



“When You Talk - We Listen!”



MANITOBA PUBLIC UTILITIES BOARD

Re: MANITOBA HYDRO  
2017/18 and 2018/19  
GENERAL RATE APPLICATION  
PUBLIC HEARING

Before Board Panel:

Robert Gabor	- Board Chairperson
Marilyn Kapitany	- Vice-Chairperson
Larry Ring, QC	- Board Member
Shawn McCutcheon	- Board Member
Sharon McKay	- Board Member
Hugh Grant	- Board Member

HELD AT:

Public Utilities Board  
400, 330 Portage Avenue  
Winnipeg, Manitoba  
January 23rd, 2018  
Pages 5840 to 5990

## APPEARANCES

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22	DANIEL PEACO, Previously Sworn	
23	DOUGLAS SMITH, Previously Sworn	
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1 --- Upon commencing at 9:03 a.m.

2

3 THE CHAIRPERSON: Good morning,  
4 everyone. Ms. Steinfeld, would you be good enough to  
5 take us through today.

6 MS. DAYNA STEINFELD: Certainly, Mr.  
7 Chair. We will be continuing with Manitoba Hydro  
8 Major Capital Projects Panel. At the outset I  
9 understand that Mr. Peters will require a few minutes  
10 with a few more questions of this panel in the public  
11 session. Following that we'll have the General  
12 Service Small and General Service Medium and Keystone  
13 Agricultural Producers, the Consumers Coalition and  
14 Manitoba Industrial Power Users Group in cross-  
15 examination.

16 At that point in time, the public  
17 session will conclude. We will take a break to  
18 prepare for an in-camera session at which point in  
19 time there will be both direct examination in-camera  
20 and cross-examination.

21 After the lunch break we will have the  
22 Daymark SaskPower, Independent Expert Consultant  
23 witnesses and that will be scheduled for the balance  
24 of the day. Thank you.

25 THE CHAIRPERSON: Thank you. Ms.

1 Ramage...?

2 MS. PATTI RAMAGE: Yes, Mr. Chair, I  
3 just want two (2) minutes of the panel's time.

4 THE CHAIRPERSON: Certainly.

5 MS. PATTI RAMAGE: You'll recall that  
6 on Thursday Consumers Coalition recommended to the PUB  
7 that it would be useful in terms of efficiency for  
8 those who present legal arguments to provide a notice  
9 of that intent.

10 And I can advise that Mr. Williams and  
11 I spoke yesterday, an email was sent out to counsel  
12 with that request and in Mr. -- and Mr. -- or actually  
13 Ms. Dilay sent that email out and it indicated we've  
14 proposed the parties provide notice on a timely basis  
15 within one (1) week of the Board's direction.

16 Now, we don't have a Board direction on  
17 this right now. It's Manitoba Hydro's view that we  
18 need one sooner than later, and that the one (1) week  
19 timeframe suggested in this email and I think Mr.  
20 Williams will chime in and say, was he -- there was a  
21 communication between him -- a miscommunication or Ms.  
22 Dilay was quicker to the gun than -- than Mr.  
23 Williams.

24 We were talking about this Friday and  
25 if I could say why I think that's important that

1 people get this kind of thing in this Friday is that  
2 we don't normally do this and the fact that someone  
3 raises that we should put me, my spidey senses, up  
4 that said something's up.

5                   And then if you add to that, the words  
6 "Charter" and "constitutional" in the issues of list  
7 my spidey senses really get going, and say, what's up  
8 here? I need to know. So I think it's important for  
9 Manitoba Hydro and I think it's important for this  
10 Panel to understand if we're going down that path what  
11 that means.

12                   And so if it's those issues, I'd also  
13 suggest the Panel ask that the outline of how they're  
14 bringing up the Charter and what they intend to do  
15 with it be provided, and perhaps more detail than one  
16 (1) or two (2) lines as suggested.

17                   The Panel may or may not be aware that  
18 in Nova Scotia where low income rates -- or low income  
19 rates or income-based rates were discussed and their  
20 uniform rates legislation was discussed and it was put  
21 as a Charter issue, but ultimately, the Constitutional  
22 Questions Act had to be invoked. And if that happens  
23 here -- I'm getting ahead of myself because I don't  
24 know what those arguments are, but we would be  
25 opposing that. It's -- it's too late in the process,

1 but I'm getting far ahead of myself. That's why --  
2 but I'd say, I'd like to see those issues dealt with  
3 by Friday so that we know if we have an issue or not.

4 THE CHAIRPERSON: Dr. Williams...?

5 DR. BYRON WILLIAMS: Yes and I'll --  
6 I'll just say that there certainly was no  
7 miscommunication with My Friend, Ms. Dilay. She's  
8 always more efficient than I am, but I don't disagree  
9 with Manitoba Hydro's sentiment that it should be  
10 sooner than later.

11 I would just say my spidey sense are  
12 not tingling so -- but -- but I would just say that  
13 when we looked at the issues and the record, we  
14 thought these are possible issues; if we need to  
15 prepare for them, we'd rather start sooner than later.  
16 So our general advice to the Board is it's not obliged  
17 to do this, but I think it will help the -- the  
18 submissions in early February and we're not opposed to  
19 Hydro's suggestion that it be for -- for Friday and  
20 it's probably what I mentioned last week.

21 THE CHAIRPERSON: We'll take under  
22 advisement and -- and discuss it at an early time and  
23 get back to the parties. Mr. Peters...?

24

25 MANITOBA HYDRO PANEL 4 - MAJOR CAPITAL PROJECTS

1 JEFF STRONGMAN, Previously Sworn

2 DAVID BOWEN, Previously Sworn

3 LORNE MIDFORD, Previously Sworn

4 DAVID CORMIE, Previously Sworn

5 ALISTAIR FOGG, Previously Sworn

6 GLENN PENNER, Previously Sworn

7

8 CONTINUED CROSS-EXAMINATION BY MR. BOB PETERS:

9 MR. BOB PETERS: Thank you, sir. Good  
10 morning. I have just three (3) quick questions in the  
11 Bipole III area, and maybe one (1) of the Keeyask  
12 area.

13 So if I could, Mr. Penner and Mr. Fogg,  
14 you helped clarify yesterday that the wind event that  
15 is shown on Manitoba Hydro slide 86 of their slide  
16 deck from yesterday, which is Manitoba Hydro Exhibit  
17 120, that wind event happened September 5th of 1996,  
18 correct?

19 MS. HELGA VAN IDERSTINE: So, I'm just  
20 going to jump in here, Mr. Peters. I very much  
21 appreciate you giving us a heads-up that you were  
22 thinking that -- to head down this line of questions  
23 and I would like to make the offer if the concern  
24 about the wind event and the effect on the  
25 transmission lines is -- continues to be an issue,

1 that the appropriate person to speak to this would be  
2 at Mr. Dave Swatek and -- or Dr. Dave Swatek, I'm  
3 being reminded, and we'd be happy to bring him here to  
4 talk about those issues if you're concerned about  
5 them.

6 MR. BOB PETERS: Thank you, Ms. Van  
7 Iderstine.

8

9 CONTINUED BY MR. BOB PETERS:

10 MR. BOB PETERS: So my question, Mr.  
11 Fogg and Mr. Penner, is: The distance between that --  
12 towers that are shown on your slide 86 which is shown  
13 on the screen and the Dorsey converter station is how  
14 far?

15 MR. GLENN PENNER: I believe yesterday  
16 I said it was 10 kilometres and I appreciate the  
17 heads-up this morning. I did a quick look on Google  
18 Maps. As I described yesterday, it's 19 kilometre --  
19 or sorry, nineteen (19) towers long. The tower -- the  
20 picture you see in the top was just at Highway 6  
21 which, according to Google Maps, is about 8 kilometres  
22 from Dorsey.

23 MR. BOB PETERS: And in terms of any  
24 towers -- other towers that were damaged, were there  
25 any closer to Dorsey than the one that's depicted on

1 slide 86, page 10 of your presentation?

2 MR. GLENN PENNER: Yes. So it was  
3 nineteen (19) towers so it -- it was nine (9) towers  
4 on one line ten (10) towers on the other. And this  
5 was closer to the north end. So, yeah, I would say  
6 it's probably roughly 4 or 5 kilometres of -- of  
7 damage. So it's -- it's probably in that two (2) or  
8 three (3) kilometres at -- at the far south end.

9 MR. BOB PETERS: And that area of  
10 damage, the closest distance from the tower damage to  
11 Dorsey is approximately how -- how far?

12 MR. GLENN PENNER: Two or 3  
13 kilometres.

14 MR. BOB PETERS: All right, thank you  
15 for that. And yesterday we also talked about the  
16 distance between Bipole III and the Dorsey converter  
17 station.

18 Have you had a chance to consider the  
19 distance between the closest point of the Bipole III  
20 line and the Dorsey converter station?

21 MR. GLENN PENNER: Yes. When the  
22 Bipole passes under what -- or travel south of  
23 Winnipeg, the closest that it reaches is 43 kilometres  
24 and then the distance between Dorsey and Riel as the  
25 crow flies is about 38 kilometres. And then, on

1 average, the Bipole lines -- separation between Bipole  
2 I and II and Bipole III was that -- that 50 kilometre  
3 buffer. So there's a -- there's a couple places where  
4 it -- it -- it impinges on that.

5 MR. BOB PETERS: All right then let's  
6 turn to slide 82 from your presentation yesterday. I  
7 believe you and the Chairman had a discussion about  
8 the -- I'll call it the pinch point near Jenpeg, where  
9 it appears the Bipole III corridor comes the closest  
10 to the corridor for Bipoles I and II.

11 Do you recall that?

12 MR. GLENN PENNER: Yes.

13 MR. BOB PETERS: And I believe  
14 Manitoba Hydro was going to undertake to determine the  
15 -- the straight-line distance as between those two (2)  
16 corridors?

17 MR. GLENN PENNER: We have an  
18 undertaking coming explaining issues around that but  
19 we -- we know that the distance between those -- the  
20 two (2) lines at that point is 23.8 kilometres.

21 MR. BOB PETERS: Okay. And there's  
22 still an undertaking. I wasn't pressing you, Mr.  
23 Neufeld, (sic) for the undertaking but thank you and I  
24 understand there's more that's coming, correct?

25 MR. GLENN PENNER: There is more



1 coming on -- on the tornado discussion, the F5 tornado  
2 discussion and -- and how that affects the reliability  
3 of the lines.

4 MR. BOB PETERS: Can you tell the  
5 Board, Mr. Neufeld, (sic) if the -- in my words, the  
6 pinch point between Bipole III corridor and the  
7 Bipoles I and II corridor, is it the closest at that  
8 Jenpeg site that you've measured as part of your  
9 undertaking or are there other points where it is, in  
10 fact, closer together?

11 MR. GLENN PENNER: That is, in fact,  
12 the closest point. And just for the record, it's Mr.  
13 Penner. I think you referred to me as Mr. Neufeld.

14 MR. BOB PETERS: My apologies. I have  
15 it written down, and I still got it wrong. I was  
16 prepared to give you one (1) of your lawyers a bit of  
17 a pass on Mr. Colaiacovo's name, but this inexcusable,  
18 I do apologize.

19 THE CHAIRPERSON: Mr. Peters, I should  
20 say your face is looking more like Mr. Bowen's tie.

21

22 CONTINUED BY MR. BOB PETERS:

23 MR. BOB PETERS: Well, that's a good  
24 segue, Mr. Chairman, because Mr. Bowen yesterday you -  
25 - you told the Board that you are updated on a very

1 regular basis by the people over whom you have  
2 supervisory responsibilities with respect to the  
3 status of Keeyask; is that correct?

4 MR. DAVID BOWEN: Yes.

5 MR. BOB PETERS: Did I understand or  
6 remember correctly that you are -- you are informed at  
7 least monthly as to the status of the aspects of the  
8 construction at Keeyask?

9 MR. DAVID BOWEN: Yes, we have a  
10 monthly construction report.

11 MR. BOB PETERS: Is there any more  
12 frequent updates than monthly?

13 MR. DAVID BOWEN: We -- we have daily  
14 construction emails that go out and a weekly  
15 construction report that goes out.

16 MR. BOB PETERS: And so the monthly  
17 one is the most comprehensive or is it just a  
18 combination of the ones that have preceded it?

19 MR. DAVID BOWEN: There's -- I guess I  
20 should step back. There's lots of reporting on the  
21 Keeyask project. I think if everyone can appreciate,  
22 there's lots to manage so there's -- there's reporting  
23 on labour, employment, training. There's reporting on  
24 the schedule, on cost performance, on -- on issues and  
25 risk. So there's a whole variety of reporting that

1 occurs, both by Manitoba Hydro and our contractors.

2                   So -- so there -- there is a fair bit  
3 reporting that -- that happens to manage the various  
4 aspects of the work.

5                   MR. BOB PETERS:    And that -- that  
6 level of reporting culminates monthly with what you're  
7 telling the Panel?

8                   MR. DAVID BOWEN:    It -- it does  
9 culminate monthly.  Manitoba Hydro has a report and,  
10 of course, it includes other things like safety,  
11 environment, quality as well.

12                  MR. BOB PETERS:    What's the most  
13 recent monthly report that you've received, Mr. Bowen?

14                  MR. DAVID BOWEN:    It's a -- it's  
15 November.

16                  MR. BOB PETERS:    Why is there a lag  
17 between the November report and January?

18                  MR. DAVID BOWEN:    That's -- that's a  
19 good question.  It's a question I ask my staff on a  
20 regular basis.

21                  MR. BOB PETERS:    What do they say to  
22 you?

23                  MR. DAVID BOWEN:    The -- the month end  
24 close typically for our financials it takes about the  
25 better part of three (3) weeks to close for financials

1 and update the schedule. So to bring everything  
2 together takes -- takes a better part of a month to --  
3 to report on the previous month.

4 MR. BOB PETERS: All right, I'm going  
5 to ask for a further undertaking, Mr. Bowen, that  
6 through your counsel you provide this Board with a  
7 copy of the most recent monthly report that you have  
8 received that you've just talk to the Panel about.

9 MS. HELGA VAN IDERSTINE: Well, we'll  
10 take that under advisement. I'm a little concerned  
11 about what the relevance of that is.

12 MR. BOB PETERS: Well, you can think  
13 about that, Ms. Van Iderstine. You can also read the  
14 Order in Council and if you have further concerns, you  
15 can put that in your response, but we'll expect that  
16 to be as an undertaking unless advised otherwise and  
17 that can be addressed.

18 MS. HELGA VAN IDERSTINE: Well, as you  
19 know, I just -- I said I'd take it under advisement,  
20 Mr. Peters so.

21 MR. BOB PETERS: Thank you.

22

23 --- UNDERTAKING NO. 60: Mr. Bowen to provide a  
24 copy of the most recent  
25 monthly report that Mr.

1 Bowen received that you've  
2 just talk to the Panel  
3 about. (TAKEN UNDER  
4 ADVISEMENT)

5  
6 MS. HELGA VAN IDERSTINE: I would also  
7 -- have you finished the questions with Mr. Bowen?

8 MR. BOB PETERS: And with Mr. Penner.  
9 Thank you.

10 MS. HELGA VAN IDERSTINE: I -- I did  
11 want to address, Mr. Chair, that the question that I  
12 posed to Mr. Peters at the outset with respect to the  
13 transmission lines' location and design, that's not  
14 something that was particularly addressed in the -- in  
15 the presentation, partly, because we didn't see that  
16 that was relevant to the issue of -- that's before the  
17 Panel, but obviously, you had some questions about it  
18 when you were questioning us at the end of the  
19 presentation.

20 And if that is an issue that is of  
21 concern to you, and you have further questions along  
22 those lines, the appropriate person in -- at Manitoba  
23 Hydro to address that is a Mr. -- Dr. David Swatek and  
24 he is the best person to answer any of those  
25 questions, and if you would like us to bring him to

1 the -- to your -- to here to present on that issue or  
2 to answer some questions -- further questions on it,  
3 we'd be more than happy to do so.

4 THE CHAIRPERSON: Thank you, Ms. Van  
5 Iderstine. We'll take it under advisement.

6 Are you done, Mr. Peters?

7 MR. BOB PETERS: Yes, I believe Mr.  
8 Monnin would like the microphone.

9 THE CHAIRPERSON: Mr. Monnin, finally.

10

11 CROSS-EXAMINATION BY MR. CHRISTIAN MONNIN:

12 MR. CHRISTIAN MONNIN: Thank you, Mr.  
13 Chair. I believe Mr. Peters has asked every question  
14 imaginable, and therefore I'm -- I'm good. I -- I  
15 digress.

16 Thank you, Mr. Chair, Board, members of  
17 the Manitoba Hydro panel. I'm legal counsel for  
18 General Service Small, General Service Medium customer  
19 class, as well as Keystone Agriculture Producers and  
20 I assure you I'll be very short this morning. I just  
21 have a few questions which I believe will likely be  
22 directed to Mr. Midford. Mr. Bowen, you may want to  
23 chime in as well and the questions pertain to -- to  
24 Keeyask.

25 And yesterday during your evidence,

1 there was some discussion with regards to commercial  
2 options and alternatives. And at that point in your  
3 evidence, you stated that Manitoba Hydro's perspective  
4 -- they looked at other alternatives that were  
5 considered and if you could go to slide 58 and 59 of  
6 Manitoba Hydro Exhibit 120, please.

7                   And this is slide 58 we're looking at  
8 under the heading Commercial Options. And I know we  
9 can all read but for the benefit of the record this  
10 slide indicates that:

11                   "Manitoba Hydro undertook a thorough  
12                   process to evaluate alternatives for  
13                   foreign impacts to the general civil  
14                   contract."

15                   And my understanding is that the  
16 entities named underneath as industry experts, KPMG,  
17 Revay, Borden Ladner Gervais and Validation Estimating  
18 assisted you looking at these commercial options and -  
19 - or alternatives; is that correct?

20                   MR. LORNE MIDFORD:    Yes, that's  
21 correct.

22                   MR. CHRISTIAN MONNIN:    And part of  
23 this process was, as I understand it, to find the best  
24 course which would be the best value for Manitobans;  
25 is that correct?

1 MR. LORNE MIDFORD: That's correct.

2 MR. CHRISTIAN MONNIN: Did this  
3 thorough process evaluate -- evaluate whether it would  
4 have been to the benefit of ratepayers to cancel the  
5 Keeyask project?

6 MR. LORNE MIDFORD: In terms of the  
7 review of the commercial options for the contract, it  
8 wasn't looked at. What we were trying to do was look  
9 at the best way to mitigate -- mitigate the risk  
10 associated with moving forward with these contracts.

11 What you're talking about is an  
12 evaluation I think of whether to proceed with the work  
13 itself and BC -- Boston Consulting Group undertook a  
14 review in the summer of 6 -- of 2016 and in the fall  
15 of 2016 provided their report and recommendation to  
16 the Manitoba Hydro Board, giving their evaluation of  
17 the economics of proceeding or cancelling.

18 And based on a comparison to  
19 alternative of installing natural gas plants to -- to  
20 meet domestic load requirements and in that  
21 recommendation they recommended to -- to the Manitoba  
22 Hydro Board to proceed. In the spring of 2017, when  
23 the project developed a new control budget and  
24 schedule, because there was a new -- a new cost to the  
25 project that evaluation was redone at that time and



1 the analysis -- economic analysis confirmed, again, to  
2 pur -- proceeding with the project was the best option  
3 for all ratepayers, customers, yes.

4 MR. CHRISTIAN MONNIN: Thank you for  
5 that answer. I'm going to belabour the point a little  
6 bit more under -- under the heading of Commercial  
7 Options.

8 And so my understanding and -- and you  
9 were very clear in your -- in your answer is that the  
10 issue of cancelling or not proceeding with Keeyask was  
11 not dealt with with this particular group -- or this  
12 particular exercise, this thorough process.

13 And then -- so I'll ask you the same  
14 question. I think I know the answer but for  
15 completeness, this thorough process, did it evaluate  
16 whether it would have been to the benefit of  
17 ratepayers to modify Keeyask?

