MANITOBA CLEAN ENVIRONMENT COMMISSION

BIPOLE III TRANSMISSION PROJECT

PUBLIC HEARING

VOLUME 5

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Transcript of Proceedings

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FRIDAY, OCTOBER 5, 2012

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Friday, October 5, 2012

Upon commencing at 9:00 a.m.

THE CHAIRMAN: Good morning. Welcome to day five of our hearings, the final day of our opening week.

Today, first up we have Mr. Williams for the Consumers Association who will be the final participant examining Hydro officials on the site selection EA. That will be followed by some questions from the panel. Following that, we will have, or may have, some examination on Aboriginal engagement.

We were informed this morning that Mr. Madden has come down with what he describes as a pretty bad flu, so he won't be here today which means that we'll have to give him an opportunity in late October to examine on the Aboriginal engagement. I'm not sure that there will be any other participants examining on that. There may be some questions from the panel, we will see.

So if we get through that, which it appears we will, we will then move to the site and line construction with Messrs. Elder and Penner.

Ms. Mayor, you had some opening comments, some undertakings?

MS. MAYOR: Yes. Thank you, Mr. Chairman. Manitoba Hydro is just going through its undertakings, and as we are able to answer them, thought it would be of assistance to provide the answers.

On October 3rd in the morning, Ms. Zebrowski had given an undertaking to Mr. Madden with respect to the dates of the Aboriginal traditional knowledge workshops. So we have provided to Ms. Johnson a copy of that document. Mr. Madden also received it yesterday afternoon, but if we could have that filed as an exhibit. In terms of the other participants or members of the public, there are copies at the end of my table towards the middle. They can receive copies as well. So if we could have that filed as the next Manitoba Hydro exhibit.

THE CHAIRMAN: Thank you.

MS. JOHNSON: That would be MH 052.

(EXHIBIT MH 052: Answer to undertaking re dates of Aboriginal traditional knowledge workshops)

MS. MAYOR: Thank you. Mr. Neufeld as well had given an undertaking on October 3rd, in the afternoon, with respect to the percentage of

private lands that were held by the Metis. I have been informed that the land titles held by Metis, that information is not in Manitoba Hydro's possession. Cultural affiliation is not something that appears on a land titles document, so we haven't been able to ascertain that. As well, it wasn't a piece of information or a question that was asked at the landowner information sessions during round 4. So, unfortunately, we are not able to provide that information.

THE CHAIRMAN: Thank you.

MS. MAYOR: And Mr. Joyal was asked by Mr. Meronek in the afternoon of October 3rd about the number of mailings that were sent out in the July 26, 2010 letter. The information that we have is that 610 affected title holders that were directly traversed by our line were sent letters. And as well, there were 767 land title holders at the half mile that were sent letters. So that was the information provided by Mr. Joyal.

And the last undertaking that we will answer this morning, Mr. McGarry was asked by Mr. Madden about additional information regarding heritage sites identified along segment C16. We have provided to Ms. Johnson by way of the next

exhibit a map and accompanying table which identifies 46 archeological sites, one centennial farm, and eight plaques, commemorative plaques, and those are contained within the PPR. So if we could have that filed as the next exhibit. And copies of those documents are also at the end of the table.

MS. JOHNSON: That will be MH 053.

(EXHIBIT MH 053: Answers to undertakings re numbers of mailings on July 26 and heritage sites along segment C16)

MS. MAYOR: Thank you. And that's all for this morning.

THE CHAIRMAN: Thank you. We'll turn it over to Mr. Williams.

MR. WILLIAMS: Good morning, Mr. Chair, members of the panel, and good morning to the Hydro panel.

Mr. Chairman, just one bookkeeping matter. To assist a little later in my conversation with Manitoba Hydro, we have presented a two-sided copy document titled Section Four Score Card for Illustrative Purposes. I'm less familiar with the procedure for this

tribunal. I would suggest it's not really evidence, it's merely for illustrative purposes. I leave it to you and Ms. Johnson whether to assign it an exhibit number or not. And my understanding is, I have shared it with my friend from Manitoba Hydro and they do not object to its introduction for the purposes of illustration.

THE CHAIRMAN: That's fine with me.

MR. WILLIAMS: Okay. I have noted the practice of other counsel to refer you to the Powerpoint presentation of Manitoba Hydro. I will not be doing that. We will have some conversation a bit later on in terms of the route selection matrix with regard to section four, so Manitoba Hydro should feel free at any time to put that up, because we'll be bouncing back and forth to it.

Good morning, Mr. McGarry, I think we'll lead off with you. And I am sad to say I didn't get to hear the chat about tsunamis and tornadoes on Monday, but I have read with pleasure both your Powerpoint and your and Mr. Dyck's evidence on October 2nd. And without asking you to elaborate yet, you'll recall in the course of your oral evidence on October 2nd, discussing your efforts to make allowance for the independent

evaluation of each individual section of the route selection, in other words, sections one through 13. Do you recall making reference to that, sir?

MR. McGARRY: Yes. Good morning Mr. Chairman, Commissioners, Mr. Williams and participants. Yes, I think that's correct.

MR. WILLIAMS: And would I be correct in suggesting to you, sir, that during the initial stages of the process, and by process I mean the identification of the three main alternative routes, Manitoba Hydro identified a number of connections between the three main alternative routes to allow for routing options between them? Would that be accurate, sir?

MR. McGARRY: That is correct.

MR. WILLIAMS: And in terms of the map that appears in section four, would there be routing options for connectivity purposes on that, sir?

MR. McGARRY: Yes, BB2 would be one sub route, AC1 would be considered a sub route for connectivity.

MR. WILLIAMS: And sir, just let me orient myself and perhaps the panel to this. If I look to the top of the map, the A9 route would be

towards the northern most section of the map. Would that be right, sir?

MR. McGARRY: Yes.

MR. WILLIAMS: And towards the bottom of this particular segment, that would be the B alternative, correct?

MR. McGARRY: That is correct.

MR. WILLIAMS: And in the middle, we have the C alternative set out, correct?

MR. McGARRY: Correct.

MR. WILLIAMS: And you identified to me as one of the connectivity routes, I believe it was AC1, running from the northeast to the southwest towards C; is that correct, sir?

MR. McGARRY: That's correct.

MR. WILLIAMS: And in terms of developing these connections to preserve routing options, Mr. McGarry, am I correct in suggesting that Manitoba Hydro recognized that there was an issue or a risk flowing from your evaluation of each individual section, that depending upon the outcome of the preceding section or the subsequent section, the routes might not meet. Is that essentially the purpose, sir?

MR. McGARRY: That's correct.

MR. WILLIAMS: And just to illustrate, we'll pretend we have a section X. If your evaluation of section X resulted in a selection of route B, and your evaluation of the adjacent section Y resulted in your selection of route A, you might need to make provisions for a crossover between these routes?

MR. McGARRY: That's correct. And we did. If you look at sections 10 and 11, I believe there is a crossover between section, the primary route C and primary route A. In fact, we had to develop new segments to allow that crossover.

MR. WILLIAMS: Okay. And we'll come back to section 10 and 11 in just one second, sir. Given that the crossover from one route to another would involve additional lines, would I be correct in saying that there must be a direct cost in terms of line length?

MR. McGARRY: There is potential for that, but each segment would have to be looked at and that was evaluated as part of the technical criteria.

MR. WILLIAMS: And we are going to come back to that in just a second, sir.

And presumably these connectivity

lines might raise additional environmental issues as well, agreed?

MR. McGARRY: Yes, and they were reviewed. The segments you see on this particular chart, keeping in mind this is the preliminary preferred route stage review alternatives, which the life of this particular chart, as I indicated before, was in early 2010 to arrive at a preliminary preferred route.

MR. WILLIAMS: And when you say they're evaluated, for example, at the bottom of the matrix for section four, I see a reference to AC1?

MR. McGARRY: Correct.

MR. WILLIAMS: And just so I understand your evidence from October 2nd, Mr. McGarry, you were making the point that for the purpose of rating route sections and recording these results on the route selection matrix, you did that without reference to how any particular section matched up with the preceding or following section in that initial matrix, correct?

MR. McGARRY: Yes, that was the intention to rate each section on its own.

MR. WILLIAMS: Okay. And you raised

it on Tuesday because you didn't want the Commission or participants to worry that there was any bias in, or that the selection of a route choice in any particular segment would be biased by the choice made with regard to a preceding or following section, correct?

MR. McGARRY: Yes, that was the intention of organizing and rating in that fashion.

MR. WILLIAMS: And I'm quite sure you don't need a reference to this, sir, it's at page 732 of your chapter seven if you felt the need, but I'm sure you don't. In terms of focusing on the initial selection of the preliminary preferred route, my understanding obviously you entered the ratings into the RCM matrix, and from that you did an initial numeric rating for each particular segment within a section, sir?

MR. McGARRY: Correct.

MR. WILLIAMS: And then you fed in consultation input from multiple sources to develop an overall evaluation for route selection, agreed?

MR. McGARRY: Yes, that's correct.

MR. WILLIAMS: And then it went to

your committee. And with all the information and all the data compiled into the matrix, the committee collectively decided on the selection of a route in each of the 13 sections, agreed?

MR. McGARRY: Correct.

MR. WILLIAMS: And you have already mentioned sections 10 and 11, but the committee in making its decision you say had to consider decisions made in adjacent sections for continuity of a preliminary preferred route, in certain cases?

MR. McGARRY: In certain cases, yes.

MR. WILLIAMS: So based on your conversation, both with Mr. Meronek and what you have just said today, I am pretty confident that one of those sections where you made provision for continuity of a preliminary and preferred route was between section 11 and section 10. Is that correct?

MR. McGARRY: Yes, we added additional segments to allow for that connectivity.

MR. WILLIAMS: And were there any other sections apart from that, sir, where you chose to make provision for continuity of a preliminary preferred route?

MR. McGARRY: I would have to check. My recollection is we did create new segments in, I believe section seven near the Arden Ridge. My colleague here can maybe check quickly. Some segments were added, I believe between section seven and eight to consider some connectivity and other issues.

MR. DYCK: Yes, that was in section eight.

MR. WILLIAMS: Okay. So the two sections where provision was made for continuity would be from section 11 to section 10, and from section eight to section seven; is that correct?

MR. McGARRY: Those are ones we have identified currently. We'd have to check all 13 to confirm that.

MR. WILLIAMS: Okay.

MR. DYCK: Let me just add that in some cases, the connectivity, and there were sections developed to examine alternative options. That's still at the alternative option stage, and it wasn't necessarily that that became a preferred route. There was an evaluation that was done to further define and further examine it.

MR. WILLIAMS: And I thank both

gentlemen for your answers.

And Mr. McGarry, it may be me in my advanced age, but I'm not hearing you very well. I'm soft spoken as well. So if I could ask you to just speak a little louder, that would be of some assistance to me.

MR. McGARRY: Yes, I'll try and do that, Mr. Williams.

MR. WILLIAMS: I certainly don't mean it as an admonishment but I just want to make sure I can hear you, sir.

MR. McGARRY: I've had the same comment from my family occasionally. I know that's hard for some of them to believe.

MR. WILLIAMS: We are going to test my technical ability, sir, and I'm not very confident. Mr. McGarry, if you see me flailing around ineffectively, it won't be your answers, it will be the technology that is causing the flailing.

MR. McGARRY: Thank you, Mr. Williams, I'm relieved to hear that.

MR. WILLIAMS: I received answers from both you, Mr. McGarry, and you, Mr. Dyck. So, Mr. McGarry, you said that in two of the sections,

you were confident that for your preliminary preferred route that there had been some continuity adjustments, and you'd have to check back to see if there were any others. Did I hear you correctly on that, sir?

MR. McGARRY: That's correct.

MR. WILLIAMS: Would you undertake to do so, sir, to review your records to see if adjustments were made in any other section?

MR. McGARRY: We can do that.

MR. WILLIAMS: I'll get back, Mr. Dyck, to you in a second about the evaluation at the preliminary alternatives stage. But Mr. McGarry, or to Mr. Dyck, whichever, in terms of the adjustment from 11 to 10, for example, was a consequence of that that you move from a segment with a lower numeric rating to -- let me put this another way. Was a consequence of it that the section selected because of the continuity issue ultimately was different than you would have selected without the continuity issue?

MR. McGARRY: If I understand you correctly, you're wondering if the adjacent section decision had a decision on a segment on either side of it?

MR. WILLIAMS: It wasn't a very well asked question, so I apologize for that.

In terms of the continuity, whether it was sections 10 and 11 or section seven and eight, was a consequence of that that a section with the lower numeric evaluation was replaced by a section with the higher numeric evaluation?

MR. McGARRY: I'd have to check on that. But as we stated before, numeric rating was not the only criteria by design, and that's why there were multiple parts to that chart on how we arrived at a final segment decision. And you'll see in certain sections numeric scoring is extremely close. And we felt as a study team that to make a selection strictly on numerics would not capture the whole picture and all the criteria.

MR. WILLIAMS: I understand that point totally, sir, but you will review your record to identify if that has happened in those sections where continuity issues arose?

MR. McGARRY: My understanding was your first request was to identify discontinuities between sections and to identify those segments, Is this another request?

MR. WILLIAMS: I think it's the same

one, sir, that's fine.

I'm interested if you can explain to me with a particular section how exactly that connectivity issue was -- actually, I think the undertaking should answer that, sir, so I'll move on.

Mr. McGarry, I want to draw your attention to what I've titled the section four score card for illustrative purposes. And Mr. McGarry, I want to start out by just indicating, I don't want to diminish in any way the importance of the issues at stake in section four, but I wonder if you would agree with me that there has been an almost dizzying series of segments and options proposed for that particular segment?

MR. McGARRY: Yes, I would agree with you, although I'm not sure about the dizziness, but there certainly is a lot of segments to consider.

MR. WILLIAMS: Maybe I was reflecting more on its effect on me than on you, sir.

And so I just want to make sure for my client's sake that they understand kind of what's been going on in that section. And if you'll bear

with me, I just want to pull out my matrix as well.

To start with, in the original deliberations regarding the initial preferred route, at the top of the front of the section four score card, you considered a number of segments listed at the top. There are sections A8, A9, B9, all the way through to section AC1. Is that correct, sir?

MR. McGARRY: That's correct.

MR. WILLIAMS: And then as I understand it, there was an additional project and some additional new alternatives that were considered, including sections B9(1), B9(2) and B10(1), is that correct, sir?

MR. McGARRY: That's correct.

MR. WILLIAMS: And in your materials, we don't need to turn there, but there would be a matrix provided for those as well. You'll recall that, sir?

MR. McGARRY: Yes, there's a table for that.

MR. WILLIAMS: And the fun didn't stop there, though, sir, as I understand it, in that there were additional segment designations

relating to section four that were considered, being P1 and P2, which effectively were intended to modify sections B9 and BB2; is that right, sir?

MR. McGARRY: That's correct, P1 and P2.

MR. WILLIAMS: If we go to the next page, and let me stop you there for just one second, sir. Is there a matrix related to P1 and P2 in Manitoba Hydro's possession?

MR. McGARRY: No, it wasn't put into a matrix because those segment revisions were going to public review in round four as part of the preliminary preferred route.

MR. WILLIAMS: And I don't mean this as a criticism, sir. For the purposes of comparing P1 and P2 to the earlier contenders, what kind of mechanism did Manitoba Hydro do, if not a matrix?

MR. McGARRY: It was primarily done by committee discussion review for a number of factors, community, recreation, caribou. I believe there are listed in IR 003(c) where we review that, and IR 0159(a).

MR. WILLIAMS: Yes. I have taken a peak at those, sir. Now, after that, as I

understand it, there were additional options presented, being options one through option four; is that right?

MR. McGARRY: That's correct.

MR. WILLIAMS: And then for the actual route itself, there was a final adjustment. And I put it here under adjusted route. So there would have been one more adjustment after that, sir?

MR. McGARRY: Sorry, one more what?

MR. WILLIAMS: After the final preferred route was identified, there was actually, as a result of the analysis of the additional four options and input received from stakeholders, there was another adjustment to the final preferred route for this particular segment?

MR. McGARRY: The adjustment for the final preferred route was the selection of one of those four options.

MR. WILLIAMS: Okay. And my understanding is that Hydro, and I certainly don't want to get into details, but is in some sort of discussion with Conservation in terms of routing through section four, or anticipating discussions?

MR. McGARRY: The discussions we had relating to the review of those options, they were

developed for a discussion with mining industry and representatives of Mining branch. My colleague just pointed out too we did have discussions with Manitoba Conservation related to caribou in the area as well.