18 I -- I expect the answer to be no to  
19 that; is that correct?

20 MR. LORNE MIDFORD: Sorry, what do you  
21 mean by "modify Keeyask?"

22 MR. CHRISTIAN MONNIN: Well, Keeyask I  
23 understand -- I understand there's seven (7) turbines  
24 in Keeyask. Was there any consideration given to only  
25 proceeding with three (3) or four (4) of those in

1 service, and then prolonging the in-service for the  
2 other ones?

3 MR. LORNE MIDFORD: I -- I can provide  
4 a perspective on that. So the -- I think what you're  
5 -- what you're saying is that, is there some cost  
6 savings perhaps in not completing the station or  
7 completing part of it and putting maybe four (4) units  
8 or -- or -- or five (5) units in-service.

9 So let me take a step back. Generating  
10 stations are designed based on water conditions. And  
11 so Keeyask -- the number of units at Keeyask and the  
12 size of the units is really based on -- on hydrology  
13 and the water conditions for the design of -- of that  
14 plants. So seven (7) is an optimum plant size and for  
15 -- for the -- for the dependable water conditions to  
16 drive those units.

17 The cau -- the actual costs involved in  
18 completing -- and I think what you're talking about is  
19 the turbine and generator for those last remaining  
20 units is very small relative to the over -- overall  
21 cost of the project. And so there isn't a lot of cost  
22 savings and you impact the revenue.

23 And if I were to provide just a very  
24 simple example, it would be like, for instance, a  
25 cabdriver who just recently purchased a Toyota Prius,

1 and then to save a little bit of money decided to take  
2 the backseats out. So, really limiting his ability to  
3 -- on -- on number affairs to -- to a single -- single  
4 -- single person, so, limi -- limiting revenue and  
5 really not impacting the overall costs in any way. I  
6 hope that helps.

7 MR. CHRISTIAN MONNIN: When you said  
8 the turbines were the costs of -- this -- cost  
9 associated with them are very small.

10 Are you able to advise today what that  
11 very small number would be?

12 MR. LORNE MIDFORD: It would be far  
13 less than 5 percent.

14 MR. CHRISTIAN MONNIN: And so to go  
15 back to my question that brought us to -- to your  
16 answer, and I appreciate the answer, it's very  
17 helpful.

18 I just want to confirm, however, that  
19 this thorough process to evaluate alternatives did not  
20 consider this alternative of modifying Keeyask; is  
21 that fair to say?

22 MR. LORNE MIDFORD: We looked at  
23 options in terms of execution of the general civil  
24 contract. We didn't look at the option of changing  
25 the scope of the design for Keeyask and only implement

1 because there's really no -- it doesn't -- to be quite  
2 frank, it doesn't make a lot of sense to -- to just  
3 install, you know, five (5) of the seven (7) units,  
4 for instance.

5 MR. CHRISTIAN MONNIN: And if I can  
6 maybe short-circuit my line of questioning. Perhaps  
7 I'll do it about this way.

8 Is it safe to say that this thorough  
9 process that was undertaken by Hydro to evaluate  
10 alternatives and to get the best value for Manitobans  
11 was simply looking at the context of completing the  
12 project; is that fair to say?

13 MR. LORNE MIDFORD: Completing the  
14 project at lowest cost, yes.

15 MR. CHRISTIAN MONNIN: And you touched  
16 upon it in one of your earlier answers, Mr. Midford,  
17 about the Boston Consulting Group, and I understood  
18 your exchange -- an exchange you had yesterday between  
19 -- with -- with Mr. Peters, Board counsel, where you  
20 touched upon that as well.

21 And you also touched upon, you said  
22 that in 2017 Manitoba Hydro did a refresh with -- with  
23 a new control budget. Has that been produced on the  
24 record for this -- for these proceedings?

25

1 (BRIEF PAUSE)

2

3 MS. HELGA VAN IDERSTINE: I'll respond  
4 to that. We're not certain that that's available, and  
5 if it is available whether it's CSI. So, we'll have  
6 to look into that, Mr. Monnin.

7 MR. CHRISTIAN MONNIN: Sorry, I was  
8 drinking from the firehose there, I was getting a --  
9 involved in two conversations. I apologize for that.

10 Ms. Van Iderstine, you've -- first,  
11 you're going to -- to indicate whether it's available  
12 and whether there's any CSI; is that correct?

13 MS. HELGA VAN IDERSTINE: Yes.

14 MR. CHRISTIAN MONNIN: And so that  
15 will -- that will be an undertaking?

16 MS. HELGA VAN IDERSTINE: Yes.

17 THE CHAIRPERSON: Can somebody read  
18 the undertaking into the record, please.

19 MS. HELGA VAN IDERSTINE: You'll have  
20 to clarify exactly what it is you asked, if you don't  
21 mind and then I'll --

22 MR. CHRISTIAN MONNIN: I had asked of  
23 the Manitoba Hydro -- Mr. Midford whether the refresh  
24 that was done by Boston Consulting Group with the new  
25 control budget of \$8.7 billion was on the record. And

1 Manitoba Hydro undertook -- and this is what I believe  
2 the undertaking to be, that they would first confirm  
3 whether that document exists, and whether that  
4 document contains any CSI and then produce that --  
5 would produce what is not CSI on the record.

6 MR. LORNE MIDFORD: Just to provide  
7 one (1) clarification. It was -- it wouldn't have  
8 been BCG that refreshed that analysis. It was  
9 Manitoba Hydro that refreshed that analysis.

10 MR. CHRISTIAN MONNIN: Thank you for  
11 that clarification, Mr. Midford.

12 Ms. Van Iderstine, is that acceptable?

13 MS. HELGA VAN IDERSTINE: Yes. So --  
14 so just to clarify, you not -- now not looking for the  
15 BCG one or you're looking for --

16 MR. CHRISTIAN MONNIN: I don't think  
17 BCG exists with the refresh.

18 MS. HELGA VAN IDERSTINE: So you're  
19 looking to see if there's any analysis, and if so  
20 whether it's CSI. Yep, okay.

21 MR. CHRISTIAN MONNIN: And whatever  
22 can be produced will be produced.

23

24 --- UNDERTAKING NO. 61: To confirm whether the  
25 refresh document exists,

1 and whether that document  
2 contains any CSI and then  
3 produce what is not CSI on  
4 the record.

5  
6 MR. CHRISTIAN MONNIN: Thank you, Mr.  
7 Chair, those are my questions.

8 THE CHAIRPERSON: Thank you, Mr.  
9 Monnin. Dr. Williams...?

10

11 CROSS-EXAMINATION BY DR. BYRON WILLIAMS:

12 DR. BYRON WILLIAMS: Yes, good morning  
13 members of the PUB Panel, as well as the Hydro panel.

14 Mr. Midford, I'll just pull up a few  
15 questions from My Learned Friend, M. Monnin.

16 Just so my clients understand, the 8.7  
17 control budget is basically what we often term a P50  
18 budget?

19 MR. LORNE MIDFORD: For Keeyask, the  
20 8.7 billion is a P50.

21 DR. BYRON WILLIAMS: And recognizing  
22 that the new evaluation in terms of stopping Keeyask  
23 in the spring of 2017 was based on the control budget  
24 of 8.7 billion. And given the uncertainty associated  
25 with Keeyask cost estimates, was the evaluation also

1 done at a P90 or \$9.6 billion level?

2

3 (BRIEF PAUSE)

4

5 MR. LORNE MIDFORD: Yes, I believe it  
6 was and for various discount rates as well.

7 DR. BYRON WILLIAMS: And, sir, in  
8 terms of the -- at the P90 \$9.6 billion level, would  
9 the conclusion still be that the net present value of  
10 proceeding with Keeyask, as compared to stopping  
11 Keeyask and fulfilling that need through natural gas,  
12 is -- is that still maintained?

13 MR. LORNE MIDFORD: Yes, it is.

14 DR. BYRON WILLIAMS: And alerting your  
15 legal counsel to this question, Mr. Midford, our  
16 client is less interested in the overall evaluation or  
17 the supporting numbers associated with the refresh  
18 conducted in the spring of 2017, but our client would  
19 be interested by way of undertaking in the final  
20 number, the -- presumably, the net present value of --  
21 of the comparison of Keeyask at the P50 and Keeyask at  
22 the P90 as compared to the stop Keeyask and natural  
23 gas alternative.

24 Would you be prepared to take that as  
25 an -- less ambitious undertaking?



1 MS. HELGA VAN IDERSTINE: Mr. Midford  
2 is not -- saying yes. He's prepared to do that, so.

3 DR. BYRON WILLIAMS: Thank you. And  
4 for the court reporter, is that undertaking  
5 satisfactory? Do you -- I'd better -- apparently not,  
6 given the big shake of the head.

7 Our client is asking by way of  
8 undertaking for the conclusion in terms of net present  
9 value for the comparison with proceeding with Keeyask  
10 at its P50 eight point seven (8.7) budget level versus  
11 stopping Keeyask and proceeding with a natural gas  
12 alternative as what's similarly the net present value  
13 of a comparison of proceeding with Keeyask at the nine  
14 point six (9.6) P90 value as compared to stopping  
15 Keeyask and proceeding with the natural gas  
16 alternative.

17 And I'll ask Manitoba Hydro to con --  
18 confirm that that's satisfactory.

19 MR. LORNE MIDFORD: Yes, that's  
20 satisfactory.

21

22 --- UNDERTAKING NO. 62: Manitoba Hydro to provide  
23 the net present value for  
24 comparison with proceeding  
25 with Keeyask at its P50

1                   eight point seven (8.7)  
2                   budget level versus  
3                   stopping Keeyask and  
4                   proceeding with a natural  
5                   gas alternative as what's  
6                   similarly the net present  
7                   value of a comparison of  
8                   proceeding with Keeyask at  
9                   the nine point six (9.6)  
10                  P90 value as compared to  
11                  stopping Keeyask and  
12                  proceeding with the  
13                  natural gas alternative

14  
15 CONTINUED BY DR. BYRON WILLIAMS:

16                   DR. BYRON WILLIAMS:    And given the  
17                   early hour, I'm quite exhausted by that, so I'm not  
18                   sure how much more I'll be able to achieve.

19                   Either to Mr. Bowen or Mr. Strongman,  
20                   if we use the term 'lower productivity' in the context  
21                   of Keeyask to suggest a higher amount a person's hours  
22                   -- of person hours for a contemplated unit of  
23                   production, is that a working definition that you can  
24                   work with. I see you nodding your head, Mr. Strong --  
25                   Strongman.

1 MR. JEFF STRONGMAN: Yes.

2 DR. BYRON WILLIAMS: Okay. And Mr.  
3 Bowen, you'll recall a conversation with My Learned  
4 Friend Mr. Peters yesterday in which while you did not  
5 make a specific undertaking, you indicated that you  
6 would be in a better position to report back to them  
7 in the fall of 2018 on whether Manitoba Hydro would be  
8 on track to meet its stretch target of \$8.2 billion  
9 related to Keeyask.

10 Do you recall that conversation, sir?

11 MR. DAVID BOWEN: Yes.

12 DR. BYRON WILLIAMS: And presumably,  
13 sir, the point you were making is that eight (8) or  
14 nine (9) months from now would tell us a great deal  
15 about whether the general civil contractor is able to  
16 meet the 10 percent productivity improvements needed  
17 to reach the ten (10) point -- or the 8.7 billion  
18 target, or the significantly higher productivity  
19 improvement needed to reach the stretch target,  
20 agreed?

21 MR. DAVID BOWEN: Agreed, the -- the  
22 construction season -- we're going through their --  
23 the ramp-up from start of January through to May. At  
24 the beginning of May, the general civil contractor  
25 will have their full -- full staff on site, and are --

1 are, as I mentioned earlier yesterday, was that the  
2 construction season -- that the prime months are  
3 basically May 1 to end of September. We are planning  
4 for the work to continue right up to the Christmas  
5 break this year, but certainly we will know this  
6 coming fall as -- as to how -- how the years turned  
7 out.

8 DR. BYRON WILLIAMS: And similarly,  
9 sir, by September 30th, on or about, that would tell  
10 us a great deal about whether the more pessimistic  
11 views of MGF will be borne out in terms of the costs,  
12 agreed?

13 MR. DAVID BOWEN: Agree. I -- I think  
14 the -- the construction season -- the September 30th -  
15 - a good month, we'll -- we'll know that. However, we  
16 will still be going at full capacity at the end of  
17 September.

18 DR. BYRON WILLIAMS: Okay. And  
19 presumably, sir, that information, whether positive,  
20 negative, or neutral, can be built into the next  
21 Integrated Financial Forecast and brought forward in  
22 the next General Rate Application?

23 MR. DAVID BOWEN: I'll -- I'll look  
24 for someone else to answer that question.

25 DR. BYRON WILLIAMS: If you're unable

1 to answer that, sir --

2 MR. DAVID BOWEN: Yes.

3 DR. BYRON WILLIAMS: -- that's fine.

4 MR. DAVID BOWEN: Thank you.

5 DR. BYRON WILLIAMS: If we could go to  
6 Manitoba Hydro's rebuttal evidence, page 3 of 58  
7 towards the bottom, and Mr. Strongman, this is  
8 probably for you. Their rebuttal evidence, yes, thank  
9 you, towards the bottom.

10 Mr. Strongman, referring your attention  
11 to the second-last bullet, this -- the second line,  
12 you'll see a reference to a suggestion that walking  
13 down the path of fixed price or unit price would have  
14 been cost prohibitive -- prohibitive in the context of  
15 Keeyask. Do you see that reference, sir?

16 MR. JEFF STRONGMAN: Yes, I do.

17 DR. BYRON WILLIAMS: And certainly,  
18 sir, you recall your conversation with Mr. Peters  
19 yesterday in terms of the experience of Manitoba Hydro  
20 in -- in Wuskwatim in terms of a contract similar to  
21 that?

22 MR. JEFF STRONGMAN: That's right,  
23 yes.

24 DR. BYRON WILLIAMS: And just so our  
25 client understands, sir, apart from the experience in

1 the mid 2000's rel -- relating to Wuskwatim, did  
2 Manitoba Hydro test the hypothesis that the fixed  
3 price and unit price approaches would've been cost  
4 prohibit -- hibitive?

5 MR. JEFF STRONGMAN: Yes, we did.

6 DR. BYRON WILLIAMS: And could you  
7 just elaborate cogently on -- on how you did so?

8 MR. JEFF STRONGMAN: So the next  
9 bullet down on the page reference that you've given  
10 explains that we went through an extensive twenty-four  
11 (24) month, three (3) phase process to select the  
12 general civil contract. The first phase of the three  
13 (3),<sup>1</sup> if you recall yesterday, I -- I had a slide  
14 showing the -- the market sounding in the first half  
15 of 2012.

16 And that's where we open contact with  
17 contractors that had been suspected of being  
18 interested in the work, and capable of -- of doing the  
19 work, and during those conversations in that market  
20 sounding, we followed through with the question you'd  
21 just asked.

22 DR. BYRON WILLIAMS: And sir, in terms  
23 of the definition of cost prohibitive in the context  
24 of a general civil contract, was there a financial  
25 threshold that -- that Manitoba Hydro employed?

1 MR. JEFF STRONGMAN: No. If you  
2 consider how you would quantify something like that,  
3 that really is the basis of the answer. It -- it's  
4 not something that was undertaken.

5 DR. BYRON WILLIAMS: Okay. Mr. Bowen,  
6 you were kind enough to share a video regarding  
7 Keeyask yesterday. You recall that?

8 MR. DAVID BOWEN: Yes.

9 DR. BYRON WILLIAMS: And you'll recall  
10 that near the start of that video, there was a line  
11 that appeared suggesting words to the -- to the effect  
12 that we are driving for success?

13 MR. DAVID BOWEN: Yes.

14 DR. BYRON WILLIAMS: And in the  
15 context of Keeyask, sir, and recognizing that there  
16 are other objectives such as a high level of safety  
17 and meaningful First Nation and -- and Indigenous  
18 employment, would the definition of success include  
19 the objective of delivering the project on budget and  
20 on time?

21 MR. DAVID BOWEN: Yes. And just to be  
22 more clear, the -- the critical success factors for  
23 the Keeyask project, safety is number 1. Then there's  
24 fulfilling our environmental commitments, achieving  
25 our required quality. Then there's the commitments we

1 have within the JKDA for training, employment, and  
2 business opportunities, and of course, there's cost  
3 and schedule.

4 DR. BYRON WILLIAMS: Okay. And I  
5 wonder if we can pull up PUB/Manitoba Hydro First  
6 Round information request 62. And I know Mr. Peters  
7 had some discussions with the Hydro panel. If we can  
8 go to the table on the next page. So I'm going to  
9 bounce around amongst Mr. Fogg, Mr. Strongman, and Mr.  
10 Penner, who hopefully, I will not call Mr. Neufeld,  
11 but no guarantees, Mr. Peters.

12 Mr. Fogg, if we're looking for a -- a  
13 financial history of the proj -- estimate of progress  
14 costs for Bipole III, we'd go down about five (5)  
15 lines. Do you see that, sir?

16 MR. ALISTAIR FOGG: Yes, I do.

17 And if we started CEF05, we see the --  
18 the West -- West line placeholder of about \$1.9  
19 billion, sir, for that CEF05, sir?

20 MR. ALISTAIR FOGG: Yes, that's  
21 correct.

22 DR. BYRON WILLIAMS: That figure rose  
23 to about 3.3 billion, I'll suggest to you, by CEF10?

24 MR. ALISTAIR FOGG: Yes, that's what  
25 it shows.



1 DR. BYRON WILLIAMS: And you'll agree  
2 that the 3.3 or 3.2 billion figure was the value at  
3 attributed to Bipole III in the NFAT proceeding,  
4 subject to check?

5 MR. ALISTAIR FOGG: Subject to check,  
6 I don't believe Bipole III was part of the NFAT  
7 proceeding, but that -- subject to check, that value  
8 may have been referenced.

9 DR. BYRON WILLIAMS: And I'll suggest  
10 to you, subject to check, sir, that shortly after the  
11 NFAT, Manitoba Hydro public revi -- publicly revised  
12 the 3.3 billion figure to 4.65 billion in CEF2014?

13 MR. ALISTAIR FOGG: Subject to check,  
14 I believe that's correct.

15 DR. BYRON WILLIAMS: Ultimately, we  
16 have the \$5 billion estimate, correct?

17 MR. ALISTAIR FOGG: That is our  
18 current control budget, yes.

19 DR. BYRON WILLIAMS: And Mr. Strongman  
20 or Mr. Bowen, focusing on Keeyask, towards the bottom  
21 of this column, and -- and CEF08, back in -- in the  
22 late 2000s we were looking at 3.7 billion is the --  
23 the estimate, sir?

24 MR. JEFF STRONGMAN: Yes, I see the  
25 number.

1 DR. BYRON WILLIAMS: Rising to 5.6  
2 billion in CEF10?

3 MR. JEFF STRONGMAN: Yes, I see that  
4 number as well.

5 DR. BYRON WILLIAMS: And now the  
6 control budget's in excess of 8.7 billion, agreed?

7 MR. JEFF STRONGMAN: The current  
8 control budget is 8.7 billion.

9 DR. BYRON WILLIAMS: And Mr. Penner --  
10 thank you for that. Mr. Penner, with -- with regard  
11 to the Manitoba/Minnesota transmission line, in  
12 CEF208, we were looking at about 205 million at the  
13 very bottom. Do you see that, sir?

14 MR. GLENN PENNER: Yes, I see that.

15 DR. BYRON WILLIAMS: Rising to three  
16 hundred and fifty (350) for the purposes of the NFAT  
17 as represented in CEF13?

18 MR. GLENN PENNER: Yes.

19 DR. BYRON WILLIAMS: And ultimately  
20 now, subject to your calculation check, sir, it's more  
21 than 25 percent, higher at \$450 million?

22 MR. GLENN PENNER: Yes.

23 DR. BYRON WILLIAMS: Mr. Fogg, I don't  
24 have the transcript from yesterday yet, but on or  
25 about slide 88 yesterday, do you recall referring to

1 the Riel converter station and characterizing the four  
2 (4) synchronous condensers as a unique aspect of the  
3 converter station, or words to that effect, sir?

4 MR. ALISTAIR FOGG: I believe what I  
5 was indicating was that the Riel synchronous  
6 condensers were unique to the Riel converter station  
7 as in they are not required at the Keewatinohk  
8 converter station solely in the South.

9 DR. BYRON WILLIAMS: Okay. And you'll  
10 agree without going into undue engineering  
11 elaboration, sir, that synchronous condensers are  
12 linked to the line-commutation converter technology,  
13 sir, also known as LCC?

14 MR. ALISTAIR FOGG: I would agree that  
15 the requirement for synchronous condensers is linked  
16 to the selection of HVDC technology, that being either  
17 line -- line-commutated converter technology or the  
18 alternative is voltage source converter technology.  
19 Ultimately, as a result of the bidder's selecting, the  
20 LCC technology required the inclusion of synchronous  
21 condensers at the Riel converter station.

22 DR. BYRON WILLIAMS: And sir, just to  
23 be clear, if the choice would have been made to run  
24 through or look to voltage source converter  
25 technology, the synchronous condensers would not have

1 been required?

2 MR. ALISTAIR FOGG: Just to provide  
3 maybe a -- a bit more background to that effect, the  
4 decision related to the HVDC technology that is either  
5 LCC or VSC was included within the request for  
6 proposals on the HVDC contract on the converter  
7 stations. Both technologies were available for the  
8 vendors to bid on, and it was left to the -- the  
9 experts in the marketplace to select the most  
10 appropriate technology based on the requirements for  
11 the project. As a result, all bids received were the  
12 LCC technology, and that was why the synchronous  
13 condensers were ultimately required.

14 DR. BYRON WILLIAMS: And so, sir, my  
15 question was if the voltage source canter -- converter  
16 technology was -- was accepted, then the synchronous  
17 condensers would not have been required? That's --  
18 you're agreeing to that, sir?

19 MR. ALISTAIR FOGG: I would agree that  
20 it -- if voltage source converters had been proposed  
21 by one (1) of -- any of the one (1) of the vendors and  
22 was the successful vendor technology, then the  
23 synchronous condensers would not have been required.  
24 However, there may have been different cost impacts to  
25 the HVDC contract as a result of selecting that

1 technology.

2 DR. BYRON WILLIAMS: And sir, line  
3 commutation converter technology as it relates to HVDC  
4 is a long-standing technology dating back to the  
5 1980s?

6 MR. ALISTAIR FOGG: That's correct.  
7 It would be considered the classic or long-standing  
8 technology that exists in the marketplace and is the  
9 same approach or technology on our current HVDC  
10 system.

11 DR. BYRON WILLIAMS: I wonder if we  
12 can turn to PUB minute -- minimum filing requirement  
13 155, and specifically, addendum 6.

14 Mr. Fogg, you'll recall, or you'll  
15 accept, subject to check, that this inf -- this  
16 minimum filing request sought all original capital  
17 project justifications relating to Bipole III,  
18 including any CPJ's addenda recommended for  
19 implementation but not approved by the executive  
20 committee?

21 MR. ALISTAIR FOGG: Yes, I'm aware of  
22 that MFR.

23 DR. BYRON WILLIAMS: Can we go to the  
24 next slide, or the next page, 2, yes. And you'll see  
25 that you -- this was unapproved, but addendum number 6

1 was dealing with moving from a budget of 2.2 billion  
2 to a revised budget of 3.9 billion, sir?

3 MR. ALISTAIR FOGG: Yes, that's  
4 correct.

5 DR. BYRON WILLIAMS: And sliding over  
6 to page 2 of 7 of this, and going down to converter  
7 related items, you'll see here a -- a notification in  
8 this unapproved CPJ that the -- on the -- that the  
9 cost for synchronous condensers had more than doubled  
10 with also a recommendation to add a fourth synchronous  
11 condenser, sir?

12 MR. ALISTAIR FOGG: That's what  
13 indicates, yes.

14 DR. BYRON WILLIAMS: Now, if we can go  
15 to addendum 6B, page 3 of 4, and towards the bottom.  
16 And sir, you'll agree with me that from capital  
17 expenditure forecast 11 through capital expenditure  
18 forecast 13, the assumption was that the technology  
19 used for the converter stations would be the voltage  
20 source converter technology rather than the long-  
21 standing, or, in your words, classic line can --  
22 commutation converter technology?

23 MR. ALISTAIR FOGG: Sorry, Dr.  
24 Williams, could you repeat from which CEF to which you  
25 were requesting?

1 DR. BYRON WILLIAMS: CEF11 through  
2 CEF13. And if you need a source for that, sir, it's  
3 MFR170, subject to check.

4 MR. ALISTAIR FOGG: No, that -- that  
5 is correct. For those CEF11 to 13, it assumed a  
6 voltage source converter technology.

7 DR. BYRON WILLIAMS: So up to CEF11,  
8 the assumption was that the -- the long-standing  
9 technology would be used here in CEF11 and moving  
10 forward for a couple of years, we see the switch to  
11 the voltage source converters, agreed?

12 MR. ALISTAIR FOGG: The original  
13 assumptions were in -- in LCC technology. At the time  
14 of CEF11, there were estimates advanced, and  
15 ultimately, it was selected to assume a voltage source  
16 converter technology.

17 DR. BYRON WILLIAMS: And though the --  
18 the caution properly offered in this CPAJ, sir, is  
19 that the assumed use of new technology in the source  
20 of voltage source converters would be an additional  
21 risk factor, agreed?

22 MR. ALISTAIR FOGG: I would say that  
23 the assumption of a voltage source converter  
24 technology represented risk from the standpoint that  
25 it was a new technology that hadn't been executed at

1 that time. However, indications in the marketplace  
2 were that that would become the predominant technology  
3 for HVDC stations.

4 DR. BYRON WILLIAMS: And if we could  
5 go to addendum 7B.

6

7 (BRIEF PAUSE)

8

9 DR. BYRON WILLIAMS: And before  
10 -- actually, Kristen, this is my fault. Perhaps you  
11 could go to the -- back one (1) page in the addendum.

12 Here, sir, you'll see addendum B -- 7B  
13 proposing a -- an increase in the previous approved  
14 budget from about 1.8 billion to 2.675 billion, sir?

15 MR. ALISTAIR FOGG: That's what it  
16 indicates, yes.

17 DR. BYRON WILLIAMS: And if we go to  
18 the next page under Risk Analysis. Just -- thank you,  
19 Kristen, right there under background. Excuse me, I  
20 misspoke.

21 You'll see a history, sir, suggesting  
22 that the historic pricing had been based for -- on the  
23 assumption of VSC technology and no synchronous  
24 condensers.

25 Do you see that reference, sir?



1                   MR. ALISTAIR FOGG:    It indicates that  
2 the -- the previous completed detailed estimate in  
3 2010 had been based on historical cost for converter  
4 stations and budgetary pricings from the vendors who  
5 would build those HVDC equipment based on the VSC  
6 technology.

7                   DR. BYRON WILLIAMS:   And then  
8 confirming what you've said previously, ultimately,  
9 the long-standing technology was bid by all vendors  
10 and it -- it resulted in -- in the need for the  
11 synchronous condensers?

12                  MR. ALISTAIR FOGG:    Yes, the request  
13 for proposal for the HVDC converters was issued to the  
14 marketplace and allowed every vendor to select either  
15 VSC technology or LCC technology based on the  
16 requirements of the converter stations. All vendors,  
17 bidding selected to bid the LCC technology.

18                  DR. BYRON WILLIAMS:   And the  
19 marketplace, sir, spoke overwhelmingly in favour of  
20 line commutation converter technology?

21                  MR. ALISTAIR FOGG:    To clarify. the  
22 marketplace in -- in this instance, there are really  
23 only three (3) vendors in the world who can construct  
24 this type of equipment. All three (3) of those  
25 vendors elected to bid the LCC technology versus VSC

1 technology.

2 DR. BYRON WILLIAMS: And if we could  
3 turn to page 138 of the book of documents of the  
4 Public Utilities Board filed yesterday. Volumes --  
5 Volume 6, page 138, Mr. Fogg.

6 And -- and, sir, you'll see a reference  
7 on the previous page that this is a -- an Information  
8 Request from a prior General Rate Application.

9 You'll accept that?

10 MR. ALISTAIR FOGG: Yes, I accept  
11 that.

12 DR. BYRON WILLIAMS: And the  
13 suggestion in this response, sir, is that the largest  
14 contributing factor to the increase in the Bipole III  
15 control budget was the final fixed price and -- and --  
16 and the direct converter technology selected; agreed?

17 MR. ALISTAIR FOGG: The largest  
18 contributing factor to the increase in the budget was  
19 the ultimate pricing, fixed pricing, received for that  
20 -- that contract, the HVDC converter equipment and  
21 together with the inclusion then of synchronous  
22 condensers.

23 DR. BYRON WILLIAMS: Okay. Thank you.  
24 If we can turn to -- and this is for Mr. Penner in the  
25 back row and, Mr. Penner, I only have a few questions.

1 So if you'll bear with me we can peer around the front  
2 row and -- and PUB-MFR-181, please.

3 And, Mr. Chair, I neglected to hand out  
4 an exhibit being Consumer Coalition 47 which is an  
5 excerpt from the amended application for  
6 authorizations related to the Manitoba/Minnesota  
7 transmission project.

8 THE CHAIRPERSON: Thank you.

9 DR. BYRON WILLIAMS: I apologize for  
10 that.

11

12 --- EXHIBIT NO. CC-47: Excerpt from the amended  
13 application for  
14 authorizations related to  
15 the Manitoba/Minnesota  
16 transmission project.

17

18 CONTINUED BY DR. BYRON WILLIAMS:

19 DR. BYRON WILLIAMS: Mr. Penner, you  
20 discussed with Mr. Peters yesterday a rise in costs  
21 related to the Manitoba/Minnesota transmission line  
22 from 350 million to roughly 450 million.

23 You recall that conversations, sir?

24 MR. GLENN PENNER: Yes, I do.

25 DR. BYRON WILLIAMS: And given the

1 refinements to your estimate you discussed with Mr.  
2 Peters yesterday, I take it that Manitoba Hydro has  
3 significant -- has a significant degree of confidence  
4 in that estimate, sir?

5 MR. GLENN PENNER: Yes, we do.

6 DR. BYRON WILLIAMS: It's at the P75  
7 level?

8 MR. GLENN PENNER: That's correct.

9 DR. BYRON WILLIAMS: And that means,  
10 sir, that in Hydro's view it is more likely that costs  
11 will go down rather than go up?

12 MR. GLENN PENNER: It -- it means that  
13 there is a 75 percent chance that we will be at or  
14 below budget, but not necessarily that the costs will  
15 go down.

16 DR. BYRON WILLIAMS: Thank you for  
17 that clarification, sir. On page 1 of four of -- of  
18 this MFR response, you highlight a number of factors  
19 that led to the increase in -- in costs associated  
20 with the projects, sir? And we'll just get to the  
21 next page, Kristen. Thank you.

22 We're looking for the addendum.  
23 Perhaps you can... It's page 27 of 50, Kristen, I  
24 think in this document -- oh, here it is, perfect.  
25 Thank you.

1                   Mr. Penner, here you discuss a number  
2 of the factors leading to the increase in the budget,  
3 agreed?

4                   MR. GLENN PENNER:    Agreed.

5                   DR. BYRON WILLIAMS:   So on this page  
6 you'll, accept subject to check, that you outline four  
7 (4) of the factors that lead to the increase? Scroll  
8 down please, Kristen.

9                   MR. GLENN PENNER:    Yeah, I believe  
10 there's four (4) factors. I can only see two (2),  
11 yeah.

12                  DR. BYRON WILLIAMS:   If we go to the  
13 next page, please.

14                  Here, sir, you also discuss a fifth  
15 factor being escalation in interest; agreed?

16                  MR. GLENN PENNER:    Agreed.

17                  DR. BYRON WILLIAMS:   And this is one  
18 (1) of the factors that is actually leading to a -- a  
19 decrease in the estimated cost related to the control  
20 budget; correct?

21                  MR. GLENN PENNER:    That's correct.

22                  DR. BYRON WILLIAMS:   And that's due  
23 both to lower borrowing rates, as well as the revised  
24 cost flows; agreed, sir?

25                  MR. GLENN PENNER:    Agreed.

1 DR. BYRON WILLIAMS: And, Mr. Penner,  
2 in your evidence yesterday, both in your direct in  
3 your conversation with Mr. Peters, you discussed the  
4 pending process for approval before the National  
5 Energy Board, sir?

6 MR. GLENN PENNER: Yes.

7 DR. BYRON WILLIAMS: And Manitoba  
8 Hydro is seeking a certificate of convenience and  
9 necessity for this -- for this line?

10 MR. GLENN PENNER: Yes.

11 DR. BYRON WILLIAMS: And Coalition  
12 Exhibit 47, sir, you'll agree, is an excerpt from the  
13 amended application for authorization filed by  
14 Manitoba Hydro on or about August of 2017?

15 MR. GLENN PENNER: Yes.

16 MS. JANET MAYOR: Excuse me, Mr.  
17 Chairman, just to clarify, Mr. -- or Dr. Williams had  
18 indicated that Manitoba Hydro was seeking a  
19 certificate. Just to clarify, Manitoba Hydro had  
20 applied for a permit and the National Energy Board  
21 recommended a certificate process which was,  
22 ultimately, approved.

23 THE CHAIRPERSON: Yes, thank you.

24 MS. JANET MAYOR: Just to clarify for  
25 the record.

1 DR. BYRON WILLIAMS: I appreciate that  
2 clarification, and I apologize for any imprecision.

3

4 CONTINUED BY DR. BYRON WILLIAMS:

5 DR. BYRON WILLIAMS: And, Mr. Penner,  
6 you were advised by your legal counsel that the  
7 Consumers Coalition might be referring to this  
8 document in your discussions with you this week?

9 MR. GLENN PENNER: Yes.

10 DR. BYRON WILLIAMS: And, sir, Chapter  
11 7 of this application to the National Energy Board  
12 discusses the economics of the transmission line as it  
13 relates to the MISO market, as well as the finances of  
14 the project; agreed? We can scroll through that if  
15 you need to take a peak at it.

16 MR. GLENN PENNER: The Chapter 7 title  
17 is "Economics" and 7.1 is "MISO market"?

18 DR. BYRON WILLIAMS: Yeah.

19 DR. BYRON WILLIAMS: And specifically,  
20 Mr. Penner, I want to draw your attention to the  
21 finance section at page 83.

22 And, sir, generally, you'll agree this  
23 is a discussion by Manitoba Hydro of its ability to --  
24 of its financial strength and ability to attract  
25 capital sir?

1 MR. GLENN PENNER: Yes.

2 DR. BYRON WILLIAMS: And if we can  
3 scroll down to (b). And, Mr. Penner, really take --  
4 take your time going through this paragraph, but I  
5 really want to direct your attention to the last five  
6 (5) lines of (b) on page 83.

7 MS. HELGA VAN IDERSTINE: I'm -- I'm  
8 just going to interrupt you Mr. Will -- Dr. Williams.  
9 I just want to make sure that you're addressing this  
10 to the correct person on the panel. I'm not sure that  
11 this is Mr. Penner's area of expertise, but I -- I'm  
12 too far away from him to have that conversation.

13 DR. BYRON WILLIAMS: If -- if there's  
14 someone else that from the panel who wants to  
15 volunteer. My questions go to the root -- the -- the  
16 risk to interest and capital of the project, so I  
17 suspect it is Mr. -- Mr. Penner.

18 MS. HELGA VAN IDERSTINE: It -- it  
19 actually found more like the revenue panel questions  
20 than -- than this panel, so that's why we're a little  
21 bit confused.

22 THE CHAIRPERSON: Let's see if Mr.  
23 Penner can answer the question, or if he states that  
24 he's not the appropriate person.

25 MR. GLENN PENNER: Typically on



1 capital projects the interest in escalation  
2 calculations does come through our finance group.  
3 It's -- it's part of the SAP process. It's not  
4 something that the capital project or the project  
5 management team decides what interest in escalation is  
6 going to be applied to a project. It would be a  
7 better question for the revenue panel.

8

9 CONTINUED BY DR. BYRON WILLIAMS:

10 DR. BYRON WILLIAMS: So, Mr. Penner,  
11 in terms of the risk related to the project and the  
12 risk related to the project coming at or below its  
13 control budget at a P75 level, would it be fair to say  
14 that Manitoba Hydro, given its alleged exceptional  
15 ability to attract debt capital, does not see that as  
16 a major risk to the -- to the -- its ability to meet  
17 its budget, sir?

18

19 (BRIEF PAUSE)

20

21 MR. GLENN PENNER: This is not my area  
22 of expertise.

23 DR. BYRON WILLIAMS: Mr. Cormie, is  
24 there anything you want to add, sir?

25 MR. DAVID CORMIE: Yes, I think it

1 would be appropriate for Ms. Stephens (sic) to speak  
2 on this subject, Mr. Williams. I don't think this  
3 panel is capable of speaking to our credit rating and  
4 ability to attract capital.

5 DR. BYRON WILLIAMS: Going back from  
6 the -- from the specifics of this excerpt, Mr. Penner,  
7 in terms of the risks related to the  
8 Manitoba/Minnesota transmission line, does Manitoba  
9 Hydro accept -- anticipate significant risks  
10 associated with interest rates such that they might  
11 impair its estimated control budget of \$450 million,  
12 sir?

13

14 (BRIEF PAUSE)

15

16 MR. GLENN PENNER: Again, I think that  
17 is a question more for the -- the revenue panel. Like  
18 I said previously, the -- the way interest in  
19 escalation is run, it -- it goes through the finances  
20 group. And when we evaluate a project estimate we --  
21 we input all of the project costs are -- with the --  
22 with the most current information that we have. And  
23 essentially the rates that -- that are set through the  
24 finance group at Manitoba Hydro comes back with a  
25 project interest in escalation cost based on our --

1 our cash flows, and -- and that's what we report on.

2 DR. BYRON WILLIAMS: And, sir, you are  
3 responsible for a risk -- a risk assessment related to  
4 the capital budget?

5 MR. GLENN PENNER: Can you clarify  
6 that?

7 DR. BYRON WILLIAMS: You're -- you're  
8 providing a control budget based on P75, sir?

9 MR. GLENN PENNER: Correct.

10 DR. BYRON WILLIAMS: Were you advised  
11 by your finance folks of any significant risks related  
12 to the ability to attract capital?

13 MR. GLENN PENNER: We have not been  
14 advised by our finance folks that there are any risks  
15 to attracting capital for this project.

16 DR. BYRON WILLIAMS: Okay. I'm going  
17 to turn to Mr. Bowen and Mr. Strongman. And, Mr.  
18 Chair, I have two (2) areas to cover. I anticipate  
19 they'll probably take about twelve (12) minutes each,  
20 and then a couple of cleanup questions.

21 Perhaps we can pull up the attachment  
22 to the evidence of MGF by Klohn, K-L-O-H-N, Crippen,  
23 K-R-I-P-P-E-N (sic). I think that's appendix A and  
24 specifically page 4.

25

1 (BRIEF PAUSE)

2

3 DR. BYRON WILLIAMS: And if we could  
4 go towards the bottom of that page under table 2.  
5 Yeah, keep going right -- thank you, Kristen. Mr.  
6 Strongman, this is not specifically on this fa --  
7 page, but you would agree that the largest contributor  
8 to overall project cost is the increase of the general  
9 civil contract.

10 Would that be fair, sir?

11 MR. JEFF STRONGMAN: Yes, that's  
12 correct.

13 DR. BYRON WILLIAMS: And specifically,  
14 that is driven by challenges in concrete and earthwork  
15 productivity, as well as additional indirect costs;  
16 agreed?

17 MR. JEFF STRONGMAN: Yes, that's  
18 correct.

19 DR. BYRON WILLIAMS: And what you're  
20 seeing here, sir, I'll suggest to you is the  
21 suggestion by Klohn Crippen that indirect costs amount  
22 to only about 23 percent of the over -- overage over  
23 budget.

24 Do you see that, sir?

25 MR. JEFF STRONGMAN: No, I don't. Can

1 you point me to it?