MR. WILLIAMS: Are there any other additional options that Manitoba Hydro has developed with regard to this particular segment?

MR. McGARRY: No, just what you have seen there and we have presented.

MR. WILLIAMS: Now, Mr. McGarry, there is no dispute that boreal woodland caribou are a critical VEC with important implications for segment routing in a number of sections in chapter seven?

MR. McGARRY: Woodland caribou was an important issue, yes.

MR. WILLIAMS: As I understand it, in terms of boreal woodland caribou, you have developed -- you use it for a number of other effects as well -- a four tiered ranking system, ranking from very high to low, which you applied to the relevant alternative route segments?

MR. McGARRY: That's correct.

MR. WILLIAMS: And if I reviewed

sections four, five and six, it would be accurate to say that there are segments within each of those three sections where the comparative ranking identifies, at least in some circumstances, very high ratings for caribou, correct?

MR. McGARRY: I'll just have a quick check, and I'll take your word for it while we're looking.

MR. WILLIAMS: I'm not sure Mr. Bedford would recommend that, but you could accept that subject to check if you wish?

MR. McGARRY: Yeah, woodland caribou did receive, for not all segments, for some segments very high in three of those sections.

MR. WILLIAMS: And those sections would be four, five and six, sir?

MR. McGARRY: That's correct.

MR. WILLIAMS: And I have to confess I'm not very familiar with the bog and Wabowden evaluation ranges. But are we agreed, sir, that it is the Bog and Wabowden evaluation ranges which are bisected by the final preferred route?

MR. McGARRY: Those ranges are intersected by section might imply something else. For instance, the Wabowden range of woodland

caribou, we do -- the final preferred route does traverse the northern portion of that particular range. For the Bog range of woodland caribou, the preferred route traverses a little bit on the eastern side of that range.

MR. WILLIAMS: And sir, I don't want to go into caribou except for as they may relate to your routing evaluation. So without going into matters better left for the chapter eight and nine effects assessment, can we agree that there was a supplemental caribou technical report filed in August?

MR. McGARRY: That's correct.

MR. WILLIAMS: And again, without going into the caribou issue per se in any detail, can we agree that there were -- that the reported Lambda rates are consistently low among all evaluation ranges indicating possible short-term slight population decline?

MR. McGARRY: Sorry, you'll have to repeat those references, I didn't quite catch them. As I understand it, Mr. Williams, you were asking about Lambda in terms of population, survivability and growth?

MR. WILLIAMS: Yes, that was what I

was asking, sir.

MR. McGARRY: Yes, those were evaluated for each of those ranges. I believe that's in the caribou supplemental report.

MR. WILLIAMS: Now, subsequent to receiving the supplemental report, has Hydro gone back, armed with this new and improved analysis, and re-evaluated any of its routing selections in segments four, five and six, with a view to determining how, if at all, it might affect the final preferred route?

MR. McGARRY: That information has been used to look at some of our routing, but there has been no further action on that. And the environmental assessment for that particular species is subject of chapter eight. And I would defer to our expert on woodland caribou to discuss the finer details of that.

MR. WILLIAMS: Okay. And I accept that, sir.

In terms of any of your recommended routes to date, that information as of now has not affected them; is that correct?

MR. McGARRY: That's correct. We still have a final preferred route before us for

review and assessment.

MR. WILLIAMS: Just looking at that section four route selection matrix, which is still up there, sir, and I don't want to go over what's been said before, but essentially when we look at the numerous, well the 23 factors above here at the top of this matrix, the information for each route and section, essentially what Hydro did was for each particular segment assign a rating score, correct?

MR. McGARRY: As I explained before, rankings, or pardon me, ratings for each criteria were done independently and scored. The weighting, as I explained before, was applied informally -- well, in a scoring sense, but not by using multipliers or coefficients, for six criteria in our matrix had the opportunity to score very high, or create a higher score than other criteria.

MR. WILLIAMS: And I have heard your discussion of this with Mr. Meronek, sir, but I do want to make sure I understand it. If we were to compare, for example, the preliminary preferred route flowing from this analysis, first of all let's agree that it was section, segments B9, BB2

and B10; is that right, sir?

MR. McGARRY: That's correct.

MR. WILLIAMS: And you were comparing it to, I'll turn for one example, the A8, A9 alternative, agreed, sir?

MR. McGARRY: Were we comparing it to that? Was that the question?

MR. WILLIAMS: That was one of the alternatives you were comparing it to, sir?

MR. McGARRY: That's correct.

MR. WILLIAMS: And I'm just trying to understand more fully how, if at all, the rating fit into this. So, sir, on the right-hand side for each of those segments, you have set out a rating, whether it's 32 for A9 or 16 for B9, agreed?

MR. McGARRY: Agreed, yes.

MR. WILLIAMS: In evaluating the preferred route through any particular section, would you have compared the sum or the -- for example in this one, would you have compared the rating for B9, BB2, and B10G numerically as against the rating for A8 and A9?

MR. McGARRY: No, we did not sum scores between individual segments. Each segment

with a label was evaluated by itself, and as part of the -- by design that the summation scores were trying to get through a section was not part of the plan. The way it was laid out allowed flexibility. As you see in the selection section four, one of alternatives became BB2, which is really a subsection for connectivity. So in having multiple segments along routes provided some flexibility in trying to address as many issues as possible in making that determination.

MR. WILLIAMS: Okay. That's helpful, sir, I thank you for that.

Just turning for a couple of moments to the issue of separation, and if you're looking for a reference, sir, it's from your direct evidence, page 340, lines 13 and 14 and 15. But if we built up some trust, maybe you'll accept that subject to check.

Your evidence on October 2nd was, paramount in all of this was separation from Bipoles I and II. Do you recall making a statement to that effect, sir?

MR. McGARRY: Yes. It was certainly part of the criteria, separation was a consideration.

MR. WILLIAMS: And it was paramount?

MR. McGARRY: That I don't recall if paramount. That particular criteria was one of the 23. Paramouncy may be a relative term, if I spoke that I meant it within the context of all the criteria considered. But from a design perspective, from an engineering perspective, reliability, it's a very important criteria.

MR. WILLIAMS: In terms of this very important criteria, sir, kind of the starting point of the objective of your evaluation was to select route segments that met the minimum required distance requirement of 40 kilometres from Bipoles I and II, agreed?

MR. McGARRY: Agreed. But many criteria had objectives for avoidance, but as you can see by the evaluation, that's not always possible. Objectives were set. They can't always be met. Criteria separation couldn't always be met. Similarly, avoidance of all wildlife management areas was not possible either.

MR. WILLIAMS: Okay. Am I correct in suggesting to you that the preliminary preferred route of BP III as it passes through the Thompson Nickel Belt at times came within 26 kilometres of

BP I and II?

MR. McGARRY: I believe that's correct. I can't remember, in the report I think it said less than 25 kilometres between the final preferred route and Bipoles I and II, at that point, just that one point.

MR. WILLIAMS: Okay. Just to make sure I heard you properly, sir, could you repeat that figure?

MR. McGARRY: I think it was, as I said I would have to check, I think it was in the 25 kilometre range in terms of the separation distance.

MR. WILLIAMS: And, sir, if it's different from 25, you'll let us know, otherwise that's fine from my perspective.

MR. McGARRY: I'm sure it's in the record by numbers, I just don't recall exactly.

MR. WILLIAMS: In terms of Hydro's preferred route, am I correct in suggesting to you, based upon the response to CEC VII-408, that there are roughly 340 kilometre line sections which are within 50 kilometres of the separation distance with BP I and II?

MR. McGARRY: Yeah, I believe that's

correct although I don't have that IR in front of me, but I can quickly confirm that.

MR. MAZUR: If I may?

MR. WILLIAMS: Mr. Mazur, you are more than welcome.

MR. MAZUR: Based on our calculation, there is approximately 340 kilometres of the final preferred route -- well, actually the preliminary preferred route within 50 kilometres. And this is based on the report that we filed called weather hazard and reliability assessment for the preliminary preferred route of the Bipole III DC line by Tessman (ph) Consultants dated January 2012.

MR. WILLIAMS: And I thank you for that, Mr. Mazur. Can we drill down one detail further. How many of that 340 would be less than the 40 kilometres, sir?

MR. MAZUR: I don't have a breakdown on the 40, but I would like to also add that 40 is a guideline, it is not our criteria. We had conducted over a period of 2001 to current date three studies looking at various weather-related risks. And the purpose of those studies was to try and establish an acceptable separation based

on the risks, the latest study was the 2012 study which I just referenced. So 40 has been traditionally a number established based on tornado, and Manitoba Hydro hasn't adopted a specific criteria, we're trying to define the relative risk of the various routes. And I can provide some further information. Based on the 2012 study, for example, in the conclusions, you know, that come out of it are that the -- if we look at tornadoes, for example, you know, separation provides a benefit of over 200 times, for example, strengthening. And so separation is one of the fundamental arguments for the route. You gain more, for example, by separation in the first 50 kilometres than you do in the second 50 kilometres. So relative risk, if we do nothing, or strengthen Bipole I and II has been suggested in many of the IRs, we reduce the risk by a factor of maybe up to five, if it's feasible to strengthen it by 40 percent, less than three times if we strengthen it by 30 percent. Whereas any separation gains us a reliability improvement of over 200 times. And I can go through some of the same arguments for ice and wind, which as we might know by this morning, is one of the risks that has

been described in Mr. Tymofichuk's presentation.

MR. WILLIAMS: Mr. Mazur, you know, and I don't want to interrupt you, I'm going to come right back to you, but really the issue here isn't about Bipoles I and II, I'm trying to understand the adherence or not to the constraint. So I'm going to come right back to you in one second. But, Mr. McGarry, for your purposes, the initial constraint for separation was 40 kilometres, agreed? If I read chapter seven, there it is.

MR. McGARRY: Yes, we used that, but as Mr. Mazur pointed out, there is bigger reliability risk assessments going on. The study team for environmental assessment used that figure.

MR. WILLIAMS: Okay. And Mr. Mazur, my simple question to you previously was whether, after agreeing that there is 340 kilometres of line within 50 kilometres, is whether you could indicate to me how many kilometres are within 40 kilometres of Bipoles I and II? Are you able to do that, sir?

MR. MAZUR: I don't have an answer in front of me. I presume we can go back to the maps

and get that number.

MR. WILLIAMS: Would that be a difficult task, sir?

MR. MAZUR: I don't know how difficult it would be, but I assume it's available.

MR. WILLIAMS: So if you would just undertake to do that? Is to examine the number of kilometres of Bipole III that are less -- of the line that are less than 40 kilometres in terms of separation from Bipoles I and II. You will do that, sir?

MR. MAZUR: Yes, we'll do that.

MR. NEUFELD: I'd like to just add a comment to what Mr. Mazur described. And for those sections that are within 50 kilometre separation from Bipole I and II, just to expand on what Mr. Mazur was describing, and further to what Mr. Tymofichuk described in his presentation, the design parameter for Bipole III is a failure rate of one in 150 years. And so for those sections where the separation distance between Bipole III and the existing one and two corridors is less than 50 kilometres, the alternative is to provide a more rigorous design for the towers in those areas. And that's an offset to help mitigate the

negative consequences of being in closer proximity to each other.

MR. WILLIAMS: And I thank you for that, Mr. Neufeld, and that's very helpful. Would I be correct in suggesting to you that the, in terms of mitigating that reduced separation, the corporation has achieved that for a cost of roughly $6 million?

MR. NEUFELD: That's correct.

MR. WILLIAMS: Ballpark, roughly $17,000 a kilometre?

MR. NEUFELD: I haven't gone through the calculation. If it's 340 kilometres, that would be an approximately right number.

MR. WILLIAMS: I thank you for that, sir.

And, Mr. Chairman, it's been a difficult week for me with a variety of other commitments. I appreciate the consideration of the panel and also of Manitoba Hydro allowing me to re-order my week somewhat. Thank you very much.

THE CHAIRMAN: Thank you, Mr. Williams. The panel members do have some questions in this respect, in respect of the site

selection. I know that Mr. Gibbons has some specific concerns about a section in western Manitoba. A few of us are going to have some questions on the process, the environmental assessment process you engaged in, in the site selection.

I think I'll let Mr. Gibbons go first on his questions and then we'll turn to the process.

MR. GIBBONS: I do have a concern about one segment of the line but I will come to that as we move forward. I thought I would go through the document from beginning to end, the presentation document, and refer to the slides in rough order.

I guess the first question that I have in terms of gaining better clarity relates to what I would call slides seven and eight, which would put them I guess on page four. And here it may just be a disconnect between my listening to the presentation and my memory of the EIS and the tech documents, so it may be just a clarification and nothing more, I don't know. But on page 4, the top and bottom slides, there is reference to the constraints and the critical habitat, for example,

important bird habitat, species at risk, which is one of the second of those slides. In the case of the second of those I mentioned, the important bird habitat, in a parenthetical aside, Ducks Unlimited is referred to. And I guess the question that I have then about all three is, in the case of important bird habitat, does this suggest that Ducks Unlimited alone was the source of information, or you had other sources? And in the case of the other two, there is no such reference. Where did the assessment or definition of critical habitat and species at risk come from? And now again, as I say, my recollection is some of this may well be in the tech documents or the EIS, but I'm a little rusty at this point after absorbing all this information.

MR. McGARRY: Good morning, Mr. Gibbons. For that point on important bird habitat and waterfowl hotspots and Ducks Unlimited, important bird habitat was data which I'll get my colleague to confirm where that came from. It's readily information and it's not related to Ducks Unlimited database, and we will come to this later. And its point, which is waterfowl hotspots, that was provided to us by

Ducks Unlimited for consideration mainly around major water bodies, marshes and wetlands that they had mapped over their many years of history in Manitoba, and shared with us areas they thought were important for waterfowl nesting and breeding. The important bird habitat later -- unless you have something?

MR. DYCK: There's various sources of information that were put together for important bird habitat, including migration corridors, staging areas for waterfowl in particular. There is a lot of information on nesting sites. Some of the information came from Manitoba Conservation in terms of colonial nesters on the lakes and lake shores, in particular Lake Winnipegosis and Lake Manitoba shorelines. And as Mr. McGarry already pointed out, Ducks Unlimited provided two different sets of information that they had collected. And there is also the more recent information that came available from the Bird Atlas of Canada, I believe it is.

MR. GIBBONS: Thank you. Second, again looking for clarification and perhaps a little bit of elaboration, on slide number nine which is the top of page 5, there is reference to

the number of heavy angled structures as a technical or engineering constraint. Could someone elaborate, either of you elaborate on that briefly as to, for example, what the cost of -- I guess what I'm thinking of here is there's a cost involved in changing direction that is borne essentially by the heavy angle structure, the angle towers. How much cost would that add in comparison to a regular tower? In other words, what's the price of changing direction? Is there a ballpark figure there?

MR. McGARRY: I wouldn't have that number. We're looking around the table to see if somebody would have that. No volunteers apparently.

MR. PENNER: I could get it for you. If I took a stab in the dark, I could be wrong and I don't want to do that. It is significant though.

MR. GIBBONS: But we could get that information?

MR. PENNER: I can get that information for you shortly.

MR. McGARRY: Okay. Just by way of comparison, in the project description chapter,

the tower footprint size and dimension is provided for a typical tangent tower and an angle tower. And you can see the structure there is significantly different, so there would be a premium certainly.

MR. GIBBONS: Slide 35, which would be the top one on page 18, there was a visual. I don't recall whether or not the area that we see running from, I guess you would say the northeast corner down towards the southwest, is that an existing cut? At the time I couldn't tell what that was in that area across that small lake?

MR. PENNER: That's an existing transmission line. You can see the tower, one of the towers up on the far side.

MR. GIBBONS: I can only make out the one on the one side, I couldn't make out the ones on the bottom, sorry.

MR. PENNER: It's not quite as clear on a screen like that, but right at the bottom of the photo in the lower left-hand corner, you can actually see the conductors very vaguely there. And that's a Bipole II conductor there.

MR. GIBBONS: So this is an example where you might fall --

MR. PENNER: Right there, you can see them very vaguely.

MR. GIBBONS: Okay. Thank you for that.

Slides 45 and 48, which puts us around I guess pages 23, 24, in the discussion that took place here, I was not fully clear on the route, on some of the routing decisions made through these areas. But I think I have come to learn since that in some cases there are significant wetlands that do not show up as lakes in some of these areas. In other words, the Bipole proposed line is the green line running from northeast to southwest?