2 DR. BYRON WILLIAMS: Oh, right under  
3 the -- at the bottom of that page.

4 MR. JEFF STRONGMAN: I see the  
5 reference to 23 percent, but I'm not sure how you  
6 characterized it.

7 DR. BYRON WILLIAMS: Okay. Well, sir,  
8 you see a reference to that -- that a significant  
9 amount of the costs are related to civil delays, camp  
10 costs, turbli -- turbine supply costs.

11 And I guess my question, sir, is, is  
12 that what you and Mr. Bowen are referring to as knock  
13 on costs? Knock...

14 MR. JEFF STRONGMAN: Yes, I think it's  
15 fair to say that knock on costs are described here as  
16 impacts from the general civil schedule onto other  
17 contracts that depend on when the general civil  
18 contractor can pass off or hand over the work.

19 DR. BYRON WILLIAMS: Okay. And I  
20 apologize for the awkwardness of that question. Can  
21 we turn to page 28 and 29 of -- of this same document,  
22 and go towards the bottom of this page. Just one (1)  
23 second.

24 MR. JEFF STRONGMAN: Before we leave  
25 this line of questioning, though, I just wanted to

1 point out that these are not Manitoba Hydro's numbers.  
2 They're the independent expert's numbers.

3 DR. BYRON WILLIAMS: Yes. And I was -  
4 - I was trying to get at the point rather than the  
5 percentage, Mr. Strongman, and I thank you for that  
6 clarification. I may be looking at a -- Kristen, I'm  
7 looking for appendix A, the Klohn Crippen page 29 --  
8 28, which should -- should show table 9, a comparison  
9 of -- of unit price expe -- extracts. And then  
10 rolling onto page 10, I -- I would like to go right  
11 under table 9, please.

12 Mr. Strongman, you'll recall a  
13 discussion with Mr. Peters yesterday in terms of the  
14 important -- importance of unit prices that you had  
15 with him?

16 MR. JEFF STRONGMAN: Amongst other  
17 things, yes.

18 DR. BYRON WILLIAMS: I like that  
19 response, sir.

20 And I'm not asking you to profess a  
21 mastery of the material, but this purports to be a  
22 comparison by Crippen -- or Klohn Crippen of the unit  
23 prices from the amending agreement 3 versus amending  
24 agreement 7; agreed, sir? A sample of that?

25 MR. JEFF STRONGMAN: Yes.

1 DR. BYRON WILLIAMS: And you'll see a  
2 suggestion by -- by Klohn Crippen that -- that there  
3 was a significant variance in -- in this sample of the  
4 consolidated unit prices flowing from amending  
5 agreement 3 to amending agreement 7.

6 Do you see that suggestion, sir?

7 MR. JEFF STRONGMAN: Are you referring  
8 to table 10?

9 DR. BYRON WILLIAMS: I'm referring to  
10 table 9 and the paragraph under table 9, noting  
11 variance in the samples between 67 percent and 366  
12 percent.

13 Do you see that, sir?

14 MR. JEFF STRONGMAN: Yes, I do.

15 DR. BYRON WILLIAMS: And I'm not  
16 asking you to -- to comment on the actual percentages,  
17 sir, but is that understanding expressed by them,  
18 namely, that there was a significant increase in the  
19 consolidated unit prices between amending agreement 3  
20 and amended agreement 7 consistent with your  
21 understanding, sir?

22 MR. JEFF STRONGMAN: Would you mind  
23 simplifying the question? I'm sorry.

24 DR. BYRON WILLIAMS: Sir, is the --  
25 the significant increase in the target price increases

1 represented in amending agreement 7 a function of the  
2 increase in the unit prices?

3 MR. JEFF STRONGMAN: I'm going to  
4 confer with Mr. Bowen.

5 DR. BYRON WILLIAMS: Of course.

6

7 (BRIEF PAUSE)

8

9 MR. JEFF STRONGMAN: Thank you for  
10 giving me a moment there. Part of my uncertainty lies  
11 in the fact that this is Klohn Crippen Berger's  
12 analysis, and asking me to verify the work that they  
13 have done is a bit of a challenge. So I'm struggling  
14 to understand whether or not the data that they have  
15 represented here is representative of our project and  
16 the contracts that are being referenced.

17 DR. BYRON WILLIAMS: Okay. And -- and  
18 I appreciate, sir, like, and just so you're clear  
19 where I'm coming from with -- with -- there's some  
20 assertions made in -- in the evidence of MGF and we're  
21 just trying to understand Manitoba Hydro's position.  
22 But we can move on from this one (1), sir. And I'd  
23 like to go to the Corporation's response to Coalition-  
24 1-208(h). So that's Coalition to Manitoba Hydro 1st  
25 Round (h).



1                   And, Mr. Strongman you'll see here a  
2 suggestion that Manitoba -- that the general civil  
3 contractor is putting additional resources in the  
4 field to increase the staff to craft ratios.

5                   You see that, sir?

6                   MR. JEFF STRONGMAN:    Yes I do.

7                   DR. BYRON WILLIAMS:   And including a  
8 greater number of superintendents to improve execution  
9 of the -- of the workforce.

10                  You see that, sir?

11                  MR. JEFF STRONGMAN:    I do.

12                  DR. BYRON WILLIAMS:   And that's  
13 consistent with your understanding of what's taking  
14 place in the field, sir?

15                  MR. JEFF STRONGMAN:    Yes, it is.

16                  DR. BYRON WILLIAMS:   And I want to go  
17 now to the evidence of MGF, page 58, at the top of  
18 that page.  And, Mr. Strongman, I'll just give you a  
19 second to look at that.  I'm looking at finding number  
20 7.

21

22   (BRIEF PAUSE)

23

24                  DR. BYRON WILLIAMS:    Do you see that,  
25 sir?

1 (BRIEF PAUSE)

2

3 DR. BYRON WILLIAMS: That's page 58.  
4 It's on the screen, but if you're unable to read the  
5 screen, sir.

6 MR. JEFF STRONGMAN: I see finding  
7 number 7 on the page, yes. On the screen.

8 DR. BYRON WILLIAMS: And, Mr.  
9 Strongman, the suggestion of MPF -- MGF, excuse me, is  
10 that the ratio of craft to foremen of 3.97:1 of  
11 Manitoba -- of -- of the general civil contractor is  
12 high compared to the ratio of similar construction  
13 projects of 6:1.

14 You see that reference, sir?

15 MR. JEFF STRONGMAN: Yes I do.

16 DR. BYRON WILLIAMS: And, sir, with no  
17 judgements offered our client is trying to understand  
18 the response to add staff in the field versus the MGF  
19 position that -- that you're over -- that the general  
20 civil contractor is overstaffed and would appreciate  
21 Manitoba Hydro's position on that specific point, sir.

22 MR. DAVID BOWEN: I'll jump in here.  
23 It's, first off, the -- the staff to craft ratio, it's  
24 an important question on any job. It's certainly  
25 something that we're looking with right now with BBE

1 as they come into the new 2018 construction season.  
2 Depending on the contractor you work with, the -- the  
3 staff to craft ratios can have a fair bit of variance.  
4 They could see on the lower end as low as 3:1, to  
5 upwards of 10:1.

6                   Certainly what the -- what -- the  
7 question that's being asked when you're looking at the  
8 staff to craft ratio is how much -- how much  
9 supervision is required to effectively plan and manage  
10 the workforce. And it -- and it really varies from  
11 the contractor philosophy and from contractor to  
12 contractor, but also based on the type of work.

13                   So -- so we are actively working on  
14 this with -- with BBE to make sure that they got the  
15 rate plan in place, the right supervision in place for  
16 the 2018 season. So it's a -- it's a very valid  
17 question. We believe right now that once we complete  
18 this work with BBE that we'll have the right -- the  
19 contract will have the right staff to craft ratio to  
20 be successful in 2018.

21                   DR. BYRON WILLIAMS: And in terms of  
22 the -- and if you're unable to respond to this, I'll  
23 accept -- accept that. But in terms of the general  
24 ops calculation of the MGF of a ratio of craft to  
25 foremen of 3.97:1, is that a calculation that Manitoba

1 Hydro takes issue with or is -- is conversant with?

2

3

(BRIEF PAUSE)

4

5 MR. JEFF STRONGMAN: So the finding  
6 number 7 relating to the suggestion that the ratio of  
7 4:1 is wrong or -- or we could save on order of  
8 magnitude \$91 million, yes, Manitoba Hydro takes issue  
9 with this calculation. As we've discussed at length  
10 yesterday, through many of Mr. Peterson's -- Peters's  
11 questions, the productivity rate of the general civil  
12 work is one (1) of our key issues.

13 The productivity rate is not meeting  
14 the plan. In fact, it's -- it's been one (1) of the  
15 main sources of overrun on this project. And the  
16 suggestion of potentially reducing the supervisory  
17 that we've added to help impact in a positive way the  
18 productivity would be going in the wrong direction.

19 DR. BYRON WILLIAMS: Okay. I'm going  
20 to switch gears, and I want to go to the attachment to  
21 the rebuttal evidence of Manitoba Hydro. That is the  
22 KPMG letter dated January 11th, 2018.

23 And, Mr. Bowen, will that be you or  
24 will that be Mr. Strongman?

25 MR. DAVID BOWEN: We'll have to wait

1 for your question.

2 DR. BYRON WILLIAMS: And -- and, sir,  
3 I just want to emphasize that I'm looking only -- I'm  
4 not seeking information that is confi -- confidential.  
5 I -- I'm looking for what's discussed here. And I  
6 want to just turn quickly to page 2, the middle of the  
7 page. Scroll down please, Kristen. And, Mr. Bowen,  
8 generally, you'll see there is a discussion on this  
9 page of the amended contract, being a -- a amended  
10 amending agreement 7.

11 Do you see that, sir? Towards the  
12 bottom of the page.

13 MR. DAVID BOWEN: Yes.

14 DR. BYRON WILLIAMS: And if we can go  
15 to the top of page 3, there is the suggestion in the  
16 second bullet that the new incentive program is now  
17 structured around cost, schedule, and management  
18 performance.

19 Do you see that suggestion?

20 MR. DAVID BOWEN: Yes, I do.

21 DR. BYRON WILLIAMS: And again, the  
22 first paragraph underneath the amended contract now  
23 includes incentives for not only costs but also  
24 schedule and management performance.

25 You see that suggestion, sir?

1 MR. DAVID BOWEN: Yes.

2 DR. BYRON WILLIAMS: And then finally  
3 -- and then we'll get to -- to my questions, but the  
4 next paragraph, there's a suggestion that in contract  
5 management a high risk exists when contract --  
6 contract performance incentives are entirely  
7 disconnected from schedules.

8 Do you see that reference, sir, by  
9 KPMG?

10 MR. DAVID BOWEN: Yes.

11 DR. BYRON WILLIAMS: So to Manitoba  
12 Hydro, do they accept the characterization that --  
13 that a -- a change in amending agreement 7 was more  
14 incentives related to schedule and management  
15 performance?

16 Is that a substantive difference from  
17 the previous contract, sir?

18

19 (BRIEF PAUSE)

20

21

22 MR. DAVID BOWEN: Forgive me. I was  
23 just conferring with Mr. Strongman. Our -- our  
24 amending agreement 7 is more of a balance of  
25 incentives between costs and schedule. Whereas, the

1 original contract would have been more heavily focused  
2 on cost.

3

4 (BRIEF PAUSE)

5

6 DR. BYRON WILLIAMS: And, sir, in the  
7 original contract why would it have had relatively  
8 less intent -- incentives for schedule?

9

10 (BRIEF PAUSE)

11

12 MR. JEFF STRONGMAN: So yesterday in -  
13 - in my testimony I explained the fundamentals of a  
14 target price cost reimbursable contract. And the  
15 fundamental of that contract is you have a target  
16 price, which is a function of your contractor's bid  
17 times the units that they're performing; that gives  
18 you your target. And then you have an actual cost of  
19 the work and you're comparing the two (2) of those.  
20 They're separately accounted for, but compared  
21 regularly throughout. And it's effectively a cost-  
22 based mechanism.

23 And Manitoba Hydro's recognition of a  
24 shortcoming within that was addressed through  
25 establishing a bonus provision within the contract to

1 ensure that schedule milestones were also going to be  
2 rewarded. That was the fundamen -- fundamental  
3 contract that we were working from at the outset.

4                   When we went through Amending Agreement  
5 Number 7, we significantly chan -- restructured the  
6 incentives to better align with the fact that our  
7 project was schedule driven at that point in time.  
8 And the milestones that were then set were based on  
9 schedule performance as the primary, with cost as a  
10 secondary.

11                   DR. BYRON WILLIAMS: Just one (1) last  
12 question this, and then -- then I'll come to my last  
13 question -- question. You'll see on -- in the third  
14 paragraph, a suggestion -- well, the second full  
15 paragraph under the bullets at the second line, a  
16 suggestion that namely a perverse incentive could  
17 exist for a contractor to forsake schedule in an  
18 effort to maintain a low cost position.

19                   Do you see that reference, Mr.  
20 Strongman?

21                   MR. JEFF STRONGMAN: Yes, I do.

22                   DR. BYRON WILLIAMS: And recognizing  
23 these are KPMG's words, but could you explain your  
24 understanding of that perverse incentive, sir, if  
25 you're able?



1 (BRIEF PAUSE)

2

3 MR. JEFF STRONGMAN: So just loosely  
4 describing what this means, I would suggest that the  
5 contractor, in this situation and the perverse  
6 conditions described, could completely disregard  
7 schedule and operate with a much smaller crew that  
8 would effectively minimize their costs on the -- the  
9 next multi year plan forward without regard for the  
10 schedule concerns.

11 DR. BYRON WILLIAMS: Okay. Thank you.  
12 Just my last question, I want to follow-up on an  
13 undertaking sought and responded to by Board member  
14 McKay yesterday with regard to First Nation and other  
15 Indigenous employment at Keeyask.

16 And will -- will Manitoba Hydro -- I  
17 take it you would recall that as part of the -- the  
18 assessment of its performance on Wuskwatim, Deloitte  
19 was retained to examine the successes and challenges  
20 of Wuskwatim in terms of First Nation and other  
21 Indigenous employment.

22 Do you recall that generally?

23 MR. DAVID BOWEN: I'm aware there was  
24 a report done. I can't say I'm familiar with the  
25 findings.

1 DR. BYRON WILLIAMS: And, sir, if  
2 you're unable to confirm this I'll understand.

3 But perhaps you could accept, subject  
4 to check, that one (1) of the observations of Deloitte  
5 in terms of Wuskwatim was an underrepresentation of  
6 First Nation and other Indigenous persons in terms of  
7 apprenticeships and the skilled trades?

8 MR. DAVID BOWEN: I'll -- I'll have to  
9 take your word for, Dr. Williams.

10 DR. BYRON WILLIAMS: Will you accept  
11 it subject to check and --

12 MR. DAVID BOWEN: Subject to check.

13 DR. BYRON WILLIAMS: What I'm asking  
14 for by way of undertaking is with regard to the  
15 Keeyask project. And in terms of the person hours of  
16 employment, I'm looking for the relative  
17 representation of First Nation and other Indigenous  
18 persons in terms of apprenticeships and skilled  
19 trades.

20 MR. DAVID BOWEN: Can -- can you be  
21 more specific of what you mean by "relative  
22 representation"? Relative to what?

23 DR. BYRON WILLIAMS: So to others.  
24 So, Mr. Bowen, or any -- anyone who is part of the  
25 Keeyask environmental impact will recall that Manitoba

1 Hydro had projections in terms of the relative  
2 participation of First Nation people and other  
3 Indigenous people in terms of the skilled trades and  
4 other positions; correct? If you don't recall it,  
5 Manitoba Hydro tracks those numbers.

6 MR. DAVID BOWEN: Yes, yes we do.

7 DR. BYRON WILLIAMS: Okay. And you  
8 would -- are you able to undertake to -- so what I'm  
9 looking for is a percentage of skilled trades and  
10 apprenticeships of the -- whatever reference point you  
11 have, whether that is hours worked, or however, or  
12 positions. I'm looking for comparison of First Nation  
13 and Indigenous persons to the other populations  
14 comprising the skilled trades, including  
15 apprenticeships.

16

17 (BRIEF PAUSE)

18

19 MR. DAVID BOWEN: I believe we have  
20 this information. So we'll -- we'll take this under -  
21 - undertaking.

22 DR. BYRON WILLIAMS: And I understand  
23 it's an undertaking that if the information is readily  
24 available to Manitoba Hydro you will -- you will  
25 produce it?

1 MS. HELGA VAN IDERSTINE: That's  
2 right.

3 THE CHAIRPERSON: Sorry. Does the  
4 court reporter have the undertaking?

5  
6 --- UNDERTAKING NO. 63: Manitoba Hydro to provide  
7 a comparison of First  
8 Nation and Indigenous  
9 persons to the other  
10 populations comprising the  
11 skilled trades, including  
12 apprenticeships

13  
14 DR. BYRON WILLIAMS: And, Mr. Chair,  
15 just recognizing the time I'll -- I'll try and get my  
16 -- the rest of my question through with MGF in another  
17 week.

18 MS. HELGA VAN IDERSTINE: So I just  
19 have -- if I might, Mr. Chair, I can advise Mr.  
20 Williams that with respect to the undertaking he  
21 requested about the updated NPVs, if he looks at tab 2  
22 of the application, pages 42 through 48, I think that  
23 information is contained in there.

24 DR. BYRON WILLIAMS: My memory is  
25 short. I appreciate that from Ms. Van Iderstine.

1 MS. HELGA VAN IDERSTINE: Right now it  
2 says estimated at 4.4 percent real WACC. These  
3 projects are positive at P50, NPV 2 billion, and P90  
4 NPV, 1.5 billion.

5 DR. BYRON WILLIAMS: That's super, and  
6 I thank you for that.

7 THE CHAIRPERSON: Thank you. We'll --  
8 we'll take fifteen (15) minutes right now and then Mr.  
9 Hacault --

10 MS. HELGA VAN IDERSTINE: Mr. Chair,  
11 if -- sorry, another question, if you wouldn't mind.  
12 We're moving into CSI now, I believe. No?

13 THE CHAIRPERSON: Mr. Hacault still  
14 has --

15 MS. HELGA VAN IDERSTINE: Oh, Mr.  
16 Hacault.

17 THE CHAIRPERSON: -- cross-  
18 examination, then we'll move into CSI. And I  
19 understand you may want a longer break.

20 MS. HELGA VAN IDERSTINE: Well, we  
21 might be able to take that break now, I would think.  
22 If we take the little longer break now and you can --

23 THE CHAIRPERSON: How long would you  
24 want now, Ms. --

25 MS. HELGA VAN IDERSTINE: Probably

1 half an hour. Or do you want to take it after.

2 Others might.

3 THE CHAIRPERSON: Well, what I think -  
4 - I'd rather have -- finish and then we'll -- we'll  
5 take and we'll -- we'll see where we are in relation  
6 at the lunchtime as well.

7 MS. HELGA VAN IDERSTINE: Thank you.

8 THE CHAIRPERSON: Okay.

9

10 --- Upon recessing at 10:31 a.m.

11 --- Upon resuming at 10:50 a.m.

12

13 THE CHAIRPERSON: Mr. Hacault...?

14

15 CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

16 MR. ANTOINE HACAULT: Yes, Mr. Chair,  
17 members of the panel, and members of the Manitoba  
18 Hydro panel. I'd like to start with a couple of  
19 questions of clarification on a slide that Mr. Cormie  
20 spoke to and it was page 117 of the slide deck. I  
21 think it's titled US Interconnection Objectives.

22 And I'd like to clarify, Mr. Cormie,  
23 with respect to the capacity on the Manitoba side with  
24 respect Manitoba/Minnesota transmission line, am I  
25 correct that there's optionality to go up to 1100

1 megawatts on the Manitoba side?

2 MR. DAVID CORMIE: Optionality to do  
3 what, Mr. Hacault?

4 MR. ANTOINE HACAULT: Well, you talk  
5 on this slide of import capabilities of 700 megawatts  
6 and export capabilities of 900 megawatts, and my  
7 understanding is when you were talking about those  
8 numbers that it took into account restrictions that  
9 would be applicable in the Great North West  
10 transmission line sector.

11 What I'm trying to determine is what do  
12 we have as far as optionality in Manitoba without  
13 further cost, if any?

14 MR. DAVID CORMIE: I think, Mr.  
15 Hacault, the import capability that I indicate on that  
16 line, on that slide of 700 megawatts, actually, it's  
17 six hundred and eighty-three (683) I think is the  
18 design number; that's associated with the facilities  
19 that we have contracted for -- in Manitoba and in  
20 Minnesota.

21 So, based on the cost of installing  
22 those facilities, this will be the guaranteed minimum  
23 import capability. There is no optionality to go  
24 above that with those facilities if we wanted to have  
25 a higher import capability than the six eighty-three

1 (683), we would have to request additional  
2 transmission service, and that would result in new fac  
3 -- new additional facilities.

4 MR. ANTOINE HACAULT: When you say  
5 "new additional facilities," what would that involve  
6 on the lines of -- in the Manitoba sector to bring it  
7 up to 1100 megawatts?

8 MR. DAVID CORMIE: I -- I don't know  
9 that answer. We haven't done the transmission studies  
10 to -- to know what that -- that -- those facilities  
11 would be and what those costs would be.

12 MR. ANTOINE HACAULT: The -- the  
13 reason I was asking those questions is that Mr. Ed  
14 Wojczynski when he was testifying in the NFAT  
15 proceedings and I believe it was also referenced by  
16 you is that there was optionality to go up to 1100  
17 megawatts with no further spending was the wording he  
18 was using. If I'm not --

19 MR. DAVID CORMIE: I believe, Mr.  
20 Hacault, the 1100 megawatts was relative to our export  
21 capability and the line was initially designed to have  
22 750 megawatts of export capability and it could be  
23 taken up to 1100 megawatts of export capability by the  
24 construction of new facilities downstream of Grand  
25 Rapids, Minnesota -- in Minnesota and that would not



1 involve any additional facilities in Manitoba.

2                   But the -- the 1100 megawatt was an  
3 export number that had -- there is a potential to  
4 increase the capability, but it wouldn't involve any  
5 construction of any new facilities in Manitoba; that  
6 was the understanding at the time. Things may have  
7 changed since then, but there was that optionality --  
8 optionality when we were doing the studies back in  
9 2013 and 2014.

10                   MR. ANTOINE HACAULT:    So just to be  
11 clear, do I understand that in Manitoba no additional  
12 costs needs to be incurred on this side of the border  
13 once the line is built to have an export capability of  
14 1100 megawatts?

15                   MR. DAVID CORMIE:    No, that's not what  
16 I said. I said at the time we were requesting  
17 transmission service. The studies, the facility  
18 studies, that were done indicated that the line could  
19 be upgraded at that time for -- by spending money in  
20 Minnesota, not spending any additional money in  
21 Manitoba.

22                   Since then, conditions may have  
23 changed. We may be able to do a study now that would  
24 indicate that, but I think we would have to do  
25 transmission studies to find out what the cost of

1 increasing the export capability would be. We think  
2 at the size of -- of the eight eighty-three (883), the  
3 additional export capability that we are -- are  
4 building now with the MMTP is sufficient to provide  
5 market access to the United States for all surplus  
6 generation that Manitoba Hydro has an additional  
7 investment in export capability is not required.

8 MR. ANTOINE HACAULT: Thank you for  
9 providing that clarification. Now, with respect to  
10 this sale and also dealing with your -- I'll have some  
11 questions now going into the SaskPower issue and, more  
12 particularly, I'll be asking you some questions with  
13 respect to the document that's in PUB book of  
14 documents 42-6. It's the Manitoba Hydro Internal  
15 Economic Evaluation. So it's at page 253 -- 253 of  
16 that book of documents.

17 So, the first question of clarification  
18 I'd like is a similar report done by the Corporation  
19 with respect to any new perspective bilateral  
20 agreement?

21 MR. DAVID CORMIE: Could you repeat  
22 the question, Mr. Hacault?

23 MR. ANTOINE HACAULT: Is a similar  
24 report prepared with respect to any new perspective  
25 bilateral export agreement?

1 MR. DAVID CORMIE: Yes, as I mentioned  
2 yesterday, should Manitoba Hydro negotiate any export  
3 sales or whether it's to Saskatchewan or to the United  
4 States that's turned over to Mr. Miles to -- to do a  
5 business case analysis and review the risks and the  
6 costs associated with the sale.

7 And so that's normal business practice  
8 to -- to -- to prepare these reports, and then Mr.  
9 Midford would take that justification to our Board of  
10 Directors when he sought approval for the power sale.  
11 We don't enter the power sales without agreements  
12 without doing those rigorous analysis that are  
13 independent of my -- of my -- of my responsibilities.

14 MR. ANTOINE HACAULT: So, Mr. Miles  
15 would've been one (1) of the persons who would have  
16 reviewed this report and put his signature of approval  
17 on it, is that correct?

18 MR. DAVID CORMIE: Yes, Mr. Miles  
19 would have -- have directed that study.

20 MR. ANTOINE HACAULT: Okay. And if we  
21 look at the second paragraph under the heading  
22 Overview. In this report it's being stated by  
23 Manitoba Hydro that entering into long-term firm sales  
24 -- I see it's a plural, is a key component of a  
25 business case.

1 Does that continue to be the situation?

2 MR. DAVID CORMIE: Could you refer me  
3 to the lineage you're speaking about?

4 MR. ANTOINE HACAULT: It's in the  
5 second full paragraph after the heading Overview. The  
6 paragraph starts with:

7 "This sale provides a long-term  
8 fixed revenue stream, reducing  
9 uncertainty related to future market  
10 price. Entering into long-term firm  
11 sales is a key component of the  
12 business case made during the 2013/  
13 2014 Needs For and Alternatives To  
14 process."

15 And my question was: Is that still the  
16 case today?

17 MR. DAVID CORMIE: Yes, underpinning  
18 the -- the business case for both Keeyask and the new  
19 interconnection was the creation of new dependable  
20 energy and capacity, some of which had yet been  
21 contracted for bilaterally and our expectation was  
22 that Manitoba Hydro would continue actively in them --  
23 in the export market to find customers for that -- for  
24 that power under those additional long-term firm  
25 sales.

1                   And the Saskatchewan sale is -- is an  
2 example of that. During NFAT we had not identified  
3 Saskatchewan specifically in the -- in the NFAT as a  
4 bilateral customer. We had only identified Minnesota  
5 Power, Northern States Power, and Wisconsin Public  
6 Service.

7                   And as -- as time progressed, and the  
8 Manitoba load forecasts declined, it created the  
9 opportunity to enter into additional capacity and  
10 energy sales from the surplus and -- and this twenty  
11 (20) year sale is an example of how that -- that  
12 strategy was implemented.

13                   MR. ANTOINE HACAULT:    And am I correct  
14 -- and I'm taking this from the next paragraph -- that  
15 as part of the resource planning, evaluation and  
16 evaluation of these contracts, there's a comparison  
17 made to potential -- potential alternative sale  
18 options; is that correct?

19                   MR. DAVID CORMIE:    Yes. And those  
20 potential alternatives are based on Manitoba Hydro's  
21 expectation of what the market value of that  
22 transaction would be without actually identifying a  
23 customer and we've -- and we've gone through a -- a  
24 conversation over the last few weeks about market view  
25 and -- and-- and what alternative customers might be

1 willing to pay for that power and -- and -- and this  
2 study looks at those as -- as an alternative and tests  
3 the sale to Saskatchewan to those alternative markets.

4 MR. ANTOINE HACAULT: So would it be  
5 over simplifying things if I said, all things being  
6 equal, if you had a sale option that might give you  
7 \$0.10 a kilowatt, and all things being equal, a sale  
8 option that might give you \$0.11 a kilowatt, you'd  
9 say, well, listen I'll pick the \$0.11 a kilowatt  
10 because I'm getting 10 percent more for my power.  
11 That's the alternative sale analysis put very simply?

12 MR. DAVID CORMIE: Yes, and -- but  
13 more than that, here we have a customer who has  
14 actually declared he will pay a fixed price for the  
15 power, as against hoping that you might find another  
16 customer and -- and bird in the hand works in this  
17 case that -- the market forecast is just a market  
18 forecast. It's not actually an indication of any --  
19 from any customer that they're willing to pay.

20 I would like to be in the position  
21 where I had people banging down the door, but this is  
22 a situation where we have potential options as opposed  
23 to a firm commitment to purchase.

24 MR. ANTOINE HACAULT: Okay. And I'll  
25 explore that a little bit more by going to page 256 of

1 this same internal report. Under -- at least under  
2 what I can see, there's a -- some attributes in this  
3 contract which would have been evaluated against a  
4 baseline, and those would include environmental  
5 attributes and capacity and energy; is that fair?

6 MR. DAVID CORMIE: Yes, Saskatchewan  
7 is committed to reducing its submissions. And  
8 although it doesn't have a renewable portfolio  
9 standard in the province like exists in Wisconsin or  
10 Minnesota, our non-emitting electricity helps them  
11 achieve those emission reductions.

12 And so being able to point to a clean  
13 non-emitting energy supply for Manitoba Hydro helps  
14 them achieve that goal. And so it's -- it's critical  
15 in the agreement that they gain title to those --  
16 those attributes.

17 MR. ANTOINE HACAULT: And under the  
18 heading Price Analysis, there's an explanation that  
19 the pricing analysis compares projected contract  
20 revenue to the expected forecast.

21 And that expected forecast was taken  
22 from the 2015 electricity export price forecast; is --  
23 am I reading that document, right?

24 MR. DAVID CORMIE: Yes, that's  
25 correct.

1 MR. ANTOINE HACAULT: So am I also  
2 right in understanding that the 2015 electricity price  
3 forecast as opposed to other forecasts that were  
4 subsequent to that, did an assessment as to what the  
5 probable value was going to be for on-peak energy?

6 MR. DAVID CORMIE: Yes, amongst  
7 comparisons to other hours as well.

8 MR. ANTOINE HACAULT: And that  
9 forecast would've had Manitoba Hydro's assessment of  
10 what it might get as far as a value for off-peak  
11 energy, second category?

12 MR. DAVID CORMIE: That off-peak  
13 energy is usually energy that's delivered Monday to  
14 Friday, sixteen (16) hours a day. This contract  
15 requires us to deliver energy on Saturday as well. So  
16 it would be a comparison to the Saturday prices as  
17 well which falls into the category of off-peak.

18 There is no overnight energy deliveries  
19 associated with this contract. So, it's not overnight  
20 energy that we we're -- we're selling here.

21 MR. ANTOINE HACAULT: And in doing  
22 this comparison, am I also correct that Manitoba Hydro  
23 would have an estimate or assessment as to what it  
24 probably could get for capacity project -- products?

25 MR. DAVID CORMIE: Yes, our



1 electricity export price forecast includes a forecast  
2 of both energy and capacity in the marketplace.

3 MR. ANTOINE HACAULT: And if you're  
4 selling environmental attributes, am I right in  
5 suggesting that Manitoba Hydro would come to an  
6 assessment of what it could probably get for  
7 environmental attributes?

8

9 (BRIEF PAUSE)

10

11 MR. DAVID CORMIE: The issue with  
12 environmental attributes is one that a purchaser like  
13 Saskatchewan Power has the alternative of building a  
14 facility that does emit and has potential costs  
15 associated with those emissions and environmental  
16 targets. When a customer chooses to purchase from  
17 Manitoba Hydro, he -- that customer has no risk  
18 associated with emissions.

19 So although there may not be any of --  
20 any price built into it, it gives us -- it gives us  
21 the advantage of saying, for the same price as your  
22 alternative, you can avoid the risk of emissions. So  
23 although we don't explicitly include a value there, we  
24 have to -- we have to overcome some of the  
25 disadvantages that we have associated with our

1 products. It's in a different product -- province.  
2 It's under different jurisdiction. It's not readily  
3 available as a gas turbine in Saskatchewan might be.  
4 And so one of the -- one of the advantages that --  
5 that -- that we talk about with our product is the  
6 non-emitting aspect.

7                   The other aspect of our product that is  
8 superior to self generation is the high reliability  
9 supply that we provide as a dependable product. It's  
10 available with the same reliability as we supply to  
11 customers in Manitoba, which is different than the  
12 reliability associated with a combustion turbine, for  
13 example.

14                   And -- and so by offering -- offering  
15 that product tied to the natural characteristics of  
16 our product, that's an advantage. It's not  
17 necessarily something that achieves a price premium,  
18 though, it just gives us an advantage compared to the  
19 customer's alternative.

20                   MR. ANTOINE HACAULT: Okay. Thank  
21 you. And am I right then that with each of on-peak  
22 energy, off-peak energy, capacity products, and as  
23 further refined by you on environmental attributes,  
24 there would be a comparison over the life of the  
25 contract which, in this case, is from 2022 to 2040 to

1 be able to make the economic analysis?

2 MR. DAVID CORMIE: Yes, the economic  
3 analysis goes out to 2040, yes.

4 MR. ANTOINE HACAULT: And to be clear,  
5 Manitoba Hydro in this analysis is using its probable  
6 views of the value of each of these products over the  
7 expected life of the bilateral export contract, as a  
8 baseline?

9 MR. DAVID CORMIE: Yes, I -- but in  
10 addition to that, there are sensitivity analysis done  
11 under various assumptions, and those include  
12 variations in Manitoba load, variation in export  
13 prices, and -- and, you know, other -- other factors  
14 that affect the production cost of producing the  
15 electricity; water flows, for example.

16 And but there are -- but there are a  
17 base set of assumptions that form the base analysis  
18 and then there's the sensitivity analysis done,  
19 including the Monte Carlo -- Monte Carlo analysis that  
20 -- that look under -- a culmination of all the factors  
21 that affect the value of the -- of the sale to -- to  
22 Manitoba Hydro.

23 MR. ANTOINE HACAULT: And again, am I  
24 right in understanding that the electricity export  
25 price forecasts, as they were then called, were an

1 input into the integrated financial forecast?

2 MR. DAVID CORMIE: Yes, the values  
3 that -- of revenue associated with a sale are in the  
4 IFF based upon the -- the 2015 export price forecast.

5 MR. ANTOINE HACAULT: Okay. And am I  
6 right in understanding one of your answers initially  
7 in this conversation that if there are new contracts  
8 Manitoba Hydro will use the same methodology of  
9 comparison to do the assessment of -- the economic  
10 assessment of any new potential export contract?

11 MR. DAVID CORMIE: Yes, the -- the  
12 process is the same. There's -- there are -- there  
13 are production costing effects. They need to be  
14 considered. That's considered through our splash  
15 modelling that looks at the variation in flows. There  
16 are sensitivities that are done based upon various  
17 interest rates and exchange rate forecasts.

18 And also we have to consider whether  
19 there are any capital projects required in order to  
20 deliver the sale. And in this case an investment in  
21 transmission was considered necessary for the sale to  
22 proceed, and so those -- those investment costs were  
23 also considered.

24 MR. ANTOINE HACAULT: So just to  
25 further understand this, on any evaluation from an

1 economic basis of a new contract, Manitoba Hydro will  
2 use what I call the old electricity export price  
3 forecast as opposed to the new policy approach in  
4 energy forecasts; correct?

5

6 (BRIEF PAUSE)

7

8 MR. DAVID CORMIE: Well, I'm -- I'm  
9 thinking, Mr. Hacault, that you're confusing the two  
10 (2) issues. One (1) is an evaluation of the economics  
11 and financial impacts of -- of a sale that we've  
12 signed a term sheet for that is -- is -- it is part of  
13 Manitoba Hydro's plans. And all the revenue that we  
14 expect to generate from a term sheet or a -- an export  
15 contract to sign will be in the IFF, and that's always  
16 been the case.

17 The question is from a policy  
18 perspective, is whether we count on unsold capacity in  
19 the IFF. And as we've testified at the revenue  
20 requirement panel of this hearing, Manitoba Hydro for  
21 -- for this IFF has chosen not to include that -- that  
22 capacity revenue in the IFF out of consideration of --  
23 of the risks associated with being in the export  
24 market.

25 MR. ANTOINE HACAULT: Thank you.

1 (BRIEF PAUSE)

2

3 MR. ANTOINE HACAULT: Now, I've got a  
4 different subject matter, which I think will take most  
5 of the next fifteen (15) minutes that I have allocated  
6 to me. And it deals with a subject that I tried to  
7 deal with with the previous panel and I was told the  
8 capital panel would be better to address it. And it  
9 relates to the Gillam redevelopment expansion project.  
10 And I alerted Ms. Van Iderstine yesterday that I  
11 intended to follow up on -- on that.

12 So I don't know who might be best to  
13 address this -- these questions to. So I know Mr.  
14 Midford did sign some of the capital project  
15 justifications, so he may have some knowledge. To  
16 bring us back to the context, if we go to PUB-MFR-72,  
17 at page 133, I had been going through various  
18 sustaining capital subjects and we had discussions at  
19 that point in time about -- and I'm looking -- this is  
20 a Boston Consulting slide. Under 4B, "defer low value  
21 capital projects." And there was an indication in  
22 this slide under the heading at the top, "realistic  
23 five (5) year change" of 100 million annual reduction.

24 And then on the right-hand side the  
25 heading "impact on retained earnings," a hundred

1 million. And at page 140 of this same slide deck,  
2 Boston Consulting on the right-hand side had given us  
3 a visual of the potential impact. Sorry to get into  
4 this introduction, but we've kind of taken it a little  
5 bit out of sequence.

6           So I want to explore this subject with  
7 respect to Gillam on a couple aspects, whether cutting  
8 projects as possible and including projects in a IFF  
9 as placeholders. So to continue this discussion, we  
10 had at that time in MIPUG book of documents 23-2, at  
11 page 15, identified various projects and on the lower  
12 -- closer to the bottom of the page, there were  
13 various projects that were identified under major new  
14 generation and transmission capital projects. And one  
15 (1) of those, the second one (1) under that heading  
16 was Gillam redevelopment and expansion program.

17           Are you following me so far?

18           Now, if we go to page 16, that's from  
19 the capital expenditure forecast produced by Manitoba  
20 Hydro in appendix 3.1, and if we can perhaps, yes,  
21 increase the font size so eyes like mine can see what  
22 we're looking at. Under "Gill -- Gillam redevelopment  
23 and expansion program" there was a total project cost  
24 allocation of 266.5 million.

25           Do you see that so far, Mr. Midford?

1 And am I correct in understanding that most of phase  
2 1A of that program has been dealt with and spent? It  
3 doesn't show us that on this slide, but I was going  
4 through that capital justification project details.

5 MR. LORNE MIDFORD: Perhaps I can  
6 start by giving the Board some perspective on -- on  
7 what this -- this project is. Manitoba Hydro, because  
8 we have a significant number of resources in the north  
9 near Gillam, Fox Lake traditional territory, and so we  
10 have three (3) major plants: Kettle, Long Spruce, and  
11 Limestone, as well as two (2) major converter stations  
12 and we're building the Keewatinohk converter station  
13 as well, and ultimately Keeyask, all to be serviced in  
14 the area.

15 So Manitoba Hydro has a fairly large  
16 presence in the area, and those that have -- have been  
17 able to travel to Gillam, I know you've seen that. So  
18 we have about two hundred and sixty-five (265)  
19 employees in the that area. We have -- because of  
20 that there's a -- there's a large amount of  
21 residential dwellings that we own to provide  
22 accommodations for staff who work and support our  
23 facilities in the north from there.

24 So the generate -- the Gillam  
25 redevelopment expansion program, I believe, was



1 initially put in place in anticipation of further  
2 expansion requirements to meet the -- to meet this  
3 additional infrastructure that was being invested in  
4 the north.

5                   We've been able on -- to reduce the  
6 need for additional infrastructure significantly. In  
7 fact, we are not building any new infrastructure to  
8 meet additional resourcing requirements for two (2)  
9 reasons. One (1), we've invested in technologies that  
10 allows us to remotely operate our generating stations  
11 from our system control centre in Winnipeg, which  
12 allows us to not staff the plant twenty-four (24)  
13 hours a day. And so we've been able to achieve  
14 reduction in staffing levels from that.