MR. DYCK: That's correct.

MR. GIBBONS: Going this way as opposed to the other side of that lake in the middle is, I'm hearing from others, perhaps made difficult by wetlands. In other words, I wasn't quite sure why the line was going that way as opposed to some other direction. I wasn't clear on the routing philosophy in some of the selections in terms of those couple of slides. Are there wetlands there that are not evident as bodies of water, let's say?

MR. DYCK: The light areas that you see overall in this area are, I guess you could term them as bogs. And so the water table is quite high, but they are vegetated over. You wouldn't see the water evidently. But the black areas that you see over here, those are all small lakes, or puddles you might call them. That's a little bit of high ground there. And then there is a couple of forested islands that are located in here. And those were purposely avoided to ensure that the habitat in those islands is not disturbed.

MR. GIBBONS: I might have asked the question at the time, but I didn't want to interrupt the flow and so forth.

MR. DYCK: That's fine.

MR. GIBBONS: Slide 52, which would be page 26 -- sorry, I think I have jumped around here a little bit -- there was a reference to mitigating for a bald eagle nest, a grebe nest and a blue heron rookery, but I don't recall in the conversation at the time as to what might be examples of the mitigation that might be undertaken there. And perhaps a brief explanation as to why avoidance of those is not possible. It

indicates in a general sense that there's a limited opportunity to route through the area due to a wayside park. And I'm presuming that the TLE in that area is a major concern. Is it that those constraints are sufficient enough that you cannot avoid those nesting and rookery areas, and if so, what kind of mitigations are we talking about? Not necessarily in great detail, but just a sense of where you're going with that?

MR. DYCK: Right. I can give you a little bit of detail, and the bird biologist will be on later in October, and you can revisit the question again if you'd like.

You are correct in saying that there is TLE lands that extend from highway 10, immediately west all the way to Red Deer Lake. So the option of routing through there was not open to us. This is a housing or cottage division right here that has been there for a long time, and we had to create separation from that as well. Coming from the north, we had to avoid the TLE land on the Overflowing River that brought us down on this alignment to come through here. This is the existing 230 kV line. That's associated with highway 10 in that area. The highway itself winds

through this region extensively, so it's not possible to follow the highway immediately with a large development such as this. In addition to that, we would have to cross the Winnipegosis salt flats springs that feed into the ecological reserve if we were closer to the highway. So that's all been avoided by creating some separation here from the highway itself.

MR. GIBBONS: You have given us why number 10 was involved, but there's a 230 line here as well?

MR. DYCK: Yes.

MR. GIBBONS: Could that line not have been followed, the existing right-of-way?

MR. DYCK: Well, I should let the engineers speak to that maybe, but there is a huge difference between a 230 kV line in terms of size. And so the 230 kV line parallels highway 10 fairly closely and has numerous corners in it. And that would not be possible with this size of line. Like you'd have a lot of corners, plus it would put us over top of the springs, the salt springs.

MR. GIBBONS: Okay, thank you.

MR. DYCK: In terms of nesting, you had some questions about the nesting?

MR. GIBBONS: Yes.

MR. DYCK: There was a bald eagle nest located south of Red Deer River, from the information that I got from the bird biologist, Mr. Berger. It is 225 metres approximately separated from the current alignment. So that buffer should be adequate according to the guidelines for separation. There are also timing windows associated with construction during the active nesting periods for birds, including bald eagle. And that would be respected by Manitoba Hydro, that's within the environmental protection plan. The waterfowl nests that were identified are on the shorelines, or were on the shoreline, that was the Western Grebe of Dawson Bay, so they would not be affected. But it's doubtful those nests are there currently because of the fluctuations in water levels over the last couple of years.

MR. GIBBONS: I should point out in my reading of the EPP, there were often references to mitigation but there wasn't always an indication what the mitigation was, just that it would be mitigated. So that's why I was asking the question.

MR. McGARRY: If I could just add a little bit to that. You mentioned the environmental protection plan. There are separation criteria for various bird species. So if we're constructing, which we're not planning to, it's mostly winter construction, but if we were operating or planning to construct in any area during a bird breeding season, then the mitigation is we're following separation guidelines as provided in the environmental protection plan.

MR. GIBBONS: So generally it's a separation issue?

MR. McGARRY: Correct, yes.

MR. DYCK: One more point here is that there is a provincial park located right immediately to the road and adjacent to the river that we wanted to have had separation from as well.

MR. GIBBONS: Thank you. Interestingly enough, that ties to the next question, which is in regards to slide number 54, which is the next page, 27, bottom of page 27, and I don't recall whether this was mentioned at the time, and if it was, I apologize, but if I could

get again a brief explanation as to the following comment:

"Alternative routing options may include routing through a provincial forest previously avoided."

Can we get a little bit more on that?

MR. DYCK: Yes, the Porcupine Provincial Forest comes to the abandoned railway line, you can just see it very faintly here. So it extends a little bit east of highway 10. And if we are looking at alternative routing to come close to the highway and the existing transmission line here, we would be entering, potentially entering the provincial forest.

MR. GIBBONS: So in terms of -- how shall I put this -- if we look at the line now, that is circumventing the forest then, the line as indicated on this?

MR. DYCK: That's correct.

MR. GIBBONS: So the intent is to avoid it, if possible, but there may be circumstances where it might need to go the other way. Any quick example of what might cause you to move it through the forest?

MR. DYCK: Well, that's the question,

I guess the issue that has been raised by Manitoba Conservation and Water Stewardship of routing through this area, that there's a concern there. So in changing the alignment, and that was one of the considerations early on in the routing process through this area, that one of the options was to be closer to the highway. And that alignment then also took us through a lot more agricultural land further south. So there are pros and cons to realigning the route through here.

MR. GIBBONS: Okay. Slide 67, I think the answer to this will be similar to the one we just had. That would be top of page 34 I guess it is. It starts with the narrative one, the slide that's at the bottom of slide 33, but I think the comment was made in regard to the photo that follows this. And I recall in that narrative that there were mitigation measures being considered, and it was mentioned, for example, skinks and so on. And again, are these mitigation measures attempts to avoid the areas, create sufficient separation and so forth, or are there other mitigation measures being planned? I don't know why skinks, by the way, stick in my mind. There were a couple of examples and I was writing as

fast as I could, but that's the one that made it onto my piece of paper.

MR. DYCK: The complex that you see in this photo here, and this is just a larger scale of the image of the same thing, this is an expanded zoomed in view. So you can see the sand dune complex that runs north/south in that area there. That would be the area of concern under that particular habitat type that's been identified by our specialists, both by the amphibian and reptile specialist as well as the vegetation specialist. So there's species of concern within these ecotypes, even though they are not a pristine environment, these are pastured areas, so they are disturbed by agricultural practices. The mitigation measures that Manitoba Hydro has proposed is to minimize the disturbance in the area, to conduct a clearing in the winter months, and to minimize crossing it from an access perspective where possible, and by siting the transmission towers away from the site. The measurement across these areas is less than an average span between two towers and, therefore, there is a good, you know, a high potential that we can avoid those areas.

MR. GIBBONS: Okay. Thank you for that.

The Chairman mentioned that I had a concern about a routing issue west of Swan Lake. I'm trying to connect it to a particular slide. In fact, I think it relates to slide 56. So I am backtracking a bit here, so I do apologize for that.

MR. DYCK: Is that the blueberry area?

MR. GIBBONS: I imagine it might be.

I refer to these as the bird maps. They have a formal name, I'm sure, but all that I can think of is they are mostly about birds.

In this particular case, this is at a point where the Bipole line would cross from, I guess it's the Rural Municipality of Mountain north down into Minitonas, so just west and southwest of Swan Lake. In what I would call the bird map, there is in the coding scheme, or the key scheme used in the mapping, a very significant large and contiguous area defined as areas of waterfowl concentration, and along the line in the map that was provided, a number of either rookery sites or sensitive bird sites for birds, right along the line here. So apparently a lot has been

discovered in that region.

I guess the question for me is, given concerns about waterfowl and so forth, would it not be possible in this context at least, in this area, this segment of the line, to move the line -- let me rephrase it. What are the arguments against moving that line so that it would conform, I guess, and follow route 10, or some other route? But route 10, for example, is to the west of that region, does not cross over that region at all. So I guess the question is, presumably it's going this way for a reason. Could you elaborate briefly for us why the line had to go through that section as opposed to following 10, given the concentration of waterfowl in that area? I'm just looking for a clarification of the rationale, I guess.

MR. McGARRY: The routing, of course, went -- we're trying to find out what section this was, but the routing as you know considered multiple criteria. And the bird information in terms of its detail, we defer to our bird specialist on potential effects in mitigation. But overall decisions on routing are complex and multi stakeholder. So for instance, moving closer

to highway 10 or along highway 10 presents some issues related to highway 10 not being particularly straight in the first place and how we would route. There is other landowner considerations the closer we get to highway 20, and to highway 10 for agriculture. Not to say any one criteria necessarily outweighs the other. Although to be clear, of course, there were six criteria that could. It was out of that decision-making framework, trying to balance all those interests of multi stakeholders, birds being one of them, yes.

MR. DYCK: The evaluation in the initial alternative routes were identified for the area. The concern over birds did not score very high. You could further question the bird biologist again when he's here presenting and when he's open for questioning on further details for the area.

I think what you're looking at for the most part is a staging area. There's waterfowl staging area associated with Swan Lake for waterfowl in the fall, in particular. And I know that country myself, and I know that the ducks and geese do congregate in the area, so there would be

some concern with bird strikes on wires. I am not 100 percent certain, but I think the biologist has prescribed mitigation measures which include the bird diverters on the lines in very specific areas there in that region. The line does follow open farmland for the most part, pretty much on the eastern fringe of the farmland area. It is several miles removed from Swan Lake itself.

MR. GIBBONS: Thank you. I think I know the answer to this question, but you're right, I am not sure I am asking -- could you describe bird diverters for us, please? What are they, how do they work?

MR. DYCK: Sorry?

MR. GIBBONS: When you mentioned bird diverters on the wires, could you briefly, not in great detail, but just a vague idea of how these things, what they are and how they might work?

MR. DYCK: Yes. I don't know that we have a picture of them, they come in various formats, various configurations, but they are spirals for the most part that I have seen, that are placed on the conductor, the top conductor. Actually, it is not a conductor, it's what they call a sky wire. I'll have an engineer correct me

here, but it's the top wire which is thinner than the conductors themselves, so less visible. And these spirals are placed on the wire to make it more visible to the birds. The research seems to indicate that it's effective and reduces bird wire strikes.

MR. GIBBONS: Thank you.

MR. McGARRY: Sorry, just one other point in that. Where our bird biologist thought it was important to place bird diverters or other mitigation have been identified as environmentally sensitive sites. And I can't tell you specifically for this area, but there is an inventory where our bird biologist thought it was important to identify sites for additional mitigation, including the use of bird diverters.

MR. DYCK: That particular area would cross the Swan River, the Roaring River and the Whiting River, those would be fly ways and those would be candidates certainly for placing those diverters on those over those rivers.

MR. PENNER: Mr. Gibbons.

THE CHAIRMAN: These spiral diverters would work better than the plastic owls we see sitting around homes in parts of Winnipeg, usually

with the birds sitting right beside them.

MR. DYCK: The owl is usually targeting the pigeons.

THE CHAIRMAN: And you usually see the owls and the pigeons sitting side by side on peoples' roof lines.

MR. PENNER: Mr. Gibbons, would you like the answer on the cost of the corner?

MR. GIBBONS: Do you have it now? Sure.

MR. PENNER: Yes. Okay. My initial guess would have been about four times, and that seems to be fairly accurate in terms of some of the numbers that we're carrying for our construction estimates. For a self-supporting structure in Southern Manitoba, a corner structure is going to cost in the order of $200,000 to install. That's not including the material costs for the structure, and I would expect those costs to be close to 100,000. So $300,000 would be a reasonable number to talk about a corner structure. And for the construction component for a self-supporting suspension structure with an inline tangent structure is closer to $40,000. So it's actually probably closer to five times the

value. And if you're talking about a jog, you have to multiply that by two because if you are travelling west and you need to make a jog north or south, you have to have two corner structures to go west again. So it's in the order of five times of that of a suspension structure. And that doesn't take into account less optimization. You may have shorter spans in those distances because you need to make that corner before you can optimize a span length. Is that helpful?

MR. GIBBONS: It is. That you.

THE CHAIRMAN: Thank you. Ms. MacKay?

MS. MacKAY: I'd like to ask a couple of questions I think about the route selection matrix and how it was put together in a general way. The route selection matrix takes qualitative data and converts it into quantitative data so that you can make a judgment about that. And you have to be very careful in making that conversion that you don't introduce biases, either consciously or unconsciously. So I am just wondering what the mechanisms were by which you got the ratings that go into the first 23 rows, or columns rather of the matrix, and what precautions you took to ensure that there was no bias going in

there so that you ended up coming out with the segments that you, for other reasons, might want. I'll let you answer that.

MR. McGARRY: Yes. Each of the specialists that provided ratings to the matrix developed their own system of rating based on their specialty and knowledge. So the methodologies they used they recorded in their technical reports as to how they came up with a rating. And it wasn't prescribed. Each expert had his latitude to determine how he could evaluate that segment based on his knowledge of his or her specialty. And I think in that way, because there is no prescription for how you rate it, we left it to the experts and their opinions -- not their opinions, but their data and analyses to determine what that rating was going to be, low, medium, high, or very high. And they weren't looking at others to see what they were doing, until we got around the table and all that information was brought together into the matrix at approximately the same time. So I think we did what we could to remove the bias in the system and also to -- and we don't really consider there is bias in that sense. But also in using that

evaluation system, we came up with that numeric scoring that you saw, and the team also felt that that was not the sole basis for decision-making, and there is two other components before we got to a final decision. So we think the system was fairly unbiased and robust in that sense, that the discipline experts had the opportunity to look at each section strictly by their own discipline.

MS. MacKAY: So when you came to sit around the table, as you have suggested, there were no changes ever made to any of these ratings?

MR. McGARRY: Certainly not by direction. I believe once it was incorporated that -- or once the disciplined specialist was confident in what they had done, then that was entered into the matrix, and it wasn't separately reviewed by Ag or anybody else. The scoring they provided went straight into the matrix and then the whole thing was evaluated as a team.

MS. MacKAY: Thank you.

THE CHAIRMAN: We're going to have a few more questions in respect of this process, but I want to take a break in a moment or two. But before we do, I'd just like to ask, and I think Mr. Williams referred to the four segments of the

line that the Environmental Approvals Branch has requested you to address. When will we get that information and when will we have an opportunity to examine that information?

MR. McGARRY: Mr. Chairman, as our response to Manitoba Conservation on those four segments indicated is that we would continue discussion with them, but we would not be in a position to provide new alternatives. If that is the course that Conservation decides on, we said we would review. And if the process leads us to need to develop and present new preferred alternatives, then we would also go through a stakeholder consultation process before we would consider them as preferred. As such, we informed Manitoba Conservation that we wouldn't have the time and the process to do that. It takes three to four months, and it would be early 2013 before Hydro would be confident in putting forward a new preferred alternative, if that's the determination of the licensing branch.

THE CHAIRMAN: So that could mean that our recommendations to the Minister are all sort of contingent upon a successful conclusion of that discussion and consideration, those

considerations, if we don't have an opportunity to examine that before this panel?

MR. McGARRY: No. What we have suggested to Manitoba Conservation, because the areas in question are relatively small compared to the 1,384 kilometre length, the overall process and route selection analyses and consultation we have gone through to support the approach and the segment choices where we've been I think are sound, and we're proposing as the final proposed route. Where those sections are being questioned, we're trying to deal with the process. And obviously we are alert to the fact that it's the licensing branch asking for this and we will have to take it very seriously in trying to accommodate.

The licensing branch will have to, first of all, establish that it is an absolute that we will have to move the route. At this point in time, we're looking at it as a review and potentially developing new alternatives to meet their requirements. But it represents, as I said, a fairly small area. If they want to deal with it as a licence condition, that there's subsequent approval once we present preferred alternatives in

that area, then that would be the way to handle it.

THE CHAIRMAN: I'm just trying to determine how we the panel might consider this and develop some recommendations to the Minister. Could we have the issues presented to us with some consideration around it, or would you just rather that we, if we decide to licence, or to recommend to the Minister that he issue a licence, we say except for these four areas?

MR. McGARRY: Mr. Chairman, it would of course be up to the commission. I don't pretend I have the best advice. In this case, it is somewhat unusual for us to deal with a route request from a regulatory body at this point and does present some challenge for recommendation. But at the end of the day, I think if the Commission is reasonably confident in what we have done, it would be able to put forward recommendations, and perhaps address those areas as also expressing confidence that the right decisions will be made.

THE CHAIRMAN: Okay. I think where I'm going to leave it then for now, we're certainly not going to close this off, but when we

come back in late October and when we get into the environmental assessment picture as a whole, we may want to have some discussion around these four points so that, you know, we have input from our participants and others in respect of those four areas. So we'll leave that there for now, but it will be open.

We're going to take a break. When we come back, the panel has a few more questions on site selection, and then I think we'll be finished with site selection for now. Come back at 10 to, please.

MS. JOHNSON: Mr. Chairman, I'd just like to enter Mr. Williams' handout as CAC number 3.

(EXHIBIT CAC 3: Handout of Mr. Williams for Consumers Association)

THE CHAIRMAN: Thank you.

(Proceedings recessed at 10:30 a.m.)

(Proceedings reconvened at 10:50 a.m.)

THE CHAIRMAN: Welcome back. I should just first start off by saying to Mr. McGarry, that we're not entirely satisfied, in fact, probably far from entirely satisfied with the response you gave us in respect to those four

particular areas. You did mention something about needing about four months to address it. I would note that this was first brought to Hydro's attention and our attention in the spring when the TAC reported, and that's now over four months ago. Before we conclude these hearings in late November, we're going to need to address these in some way or other that gives us a basis to make a recommendation to the Minister.

MR. McGARRY: Thank you, Mr. Chairman. We will caucus on that and try and determine a process that will be satisfactory to the commission and Manitoba Conservation.

THE CHAIRMAN: Thank you. Mr. Gibbons has I think a very brief follow-up on his questions about bird habitat.

MR. GIBBONS: Yes, the question was raised during the coffee break as to what map I was referring to. And one of the reasons why I didn't have more specific information at the time is because some of that information was contained in the margins which were cut off from the copy that I actually received, but I have now discovered that it is the part of the additional information from Hydro that was submitted on

September 17th. And in this particular case, the section of the map that I was referring to, there is the larger map, of course, which is the index to the individual sections and the section in question was section 11. Again, it's the area due west of Swan Lake. That is not the town but the lake itself.

THE CHAIRMAN: Moving on, I noted before the break that the commission was going to have some more questions in respect of the process that was undertaken by Hydro in this site selection environmental assessment. I think Mr. Kaplan is going to lead us off in that direction.

MR. KAPLAN: For the benefit of the court reporter, my questions will be very short. For the benefit of the Hydro panel, my questions are quite easy, that is the questions.

Firstly, I think you all recall the constraint mapping that was presented. My question to you on behalf, I think of myself and the panel, why was the constraint mapping presented at the hearing not included in the EIS? Whoever wants to jump on that, that's fine.

MR. DYCK: The constraints are

actually presented in the land use technical report, the maps associated with that report. That would contain the most comprehensive set of constraints that are associated with the project study area. Various other constraints will be discipline specific that are included in other reports, technical reports and so on.

MR. KAPLAN: The leads into my second question, and I'll just quote you one line.

"Technical reports have been prepared for the various biophysical, socioeconomic consultation and technical project components."

That leads to the question, and I ask it of any one of you, why was the technical report on route and site selection not prepared that would include the constraint mapping presented at the hearing, as well as a detailed description of the rationale for the identification and delineation of alternative route A, alternative route B and alternative route C?

MR. McGARRY: Mr. Kaplan, the presentation for route selection was contained in chapter seven. There was a lot of information in there. There was a lot of mapping. All the

segments are provided. The matrix is there. Rationale for criteria was provided. It was felt by the study team that the presentation of the information was complete, in our minds, in terms of chapter seven.

THE CHAIRMAN: I am going to follow up with a number of questions that may not exactly flow one from the other, but they are all related to the same thing. In some ways, I recognize that this is an after-the-fact question and that what's done is done. But I'm just finding, and have been for some time finding this process of route selection and the way you went through it to be extremely confusing. It's very complicated. It appears to have been a very lengthy process, as was suggested earlier. There are subjective elements or there may be subjective elements in how you went through it. I'm talking about this whole matrix scheme. And also it relates to the constraints presentations that you made to us.

On pages four and five of the presentation, you have what I might call a subset of the constraints, you have the biophysical and socioeconomic constraints and then technical engineering constraints, as well as a brief slide

on potential routing opportunities.

And then if you move over to page 10, you have an alternative route comparison and you used an even further subset of the constraints. I think there are eight listed there. It's not the full 23 that you have in the matrix.

When you compare, when you look at the slide at the bottom of page 10 and you compare routes A, B and C with these eight different comparators, it's quite clear that route B was the preferred route and the best route. They come out ahead on just about all of the criteria, or they are very close, such as the forested land cover section which is within a couple of kilometres.

Why didn't you just stop there, choose route B, and then go into a full detailed environmental assessment of that route, rather than going to this lengthy process of doing almost a full environmental evaluation on every different segment of the three alternatives that you presented? Wouldn't that have been much simpler, and really achieve the same thing in the end, and perhaps even allowed you time and effort to do a better environmental assessment along the preferred route?

MR. McGARRY: Thank you, Mr. Chairman. I think what you described, yes, would have been a simpler process. But due to the size of the project study area, the fact we cross five eco-zones, seven eco-regions, the depth and diversity socially, biophysically north to south is tremendous, terrain, wildlife, people. And to do a generalized route selection of the nature you described, we didn't think was sufficient. The detail involved and the complication, yes, clearly I agree with you, trying to review that number of segments is not an easy task, it's not easy to communicate. But what we intended through this assessment was to demonstrate that we were in fact considering geographic and social differences, north to south, that lead us to better route selection in such a huge project study area.

THE CHAIRMAN: I don't think, even if you look at the analysis on page 10 which covers some significant elements, I don't think I'd call it a generalized route selection. I think that that would provide you with a fairly good basis for choosing that route. I mean, it just seems so overly complicated.

MR. McGARRY: It is complicated,

again, I'll agree. The information you see on the bottom of page 10 are just metrics placed there to show some basic differences between the route. It really is summary information. And that information is using length in each case, whereas the matrix was less concerned with length than choosing a segment by each section.

THE CHAIRMAN: Then how did you, sort of within this process, how did you determine how you would go around or go through the various constraints in delineating the three alternative routes?

MR. McGARRY: The initial selection of alternatives actually started -- well, there is two components, north and south. In the north, we started with terrain analysis to outline some potential ways to accomplish our objective of routing the line. In the south, we started with Mr. Nielsen's appraisal of traversing farmland from The Pas to Riel. From there, the team worked to boil down what was a multiplicity of alternative routes down to an A, B, C framework, primarily to facilitate consultation. Trying to help people comment on A, B, C, D and E, five potential routes, increases the complexity and

choices in trying to evaluate that input. We felt that three options in most areas, sometimes there was four, that presented an opportunity for a stakeholder and multi-party input based on segments or sections that represented different interest in values. And by having it primarily on three routes with some sub connecting routes, I think we accomplished that integration of route selection and public consultation, and together those elements were processed for route selection.

MR. DYCK: If I can just add to that too, that the site selection and environmental assessment process starts off at a high level with a broad study area, as you see. And it's basically, or it can be viewed as a course filtered type of approach at the start of the process. And then as you get more and more, or closer and closer to a final route, it becomes very, very detailed and very site specific as the constraints become site specific, such as a house or as a very small ecotype. Those all have to be identified. As we have seen throughout the processes, we are still being criticized for not having done enough in many areas. So the amount of work that you can put into something like this

doesn't seem to cease.

THE CHAIRMAN: No, but if you'd just selected a preferred route first and then done an analysis and environmental, a full-detailed environmental analysis or assessment on that route rather than, you know, three or four or five different options in each section, you might have been able to do a more complete job on the one route. But that's, you know, what's been done in the past, or it's in the past, as I noted at the outset. My own opinion is it's not an entirely satisfactory way of doing it, but that's what you've done. So I just wanted to get some understanding of why you went that route.

But I note that even within this process, you know, there's a number of inconsistencies, and some of them are fairly obvious. I think one or more of my colleagues will address some other more specific ones, or other specific ones later. But I just note that the core communities, let me just start off, what are core communities? What do you define as core communities?

MR. DYCK: The core communities was a metric used by the biologists to assess habitat,

and it's based on patch size metrics, so contiguous patches of habitat for certain species. So basically you're looking at the quality of the habitat in terms of contiguous forest patches within a route corridor, and then compare the route corridors one to each other, which is the preferential one from that perspective.

THE CHAIRMAN: I was just going to note an inconsistency that the core community's criterion for segment B10G in section four was rated very high with comment, important caribou and another VEC habitat. However, the caribou criterion was rated as medium, as were the criteria for birds and mammals. The vegetation criterion was rated as low for the same section four. Four segments have very high ratings for caribou criterion, whereas the core communities criterion are rated as low to medium. It just seems inconsistent. You don't need to address that specific issue, but just example of inconsistencies from one section to another.

MR. McGARRY: Yes, Mr. Chairman, we have to examine that in more detail for a complete explanation of the ratings. But again going back to the selection of criteria and how they are

described in appendix 7A(1), these were independent in terms of their evaluation. There is some relationship, I suppose, between fragmentation and core communities, but they are different metrics and don't always align, as they don't in section four on section 88. But the study team felt that besides identifying simply birds, mammals and other -- caribou and other biophysical indicaters, that there were habitat and core community concerns that needed to be added in addition to simply evaluating birds, mammals or caribou.

MR. DYCK: If I can add to that too. In the final consensus and discussion in the committee at the committee stage on that particular section, it has to be taken in context with where that location is and the continuity as well as the segment itself. That segment in particular is a very short segment. The other aspect of that is that it's at the southern extremity of the Reid Lake caribou herd. So as much as that caribou evaluation range could be avoided, it was avoided. So that was already taken into account as well in that consideration.

THE CHAIRMAN: Thank you. I think my

colleague, Mr. Gibbons, has some other questions about other inconsistencies in this process.

MR. GIBBONS: It's actually one question, but it applies to three different elements of the project, and I'll provide just a bit of context if I can. The site selection process for the northern ground electrode site, from what we can glean from the material in front of us, did not include soils and terrain, forestry, terrestrial invertebrates and PAI lands, to which I would also add ASIs, reserve lands, and TLE land sections that were -- sorry, the reserve lands and TLE sections that were used in Keewatinoow's converter site selection process, and/or the assessment of the AC collector and construction power line corridor. In other words, some were used in some cases and not in others. And it seems that if we take that as a group, the northern part as a group, the Keewatinoow converter station, the northern electrode site and the northern electrode line did not seem to be subjected to the same criteria as other parts of the EIS, relating most obviously to the line itself, the Bipole line itself. Can you speak to why it seems, and I'm not sure if it did or did

not happen, or if it's simply that the written material does not reflect it, but there seems in the written material at least to be an inconsistent use of those features and constraints that were used for the line in the converter station case, the northern one, the Keewatinoow one, the northern electrode site and the electrode line, and the northern electrode line. Was it simply left out of the document? Were different criteria used, et cetera? That's where I'm going with that question.

MR. McGARRY: Thank you, Mr. Gibbons. The components that you speak of, many of them were principally technically driven in the beginning, and the environmental assessment team accepted that ground electrode has certain criteria, so does converter station site in its proximity. These were technically driven site selections that were, as Mr. Chairman pointed out, this actually would get closer to the approach he was speaking of, that sites were somewhat selected based on their technical criteria, then the sites were assessed. But a number of sites were assessed in each case. I believe for converter station sites there was, in the north there was

five. So the project study team did assess these sites, but with technical criteria generally overriding we were looking for essentially, to put it in simple language, show stoppers. Were there things here that we were, as an environmental assessment group, including socioeconomic, would feel would be a major restriction to siting here? So in collaboration with the technical team, we came to a decision on that and conducted our assessment accordingly. So it didn't receive the same matrix detail as the HVDC line.

MR. GIBBONS: And so by extension, the DC line itself is not, at least compared to these components, is not technically driven in the same way that these are?

MR. McGARRY: I would agree with that. The environmental team had quite a bit of flexibility in determining route.

MR. NEUFELD: Mr. Gibbons, perhaps I can explain a few more details as they relate to the technical constraints, and this speaks to the difficulty the Chairman spoke of earlier in our sessions regarding how do those electrons get into the earth?

And so the constraint is that of

needing to find an area where there's good soil conductivity, in other words, there is a place where you can complete a circuit. So for example, if it's in a rock outcropping area, that's probably not a good area. But if there's an area where there's fairly good wetlands and the type of soil is conducive to providing good conductivity, those are the choices one has, and that's it, and there aren't that many.

So exploratory drilling was done in a number of areas and the most -- so that left a certain constraint in terms of locations where ground electrode could be located.

And the second criteria was that it should be in an area that is as close as possible to the converter station as well.

MR. GIBBONS: Thank you.

MR. DYCK: If I can just add to the explanation as well. From a biophysical perspective, the terrain in the area, because these components are all in a relatively small area, the terrain conditions are very similar. So the issues are, you don't have the diversity that you have in the larger study area from north to south, the conditions are very similar from one

site to another.

Some of the differences would include, where there were streams that would traverse some of the sites that were identified, those would be flagged both by aquatics and also by mammals and birds, and amphibians and retiles as well, because there was increased habitat value for those types of features. But in other areas, there wasn't really any distinction from area to area. So that it simplifies the process of selection, so to speak, because there isn't that huge amount of diversity.

Similarly from a socioeconomic perspective, the issues are pretty much the same in the entire area, other than heritage and resources, which were clearly identified and surveyed for.

MR. GIBBONS: Thank you.

MR. McGARRY: Sorry, just one more point, Mr. Gibbons. The evaluation was done by disciplines, and you'll find in chapter eight of the EIS that when we went through the various components for assessment, we separated out those components. So there is information for converter station, there's information for HVDC and so on.

I think we broke it into four components for assessment and it was written up that way in chapter eight.

THE CHAIRMAN: Ms. MacKay?

MS. MacKAY: Yes, I'd like to ask about the collector lines and construction power lines. And I don't know whether it would be useful to have slide 83 and 84 available. It may not matter. But these lines were decided upon in I think much the same way as the material that Mr. Gibbons was talking about. So it was based primarily on technical and functional issues. But this is six lines going through, and it's going to be quite a wide right-of-way as a result. And you took it through what appears to be untouched areas when there were a number of rights-of-way available to you for at least part of the line. And that would show, for the audience, on slide 84 I think. I'm just wondering if you can explain to us why you chose to go through in the way you did?

MR. McGARRY: Ms. MacKay, I believe that's the image you were speaking of. Is this the image here on the screen?

MS. MacKAY: Yes. You can see there's a railway there for part of it, there's the

Conawapa road, further north there's the ground electrode line that you could have followed, but instead it's a line going straight through.

MR. McGARRY: Yes. Again, there was technical criteria for routing in that way, and I agree it wasn't done in the same manner. For instance, following the Conawapa access road did not lend itself simply by curve or linear routing and the amount of angles it would require. Those are six tower lines. Trying to keep them as straight as possible is paramount, because you do additional angles, and there are some, but addition angles mean you'd have to do it for six lines. And so straight line routing was important in this case, and also the distance. So again, it was primarily technical considerations that lead to this, and then the environmental assessment team reviewed that decision to see how compatible it was with environmental or social criteria.

MR. DYCK: If I can just add to that, the lines do parallel the railway line that's existing there to Amery. And then beyond that, that's an abandoned railway line to the fort, Fort Nelson.

MS. MacKAY: Okay.

MR. NEUFELD: Perhaps I might make one other comment about the engineering side of the designs for those lines. A fairly intensive review was taken to ensure that that corridor, which is a fairly wide swath as you have indicated, that corridor could be narrowed up as best as possible.

THE CHAIRMAN: Mr. Motheral?

MR. MOTHERAL: I'm very interested to know the reason for the third, I'm going to call it in feet, I'm a past farmer and most of my farming career I was in feet, not in metres. But I understand the need for the hundred foot clearance around towers in agricultural Manitoba, okay. Was there not an instance where you said that somebody wanted 46 metres, which would be 150 feet, is that correct, in your meetings with farmers?

MR. McGARRY: The criteria we landed on was 42 metres.

MR. MOTHERAL: 42 metres. Is that going to be a standard space then for the whole agricultural Manitoba?