15                   And also through our corporate staffing  
16 reduction plan, and I'm sure you've heard of -- about  
17 that earlier. We've been able to reduce staffing  
18 levels, so the net -- there will be no net increase  
19 requirement to invest and expand the facilities in  
20 Gillam. So the Gillam -- the dollar values that are  
21 being spent is really just addressing end-of-life  
22 infrastructure investments, such as waste and water  
23 plants that are end-of-life, water lines that -- that  
24 need to be replaced. Just -- just the mass -- it's  
25 three hundred and sixty-five (365) homes. The ongoing

1 requirement to upgrade and replace those facilities.  
2 So that's what that is earmarked for.

3                   Now, in terms of what's been spent, I  
4 can -- I can tell you that the numbers have been  
5 reduced from the -- the two sixty-six (266) that --  
6 that you referred to, Mr. Hacaault. It's been reduced  
7 to \$225 million. And the reference to the different  
8 phases is really from an old perspective of expansion  
9 requirements. What we've done is we've integrated the  
10 spend of all these different infrastructure projects  
11 like waste and water, and -- and added that to our  
12 review process internally to -- to look and justify  
13 each based on its own merit going forward.

14                   MR. ANTOINE HACAULT: Thank you.

15                   MR. LORNE MIDFORD: I don't know if  
16 that helps, but --

17                   MR. ANTOINE HACAULT: You took out  
18 about half a page of my questions because I was going  
19 to go through the automation, through a lot of these  
20 things. Another development, when you say that things  
21 have changed, initially when this program was put into  
22 place we -- it was also anticipated that we might be  
23 going ahead with Conawapa.

24                   That was part of the plan; correct?

25                   MR. LORNE MIDFORD: Yeah, yeah, that's

1 a good point. Yes.

2 MR. ANTOINE HACAULT: And just to give  
3 a little bit more context for those who haven't had  
4 the fortune to go up to Gillam, it is on the Nelson  
5 River, as you indicated; correct? Or off the Nelson  
6 River?

7 MR. LORNE MIDFORD: It's near, yeah.

8 MR. ANTOINE HACAULT: And -- and can  
9 you give us an idea of the -- of the population? Is  
10 it, you know, between a thousand and two thousand  
11 (2,000) people?

12 MR. LORNE MIDFORD: It's the one  
13 thousand two hundred and sixty-five (1,265) people of  
14 -- and there is an urban reserve, Fox Lake Reserve,  
15 there, as well as a town, and Manitoba Hydro staff.

16 MR. ANTOINE HACAULT: Thank you. And  
17 if we go to PUB-MFR-115 that page 264 we should have a  
18 capital justification. Sorry, before we go to that  
19 could you keep on the other slide. The one (1) thing  
20 I want to discuss is if we look on this slide, what  
21 we're looking at -- and I'll bring you to that  
22 discussion -- is we see -- I'm going to sol -- call it  
23 placeholders. Hopefully, I'm not mischaracterizing  
24 that. For the years 2019/2020 of numbers in the range  
25 of \$30 million or so.

1 Do you see that?

2 MR. LORNE MIDFORD: I do see that.

3 MR. ANTOINE HACAULT: And if we go to  
4 the extreme right-hand side of that particular capital  
5 expenditure forecast, we see that the ten (10) year  
6 total that's expected to be spent is in the range of  
7 \$226 million, and a further amount over the twenty  
8 (20) year time period for a total -- a cumulative  
9 total of 241 million.

10 Am I reading that right?

11 MR. LORNE MIDFORD: Yes, I believe so.

12 MR. ANTOINE HACAULT: And we've  
13 clarified, I think, that this program is no longer for  
14 new generation facilities because we've now got  
15 Keeyask underway.

16 And there would be no new generation  
17 facilities in Manitoba Hydro's plan; correct?

18 MR. LORNE MIDFORD: That's correct,  
19 beyond Keeyask.

20 MR. ANTOINE HACAULT: Yeah.

21 MR. LORNE MIDFORD: Yeah.

22 MR. ANTOINE HACAULT: And if we go now  
23 to PUB-MFR-115 at page 264, this capital justification  
24 doesn't deal with 1A. I'll take you to that briefly,  
25 if I have time.

1                   But 1A were initial phases of about  
2 24, \$26 million; correct? Subject to check.

3                   MR. LORNE MIDFORD:    Yeah, it's -- yes,  
4 subject to check. You're -- you're referring to a  
5 document from -- there would be a different document.

6                   MR. ANTOINE HACAULT:    2012?

7                   MR. LORNE MIDFORD:    Yeah, 2012. Yeah.

8                   MR. ANTOINE HACAULT:    And the initial  
9 budget here for this project was 366 million, as we  
10 can see, from 2012?

11                  MR. LORNE MIDFORD:    Yes.

12                  MR. ANTOINE HACAULT:    And you've told  
13 us that's now gone down to 225 million; correct?

14                  MR. LORNE MIDFORD:    Correct.

15                  MR. ANTOINE HACAULT:    And if we go to  
16 page 2 -- the next page, we see some of the projects  
17 that you were talking about in phase 2, being sewer  
18 and water upgrades, road upgrades. And there's the  
19 explanation, I believe, somewhere in this document  
20 that Manitoba Hydro often builds infrastructure for  
21 the town of Gill -- Gillam and subsequently turns that  
22 infrastructure over to the town to operate and  
23 maintain.

24                                Would that be a correct description?

25                  MR. LORNE MIDFORD:    Yes, that's

1 correct.

2 MR. ANTOINE HACAULT: And we see that  
3 under the heading "owner" on this page.

4 Although Manitoba Hydro is spending on  
5 certain items, there's the acronym LGD, which would be  
6 local government district for Gillam; correct?

7 MR. LORNE MIDFORD: Yes, that's right.

8 MR. ANTOINE HACAULT: So although  
9 Manitoba Hydro is spending this money, it's not going  
10 to own the assets?

11 MR. LORNE MIDFORD: That's correct.

12 MR. ANTOINE HACAULT: Would you -- and  
13 if you can't that's okay. Would you be able to  
14 quickly explain whether or not, as a result of giving  
15 those assets to the -- the local government district  
16 of Gillam, how does the accounting work for that? I  
17 mean, is it a Manitoba Hydro asset and you've got no  
18 idea?

19 MR. LORNE MIDFORD: You know, I --  
20 what I -- well, maybe what I can share is why because  
21 you're probably -- you -- you be wondering that.  
22 There is a long-standing agreement with the town of  
23 Gillam that Manitoba Hydro, in lieu of taxes -- in  
24 lieu of the taxes that we would -- that -- that folks  
25 would normally pay through property taxes -- so in

1 lieu of taxes we provide the costs for -- to -- to the  
2 town. And there's also a requirement for any  
3 significant major upgrade capital investment. There  
4 is also that requirement for Manitoba Hydro to provide  
5 that.

6 MR. ANTOINE HACAULT: Okay. And --

7 MR. LORNE MIDFORD: But I'm sorry, I  
8 can't -- the accountings --

9 MR. ANTOINE HACAULT: Okay. That's  
10 okay. Phase 1B says the project is delivered from  
11 2015 to 2018.

12 I think I've read somewhere that by  
13 March 2018 all of this infrastructure work will have  
14 been done, stage shown on here? Sorry I'm kind of  
15 pushing you --

16 MR. LORNE MIDFORD: This is -- sorry,  
17 this is -- so you're look at phase 1B?

18 MR. ANTOINE HACAULT: Yes. On -- on  
19 this particular --

20 MR. LORNE MIDFORD: Some of them are  
21 blank -- some of are blanked out, so it's -- yeah.

22 MR. ANTOINE HACAULT: If we go to page  
23 276. Sorry I'm kind of speeding along here. I'm  
24 mindful of the time.

25 MR. LORNE MIDFORD: Agree.

1 MR. ANTOINE HACAULT: We see that in a  
2 revision -- and I think you were involved in this  
3 revision, Mr. Midford -- there was some \$7.75 million  
4 taken out of each year, as in these placeholders?

5 MR. LORNE MIDFORD: Yes.

6 MR. ANTOINE HACAULT: For a total of  
7 100 million?

8 MR. LORNE MIDFORD: Right.

9 MR. ANTOINE HACAULT: Prior to doing  
10 that, was there any discussion with any of the vice  
11 presidents of the various business sectors, either  
12 generation, transmission or distribution?

13 MR. LORNE MIDFORD: There was a  
14 decision to re -- reduce the overall budget because we  
15 didn't think it was a realistic representation of what  
16 needed to be spent in -- in Gillam. And so that was  
17 together with the vice president of -- of transmission  
18 and the vice president of HR and the services.

19 MR. ANTOINE HACAULT: Okay. And with  
20 the couple minutes that I've got left I'd like to take  
21 you to -- yeah, at the very top of the slide before I  
22 move to another slide, am I right in understanding  
23 this capital justification project to indicate that no  
24 other alternatives were considered indicating the work  
25 must be completed?



1 MR. LORNE MIDFORD: We did to consider  
2 -- tried to think of -- of alternatives to -- to this.  
3 In the end, we have a lot of infrastructure that  
4 supports our operations through -- through our  
5 staffing requirements, and those -- that -- that --  
6 those assets are coming to end-of-life. Just like in  
7 your -- your house, you have to replace a roof every,  
8 you know, twenty (20) years. Multiply that by three  
9 hundred and sixty-five (365). So it's -- it is -- in  
10 terms of an asset management and spend requirement  
11 there's -- there's definitely a need to ensure that we  
12 have adequate facilities for -- for our staff to  
13 support our -- our assets.

14 MR. ANTOINE HACAULT: But to be clear,  
15 these are just placeholders. If you had done a  
16 detailed analysis you wouldn't do a blanket cross off  
17 of \$7.75 million each year without knowing exactly  
18 what you're going to cut.

19 Isn't that correct, they're just  
20 placeholders?

21

22 (BRIEF PAUSE)

23

24 MR. LORNE MIDFORD: I felt that --  
25 that the amount of the three hundred and sixty-six

1 (366) was -- was definitely not required. And I --  
2 the first priority was to free up the dollars. So  
3 went through and reduced by \$100 million as a first  
4 swipe. As we developed detailed plans, and we have  
5 those in place right now, for each of those projects  
6 and each of them are -- are cash flowed appropriately  
7 now.

8 MR. ANTOINE HACAULT: Okay. You  
9 wouldn't be able to point me in -- to any IR response,  
10 or any document in your filing that would give me an  
11 explanation, for example, of what you're going to be  
12 spending on in 2024/'25 and 2025/'26, would you?

13 MR. LORNE MIDFORD: I -- I suspect it  
14 hasn't been included through -- through an IR process.

15 MR. ANTOINE HACAULT: The only IR I  
16 had found was that no projects have been identified  
17 after March 2018.

18 MR. LORNE MIDFORD: I have the list in  
19 front of me. So there are projects -- there's about  
20 nineteen (19) projects spanning right now from 2018,  
21 and I can give you the -- 2018, there's 24 million;  
22 2019, thirty-five (35); 2020 there's forty-one (41);  
23 2021 is 24 million; 2022 is thirteen (13); 2023 is  
24 seven (7); and 2024 is -- is one-point-two (1.2).

25 MR. ANTOINE HACAULT: And -- and

1 what's -- okay. One (1) last going back to Coalition/  
2 Manitoba Hydro Round 1-7174 (sic). This was the  
3 justification for the phase 1A. And at 298, I think  
4 is where I want to take the witness in this PDF.  
5 Maybe just up to 297. At the bottom of 297.

6                   Now, the reason I'm taking you to this  
7 area is in the previous CPJs that we looked at that --  
8 one (1) of which, 1, 2, and 3 were all blanked out as  
9 commercially sensitive information, but the same  
10 headings here were not. So I'd like you to please  
11 explain to me what is meant by damage to local  
12 stakeholder relationships in number 1 of ris -- risk  
13 analysis.

14                   Which stakeholders and what damage?

15                   MR. LORNE MIDFORD: Manitoba Hydro  
16 lives and works in the traditional -- traditional  
17 lands of the Fox Lake Cree Nation. And we live  
18 together in parts -- parts of -- of Fox Lake -- some  
19 of Fox Lake members live in Gillam, and some live in  
20 Bert (phonetic). And those that live in Gillam share  
21 in -- in the facilities that are provided through the  
22 town of -- of Gillam, for instance. And so  
23 investments in recreational centres and libraries and  
24 -- and things like that would -- would as well, the --  
25 the members of the Fox Lake Cree Nation that live in

1 Gillam would have advantage to use those facilities as  
2 well, and do.

3 MR. ANTOINE HACAULT: Okay. Thank  
4 you. And with respect to number 2, the work in the  
5 Gillam redevelopment expansion program is non-core  
6 business to Manitoba Hydro, and there's an indication  
7 that building houses and shopping centres may provoke  
8 negative public perception.

9 Is shopping centres part of what I  
10 didn't see in the blanked out stuff?

11 MR. LORNE MIDFORD: I'm not sure what  
12 was in the blanked out.

13 MR. ANTOINE HACAULT: Okay. Has  
14 Manitoba Hydro -- has Manitoba Hydro been involved in  
15 building shopping centres as indicated?

16 MR. LORNE MIDFORD: There is a  
17 shopping centre in the town of Gillam.

18 MR. ANTOINE HACAULT: And --

19 MR. LORNE MIDFORD: And that is -- has  
20 been built in -- in the last five (5) years.

21 MR. ANTOINE HACAULT: Yeah. And is  
22 Manitoba Hydro involved at all in the financial  
23 payment for anything related to a shopping centre?

24 MR. LORNE MIDFORD: The capital  
25 requirements --

1 MR. ANTOINE HACAULT: Okay.

2 MR. LORNE MIDFORD: -- for that  
3 investment through the town of Gillam.

4 MR. ANTOINE HACAULT: Yeah. And with  
5 respect to the first bullet, the damage to local  
6 stakeholders.

7 Is that a positive or a negative thing?  
8 I'm -- I'm trying to understand that because I, quite  
9 frankly, was reading it two (2) different ways. So I  
10 will listen. There might be damage to local  
11 stakeholder relationships if -- we saw that Manitoba  
12 Hydro was spending that much money in Gillam, but not  
13 on the First Nations was one (1) reading I had, and  
14 there might've been an alternative reading.

15 MR. LORNE MIDFORD: We have a -- it --  
16 it references the harmonized Gillam development and  
17 land use planning initiatives. So we have a joint  
18 group from Fox Lake, the town, and Manitoba Hydro that  
19 meet regularly and look at the investments that are  
20 made within the community to ensure that it aligns  
21 with all the interests going forward. And so that all  
22 -- all the stakeholders can take advantage and -- and  
23 support the investments that are required.

24 MR. ANTOINE HACAULT: Okay. And I'll  
25 finish with this. If we can just go to the next page,

1 298, to read the rest of numbers 2 and 3, which had  
2 been blanked out as CSI on -- on the other capital  
3 justice -- or capital justification.

4 With respect to 3, are there any new  
5 subdivisions that are contemplated?

6 MR. LORNE MIDFORD: No. And maybe I  
7 can take an opportunity just to expand on -- on the  
8 previous risk. I -- I look -- I view that more as an  
9 opportunity to strengthen our relationship in the  
10 community with -- with Fox Lake Cree Nation members  
11 who live in the community. So I -- I view it more as  
12 an opportunity than -- than anything.

13 MR. ANTOINE HACAULT: Okay.

14 MR. LORNE MIDFORD: Mr. Hacault, could  
15 you give us the date on this document?

16 MR. ANTOINE HACAULT: This -- I think  
17 if we go back, Ms. Schubert, is 2012, because it's the  
18 capital justification for phase 1A. Thank you.

19 MR. LORNE MIDFORD: Thank you.

20 MR. ANTOINE HACAULT: So I think if we  
21 go one (1) page before we'll see that it's 2012,  
22 consistent with the capital justification for phase  
23 1B, 2 and 3, which we started with this was with  
24 respect to the phase 1A.

25 MR. LORNE MIDFORD: Right.

1 MR. ANTOINE HACAULT: And it included,  
2 the without redaction if we go to the next page, all  
3 the types of projects, subdivisions, single-family  
4 dwellings being built, Town Centre, et cetera.

5 MR. LORNE MIDFORD: Yeah. So this --  
6 I -- this represents, I think, what the plan was at  
7 that time. This no longer represents the current  
8 plan.

9 MR. ANTOINE HACAULT: Thank you. My  
10 time's up. I've extended my welcome.

11 THE CHAIRPERSON: Thank you. I have a  
12 few questions I think probably, Mr. Midford, if I may.  
13 Kristen, can you pull up the Manitoba Hydro-120, and  
14 page 30. Okay.

15 Mr. Midford, as I understand from  
16 before, you refer to these as the type of contracts  
17 you're looking at for a project like Keeyask.

18 Is that correct? This variety of  
19 contracts? And this is the -- sort of the headings of  
20 them?

21 MR. LORNE MIDFORD: So these -- these  
22 are the kind of contracts that we've entered into for  
23 Keeyask, yes.

24 THE CHAIRPERSON: Right. Okay.  
25 Kristen, can you go to the next screen. And in

1 relation to the BBE contract, you refer to it as  
2 target price. But I understand in the testimony that  
3 you thought the -- the right title would probably be  
4 target price cost reimbursable.

5 Is that correct?

6 MR. LORNE MIDFORD: Yes, that's right.

7 THE CHAIRPERSON: Okay. BBE is -- is  
8 the major contract for Keeyask; correct?

9 MR. LORNE MIDFORD: It is, yes.

10 THE CHAIRPERSON: It has many  
11 different components, both above ground below ground  
12 involved in the project?

13 MR. LORNE MIDFORD: A lot of scope,  
14 yeah.

15 THE CHAIRPERSON: Yeah. I guess the  
16 question I have is, for a project of this size and  
17 this complexity is it normal to only have one (1), if  
18 I could call it methodology, a payment or pla --  
19 payment process? Or is it not possible to break it  
20 down into different components and assign a different  
21 formula, depending on the component? It sounds like  
22 this is -- that there was one (1) formula used for  
23 everything. But you've got some things that are known  
24 and some things that aren't known, for example, the  
25 geotech on the -- on the south dam.



1                   Was there consider -- consideration  
2 ever given in terms of breaking it down into different  
3 parts and having different formulas of payment?

4                   MR. LORNE MIDFORD:   Well, I'll start  
5 to answer, and then I'll -- I'll ask maybe Jeff or --  
6 or Dave to --

7                   THE CHAIRPERSON:    Sure.

8                   MR. LORNE MIDFORD:    -- to chime in.  
9 And I think what you're talking about is rather than  
10 putting such a large amount under one (1) contractor  
11 as a target based re -- cost reimbursable target was  
12 there options to enter into unit based pricing for  
13 smaller segments of work, for instance. And -- and so  
14 carve it up in different ways, which --

15                  THE CHAIRPERSON:    Right. So that --  
16 so that you could have --

17                  MR. LORNE MIDFORD:    Yes.

18                  THE CHAIRPERSON:    -- possibly it may  
19 be more appropriate to have cost reimbursable for  
20 certain things --

21                  MR. LORNE MIDFORD:    Right.

22                  THE CHAIRPERSON:    -- unit base -- unit  
23 based pricing for certain things --

24                  MR. LORNE MIDFORD:    Yes.

25                  THE CHAIRPERSON:    -- pure target

1 pricing for certain things rather than have everything  
2 fit under -- under one (1) umbrella.

3 MR. LORNE MIDFORD: And I believe that  
4 there was some experience with that with Wuskwatim.

5 THE CHAIRPERSON: Okay.

6 MR. LORNE MIDFORD: And so I'd like to  
7 maybe asked Mr. Bowen or Mr. Strongman to provide that  
8 insight.

9 MR. DAVID BOWEN: I'll -- I'll take a  
10 first stab. There's -- there's three (3) main types  
11 of scope of work on the general civil contract.  
12 There's the earthworks, there's the concrete works,  
13 and there's the balance of plant. The -- the  
14 earthworks is -- it's quantity driven. It's probably  
15 the most common type of contract type is a unit price-  
16 based contract, and so it is -- it is quantity driven.  
17 And, of course, the main risk is the geotechnical  
18 risk.

19 For the concrete, again, the typical  
20 con -- contract type payment form would be a unit  
21 price. The quantities are well-defined, following the  
22 -- the lines on the drawing. And, of course, the --  
23 the labour -- labour productivity is -- is the biggest  
24 risk on that work.

25 The last type of scope is the balance

1 of plant work. So that's basically, for lack of  
2 better terms, putting in the systems, taking all the  
3 systems that exist to make the generation --  
4 generation station work. It's tying them all together  
5 and -- and making them work. That scope of work, we  
6 added it to the general civil contractor for Keeyask  
7 because there's multiple interfaces.

8                   Typically it's done on a cost  
9 reimbursable basic basis, because it's driven by the  
10 schedule. So if you could imagine that as the build  
11 happens, and we have seven (7) units at Keeyask, as  
12 various areas become available to install cable tray,  
13 to install piping, the -- the general civil contract  
14 work basically drives where that contractor could  
15 work. And so it's always been on demand type of work  
16 and -- and typically carried out on a cost reimbursed  
17 basis.

18                   To -- to get back to your -- your main  
19 question as to -- I think I'll ask it a different way.  
20 Why -- why didn't we create a lump sum or unit price  
21 for those specific scopes of works? What I -- what  
22 I'm trying to explain is that in terms of the  
23 contracting methodology for payment we -- we did  
24 believe that having a single payment under the target  
25 price with an incentive for the contractor to earn

1 their profit and perform really accomplished what we  
2 wanted for those three (3) main scopes of work.

3 THE CHAIRPERSON: Given what  
4 transpired to date, is that what you would do again?

5 MR. DAVID BOWEN: Certainly, with --  
6 with hindsight and -- and half of the general civil  
7 work behind us right now, certainly we would have a  
8 hard look at if we did this again tomorrow of how we  
9 would contract this based on the marketplace are --  
10 are key findings on this project. So we would have a  
11 hard look at it and -- and make that decision with the  
12 parameters going forward.

13 THE CHAIRPERSON: Okay. Thank you.  
14 Does the panel have any questions?

15 BOARD MEMBER MCCUTCHEON: Good  
16 morning. I have -- oh, sorry. I have one (1)  
17 question. If we go to slide 82, I think would be -- I  
18 don't know if we really need a visual on this. It's  
19 probably for Mr. Penner. My question is regarding the  
20 Bipole III re -- reliability project.

21 Does it benefit all customers of  
22 Manitoba Hydro in all areas of Manitoba from a  
23 reliability standpoint?

24

25 (BRIEF PAUSE)

1 MR. GLENN PENNER: I think the answer  
2 to that question is, yes. If -- if there were a  
3 problem with Bipole I and II that -- that caused a  
4 problem, the blackout would be across the province.

5 BOARD MEMBER MCCUTCHEON: So the  
6 customers even in the northern areas wouldn't have  
7 access to power?

8

9 (BRIEF PAUSE)

10

11 MR. GLENN PENNER: I think they're --  
12 it -- it's hard to predict exactly what would  
13 transpire. Certainly some of the generation would  
14 have black start capability, and if there was an  
15 extended outage because of Bipole I and II being gone,  
16 it's -- it's hard to hypothesize as to exactly what  
17 would happen, depending on what it would be,. But  
18 there -- there probably would be ability to restore  
19 power in the north.

20 BOARD MEMBER MCCUTCHEON: Okay. Thank  
21 you.

22 THE CHAIRPERSON: Ms. Van Iderstine,  
23 you have the choice of doing re-examination now, if  
24 you prefer. I'm not sure if you had planned re-  
25 examination.

1 MS. HELGA VAN IDERSTINE: I have one  
2 (1) question on re-examination.

3 THE CHAIRPERSON: Okay.

4 MS. HELGA VAN IDERSTINE: And I have  
5 the answer to the --

6 THE CHAIRPERSON: Okay.

7 MS. HELGA VAN IDERSTINE: -- to one  
8 (1) of the undertakings. So if I can do that then we  
9 -- that'll be pretty brief.

10

11 RE-EXAMINATION BY MS. HELGA VAN IDERSTINE:

12 MS. HELGA VAN IDERSTINE: So just in  
13 terms of the re-examination, you'll recall, Mr. Bowen  
14 or one (1) of the panel members who were addressing  
15 Keeyask, that Dr. Williams asked a question about  
16 labour productivity and why with Wuskwu -- Wuskwatim's  
17 labour productivity having not been met that you  
18 expected the higher productivity on Keeyask.

19 And did you -- can you elaborate a bit  
20 on that answer?

21 MR. DAVID BOWEN: If I -- if I could  
22 just expand on two (2) points. First off, Wuskwatim  
23 was a three (3) unit generating station, had just over  
24 a hundred thousand cubic metres of concrete. Keeyask  
25 is a seven (7) unit generating station, has about

1 three and a half (3 1/2) -- 350,000 cubic metres of  
2 concrete. So there is a much larger learning curve  
3 opportunity for Keeyask to cause improvement in -- in  
4 cost efficiencies.

5                   The other piece with Keeyask being  
6 larger is that there is the ability to use different  
7 means and methods on a larger job that can be more  
8 cost-effective. So those were considerations that we  
9 factored in at the time of the tender award.

10                   MS. HELGA VAN IDERSTINE: Thank you.

11 And I have one (1) -- an answer to the undertaking  
12 from the GRA. They had asked a question. I thought  
13 it might've been answered by my response to Dr.  
14 Williams when I gave the answer to the -- the  
15 undertaking that was given there. But Mr. Monnin is  
16 not here, so I wasn't able to ask him. So I will give  
17 it on the record and I think that answers that  
18 undertaking.

19                   So section 2.5.4, the Manitoba Hydro  
20 update to Keeyask. The project review of Manitoba  
21 Hydro application provides an updated economic  
22 evaluation, including the P90 capital estimate of 8.7  
23 billion. The text from page 47 reads:

24                   "Manitoba Hydro updated several  
25                   assumptions and prepared a series of

1 NPV analysis to compare a project  
2 shutdown scenario, the base case,  
3 and the revised life cycle economics  
4 of the -- for the project. The  
5 analysis was prepared with a range  
6 of real discount rates, WACC at 4.4  
7 percent and 5.4 percent and 7.5  
8 percent at both P50 and P90 levels  
9 to test for sensitivity. These  
10 discount rates infer a nominal cost  
11 of equity of 8.4 percent, 12  
12 percent, and 20 percent  
13 respectively."

14 And then there's the quote from page  
15 48, which I read earlier.

16 THE CHAIRPERSON: And -- and Ms. Van  
17 Iderstine, if you could advise Mr. Monnin later of the  
18 --

19 MS. HELGA VAN IDERSTINE: I'll do --  
20 I'll do that. Thank you.

21 THE CHAIRPERSON: We're going to be  
22 moving into CSI this afternoon. Ms. Van Iderstine, I  
23 just want to go through with you and Mr. Peters how  
24 long you think you'll need so that counsel can know  
25 when they should be returning.



1 MS. HELGA VAN IDERSTINE: So we're  
2 anticipating that the presentation will be thirty (30)  
3 minutes or less, probably likely closer to twenty (20)  
4 minutes, but we'll just tighten it up over the lunch  
5 hour and see where we go on that. But that was our  
6 present -- expectation.

7 THE CHAIRPERSON: And, Mr. Peters...?

8 MR. BOB PETERS: An hour and a half  
9 would be maximum.

10 MS. HELGA VAN IDERSTINE: Mr. Chair --

11 THE CHAIRPERSON: Yeah.

12 MS. HELGA VAN IDERSTINE: -- I know  
13 we've got Daymark this afternoon. At present,  
14 Manitoba Hydro's been given half an hour for cross-  
15 examination there. At the moment we do not anticipate  
16 having any cross-examination of Daymark.

17 THE CHAIRPERSON: Okay. Mr. Peters,  
18 sorry, an hour and a half...

19 MR. BOB PETERS: I have an hour, I'm  
20 told.

21 THE CHAIRPERSON: Yeah, I was just  
22 going to ask between an hour -- I mean, she's the --  
23 she's the scheduler tsar.

24 MS. DAYNA STEINFELD: Mr. Chair, I'm  
25 advised by Dr. Williams that they also do not

1 anticipate having questions for Daymark this  
2 afternoon, in which case at the Board's discretion the  
3 extra half hour for Board counsel would be available.

4 THE CHAIRPERSON: Okay. So two (2)  
5 hours -- so it would be safe to say that if we advised  
6 everyone, including Daymark, to return at three  
7 o'clock. Why don't we do this? We will -- we'll  
8 adjourn until three o'clock. There will not be an  
9 afternoon break. So we'll go three o'clock and  
10 proceed with -- with Daymark. We'll do the -- the --  
11 I'm -- I'm about to -- Ms. Steinfeld...?

12 MS. DAYNA STEINFELD: Just for  
13 clarification, Mr. Chair, if you could specify when  
14 the CSI session will be starting?

15 THE CHAIRPERSON: Oh, I'm sorry. The  
16 CSI session will start at one o'clock. We'll -- we'll  
17 break for lunch and, sorry, Mr. Hacault...?

18 MR. ANTOINE HACAULT: I hadn't advised  
19 Board counsel, but I don't think I'm going to have  
20 very many questions of Daymark either.

21 THE CHAIRPERSON: Okay. Okay. So  
22 we'll break -- we'll adjourn until one o'clock. I  
23 would ask if the court reporter could set up so that  
24 we're going -- I don't know -- with -- with the CSI  
25 tape and we'll make sure that the live stream is off.

1 Okay. So we'll adjourn at one o'clock. We'll plan to  
2 resume with Daymark at three o'clock. Thank you.

3

4 --- Upon recessing at 11:55 a.m.

5

6 (HEARING NOW IN-CAMERA)

7

8 --- Upon resuming at 3:44 p.m.

9

10 THE CHAIRPERSON: Ms. Van Iderstine, I  
11 understand you -- you do have a question for re-  
12 examination?

13

14 RE-EXAMINATION BY MS. HELGA VAN IDERSTINE:

15 MS. HELGA VAN IDERSTINE: Yes. And it  
16 relates to the question that panel member McCutcheon  
17 asked towards the end of the pan -- capital panel,  
18 just before we went into CSI, and so I believe Mr.  
19 Cormie wants to clarify the issue of what would happen  
20 if Bipoles I and II went out, and Bipole III was not  
21 yet in service.

22 MR. DAVID CORMIE: Yes, thank you.  
23 The -- the contingency that Manitoba Hydro is most  
24 concerned about without the Bipole III project and the  
25 Riel sectionalization was the complete loss of the

1 Dorsey converter station, which would disconnect  
2 Manitoba Hydro's Northern generation from its ability  
3 to serve Southern load.

4           So imagine a scenario where that  
5 facility was completely destroyed. That would result  
6 in immediate shutdown of -- and blackout of the  
7 Province of Manitoba. The interconnections with our  
8 neighbouring provinces would open, and the Province  
9 would be subject to a blackout.

10           And I had -- had the suggested that  
11 everyone in the Province would be without power, and -  
12 - and I just wanted to clarify that there are the  
13 local diesel communities who would be fortunate enough  
14 to still have -- have a supply of electricity.  
15 However, the economic catastrophe that would result  
16 from the loss of the Dorsey facility for up to three  
17 (3) years as we tried to put the system back together  
18 would result in ultimately those communities being  
19 involved in the economic crisis as well, because they  
20 do rely on being connected to, you know, Winnipeg, and  
21 the infrastructure in Winnipeg could not be maintained  
22 in that -- in that circumstance.

23           Immediately after such a -- a crisis  
24 would happen, our control centre would take steps to  
25 slowly bring back as much generation as it could

1 that's not connected to the DC system, and that  
2 involves the generating stations on the Winnipeg  
3 River, and our thermal stations at Brandon and  
4 Selkirk, and we do have some other generating stations  
5 in the North that -- that can be brought on, but  
6 effectively, we would only be able to serve a small  
7 portion of our load, and it would take time for that  
8 to be reestablished.

9           Ultimately, every customer in Manitoba  
10 would be affected through rotating blackouts as -- as  
11 we -- we -- as -- as we reestablished the power supply  
12 that we -- that -- that we had. But most -- most of  
13 Manitoba load would not be served by the -- by the  
14 remaining -- by the remaining generating facilities.  
15 There -- there would just not be enough generating  
16 station and capacity available connected to the -- to  
17 the AC network to serve -- to serve the load.

18           So I just wanted to provide that --  
19 that clarification that even though the isolated  
20 diesel committees may stay on, ultimately, they would  
21 be also affected, because the Province would end up --  
22 it'd effectively be in -- in an emergency, and the  
23 emergency would last a long, long time.

24           THE CHAIRPERSON:    Okay. Thank you for  
25 the happy news, Mr. Cormie.

1 MR. DAVID CORMIE: You're welcome.

2

3 (PANEL STAND DOWN)

4

5 THE CHAIRPERSON: Yeah. Thank you.  
6 Thank you very much. Gentlemen, welcome back. Sorry  
7 for the delay. We had a little technology glitch at  
8 the beginning.

9 I'd just remind you that you're sworn  
10 in, so we don't have to go through that process again.  
11 Mr. Haight, did you want to start?

12

13 INDEPENDENT EXPERT CONSULTANT PANEL:

14 DAYMARK SASKPOWER

15 DANIEL PEACO, Previously Sworn

16 DOUGLAS SMITH, Previously Sworn

17

18 EXAMINATION-IN-CHIEF BY MR. WILLIAM HAIGHT:

19 MR. WILLIAM HAIGHT: Yes. And I also  
20 understand, Mr. Chair, that there is no need for me to  
21 take these individuals through their qualifications,  
22 as that all has already occurred. So just for the  
23 purposes of the record, Mr. Peaco and Mr. Smith will  
24 be referring to their SaskPower report, which is DEA  
25 Exhibit 4 in this proceeding. They also have a

1 PowerPoint presentation for the public session which  
2 is -- been marked as DEA Exhibit 10. And of course,  
3 their CVs are available, should anybody wish to look  
4 at them, which are DEA Exhibit 8.

5                   So with that housecleaning, I will turn  
6 it over to Mr. Peaco and Mr. Smith.

7

8 PRESENTATION BY MR. DANIEL PEACO AND MR. DOUGLAS

9 SMITH:

10                   MR. DANIEL PEACO: Good afternoon.  
11 Thanks for welcoming us back, and appreciate the -- no  
12 -- no worries about our -- the delay. We -- we are  
13 here to accommodate your schedule, not your -- you  
14 ours. So we'll do our best to kind of catch you up.

15                   And what we plan to do is -- is present  
16 to you in summary form the contents of our report, and  
17 go through some of what we believe are the key  
18 highlights of that, and we'll be happy to answer  
19 questions along the way, as -- as before. And we'll  
20 try to step through this and sort of catch up your  
21 time a little bit, if that's -- if that's productive.

22                   So go to the next slide, please. So  
23 what we want to do in this first presentation, the  
24 public presentation, is to give you an overview of the  
25 -- the transaction and the status of the transaction,

1 the -- at least in general terms, the evaluation  
2 methodology that the Company used and that we used in  
3 our -- in our work and in our current understanding of  
4 the economics of the -- of the transaction. And we  
5 will step through briefly what our scope of work is,  
6 some -- some key concepts that we'll be talking about  
7 as we go through the presentation, and just describe  
8 the history, and how the project came together, and  
9 what the current status is. And then we'll step  
10 through the economic analysis that the Company did at  
11 the time they entered into the agreement -- into the  
12 agreement, and the analysis that we did to look at the  
13 current economics of the -- of the transaction. And  
14 we'll wrap up with some -- some of the key findings  
15 that we have for the public session.

16                   Next slide. The next slide. So the  
17 scope of work was basically this statement: To review  
18 the justification for the -- for the sale to -- to  
19 SaskPower of a hundred megawatts, and -- and make an  
20 assessment as to whether it's -- it's in the  
21 ratepayers' interests to continue to proceed with the  
22 project. And so we do this primarily as looking at a  
23 current day assessment of where it stands today and  
24 what the economics are going forward. And so we will  
25 -- we will focus on that as we go through our -- our



1 presentation.

2                   Next slide. So our approach, we -- we  
3 spent some time -- we -- again, as in our -- in our  
4 work on the export revenues, we had a number of -- of  
5 discussions with -- with the staff at Manitoba Hydro.  
6 We -- we gathered a -- a number of the documents  
7 related to the -- to the transaction, the contracts,  
8 the studies, both economic and transmission studies,  
9 and we performed some addition to the limit -- limited  
10 additional analysis, particularly with respect to  
11 current economics, in doing our work and putting that  
12 into the report. The materials that we've prepared,  
13 which I've already talked about, are both a -- a  
14 public and CSI version of our reports, and we did  
15 respond to an -- an -- a few IRs, and those are also  
16 in the record. So those are the materials that we've  
17 produced for the record so far.

18                   The next slide, and the next. So let  
19 me just talk a little bit about some of the -- the  
20 terminology that we'll be talking about. First, it's  
21 important to sort of distinguish there's sort of two  
22 (2) -- two (2) parts of Manitoba Hydro that are  
23 relevant here, the Manitoba Hydro export marketing  
24 organization is the -- is the part of the Company that  
25 actually negotiated the transaction and entered

1 agreement. They are functionally separate from the  
2 transmission function and so there -- we will refer --  
3 we refer to in the report and may refer today to the  
4 Manitoba Hydro transmission. That would be the group  
5 that's responsible for the transmission. Those groups  
6 necessarily need to operate at arm's length under the  
7 terms of the Open Access Transmission Tariff to make  
8 sure that the -- the transmission system is operated  
9 to accommodate not just Manitoba Hydro, but any -- any  
10 of the customers of the transmission system. And so  
11 we talk a little bit about the -- the tariff as it  
12 pertains to the transaction.

13                   There was an initial capital project  
14 justification that the -- that the Company prepared  
15 when they decided to proceed to investigate seriously  
16 the -- the transaction and the -- there's also a -- a  
17 couple of -- there's a facilities construction  
18 agreement, which is actually the contract that -- that  
19 Hydro export entered into with transmission to -- to  
20 actually have the transmission facility constructed.  
21 So we'll refer to that facilities construction  
22 agreement as the -- as the agreement related to  
23 building the transmission.

24                   And there are two (2) studies, the  
25 group facility study and the group system impact

1 study. Actually, they were -- chronologically, they  
2 were done in reverse order of on the list here, but  
3 those are two (2) studies that were done by Hyd --  
4 Manitoba Hydro transmission at the request of Hydro  
5 export to -- to do a -- first, a generalized system  
6 impact study, and then a specific study for the  
7 facilities that were -- that were selected to be  
8 built.

9                   And then one (1) other term that we'll  
10 talk about a lot is transfer capability. And there are  
11 some transmission lines that form the interconnection  
12 between Manitoba Hydro system and SaskPower system,  
13 and the transmission planning studies will look for --  
14 at -- at those systems and perform certain studies to  
15 determine on a reliable basis how much power can  
16 transfer between the systems reliably. And so the  
17 transfer capability is a -- is a term associated with  
18 with -- with the -- with the determination of how much  
19 power can reliably be transferred between the systems.

20                   Next slide. So a couple of things to -  
21 - to understand in terms of the existing system. At  
22 the -- at the start of the transaction, on the left-  
23 hand side, before the agreement was entered into,  
24 there was a -- nominally a 125 megawatt transfer  
25 capability between the two (2) power systems. The --

1 they were -- and there are a number of commitments  
2 against that capability that were existing, which  
3 we'll talk about in CSI, and there was a -- a total of  
4 45 megawatts that was available at the time that  
5 discussions began -- were entered into with respect to  
6 this new trans -- transaction.