MR. McGARRY: No, the criteria applied between Provincial Trunk Highway 16 and Riel, so

the intensively cropped area of Manitoba that we traversed. And there the desire, because of intensive cropping practices and the use of large sprayers and other equipment, there was a desire to increase the separation distance between the road right-of-way and the tower itself, to allow passage between the tower and the road unobstructed. And based on the input we got, that was the decision to move it 42 metres infield instead of 33.

MR. MOTHERAL: So it is going to be 42 metres -- I'm just giving an example. If you've got a 10 mile stretch in agricultural Southern Manitoba, that it will be 42 metres all the way?

MR. McGARRY: That's the intention within the zone I mentioned between 16 and Riel.

MR. MOTHERAL: I was concerned that there was going to be some instances where it was going to be 42 metres in some places and 30 in others, which would require an angle, and that is not going to happen; is that right?

MR. McGARRY: No, the angles on the route is as we have shown for the final preferred route.

MR. MOTHERAL: I'm sorry?

MR. McGARRY: The final preferred route shows where the angles are, and that's what we are proposing, to stick to that route. And 42 metres infield where it parallels a road allowance is the intention. Where it runs along the half mile is a different criteria. This is just for being adjacent to municipal road allowances, where we are adjacent to it.

MR. MOTHERAL: I'm not sure if I quite understand everything there, but I'll talk to you later.

MR. PENNER: Can I add something in there? Just in terms of the right-of-way, so the right-of-way width is 66 metres wide and that's why the right-of-way, when it follows a road allowance, the towers will be 33 metres in from that road allowance, and that's north of highway 16. And then south of highway 16 to Riel, there's been an additional distance between the right-of-way and the road allowance of nine metres. That's why the towers are going to be 42 metres infield.

MR. MOTHERAL: Thank you. Now I understand. From there on it's going to be 42 metres?

MR. PENNER: From 16 all the way back to Riel.

MR. MOTHERAL: Yes, thank you.

MR. McGARRY: Sorry, Mr. Motheral, that's why we have a bigger team here to help with our clarifications.

THE CHAIRMAN: Okay. I think that brings us to the end of the questioning on route and site selection. So thank you to those involved in this.

I don't believe there are any other questions today or cross-examination today on the Aboriginal engagement. When we return at the end of October, Mr. Madden will have the opportunity to examine on Aboriginal engagement, as will members of the panel. No other participants, the other participants have all completed their examination on that, so it will be just Mr. Madden and the panel.

MS. ZEBROWSKI: Could I add one clarification to some of the remarks I made yesterday?

THE CHAIRMAN: Certainly.

MS. ZEBROWSKI: I just wanted to make one clarification. I should have asked for a

clarification when the question was asked of me yesterday, and in the excitement of the moment I neglected to do so.

When Mr. Dawson and I were having discussions, he had asked some questions about table seven on page 87 of the ATK technical report number one. And I believe the question that I was asked was -- he had asked to just clarify, I guess for those in the audience, which communities here had on the constraints column of that table the listing of Treaty 1 as a constraint, and he had listed off a number of communities and I agreed yes. It occurred to me afterwards that it may appear that I had agreed that all of those communities were signatory to Treaty 1, and I just wanted to clarify that two of those communities, Dakota Tipi and Dakota Plains are not signatory to Treaty 1, but they do in the table have Treaty 1 in that constraints column. And further clarification on this table and this report will be provided by the expert who prepared it later in October.

THE CHAIRMAN: Thank you. Well, I think we can now -- Mr. Dawson?

MR. DAWSON: I'm glad that it's

exciting to be examined by me. I just wanted to say that I won't take the panels' time to ask questions that arise out of this clarification and I'll reserve that for later in the month.

THE CHAIRMAN: Thank you. We'll now move onto the next panel, which is the construction panel. Mr. Penner and Mr. Elder will be in the hot seats.

MS. MAYOR: If we can just have two minutes to make adjustments to the seating and we'll be ready to go.

THE CHAIRMAN: Yes. Are we ready to roll?

MR. ELDER: We are.

THE CHAIRMAN: Mr. Mills?

MR. MILLS: We're going to be asking some questions of the construction and its effect on -- not forestry with regards to the routing of the line but with forestry specifically within the construction. And we note that Mr. Dyck is here and available, and we would ask that he be able to remain and join so that we can -- we may have some specific forestry construction questions of him.

THE CHAIRMAN: Is that a concern?

MR. ELDER: That's not a concern for

us.

THE CHAIRMAN: Okay.

MR. MILLS: Thank you.

THE CHAIRMAN: What we are addressing now is the presentation made by Mr. Penner and Mr. Elder on Wednesday morning. It's in respect of both line construction and converter station construction. We'll go for about a half an hour this morning and then for a couple of hours this afternoon. If we're not concluded, we'll come back to it at the end of October.

So where is my list? First up, Tataskweyak, do you have any questions? Okay, thank you. Pine Creek, Mr. Mills.

MR. MILLS: Thank you, Mr. Chairman. We respect the schedule. We had hoped to spend about 45 minutes discussing Mr. Tymofichuk's references to line construction as it relates to Bosnian and Serbian guerilla issues, but we'll refer to a later on that.

THE CHAIRMAN: It might be a much later date, early December.

MR. MILLS: Good morning, Mr. Penner. I wanted to start by, Chief Bushie asked me to thank you for the access that you provided to him

and he greatly appreciated the conversation that he had with you and that we have had with you.

We have just a few quick concerns. Could you explain or elaborate to us as to why your process chose to include a northern Aboriginal construction relationship?

MR. PENNER: Can you clarify that question, please?

MR. MILLS: Well, in the EIS and in your presentation, you refer to a northern construction relationship, a preferred Aboriginal relationship in the north.

MR. PENNER: I'm not quite sure exactly where in my presentation are you referring to?

MR. MILLS: In the EIS under construction, there are references to a northern construction relationship specifically with Aboriginals. Are you familiar with it?

MR. PENNER: I'm not sure if you're referring to the employment preference --

MR. MILLS: Yes.

MR. PENNER: -- or northern purchasing policy?

MR. MILLS: I'd prefer to talk about

the northern purchasing policy.

MR. ELDER: Sorry, Mr. Mills, what is your question? I'm not clear.

MR. MILLS: My question is, could you elaborate as to why your process chose to include a northern Aboriginal purchasing policy?

MR. PENNER: The northern purchasing policy has been a part of Manitoba Hydro for many years. As I said yesterday, the line construction also has, I guess employment preferences for the entire line. And I can elaborate a little bit further. Our northern sections of lines and the collectors, the preferences will be such, northern aboriginal, northern residents, then Manitoba residents, Canadian residents, and all else. For the central sections of the line, we will have local aboriginals to the project area, local residents to the project area, Manitoba residents, Canadian residents, and then all else. In the southern areas, what we refer to as our S1 and S2 sections, we will have Manitoba Aboriginals, Manitoba residents, and Canadian residents, and then all else. And those are hiring preferences that we will include in the contracts, and the intent is that the contractor will have to follow

those hiring preferences when he brings on non supervisory staff. And what it does is it provides for opportunities for local, for Aboriginal and Manitoba residents access to these projects.

MR. MILLS: Thank you.

THE CHAIRMAN: Mr. Mills, do you mind if I interrupt and just ask a question? The other day when you spoke, you said that the Keewatinoow station would be built under the terms of the collective agreement. Now, will the transmission line be built under that collective agreement as well?

MR. PENNER: I can certainly answer that question. So, Keewatinoow is built under what's called the BNA, the Burntwood Northern Agreement. The Burntwood Northern Agreement essentially covers construction of converter stations and dams, generating stations, but does not cover transmission lines.

And to further clarify that, in 2009, we concluded an agreement with IBEW 2034 and the operating engineers, and 985. And so now we have something called the transmission line collective agreement, with the anticipation that this was put

together for the Bipole III project.

THE CHAIRMAN: Thank you. Mr. Mills?

MR. MILLS: Thank you, Mr. Chairman. Mr. Penner, on page 7 you have a slide showing a clearing right-of-way. Are you able to bring that up for us?

MR. ELDER: Sorry, Mr. Mills -- if I could just, Mr. Sargeant, add to your question regarding the BNA. So just to give you a picture, in the north, the northern converter station will be built under the BNA. The hiring preferences for there are, northern Aboriginals from the area is the first tier. Second tier is existing northern unions. Third tier would be northern Aboriginals. Fourth tier would be northern residents. Fifth tier would be southern union members. And sixth tier would be Manitobans. And then the seventh tier would be when we hire somebody from out of Province.

So at the northern converter station we will be governed by the BNA. The transmission line will be, as Glenn has explained, will be mandated under the transmission line agreement with the preferences he stated. And then in the southern Riel site, where we don't have a labour

agreement, we will be putting the same preferences in our contracts for Aboriginal preference.

THE CHAIRMAN: Is that listed somewhere in the 800,000 pages of information that we received, or if not, could you provide that to us?

MR. ELDER: Sure, yes we could. Yeah.

THE CHAIRMAN: Thanks.

MR. MILLS: So just to confirm, you indicated that in the north your first hiring priority is northern Aboriginals; is that correct?

MR. ELDER: What I said, Mr. Mills, is for the northern converter station, which falls under the Burntwood/Nelson agreement, those are the hiring preferences for that.

MR. MILLS: And then later I heard you say those same preferences will hold for the southern work, southern and central work?

MR. ELDER: What I said, for the southern work there will be an Aboriginal preference through contracts, it's not through a labour agreement.

MR. MILLS: If on that northern project Aboriginals are the first priority, in the central region are Aboriginals the first priority?

MR. PENNER: To answer the question I'm going to repeat the hiring preference for the central sections, which is where Pine Creek is in. We have local Aboriginal to project area.

MR. MILLS: First priority?

MR. PENNER: As first priority.

MR. MILLS: That's all I need, thank you. I just want to keep this short. That was my point.

THE CHAIRMAN: Yes.

MR. MILLS: Can you call up the clearing ROW slide at the top of page 7 for that screen?

MR. ELDER: Is this the slide you're looking for, Mr. Mills?

MR. MILLS: No, it's beyond that.

Mr. Penner, is that example of width and thoroughness of clearing, would that be typical to what would take place through the forested area above Pine Creek, across the river watersheds?

MR. PENNER: This is an example of clearing on the Wuskwatim project. And actually the width of this clearing is 120 metres wide, because there's two transmission lines through

there. This is a double width corridor. But I use this picture to identify the stacks of timber, and I thought it was one of our best pictures to show. So it is actually twice as wide as what the Bipole transmission line right-of-way would look like.

MR. MILLS: Thank you. Your proposed construction schedule where the right-of-way clearing crosses the North Duck, South Duck, Pine and Slater watersheds above Pine Creek, what is your construction schedule for that work? So the central clearing portion of your work, assuming a licence issues to your schedule, when do you propose to do that work?

MR. PENNER: Our current construction schedule shows us starting, if we have a winter season, once we receive licence we will start working in sections N1, 2 and 3, the first season, and in the second season beginning work in N4. And our anticipation is that we may start in C1 and C2 in the second season, but it may be deferred to the third season as well.

We have a little bit of flexibility in terms of where we start and when we start in terms of that construction schedule. But at this point,

this is where we are expecting it to start.

MR. MILLS: If we use the distance across the Pine Creek watershed as being 90 kilometres, and if we assume your schedule, what's the duration of that work on the clearing portion only?

MR. PENNER: We would expect clearing in C1 to take, well, probably in the order of one winter season.

MR. MILLS: Four months, fair to say?

MR. PENNER: It's fair to say that approximately four months is what we would expect that to take.

MR. MILLS: Thank you.

THE CHAIRMAN: Can I just interrupt again? When you say season, are you talking years or are you talking three or four month periods? When you said season two or season three, was that a year?

MR. PENNER: I apologize for that. So for our northern construction, we can only construct in the north because of access. So when I have referred to a year, like season one would be year one. So N1, 2 and 3, we'd like to start in winter season one, followed by -- we expect

that N1, 2 and 3 will take at least two winters to clear. So the idea would be that we start clearing in the first winter season, and that may take us till end of March or April, it depends on when the frost starts to come out of the ground.

THE CHAIRMAN: What I was trying to get to was, Mr. Mills is asking you about the area around Pine Creek, the C area. When you said that will be season two, is that the summer of '13, or is that the next winter, a year later?

MR. PENNER: Well, we expect that there is a number of areas within C2, C1 and C2 near the Pine Creek area that are going to need winter construction. And so we would be looking at that. And what I meant is that that would be either winter two or winter three construction.

THE CHAIRMAN: Thank you.

MR. MILLS: Mr. Penner, I understand that the need for winter construction that you just described is, and I read it in your impact statement, is a form of mitigation of effect on the watershed. You prefer to work on frozen ground so that you can get your work done, return to a status, and exit. Is that fair to say?

MR. PENNER: Yes. Winter construction

is very important for stream crossing, for crossing any areas where the moisture is such that we would not be able to traverse across it in summer time.

MR. MILLS: In fact, your EIS and your responses make it very clear that you are relying upon frozen ground as the watershed mitigation where you cross above Pine Creek. Is that fair to say?

MR. PENNER: I think frozen ground is part of the mitigation. In my slides, and if I could have them, I believe the next slide?

So part of the mitigation at any stream crossing is to have a buffer zone where the trees are not cut the same as the rest of the right-of-way. And in this case, you can see the buffer zone where the trees have not been cut. And in this case, it may be a little bit difficult to tell, but in the first season we actually laid down pine valves (ph) across the roadway to prevent any erosion or sedimentation into the stream during the spring runoff. So once the first season of green growth came back in that area, that would no longer be needed, but it was to enable a mitigation measure to make sure that

there wasn't erosion or sedimentation in that stream.

MR. MILLS: Mr. Penner, thank you. Your right-of-way, as it crosses above Pine Creek, crosses four fairly significant waterways, and you have described the buffer zone that you offer. Can you confirm the depth of the buffer zone that you would provide where you cross those four waterways? Twenty metres, 100 metres, 200 metres? Could you arrange your pole spacing to give us the largest possible buffer zone? Could you give some comfort in the buffer zones?

MR. PENNER: Thank you. Could you just give me a moment?

MR. DYCK: The environmental protection measures in appendix 11(a), 11(1), identify the buffer zones and setback distances on all streams and sensitive sites, so they are recorded there.

MR. MILLS: Can you tell me what they are?

MR. DYCK: I believe it's 30 metres as the standard buffer and some are actually beyond that.

MR. MILLS: That's all I need, thank

you.

MR. DYCK: There's different types of operating methods within various areas.

MR. MILLS: Thirty metres is fine, thank you.

Mr. Penner, will any herbicides be used in the right-of-way clearing where it crosses above Pine Creek?

MR. PENNER: I'm sorry, you need to repeat that? I didn't hear the first word.

MR. MILLS: I'm sorry. Is it your plan to use any chemicals or herbicides in creating the right-of-way where you cross those waterways above Pine Creek?

MR. PENNER: We will be only using mechanical methods to do clearing. We will not use herbicides or chemicals to create the right-of-way.

MR. MILLS: Thank you. It may not -- I suspect the answer, so I'll let it go.

We have some questions of the -- we have great concerns that the right-of-way will affect the watershed. And I appreciate Mr. Chairman allowing me a touch of latitude and I'll move quickly with Mr. Dyck, but we have some

questions with regards to that.

Mr. Dyck, you, in both the EIS and in words here, have made very strong statements that the right-of-way clearing will have no effect on the watershed. Is that fairly accurate?

MR. DYCK: Standard practices in construction and clearing in the winter time --

MR. MILLS: I believe you said, as you spoke, that there will be no effect on the watershed?

MR. DYCK: I will just qualify that, okay.

MR. MILLS: I think --

MR. DYCK: Standard practices are that when you work on frozen ground conditions, there is virtually no soil disturbance, hence there's no interference with drainage patterns that are existing and, therefore, no effects on the watershed, or on the drainage pattern that's existing at that point.

MR. MILLS: So is it your position that the right-of-way clearing, the subsequent right-of-way and maintained clearing will have no effect on the watershed?

MR. DYCK: Yes, given the

circumstances and the mitigation measures that are put in place, there should be no effect on the watershed.

MR. MILLS: Thank you. Did you do any specific research with regards to the Pine Duck and Slater creeks and rivers where the right-of-way will cross them?

MR. DYCK: I am quite familiar with the area personally. I have worked in that area. It's at the foot of the Duck Mountain. The area in question there is permeated full of beaver dams, so there's not a huge gradient there, there's not a real rapid flow of water.

MR. MILLS: You'd be very familiar with that area with your work with LP in the '90s, is that fair to say?

MR. DYCK: With the Province of Manitoba, and with Repap Manitoba and with LP, yes.

MR. MILLS: Okay. I read the information that was provided, and I found it regrettable, but perhaps the best study of that watershed, the one you have just described, was provided by, in fact was commissioned by LP, and was provided by Watertight Solutions Limited. Are

you familiar with that study?

MR. DYCK: No, I'm not.

MR. MILLS: You aren't. Watertight was commissioned by LP to speak to the effect of clear cutting on the watershed above Pine Creek. This report regrettably was provided to CEC previously in an edited, photo-shopped draft form. After much digging, and I appreciate and acknowledge the support of the province, we obtained a copy of the report. And it clearly indicates that the magnitude of the increase in the flow is proportional to the area harvested in a watershed. And it states that water yield will change following any harvesting, and increases in annual water yield of zero to 60 percent as a result of harvesting are reported and documented in this report.

I'm disappointed that you haven't looked to that study as it specifically speaks to the effect of forestry and clear-cutting in the watershed. And I would ask if you could undertake to review that report? If you need a copy, we'll provide it, so that we could address it later on in the process with you specifically?

MR. DYCK: Sure, I can review that

report. One thing I would mention is that --

MR. MILLS: Thank you.

MR. DYCK: -- it's standard information that there's increases in water flow where there is a large scale forest harvesting, also where there are widespread forest fires there's increase in water flow in watersheds. Those are all standard readily available information.

MR. MILLS: I suspect you'll find that Watertight concludes that any form of harvesting or clearing will cause an increase in water flow, but I'll ask you to review that report and we can debate that later.

MR. DYCK: Yes, it certainly depends on the size of the area cleared.

MR. MILLS: One final question, Mr. Dyck. When you worked for Lac Seul First Nation, did you not conclude that any form of harvesting in their forestry region would increase water flow in the watershed?

MR. DYCK: Say that again, please?

MR. MILLS: When you worked on the Lac Seul study, did you not conclude that any form of harvesting in that watershed would increase water

flow?

MR. DYCK: We're talking about a loss of use study?

MR. MILLS: Yes.

MR. DYCK: Give me the context here, what are we comparing?

MR. MILLS: It's in your CV, you can refer to it.

MR. DYCK: Oh, you're taking this from the CV?

MR. MILLS: You list this in your CV, I read the report.

MR. DYCK: Okay. I'm just trying to get context here. What was the context of this?

MR. MILLS: You stood in front of us and made a very powerful unequivocable statement that the right-of-way clearing of Bipole will have no effect on the watershed. I have information from others that indicate that it clearly will. And I believe that you supported that argument in the Lac Seul study you contributed to. So I'm just tying to reconcile your position as you work for Hydro and your position as you worked for Lac Seul on a previous watershed concern.

MR. DYCK: I think the context is

entirely different here if you were talking about the loss of use study over a large area and the events that took place in a historic sense, it's a completely different project.

MR. MILLS: Well, we'll get back to that later on. Those are my questions of these two gentlemen.

Mr. Penner, in closing we observe that the default setting on mitigation in the watershed for Hydro appears to be frozen ground, and we discussed this at a community meeting, and it seems fascinating to us that that is relayed upon with such consistency. The elders of Pine Creek First Nation are prepared to offer to you a pseudo Ojibway contiguous cold water prayer to ask Mother Earth in that regard. And the Chief wanted me to let you know if you'd like, we can forward a draft of that form of agreement for your consideration. I'm joking.

Thank you, and we'll get back to these in our presentation.

THE CHAIRMAN: Thank you, Mr. Mills.

MR. BEDFORD: In order for Mr. Dyck to fulfil the undertaking he's just given, Mr. Mills will have to provide us with a copy of this

Watertight report to which he referred?

MR. MILLS: Then we will.

MR. BEDFORD: Thank you.

MR. DYCK: And if I could just clarify, the Lac Seul study, that it had to do with a reservoir flooding environment, that's what that work was about.

MR. MILLS: I have read the report. Thank you.

MR. DYCK: I was just trying to put context to that.

THE CHAIRMAN: Thank you. We'll take a break for lunch in a moment. When we return from lunch, the order on the list will be Bipole Coalition and Consumers Association of Canada. That's all. We will adjourn now and come back for one o'clock please.

(Proceedings recessed at 11:55 a.m.)

(Proceedings reconvened at 1:00 p.m.)

THE CHAIRMAN: Okay, I think everybody is ready to go, I see, Mr. Meronek just anxious to get at it, and Mr. Bedford also. So, Mr. Bedford?

MR. BEDFORD: Mr. Elder, on Wednesday morning, I understand gave an undertaking regarding the distance between Gillam and Keewatinoow, and he ready to answer that undertaking, and he is ready as are his colleagues, for questions.

MR. ELDER: Just to clarify the distance from Gillam to the construction site, is 79, approximately 79 kilometers. The discrepancy, the construction site is about 15 kilometers long, so, it depends whether you are measuring to the converter station, or to the camp.

THE CHAIRMAN: Thank you. Any other housekeeping matters? We will return to examination of Hydro. Mr. Meronek?

MR. MERONEK: Thank you, Mr. Chairman. I am trying a little experiment this afternoon, I have gotten rid of the sidewalk rails, and I am going to ride my bike without binders today.

THE CHAIRMAN: We are all anxious to see

what happens.

MR. MERONEK: I just have a few questions, actually. I just want confirmation from the panel as to the construction schedule for agricultural Manitoba, the intensive agricultural land. Am I in correct understanding it is going, the construction will take place in the winter season?

MR. PENNER: No, at this time, the current plan would be we would start in the second summer season in the south.

MR. MERONEK: I think it is evident that that is probably the worst time of year for construction on agricultural land. Is there any reason why it couldn't be done in a different season?

MR. PENNER: Looking through our planning, and reviewing, the amount of time that we have to construct the project, we are constrained in the north to the winter season. And we only have, what is left is the spring, summer, and fall. Spring of which is typically extremely wet, very difficult to do any kind of construction, or moving any equipment due to road restrictions. So the remainder is summer, and fall. If we are going to meet our in-service date of 2017.

MR. MERONEK: Is that inviolate, or is

there any flexibility in terms of seasonal construction in the south?

MR. PENNER: I am sorry, could you repeat that question.

MR. MERONEK: I said is that schedule inviolate, or is there any flexibility in considering doing as much construction in the south as possible in a season other than the summer?

MR. PENNER: Our schedule is very firm right now. We are constrained with those five years. It is going to be difficult to complete the project in that time period. We will do our best to construct in the summer, and fall periods, avoiding the springtime. But it is, we are certainly very constrained in our time.

MR. MERONEK: I take it the fall back position, is it will all get sorted out through compensation?

MR. PENNER: Our intent would be that we notify agricultural, farmer ahead of construction time which year we would be going through those areas. And we would hopefully let them know prior to them putting a crop in that area. And if not, if they have put a crop in, we would certainly look at compensating for crop damages, and any kind of damage

as a result of the construction process.

MR. MERONEK: Thank you. Just on another topic, as I lay awake at night, last night struggling to get to sleep, sounded like Mr. Tymofichuk, I was thinking about ground electrodes. And in Chapter 3 of your EIS, there was some narrative on the current flow, and the voltage flow for ground electrodes. The ground electrode line operation, and the spin wheel of the ground electrode. And, as I understand the narrative, there is low voltage in normal situations for the ground electrode, but at times, when there is maintenance, or when there is repair, a malfunction, that increases to some extent, did I capture that correctly?

MR. ELDER: Yes. So from a safety perspective, I think is your question, when we are operating the electrode, the safety to personnel would be no different than when we are in the bipolar configuration. A good example of this, is the two electrode sites around the Dorsey area, there is no fencing around them. There is agricultural production around them. So, from a step potential, human health issue, there is no concerns.

MR. MERONEK: So, as I understand it, I am advised, that there have been situations with Bipole

I, and Bipole II, where there has been a monopolar mode in operation for several months at a time, which would increase the voltage in terms of the earth gradient. Is that -- is that accurate?

MR. ELDER: Just one moment please. My understanding, is we haven't had situations where we have had multiple months of monopolar operation.

MR. MERONEK: To the extent you have, has that been measured as to what the voltage at the earth gradient is over what distance?

MR. ELDER: Sorry, could you repeat your question?

MR. MERONEK: Yes, in situations where there has been monopolar mode for Bipole I, and Bipole II, has there been a measurement as to what the resulting voltage for the earth gradient would be in those locations?

MR. ELDER: Are you talking step potentials in the general region?

MR. MERONEK: Yes.

MR. ELDER: Yes, that was done as part of the planning work for Bipole III here.

MR. MERONEK: Could you advise me as to what those measurements were?

MR. ELDER: Not off the top of my head, but

we could certainly get you that information.

MR. MERONEK: Appreciate that. Lastly, Mr. McGarry yesterday punted these questions to an engineer, and I am not sure how many more opportunities I will get to talk to an engineer. But, when it, when it came to the decision of Manitoba Hydro to move the routing off road allowances for reliability concerns, and clearance violations, did any of you gentlemen have a role to play in those decisions?

MR. PENNER: I don't think anybody at the panel had a role in any of those decisions. Can you ask specifically, what, what the question is?

MR. MERONEK: We discussed yesterday that the agricultural technical consultant had, or at least the initial routing for Bipole III was along a half mile line, then it got changed to a road allowance, and then because of a couple of concerns that Manitoba Hydro engineers had over potential accidents, and signage violations, that the decision was made by Manitoba Hydro to place the towers more into the farmer's fields. And I got the impression from Mr. McGarry, that was an engineering decision and I just like to ask an engineer from Manitoba Hydro, as to why --

MR. PENNER: Can you give me a moment to confer with my colleagues?

MR. MERONEK: Sure.

MR. PENNER: I think I spoke to some of this a little bit earlier this morning. The right of way is adjacent to the road allowance, and the towers are on the center of the road allowance. So the 33 meters that we talk about the tower being offset from the road allowance, is the center of the right of way. So that the right of way is not inside of the road allowance except where, what I understand, that we heard from farmers, that between Highway 16, and Riel, there was an additional 9 meters added between the road allowance, and the right of way so that the towers are centered 42 meters from the right of way -- or from the road allowance.

MR. MERONEK: I heard that this morning, but, and maybe I will have to save this for the agricultural consultant, but my understanding is that the towers were going to be placed closer to the road allowance, but, that Manitoba Hydro engineers decided for safety reasons, that is vehicles, may crash into the transmission towers, or there might be a sign put up that might impact the transmission conductor

lines, the decision was made to move, to route further in field? Are you aware of that?

MR. PENNER: Yes, I heard that discussion yesterday. I think there was certainly some confusion around where the towers would be placed and possibly in initial stages of some of those discussions, but from an engineering perspective, it was always seen as the towers would be on the center of the right of way.

MR. MERONEK: So these, this reliability concern, and signage clearance violation that was spoken about in the agricultural technical report was inaccurate?

MR. PENNER: A moment, I am just going to confer with my colleagues.

MR. PENNER: I understand, in discussions with my design colleagues, that over the last ten years, that transmission lines through southern Manitoba have typically been placed in the center of the right of way. Their may be some older installations of transmission lines where they are moved closer to the edge of the right of way. It becomes an issue with the conductor swing out in term of, we don't control outside the right of way. And, so, we can't control what could get placed in the

road allowance. So, it becomes maintenance issues, when it comes to ditching there are other issues with the foundations.

So, in regards to your question, whether that, the technical report is incorrect, there may be, may have been some confusion between the report writer, and the intention of the design engineer.

MR. MERONEK: Just, and we will cover that off, when the time comes, but just as a follow-up question, you may not have any control over the property between the right of way, and the, and the road allowance, but clearly, if through discussions, and cooperations with either land owners, or whoever owns the land including municipalities, clearly you could discuss with them as to whether or not it would be a good idea to put signs up or not? Isn't that a possibility?

MR. PENNER: I am sure there would be a possibility for discussion amongst those things, but again we don't control that, and our, like I said, our standard practice is to have the transmission towers in the middle of the right of way so that we avoid any kinds of concerns that may go on outside of our right of way.

MR. MERONEK: There aren't really any

safety issues are there, sir, with respect to placing the transmission lines closer to a road allowance that can't be alleviated by putting barriers up?

MR. PENNER: I am sorry, could you repeat that question.

MR. MERONEK: Yes, one of the assertions is that having a tower close to the road allowance creates an opportunity for vehicles running into the transmission towers, and, and causing damage. And, I am simply suggesting to you, that that could be I eliminated by having a barrier placed along the side of the road where there is a tower?

MR. PENNER: I mean that, that certainly a possibility of a method for sure. It also becomes the, the barriers, if such were placed could also be essentially, a hazard to the driver. It is not just the tower that is a safety concern in that matter.

MR. MERONEK: Well, I don't want to be giving evidence, I guess, in court proceedings you call this judicial notice, I guess you could call it quasi-judicial notice here, but if you drive along Wilkes Avenue, and the corner of Wilkes Avenue, and Waverley, one route is 70 kilometers an hour, one is 60 I believe. There is a horking big transmission tower, with a big barrier right on the corner, are

you familiar with that?

MR. PENNER: I think I have seen it, yes.

MR. MERONEK: Is there any reason that can't be accomplished in the country side along road allowances?

MR. PENNER: It is probably a possibility.

MR. MERONEK: Thank you, sir. That wasn't so bad. Those are my questions.

THE CHAIRMAN: Thank you, Mr. Meronek, that wasn't bad at all.

Mr. Williams? Mr. Dawson? Let's just have -- Mr. Mills.

MR. MILLS: We have very brief questions, with Mr. Elder, if we would be allowed to go now.

THE CHAIRMAN: Certainly.

MR. MILLS: Thank you, Mr. Chair. Mr. Elder. Your construction schedule indicates 2013 licence acquired.

MR. ELDER: I am sorry.

MR. MILLS: The information you provided us your construction schedule slide indicated 2013 licence acquired on your construction schedule?

MR. ELDER: That was an assumption.

MR. MILLS: Based on that assumption your subsequent slide called, Current construction project

activities that are underway such as procurement, camp contracts, engineering and contract development, and development of project staffing, could you give us some sense of what your throw away costs are, as of today? In other words, if the licence wasn't granted, or if it was granted in a form that didn't allow Hydro to proceed with this work, how much money does Manitoba Hydro have as throw away costs today, and what would those costs be assuming you continue this work to the date of licence acquired? And rounded to a million bucks, would be fine. But, we get the sense that you are spending money, and we would like to understand how much, and, and at what rate. Am I clear?

MR. ELDER: Yes, just give me a second please.

MR. MILLS: If you want to provide it as an undertaking and give us more accurate information later, I would actually prefer it. I would like, a good number, that we can rely upon.

It is late on a Friday, I don't need to spend the time while we do this if you want to bring it back later.

MR. ELDER: Just one moment.

THE CHAIRMAN: If you you can provide it

now, I would prefer you do that.

MR. ELDER: Mr. Mills just so I am clear on your question. You are asking what the sum costs are on the project to date?

MR. MILLS: Yes.

MR. ELDER: For overall Bipole III project.

MR. MILLS: I would love that number. I was looking at your converter work. I would prefer the overall Bipole. But I was responding to your providing us with the two converter stations, the construction schedule, and the work that you have under way, in anticipation of a 2013 permit.

MR. ELDER: What I can tell you, is I don't have the man hours spent to date. Obviously, on the licencing piece, and that the major contracts that we have let is, is the lagoon work, the and that is to get that prepared should we get licenced.

MR. MILLS: Yes.

MR. ELDER: The camp work, and --

MR. MILLS: Engineering, and contract development?

MR. ELDER: I don't have those numbers, but we are probably, on the contracts we have let on the converter station side right now, we are around 45 million dollars.

MR. MILLS: So 45 million dollars would be the converter station throw away costs if the permit doesn't proceed?

MR. ELDER: Those are the contracts we have let, and that is roughly the value of the contracts we have let to date.

MR. MILLS: You are all in. Thank you.

THE CHAIRMAN: Thank you, Mr. Mills. I would like to just take a couple minute time out, so the panel can confer, we have a number of questions that we have prepared, but we haven't really had much discussion about it because we didn't think we would get to it this afternoon. Let's take a short time out, two, three, four minutes and we will get back to it And carry on for another hour or so.

(HEARING RECESSED BRIEFLY).

THE CHAIRMAN: Okay, end of the time out. We, we are going to proceed with our questioning, it may be slightly stilted, because I am just going to be reading questions off of a page as they were written without having really digested them. So, first, other panelists have some other questions, that we will address first, but, before we even do

that, I understand, Mr. Mazur, and, or Neufeld have some clarification to make.

MR. NEUFELD: There were two items, that, two questions that were discussed earlier, the one was addressed by Mr. Meronek, with regard to putting bollards or protection devices around towers that could conceivably be used closer to, close to a roadway.

The nature of Bipole III, is such that it is a major transportation corridor. We would want to reserve the, the full reliability of that facility, specifically as it relates to the towers, and not, not move those, have the alternative of having those towers closer to a roadway. Mr. Penner talked about the safe, the concerns, about safety as it related to vehicles. If you have got those bollards closer to a highway, and certainly on a day like today, I think we can appreciate that there is going to be a lot of cars slipping into the ditch, so that is a concern. We wouldn't want a tower exposed to, for example, a semi taking it down. It is carrying a lot of power. We would just like to clarify that those towers should remain further away.

THE CHAIRMAN: Thank you. Mr. Gibbons, you have some questions, on construction points --

MR. NEUFELD: One other item if I could clarify, it is with respect to the grounding electrode. I would add to what Mr. Elder referred to earlier in terms of the design of the grounding electrode, and the question that was raised whether there would be a voltage rise as a result of a prolonged period of time running monopolar. And, that is not how it works. If we recall, my brief explanation this morning in term of looking for places that have good ground conductivity. Good conductivity means you won't have voltage rice, what happens is over a prolonged period of time the soil will start to heat up, but that is taken into account with the design parameters.

THE CHAIRMAN: Thank you. Does that cover it now?

MR. NEUFELD: That covers it.

THE CHAIRMAN: Thank you. Mr. Gibbons, on construction questions.

MR. GIBBONS: Yes, several points of clarification, and further information. And no need to go back to this particular slide, but there was, in the, this is for -- sorry, for Mr. Penner, slide 7, without going back there, showed a piece of machinery, and you were saying earlier that when it,

when you do the clearing of the right of way that it removes everything above the surface, but retains the root ball, so that underbrush can regrow, and so on. Since there has been concern raised by not only during these hearings, but prior to the hearings and submissions from different groups, and the idea of country food, the example, one example was harvesting blueberries, et cetera, do you have a sense, given that type of clearing method, how long it would take for those shrubs to come back, and I am imagining among those shrubs, would be blueberries and things of that nature. From past experience, does it take a period of time until shrubs are able to produce things like blueberries. I am not sure in other words, the clearing, it creates an area, that is more or less dormant in terms of food production.

MR. PENNER: I am going to check with my colleagues, in terms of the blueberries.

So, we have a couple of different methods of clearing. With this method of clearing, what I explained earlier, is that it doesn't take the root mass, and it doesn't dig up the soil, and so it does take, the first season back, will you see grass growing, immediately, grasses, but shrubs take a little longer to come back, it maybe several seasons

specifically blueberries.

Now the typical area that we will find blueberries in, will not be in areas of heavily forested or wooded areas, it would be typically more of the open area where there are few trees and if you turn the slide to the next page, next one again yet. That, this feller buncher type of equipment, would be going in, and you wouldn't get that ground tramping. We would be going in, with the this equipment cutting selected trees. As opposed to coming through, and shearing that all, all of that off. Is that clear?

MR. GIBBONS: It means in that context, blueberry bushes, and other bushes of that sort would be relatively undisturbed.

MR. PENNER: In areas of traditional use areas for blueberry gathering, our Environmental Protection Plan, when we go, like, say, for instance, in C1, or the Pine Creek area, we will go to that community, and clarify where their blueberry picking areas are, and we will mark them out as environmentally sensitive areas, and we will work through those with selected clearing type operations. And that is our typical procedure. As we refine the construction Environmental Protection Plans, for each of the sections.

MR. GIBBONS: Great. Thank you for that. Now, the other questions, are all related to the slide that was there a moment ago, number 14. The one with the buffer zone on the river. And, here, I am trying to get a clearer sense of the reasons for, for the clear cutting that does occur. One of the things that, to, to a non-engineer, an amateur on the outside looking in, might ask, is, why the buffer zones, sorry, why the ROW normally could not look more like the buffer zone in the sense that, that, there is a lot less clear cutting done in that context, lot of trees retained, and so on. Clearly part of that has to do with the sway, and so forth, in the line, and so on.

Can we get a better sense of what the right of way would look like after a few years, in terms of what kind of growth might be seen in a right of way say, five years after the original cut? This, for me, to me, for example, looks, like it is a relatively recent cut.

MR. PENNER: Yes.

MR. GIBBONS: There wouldn't be under brush growing, and in addition to under brush, whether or not small trees, small types of trees, up to a certain height would be permitted in the right of

way, so it was not as barren looking as this might look. So, can you give us a sense of how that might occur, and the period of time it might take to occur.

MR. PENNER: In the three or four, or five years as you suggest after the right of way has been cleared, the grasses grow, because the root mass has not been disturbed, there will be bushes, those things start to come back, and trees start to come back as well. Although, in a northern environment the trees take a fairly long time to grow back in.

So, yes, the right of way certainly greens up very quickly, and it is a matter of the trees that are not going to be growing in, and becoming danger trees, are not something that we would necessarily go, and remove. But trees, that, end up, or we know they are going to be growing and have the potential to grow into the conductor, those are trees that we have to get after. And, we can't, we can't go in, and trim every year, and try to trim every tree, so, what we have to do, is when we are in an area, and, we know that that tree may grow in five years, and be done, we have to get over those specific trees, with a targeted herbicide.

MR. GIBBONS: This is a selective process.

MR. PENNER: The herbiciding would be a

selective process.

MR. NEUFELD: There are NERC reliability standards to which we must adhere, these are for lines 230 kV and above, there are certain limits approached that are not allowed by NERC reliability and tree that exceeds the growth level needs to be cut down.

MR. GIBBONS: Now, one of the things that has come to our attention, in preparation for the hearings, is that there are different approaches to the ROWs. And, one of the examples, that we have encountered, is from the state of New York, where there is a kind of a differential growth pattern within the right of way depending on how close the growth is to the tower, taking into account the sway, in the line, the sway is greater in the middle of the line, but it is less, as you get to the towers, correct, as you get to where it is anchored, sorry, when you get close to the anchors, it doesn't sway as much, the anchors being the towers.

Is there, in terms of the Hydro standard practice, consideration of those kinds of questions? I understand that they might be more difficult to deal with, in terms of maintenance, and, that it is a much more variable kind of right of way maintenance,

that would be required, but is that part of Hydro's, normal practice, so, some --

MR. PENNER: Just a moment, I am going to check with my line maintenance colleagues. So, in conference, with my maintenance colleagues, what naturally occurs, is that the shrubs along the sides of the right of way are allowed to grow a little bit larger, and you end up with a kind of an arcing pattern. We allow for larger growth on the edges, but we need to maintain in the middle, cleared. And, then, I think you were referring to allowing near the tower bases to have more trees growing, and in our situation, with guyed structures, the area around the guys, needs to be cleared, because those trees become a danger, or a hazard for the those trees, to fall on the guy wires as well as on the conductor.

So, it doesn't really help to have that kind of in and out hour glassing. Typically in the center span, that is where the furthest that the conductor can swing out. And typically, on average where the lowest part of the conductor is. But as you get closer to the tower, certainly the conductor is higher, but because of those guy wires, it is important to maintain the edges of the right of way around those guys, so a tower can't fall on a guy --

or a tree can't fall on a guy wire.

MR. GIBBONS: That still leaves open the question of the self, the towers, that don't require guy wires, could that be done in those areas where, where the un-guyed towers might be located?

MR. PENNER: Well, the un-guyed, or what we call the self-supporting structures, will only be used in agricultural land. So --

MR. GIBBONS: Only in agriculture --

MR. PENNER: So we are using guyed structures throughout the remainder of the project.

MR. GIBBONS: Okay.

MR. NEUFELD: The other item I might add, you referred to the New England area with your reference, I believe you referred to the New England.

MR. GIBBONS: New York state..

MR. NEUFELD: In that entire part of the grid it is probably some of the dense, most dense transmission corridor, that you will find in North America. And there is, the lines tend to be shorter, in a more constrained geographic area, and more just in time tree trimming, is something that is more doable. Here we have a transmission corridor, along with a lot of our transmission, by virtue of the topography and generation and the load work in this

province, we have go generation in the far north along a lot of transmission lines. That is a lot of area to clear, and we just wouldn't be staffed up to do the sort of more just in time type of tree trimming.

MR. GIBBONS: Thank you.

THE CHAIRMAN: Mr. Motheral?

MR. MOTHERAL: In keeping with the right of way, as a prime example, I would like you to pull up a picture, this is on the route site selection handout on page 23.

THE CHAIRMAN: I am not sure they have that one up.

MR. MOTHERAL: I was wanting to use it as an example. Is it a policy of Manitoba Hydro to clear the complete right of way no matter what dense, how dense the vegetation is?

MR. PENNER: Is there --

MR. MOTHERAL: Is there a possibility of leaving some. I just happened to see a picture here, where there is maybe only 40, or 50 trees in two miles. Is it completely cleared before construction?

MR. PENNER: As my colleague Gerald Neufeld indicated previously, that it, it is very important

that trees don't grow in. However, there are locations where there is stunted growth, and, where there is environmentally sensitive zones, such as caribou calving lands, where we do leave the trees. And, but it has to be, and when we go through areas like that, we will select trees, we refer to as danger trees, there is a calculation to figure out the height of the tree, where the conductor could swing to, and then those trees are removed once the conductors are strung in place.

So, there is some selective, but, for the most part, trees that are expected to grow into the conductor, will be removed.

MR. MOTHERAL: Thank you. I just want you to realize that there are opportunities to leave several areas undisturbed because of the less dense.

THE CHAIRMAN: Ms MacKay?

MS MACKAY: In looking at the development of the Keewatinoow site, you told us that you needed to take out the permafrost prior to starting the construction in preparation of the site. And, we saw a bit about permafrost also when we saw Gillam townsite, and the new areas there. I wonder if you could just tell us a little bit about how you prepare the site, to thaw the permafrost, and what the impact

of that is on the site?

MR. ELDER: I will do my best, I am a mechanical, so my civil colleagues, will be cringing in the stands. So, yes, the site will tend to be, will have low lying areas that maybe wet. There will be permafrost in the area, so typically what you do is you will excavate down, and let that permafrost dry out. Pull out all of that, that poor material, while you are doing, if you are around any creeks, you put silt control measures in, so you are not running anything into the creeks.

So, on a large site like we have got here, we will, we will tend to develop zones, so put some bridging in, roadways in, so we can work the site. So, if there are some wet areas we can't get in the spring, website continue to work other parts of the site. But the basic concept is to dig out the permafrost, and the poor material, and then build it back up with good material. So if you look in, in this picture here, there is all of these brown, are existing granular deposits that have been identified to help build that site back up.

MS MACKAY: About how long does that process take?

MR. ELDER: Again it is really weather

dependent, we are thinking about 18 to two years, to build the site.

MS MACKAY: So it is two years, before you are beginning construction?

MR. ELDER: Construction of installing the converter equipment, yes. It is about two years to develop the site off camp.

MS MACKAY: If I may, I have one other small question. This is a slide 23, I think. Just for information. This is the work force accommodation. I think. Doesn't seem to be. I am on page 11.

MR. ELDER: Please bear with me for just a second.

MS MACKAY: There it is. Just out of curiosity, on the right hand side, we have the supervisory staff accommodation, on the left the workers accommodation; is that correct?

MR. ELDER: Yes, that is correct.

MS MACKAY: Do the lines on those area reflect differences in the size of accommodation given to the two groups?

MR. ELDER: Yes, typically for a modern camp like this, I guess, maybe I will touch on the differences from a Wuskwatim camp for instance, there

would be gang washrooms, and -- believe it or not, that is one of the major driving forces from the construction forces, everybody wants their own bathroom. So, this camp will have that. And, then there is normally a couple of tiers of accommodations, so, on this camp, we have, this would be the craft dorms, and, I think it is around 130 square feet per room. This will be slightly bigger for the supervisors, and then there is a management complex, which will be a little bit bigger still.

MS MACKAY: Is it really only slightly different, it looks, like twice the size.

MR. ELDER: The buildings are the same size. The modules inside, so in this module, there is 110 rooms, and in this module there is 54 rooms, so the buildings themselves are the same size, but the rooms are bigger.

MS MACKAY: Is it the case now, that the craft, the room for the craft workers rooms, do have their own bathroom facilities, or are they still using shared facilities.

MR. ELDER: With this camp here, they will have all of their own bathroom facilities, they will have their own TVs, air conditioning, HVAC control for their rooms, and such.

MS MACKAY: Thank you.

MR. ELDER: You are welcome.

THE CHAIRMAN: Does that 130 conveyer feet include the washroom.

MR. ELDER: Yes. It does.

THE CHAIRMAN: Pretty small. Mr. Gibbons, you had a follow-up.

MR. GIBBONS: I am sorry, I did have a follow-up. And, it goes back to the guyed towers, versus the self-supporting towers. If I heard correctly, what I heard was that the self supporting towers, are only used in agricultural areas, and the guyed towers, would be used everywhere else. It does cross my mind, that there are different way of interpreting that. Does that mean only the central section, or central, and southern sections will have the self-supporting towers, and the north will have the guyed towers? Or are we taking about agricultural land per se?

In other words, in the central, and southern regions, particularly central there will be areas where the line is crossing land that is not farmland but could be forest or wet lands, swamp. Is it not technically possible to use the self-supporting towers in many areas that are not

farmland in order to minimize the footprint of that tower. And, to only use the guyed towers where it is technically required, in other words, where a self-supporting tower would not be possible?

MR. PENNER: So, there is a cut off. And, for me to get the exact spot. The self-supporting towers, will be used in the southern sections, and up to the point where the agricultural land ends, I believe, and then from there it would be guyed structures, and I can I can just check for you, if you would like further clarification on that. So, yes, you are right, there would be locations, in southern Manitoba, where we would be doing a river crossing, or where we would be crossing through areas, where it is not agricultural. We would be using self supported structures in there. We won't be intermittently putting in guyed structures. Bear with me one moment, and I will confer with my design colleagues.

My understanding is around the Langruth area is where we would be switching to guyed structures.

MR. GIBBONS: Now in that context, though the point of the question is whether or not it is possible to use the self-supporting towers, which do

have a significantly smaller footprint on the land than the guyed towers would have. In terms of clearing, and so on. We heard earlier, that the footprint, so to speak is 60, just under 64 square meters for a self supporting tower, and considerably larger for the guyed towers. In from the technical perspective, is it not possible that there are places farther north than Langruth, where one could use the self-supporting towers in order to reduce the amount of space that needs to be clear cut in order to keep the areas free of interference with the guyed towers? In other words, is there a technical reason?

MR. PENNER: There is a technical reason for using the guyed towers, as well. In the north, when, it is -- one of the things, I guess probably the first thing is that guyed transmission towers are significantly more cost effective to use. And Bipole I, and II, the guyed structures are used throughout, right through agricultural land. But in the north, guyed structures, are a much better structure from a point of view of being able to adjust, and, to make adjustments if towers tend to move.

What we typically have in southern Manitoba is clay, and good soil for putting in foundations.

In the north we struggle, in the north and central regions we struggle a lot more with bogs, and, with wet soils, and rock, and it is a, it is significantly more difficult to have a foundation that doesn't tend to move on us as much. And so, we get maintenance issues with tower bases going up and down with the permafrost. We don't, we don't typically come in, and remove the permafrost, we like to come in, and, do the minimal amount possible, to not disturb. But permafrost can cause us a number of issues with the tower base coming up and down. A guyed, structure allows, significantly more flexibility in being able to adjust the tension in the guys, and keep the towers relatively standing upright.

On previous lines, we have had corner structures, with four legs, like the self-supporting structure in, in this project we are planning to have guyed corner structures to allow that flexibility, because we end up spending a lot more time to get back in to repair four legged structures. So there are some maintenance issues, and engineering issues with using a self-supporting structure throughout the northern regions.

MR. GIBBONS: Perhaps my question is not precise enough. And what I am getting, I think, is a

sense that there is a dividing line where above this line you use one, below this line you use another, and I guess the question is, above -- is the decision made on a how should I phrase this? That you are making that there is a decision from Manitoba Hydro that everything above this line is done one way, everything below the line done another, not taking into condition local conditions.

MR. PENNER: There will be some of that, where self-supporting structures will be above Langruth location, in spots where using self-supported towers above that, but it is going to be, it will be limited as we move into those locations.

MR. GIBBONS: That is the kind of things that could be done if the soil conditions were appropriate, in say a forested area, so that you could cut down the amount of space lost, to the footprint of the tower, is that, I mean, hypothetically, that is possible? That you could find spots where you could use a self-supporting tower, in order to use up less of that forest space than you would if you had the guyed towers.

You were saying earlier guyed towers require there will be no trees within the footprint of that tower because of the potential for

interference with the guyed wires, so the question is, are there times when in nonfarm situations, such as in a forest, where the conditions would be appropriate for you to use a self-supporting tower in order to reduce the amount of footprint that the tower creates by virtue of its guy wires.

MR. PENNER: I understand your question. Just give me a moment, please.

So, yes, there could certainly be areas where a self-supporting structure would meet the criteria of the soil conditions, and be able to put them up. The issue becomes more of a cost issue. Once we are in the north with a guyed structure, it is significantly cheaper to put in a guyed structure as well, than it is to put in a self-support structure.

Now, depending upon the, the sensitivity of the zone, as to whether that would be considered or not. Is something that would have to be looked at I guess.

MR. GIBBONS: Thank you.

THE CHAIRMAN: Mr. Mills, you have had two kicks at this can. What, what what are you up to now?

MR. MILLS: Mr. Chairman, we believe we

heard a contradiction in Mr. Penner's testimony, and we would like one minute to confirm what it is.

THE CHAIRMAN: One minute.

MR. MILLS: Mr. Penner, an hour and a half ago we believe you indicated no herbicides would not be used in the right of way creation. And just now you made reference to stump treatments in the development of the right of way. Manitoba Hydro's vegetation management practices indicates that stump treatment involves the application of a herbicide. We ask that you confirm, that within the water sheds of the North, South Duck, Slater, examine Pine, that herbicides will not be used, can you confirm that in.

MR. PENNER: I think you are referring to construction versus maintenance. There will be no herbicides used during the construction portion of the work. Can you clarify, you said some sort of stump treatment.

MR. MILLS: You made reference just a few minutes ago, with regards to a stump treatment of larger growth trees. We were discussing danger trees. And you indicated how you would propose to deal with them.

THE CHAIRMAN: Did he specifically say they would use herbicides in that stump treatment.

MR. MILLS: Manitoba Hydro defines stump treatment as the application of an herbicide.

THE CHAIRMAN: Thank you.

MR. MILLS: I heard the words come up and it tripped my trigger.

MR. PENNER: I don't recall the words "stump treatment", and I am a little confused about the question. We will not be using any herbicides during the construction. We did talk about selective clearing, and sensitive zones, that we would go in with the feller buncher machine, or, hand clearing, to clear selected danger trees. But, we talked about -- earlier we were talking about maintenance, and herbicides. That there would be selective spraying of trees five years down the road, for, for right of way maintenance. But, we did not talk about anything, and we wouldn't use herbicides in the clearly of the right of way.

MR. MILLS: Can Pine Creek assume.

THE CHAIRMAN: We will have to take Mr. Penner at his word, that no herbicide will be used. We will be at some other time be tracing ongoing maintenance. So you have had your one minute now.

MR. MILLS: You referred to danger trees, and a height. What is the height of a danger tree

on the Bipole III line.

MR. PENNER: There is a formula, and drawing put together, and it relates to the height of the conductor, the distance the tree is away from the centerline of the right of way, and, it is calculated based on that. So that it is essentially a fall distance from, if the tree is tall enough, could fall and hit the conductor, it becomes known as a danger tree, and must be trimmed out of the buffer zones that we show in there. So, that we essentially make sure any tree, the danger trees, can't fall onto the conductors.

MR. MILLS: I appreciate that, have we seen the description of danger tree heights yet, or is it information to come to us.

MR. PENNER: Can you repeat that?

THE CHAIRMAN: I think he answered that they are working on it. We haven't seen it yet.

MR. MILLS: We haven't seen danger tree heights yet, thank you, we look forward to that.

THE CHAIRMAN: Thank you, Mr. Mills, I will turn back to the panel questions, these are the ones I referred to earlier might sound stilted as I read them off.

In Mr. Elder's presentation the other

morning, page 3 top panel there is a list of main components of the job. And, I note that a couple of construction projects seem to be orphans, but you may be able to correct me. The proposed AC connector line, and the construction camp power line don't seem to be included as a major component of either the converter station construction, or the transmission line construction. Is there any particular reason for that?

MR. ELDER: Just simply divisions of work. Those, those packages themselves, are under our transmission business unit, and Mr. Penner could speak to those. These are the packages managed by our business unit. So.

MR. PENNER: I build, I look after the construction of the transmission. And I can answer any questions with regards to the collector, or the construction power line.

THE CHAIRMAN: At this point we are concerned, about why it wasn't included in either of these construction presentations.

MR. ELDER: We are a two-headed monster.

MR. PENNER: I apologize. The construction power line, is somewhere in the order of 28 or 30 kilometers long, in comparison to the larger Bipole.

All of the clearing, and the construction methods would be very similar.

THE CHAIRMAN: Okay, thank you. Switching to northern construction, and I guess it is just the season right now, is about a three to four-month season for northern construction?

MR. PENNER: That is typically. Last winter was much, much shorter.

THE CHAIRMAN: Yeah. If winters, we would all love, maybe not all of us, maybe you wouldn't, but most of us would like to have another winter like last year.

MR. PENNER: Not me.

THE CHAIRMAN: Perhaps if we could isolate a colder winter to where you need to build, the rest of us could enjoy balmier winters. That leads me, if there is a continuation of balmier winters, there is no doubt that climate is changing, and the climate seems to be warming up, albeit slowly, but still warming up. What would Hydro do, if the seasons become on a regular basis only two and a half, to three months long? Are there other ways that you might go about carrying out your construction?

MR. ELDER: For the converter station portion, it would have some scheduling impacts, not

as much, but on the, on the transmission side for this project, I think it would impact the schedule significantly.

THE CHAIRMAN: I am more concerned with the transmission side where would certainly come into effect, if the land doesn't free freeze.

MR. PENNER: We are certainly very concerned about weather conditions impacting project schedule, and even in summer conditions the construction of the AC switchyard at Riel, in the first year, we had -- if you can remember back in 2009 was one of the wettest seasons on record, we had a contractor who was placing clay on the site. And he could work six days, he had six full days of work between July, and August. So, it, is seriously impacted the speed at which we could do our work.

THE CHAIRMAN: Could you use timber mats, or -- is there kind of material that geo-technical cloth, something or other, that you could put down, would you consider doing that?

MR. PENNER: What really happens, is the first places to go, are some of the smaller stream crossings, as things start to thaw out. And we have to follow the DFO operating statement, and, so we don't want to put any debris in the water. And, so,

we can't -- so, those are typically the places, and, it is typically a few places that will start to get too deeply rutted, and for the most part we could access most of the line for an extra week or two, but that becomes a bit of a problem with doing that.

And we have done places where we have helped pack snow down, like the more snow we get the better off it is for us. The snow cover keeps the sun off the right of way. We do things like positioning the right of way roadway, so, that it is in the shade of the trees, along the edge of the right of way. There are a number of mitigating factors we try so we can work as long as we can.

THE CHAIRMAN: I think the DFO regulations would allow construction of culvert bridges, or other kinds of bridges, would you consider that, or would that be too expensive.

MR. PENNER: We would consider those types of things as well, yes.

THE CHAIRMAN: You have also talked, you talked a bit about access trails, and you said that you have identified about 50 useful access points right now. You also noted that you would, I think you said you would need an access trail, about every 30 to 40 kilometers. Have you ever thought of just

having limited access trails, and just running up and down the transmission line?

MR. PENNER: That, it becomes, an issue for travel along the transmission line. The, the travel distance, and the travel time it takes to get along a transmission, typically, you can travel ten to 15 kilometers an hour down a transmission line. And once you are out 40, or 50 kilometers, each day, to get to the next clearing site you are driving an hour and a half to two hours.

And we talked about winter construction. We typically, the guys will get up, and gals, will get up well before sunrise have their breakfast, and start to travel in non-daylight hours to get to the construction site because of where their camp is located and then begin work once day light appears, and work to sunset, which is three o'clock in the afternoon. And then drive back. So, the driving time becomes, a real issue around only having one or two access points.

THE CHAIRMAN: I think you also said as far as identifying other access points you wouldn't be able to do that, until you have identified the centerline of the right of way; is that correct?

MR. PENNER: It typically, as we move

along, there may be efficiencies to, we may run into obstacles, or environmentally sensitive zones, or large cliffs, and hilly terrain where it is just not, it is just not practical to access that, and we don't, it is very tough to know, until you have kind of ground truthed it, in fact, when we make bypass trails, that is typically what is is done. You get to a site, you can't get your equipment in the right of way over the hill, and typically someone will walk the area to find the best route to get the equipment around, and through. And that is typically how that kind of work is done. It is very difficult to do that work from topographical maps the detail is just not there.

THE CHAIRMAN: Pages 12, and 13 of your presentation, you show a tower assembly, and tower erection, and foundations. Do you have any idea where that was?

MR. PENNER: Can you bring that slide up? That picture?

THE CHAIRMAN: It is, it would be probably slide 23, 24. They are self supporting towers.

MR. PENNER: Yes. That is actually, that -- back up, that picture right there we just completed that, it was this spring, and there is,

that is a transmission line that goes between our new Transcona East station, and Transcona Day Street station, so that tower is located on the Floodway right of way.

THE CHAIRMAN: It is just the edge of the city.

MR. PENNER: Yes, there is another, that photo, that was taken earlier this spring, it looks like it is April 17. And, that, is near our Brandon GS that was for a new line constructed there.

THE CHAIRMAN: Okay. Now we noted sort of some differences in the different elements, or stages in northern, and southern construction. In southern construction, you just listed three stages, foundation, towers, conductor. But, in the north, there is also off corridor, and right of way temporary access, temporary water course crossings, and clearing. Is there no clearing, or water course crossings that you need to deal with in the south.

MR. PENNER: Certainly we will be crossing a number of rivers, there will be some selected clearing, as we cross those rivers, or go through zones. What I tried to do was give a broad overview of the two construction methods, and in the south, the, what I listed there, as the three things that

are typically the main components, are the main components, and in the north, it, really is, a large clearing operation, before the construction can begin. And that is why, I listed the construction kind of as one item. The construction of the foundations, and anchors, and towers.

THE CHAIRMAN: I think somewhere in EIS you talk about just fording streams, will you be doing that very often, fording streams? Can you even do that, under DFO regulations.

MR. PENNER: In the north, we would -- well, we would cross frozen extremes.

THE CHAIRMAN: Frozen, yes.

MR. PENNER: I don't think in the south we will have, unless it is a femoral stream, that is a dry stream bed possibly, but no. The access is too good, that we shouldn't have an issue with that.

THE CHAIRMAN: That brings me to the next question, then, will there be need for any access trails in the southern, or central sections of the line?

MR. PENNER: One moment. I just wanted to, I had to confirm with my colleague. Very, I would say, it would be very insignificant, very minor need to access trails. Without reviewing carefully

all of the locations of the river crossings, and, there are, we just did a crossing up near Roblin, where we repaired some towers, and, we needed a small trail down to the tower there. That was already existing, that we had to reopen up. But, so, it would be very limited types of trails. And, we have, certainly, kind of canvassed the entire line, and, looked at where the access is, and, it is typically right off of, off of the mile roads or any other developed features.

THE CHAIRMAN: In, in the EIS, it states that approximately 3355 hectares, of upland forest vegetation will be cleared along the corridor. Do you know how much of that would be in the central, and southern sections?

MR. PENNER: Not off the top of my head.

THE CHAIRMAN: Would it be difficult to get?

MR. PENNER: Let me take it as an undertaking and see what we can do for you. I know in the southern sections it is going to be very limited. It would just be in river crossings. In the central sections we do have areas we have areas designated winter only, and certainly areas that need to be cleared, as Pine Creek has referenced, near

their area, there are certainly some clearing, I will take that back, if that is is okay.

THE CHAIRMAN: Sure. And ballpark figures, would be sufficient.

MR. PENNER: Okay.

THE CHAIRMAN: I think this is probably my last question. But, you also, in the EIS, you refer to 21.24 hectares of registered wood lots which will be cleared. Are there any nonregistered wood lots, that will also be cleared, or that you are aware of?

MR. PENNER: One moment please. At this point we don't have an answer to that question. Whether there are any nonregistered wood lots, we think that possibly, John will have, has that inventoried, and we could look that up, if you would like.

THE CHAIRMAN: Sure, that would be helpful.

MR. PENNER: Okay.

THE CHAIRMAN: Thank you, now, are there any members of the public, who have questions of Manitoba Hydro on this issue? Strictly related to the construction of the converter stations, or the transmission line? No?

Well, I guess that brings us, just about to

the end of week one. When we reconvene, we will not be reconvening in Winnipeg for about three and a half weeks. When we reconvene, we will have brief periods, basically, just Mr. Madden, and perhaps the panel some examination on aboriginal engagement, and, on construction. After that, we will turn to new presentations by Manitoba Hydro.

Next week we are in Gillam as most of you know, and I suspect we won't see have many of you at all. Mr. Meronek?

MR. MERONEK: Thank you, sir, I was just looking ahead, to the schedule. And commencing on October 29, there is a litany of presentations, by Manitoba Hydro, and, on October 30th, there is a, a beginning of question of Manitoba Hydro panels, but, some of the panels, have not been articulated here. There is one panel Caribou and Moose, on the 31, I am assuming that cross-examination on that panel will take place that day. I am just wondering if there is, if we could have a more complete list of when these panels will be cross-examined in turn, like we have for the first week?

THE CHAIRMAN: I can't give you an answer to that right now, but between -- I will consult with the Commission Secretary, and we will get the

information to you as soon as we can.

MR. MERONEK: Appreciate that, thank you.

THE CHAIRMAN: And to everybody else of course. Ms Mayor?

MS MAYOR: Mr. Sargeant we do have two remaining undertakings, two additional undertakings, which we can answer today. They were given by Mr. Penner, and he has got that information in front of him, perhaps we can take care of those two undertakings at this time.

THE CHAIRMAN: Good. Thank you, Mr. Penner.

MR. PENNER: For our record, we have Undertaking No. 4, from October 3rd, the question was How much will new footprint take out of Crown lands that can be used by aboriginals for harvesting, et cetera, both kilometers, and square kilometers. Approximately 910 kilometers, or 60 square kilometers is the footprint required on crown lands for Bipole III as Manitoba Hydro's preference is to obtain land rights on Crown lands by way of easements, there are no conditions in the easement that would prohibit aboriginal harvesting, therefore these lands potentially, would be available for aboriginal harvesting, with the exception of the construction

season in the specific areas.

THE CHAIRMAN: Thank you.

MR. PENNER: Undertaking No. 5, from October 3. What is the difference in cost of acquiring Crown land versus private land. Manitoba Hydro's preference to obtain land rights by way of easement. Easement for Crown lands, are 25 percent of market value based on a fee structure established by the Crown Lands Act.

Private lands are at 150 percent of market value for Bipole III.

THE CHAIRMAN: Thank you. Any other housekeeping matters, Manitoba Hydro? Commission secretary.

MS JOHNSON: Yes, this is just to inform the room that Pine Creek First Nation has supplied the report to Manitoba Hydro for Mr. Dyck.

THE CHAIRMAN: I am sorry, I didn't.

MS JOHNSON: That the report that Mr. Mills was referring to this morning, he has supplied it to Mr. Dyck.

THE CHAIRMAN: Thank you. That brings us to the end of Week One. We still only have seven more weeks of this. It will be fun.

See many of you, or some of you next week,

in Gillam, and most of you, we will see again on the 29th of October. So Happy Thanksgiving to everybody, have a good weekend.

(HEARING ADJOURNED)

OFFICIAL EXAMINER'S CERTIFICATE

Debra Kot and Jill Proctor, duly appointed Official Examiners in the Province of Manitoba, do hereby certify the foregoing pages are a true and correct transcript of my Stenotype notes as taken by us at the time and place hereinbefore stated to the best of our skill and ability.

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Official Examiner, Q.B.

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