7           After this project is done, the  
8 transmission that will be added will expand the  
9 transfer capability between the systems to 325  
10 megawatts, and a -- an additional 100 megawatts, and -  
11 - and the -- and -- and you will -- this -- the trans  
12 -- the -- the total interface will retain capabilities  
13 to meet existing commitments, as well as the new  
14 project over the life of its -- over the life of the  
15 contract, and -- and allows for the full -- the full  
16 amount of the power sale to SaskPower under the  
17 planning studies that were done.

18           Next slide. So the -- in terms of how  
19 it's put together, the power sale agreement betw --  
20 between the two (2) companies were -- was entered into  
21 in January 2016. That date we'll talk about that was  
22 -- there was an economic analysis that was coincident  
23 with that -- with that. And we'll be talking about  
24 that economic analysis, and it would -- we'll -- we'll  
25 sometimes talk about 2016 analysis and -- and 2016, in

1 that case, really refers to January 2016, because that  
2 was when it was completed, but it was really done in  
3 the -- in the latter part of 2015.

4           There's a facilities construction  
5 agreement that was entered into between Manitoba Hydro  
6 export and transmission in May of 2017 earlier this  
7 year, and that transmission project now, as a result  
8 of that agreement, is -- has begun to be in  
9 development. The -- the agreement provides -- this --  
10 this slide refers to a monthly status. There's  
11 actually a regular status. It's not necessarily  
12 monthly, but there -- it -- there is a regular  
13 reporting on the status of the project development  
14 that occurs, and there's been one (1) such report to  
15 date, which we've reviewed, and that was -- that was  
16 produced in October of 2017. So we refer to that in  
17 our report.

18           And at -- as of that date, there have  
19 been fairly limited expenditures on the transmission  
20 project, because it's very early in the development  
21 phase, roughly \$1.6 million spent to date on that --  
22 on that facility development. And we will discuss all  
23 of this a little bit further in the -- in our  
24 presentation in the -- in the confidential in-camera  
25 session.

1                   And we've -- here, we just put together  
2 a -- sort of an overall timeline of the project from  
3 sort of initial concept through operation. And you'll  
4 -- just following this down, sort of down from top to  
5 bottom and left -- left to right, the -- the --  
6 Manitoba Hydro and -- and SaskPower have been  
7 exploring possibilities for some time. The -- there  
8 was an initial facility study conducted in 2012 to --  
9 to generally assess what would be required in terms of  
10 transmission facilities to accommodate a transaction.  
11 They entered into a term sheet for negotiations or --  
12 in 2015, and -- and at that time, Manitoba Hydro  
13 export submitted what's called transmission service  
14 request to Manitoba Hydro transmission to -- to  
15 initiate the process, to -- to study the system to  
16 accommodate the transactions.

17                   The -- the companies entered into a  
18 term sheet, which is prelimin -- which is a  
19 preliminary agreement preceding the actual power sales  
20 contract. There was -- in -- in mid-2015, the -- the  
21 -- when we -- we talked about earlier, the capital  
22 project justification was the first economic analysis  
23 that was presented up through the Manitoba Hydro  
24 management in terms of the economic justification for  
25 the project, and -- and served as a basis for them to

1 get authorization to proceed to do the -- the final  
2 studies.

3                   And then the -- you can see there, the  
4 -- there's a -- is an item called the GSIS, which is  
5 the -- the system -- the generation system  
6 integrations studies. That was the first round of  
7 studies done by Mani -- Manitoba Hydro transmission.  
8 The -- at the -- at the conclusion of that study, the  
9 -- the parties entered -- entered the cont -- the  
10 power sale contract itself. And -- and they -- and  
11 then they proceeded to do the final -- the generation  
12 facility study to get the -- the final design for the  
13 transmission. So that was completed in early 2017.  
14 And -- and then that -- once that was completed, then  
15 soon thereafter, the facilities construction agreement  
16 was entered into, and -- and that -- that initiated  
17 the development of the actual transmission facilities.

18                   So the -- you can see that -- that  
19 project is now in the licensing phase, and will be in  
20 construction in 2019, with a -- with a plan completion  
21 in early 2021, with the power sales contract beginning  
22 in -- in June of 2020. So there will be a period of  
23 time where the contract will be performed under the  
24 existing transmission with the -- with the expectation  
25 that the -- that the expansion of the transmission

1 will kick in in 2021 and will be in operation for the  
2 balance of the term of the contract.

3 So that's the -- sort of where the  
4 project is now and where it's heading in terms of the  
5 timeline to get operation. Okay. Next slide. And  
6 I'll turn the -- and Mr. Smith will explain the  
7 economic analysis that we're -- that we're talking  
8 about today.

9

10 (BRIEF PAUSE)

11

12 MR. DOUGLAS SMITH: There. Sorry.  
13 Good afternoon. Because this is a -- a transaction  
14 between two (2) actual parties, as you can imagine,  
15 the -- the majority of the information is of a  
16 confidential nature, so -- so this will, by necessity,  
17 be fairly high level in the public portion of this.  
18 But we -- we want to give as much information as we  
19 can in -- in assisting in understanding what the  
20 evaluation was at the time, as well as what we did in  
21 our work to assess its current economic condition.

22 So in late 2015, culminating in a  
23 report produced in early 2016, Manitoba Hydro  
24 performed an -- an economic analysis. They studied  
25 both 100 megawatt sale as well as an additional



1 potential 40 megawatts, total 140 megawatts, and --  
2 and they did this work, what I would call in -- in a  
3 traditional with and without study. So they looked at  
4 either the inclusion of the -- the sale or the system,  
5 and exclusion of the sale, and compared the economics  
6 of those -- those two (2) states to determine the --  
7 the financial performance of the contract.

8           They used their SPLASH model for -- for  
9 producing those studies, or the -- the underlying  
10 data. And in the base case, the without case, they  
11 considered that any future needs would be met by new  
12 gas-fired generation, and then in the case where  
13 there's additional sales, they adjusted as needed the  
14 timing of -- of any new generation needed. The  
15 results were expressed as a net present value of -- of  
16 the -- the economics of the with and without case. So  
17 it's net benefit or cost based on the inclusion of the  
18 contract. And then they performed some sensitivity  
19 analysis around their -- their reference case, which  
20 we'll discuss in -- in more detail in the confidential  
21 version.

22           Next slide. In general, the -- the  
23 assumptions used were consistent with -- with the  
24 assumptions being used in other studies for the time.  
25 So there were 2015 assumptions, and the -- the

1 resource impacts, in other words, when and how  
2 resources needed to come in, were -- were based on a  
3 contemporaneous report studying the -- the need for  
4 future generation. Keeyask was assumed in at the time  
5 in -- in 2019. That was, like, the current  
6 assumption, as well as the transmission was assumed  
7 in. And the cost of the -- the cost of the SaskPower  
8 transmission line was based on the then-current  
9 transmission studies, the -- the group system impact  
10 study that Mr. Peaco had referred to.

11                   Next slide. So, as Mr. Peaco  
12 indicated, the request that was made of us was to --  
13 to look at updating the economics, and to determine  
14 whether the project was -- was still economic. In  
15 order to do that, we first requested that Manitoba  
16 Hydro produce an updated version of their base  
17 calculations, which they produced for us. They used  
18 assumptions consistent with the -- the analysis being  
19 done in this rate application. They updated the  
20 transmission cost based on their latest available  
21 information, and produced for us a -- a base case for  
22 just the 100 megawatt case.

23                   That served, then, as the starting  
24 point for our analysis of the current economic  
25 situation. We then produced some sensitivity analysis

1 against that, to -- to test the results against --  
2 against inputs as -- that we felt needed to be -- to  
3 be tested to -- to determine how robust the solution  
4 was, and that information is -- was deemed  
5 confidential, and will be discussed in our CSI  
6 presentation. Next slide.

7 MR. DANIEL PEACO: So the key findings  
8 that we have the key findings that we have that -- so  
9 the key findings that we had that -- that we can --  
10 that are -- that are in the public portion of our  
11 report, obviously, we -- as I noted earlier, the  
12 transmission project is still in early stages of  
13 development, meaning it's -- the -- the sunk costs on  
14 that is -- are -- are fairly low relative to the total  
15 project cost at this point.

16 We -- we also note because -- because  
17 of the way the -- the transaction is set up, potential  
18 delays in transmission project do have -- have some  
19 impact on the economics, but they don't have a  
20 material impact, because there -- there's an  
21 accommodation to deliver most of the power until  
22 that's done, and that's been worked out in the  
23 agreement of the transaction.

24 And -- and we've -- we concluded, based  
25 upon the work that we've done, that -- that we -- we

1 believe the project is still in the best interests of  
2 the ratepayers to proceed with the project, and -- and  
3 beyond that, we really -- we would really need to go  
4 into the confidential information. So that's --  
5 that's the essence of -- of what we found. We -- we  
6 believe -- we believe that the -- the project is  
7 economic as it sits today, and -- and should proceed.

8           With that, I think that's all -- that's  
9 what we prepared for -- for the public session.

10           THE CHAIRPERSON: Thank you,  
11 gentlemen. Mr. Hacault, do you have any questions?

12           MR. ANTOINE HACAULT: Yes, I do, Mr.  
13 Chair.

14

15 CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

16           MR. ANTOINE HACAULT: Good afternoon,  
17 Misters Peaco, and Smith. I'll want to focus on some  
18 of the statements that you made in your slide 14, but  
19 then as updated for 2017. And as I understood your  
20 testimony and what was in the -- in your public  
21 version of the report, there was consistency in the  
22 assumptions used to evaluate the plan and the  
23 assumptions used for IFF.

24           Do I have that right so far with  
25 respect to the Hydro evaluation done in 2016?

1 MR. DANIEL PEACO: Yes, and -- and the  
2 -- as we -- as we noted, it was really based upon  
3 their -- their 2015 planning studies, because the --  
4 the final date on the report was in January of 2016,  
5 so it tied to the -- to the 2015 system planning  
6 studies that they used for other purposes.

7 MR. ANTOINE HACAULT: And you weren't  
8 here during my prior questioning of the Manitoba Hydro  
9 rate panel, but in PUB book 42-6, at page 256, there's  
10 reproduced a public version of the Manitoba Hydro  
11 analysis of this contract, and Manitoba Hydro reports  
12 that the pricing analysis compares the projected  
13 contract revenue -- I'm in -- under the heading number  
14 6 -- to the expected forecast for the long-term  
15 dependable product presented in the 2015 price  
16 forecast.

17 Is that consistent with your -- again,  
18 if I'm getting into CSI, let me know, but I've --  
19 think I've been able to ask these questions of  
20 Manitoba Hydro, and I'm hoping to go through them with  
21 you without asking for CSI.

22 Is that consistent with your reviews?

23 MR. DANIEL PEACO: Yes.

24 MR. ANTOINE HACAULT: And when you  
25 were saying that the underlying assumptions used for

1 the analysis of the contract, would that included --  
2 have included the 2015 electric -- electricity export  
3 price forecast?

4 MR. DANIEL PEACO: Yes.

5 MR. ANTOINE HACAULT: Okay. And to  
6 your understanding, that that was used for the  
7 Integrated Financial Forecast purposes?

8 MR. DANIEL PEACO: I believe so, but  
9 we didn't -- we -- at that -- we didn't really look at  
10 the 2015 IFF for the purposes of this report.

11 MR. ANTOINE HACAULT: Okay. Thank  
12 you. And I'm going to move to try and understand how  
13 both the dependable product value forecast was dealt  
14 with in 2017. So I'll take it in little bites.

15 With respect to 2015, am I correct in  
16 assuming that the 2015 electricity export price  
17 forecast included Manitoba Hydro estimates of probable  
18 values for three (3) areas of on-peak energy, off-peak  
19 energy, and capacity products?

20 MR. DANIEL PEACO: This is the 2015,  
21 now, you're asking about?

22 MR. ANTOINE HACAULT: Yes.

23 MR. DANIEL PEACO: Yes, that's  
24 correct.

25 MR. ANTOINE HACAULT: And -- and Mr.

1 Cormie also -- he explained that they didn't -- if I  
2 understood his testimony right, didn't actually charge  
3 or get a price for environmental attributes, but they  
4 helped the sale of the contract. Was environmental  
5 attributes something you also dealt with in the 2017  
6 update?

7 MR. DANIEL PEACO: In the 2017 update?

8 MR. ANTOINE HACAULT: Yes.

9 MR. DANIEL PEACO: That was a  
10 consideration that went into our -- our sensitivity  
11 analysis Mr. Smith described that we did some  
12 additional analysis. So we looked at some alternative  
13 values that would encompass those kinds of premiums.

14 MR. ANTOINE HACAULT: Okay. And going  
15 -- as I understand your report, and it was at page 19  
16 of the report, your public report. It indicates under  
17 the heading 'Manitoba Hydro 2017 updated economic  
18 analysis' that -- I'm looking at the last sentence in  
19 the first paragraph in the 2017 Excel workbook shared  
20 with Daymark, Manitoba Hydro updated the inputs and  
21 assumptions used in the 2015 evaluation for both a  
22 hundred megawatt SaskPower sale and no sale options.

23 So did Manitoba Hydro provide --  
24 without getting into CSI -- updates of its forecast of  
25 estimates of probable value for on-peak energy, off-

1 peak energy, and capacity products?

2 MR. DOUGLAS SMITH: Manitoba Hydro  
3 used the -- the current forecast that they produced  
4 that we've discussed in -- in previous sessions here,  
5 consistent with their rate application. So it's the  
6 same -- it's the same forecast used elsewhere.

7 MR. ANTOINE HACAULT: Okay. And I'll  
8 bring you to page 22 to try and better understand  
9 that. There's a table there. And again, a lot of  
10 it's deleted, but it seems to compare and has blacked  
11 out comments with respect to dependable energy. Was  
12 there any updating on the issue of a -- a dependable  
13 energy? And before we -- maybe we should see the top  
14 of that table in the previous page, just to understand  
15 what that table was about.

16 So it -- the table says 'comparison of  
17 economic analysis of 2015 with 2017 update'. And then  
18 we can go back to the next page, again. And I want to  
19 focus on dependable energy. Was there an update with  
20 respect to the values of dependable energy in the 2017  
21 update?

22 MR. DOUGLAS SMITH: The -- the value  
23 of dependable energy, as long as -- as well as other  
24 inputs were updated to current assumptions.

25 MR. DANIEL PEACO: Let me -- right. I



1 think the -- your question was as to the amounts of  
2 dependable energy, and I believe that this is sort of  
3 the -- they did update their analysis so that we -- it  
4 was -- the analysis was based upon a current  
5 assessment of the available dependable energy in their  
6 -- in their forecast through time.

7 MR. ANTOINE HACAULT: Okay. With  
8 respect to dependable energy, was there capacity value  
9 assessed for the 2017 analysis?

10 MR. DANIEL PEACO: In terms of the  
11 pricing of that?

12 MR. ANTOINE HACAULT: Yes.

13 MR. DANIEL PEACO: In their forecast,  
14 they were -- this -- and consistent with their export  
15 revenue forecast that we talked about, they use just  
16 the energy component of their market price forecast.

17 MR. ANTOINE HACAULT: Okay. And in  
18 assessing whether or not the -- the contract was  
19 economic or not, did Daymark provide any of its own  
20 views or reasonable estimates with respect to capacity  
21 values?

22 MR. DANIEL PEACO: It was also part of  
23 our sensitivity analysis that we referred to, yes.

24 MR. ANTOINE HACAULT: Okay. But what  
25 you're telling me is Hydro didn't provide you with

1 their views on the capacity value for the 2017 update?

2 MR. DANIEL PEACO: Correct.

3 MR. ANTOINE HACAULT: Okay. And just  
4 to be clear, the SPLASH runs that were done for the  
5 2015 evaluation that resulted in the 2016 report was  
6 for the period of time for which the contract was  
7 intended to operate, that is, 2020 to 2040?

8 MR. DOUGLAS SMITH: That was the data  
9 being used in the analysis. I -- the -- the SPLASH  
10 runs were for whatever length of time those particular  
11 SPLASH runs were used for, but the -- the full -- the  
12 full length of the contract was evaluated.

13 MR. ANTOINE HACAULT: Okay. And just  
14 to be clear, then, when Daymark did its review on the  
15 economic desirability of this contract, it came up  
16 with its sensitivity analysis on capacity pricing for  
17 the time period 2020 to 2040? Is that correct?

18 MR. DANIEL PEACO: Yes.

19 MR. ANTOINE HACAULT: Okay. And just  
20 to be clear, the assumptions that Manitoba Hydro  
21 provided to you with respect to dependable energy  
22 value, being only energy, that's the estimates which  
23 in the export report you deemed to be conservative?

24 MR. DANIEL PEACO: Yes.

25 MR. ANTOINE HACAULT: Thank you.

1 Those are all of my questions.

2 THE CHAIRPERSON: Thank you, sir. Ms.  
3 Van Iderstine...?

4 MS. HELGA VAN IDERSTINE: We have no  
5 questions. Thank you.

6 THE CHAIRPERSON: Mr. Peters...?

7 MR. BOB PETERS: Mr. Chair, for those  
8 of us who know Mr. Hacault, we can attest that he's  
9 quite the dancer. Today, he danced fairly close to  
10 the CSI line, and didn't cross it in his public  
11 questions, but he did cover most of the areas that I  
12 wanted to cover, but for two (2).

13

14 CROSS-EXAMINATION BY MR. BOB PETERS:

15 MR. BOB PETERS: And perhaps I can  
16 draw the witnesses to slide 11 of the slide deck that  
17 was marked as exhibit DEA-10 this afternoon. And  
18 gentlemen, again, my answers do not seek to put on the  
19 public record any information that is considered by  
20 Manitoba Hydro to be confidential.

21 MR. DANIEL PEACO: Understood.

22 MR. BOB PETERS: And so if you have  
23 any concerns or issues, please state them to the --  
24 the Board and not provide that on the public record,  
25 and we can address that later.

1                   So looking at this -- this chart, and  
2 the -- the pink bar on the right-hand side, halfway  
3 down the page, is to depict the contract starting in  
4 June of 2020 and running out to -- to 2040, correct?

5                   MR. DANIEL PEACO:     Correct.

6                   MR. BOB PETERS:     What we show -- and  
7 the -- immediately underneath that is that the  
8 earliest in-service date for transmission will be June  
9 of approximately 2021.  Is that also correct?

10                  MR. DANIEL PEACO:     That's -- yes.

11                  MR. BOB PETERS:     And so can you  
12 explain on the public record what risk there is to  
13 Manitoba Hydro in terms of meeting that one (1) year,  
14 when their -- the transmission line may not be  
15 physically in place?

16                  MR. DANIEL PEACO:     Well, at -- at risk  
17 -- in terms -- the -- the power sale agreement has  
18 specific provisions the party understood going --  
19 entering into the agreement, that there would  
20 potentially be a -- a delay in the transmission  
21 upgrade, you know, not so that it would not be  
22 coincident with the start of the -- the energy  
23 deliveries and their specific accommodations in the --  
24 in the power sales agreement for operations during  
25 that period of time prior to the completion of the

1 transmission project.

2                   And so that risk is -- is reasonably  
3 limited, subject to any potential cur -- limited  
4 curtailments of the deliveries that might have to  
5 occur in that period, but -- but it's specifically  
6 counted for both parties understood that -- that those  
7 -- those two (2) dates would -- would not line up and  
8 they made provisions for that in the agreement.

9                   MR. BOB PETERS:     So you're indicating,  
10 Mr. Peaco, that even though Manitoba Hydro and/or Sask  
11 -- SaskPower may not have transmission facilities  
12 interconnected, the contract does not cancel?

13                   MR. DANIEL PEACO:    Yes.  It doesn't  
14 jeopardize the contract.  It only jeopardizes some --  
15 some of -- some limited amount of the total energy  
16 contemplated until -- until the transmission is in  
17 place.

18                   MR. BOB PETERS:    All right.  Thank  
19 you.  And Mr. Smith, on slide 13, you provided the  
20 Board with an overview, and you called it the 2016  
21 sale evaluation.  And I believe earlier today and  
22 yesterday, I called it the 2015 Manitoba Hydro sale  
23 evalu -- evaluation, but that's because it was done in  
24 2015 and signed in 2016, correct?

25                   MR. DOUGLAS SMITH:    Correct.

1                   MR. BOB PETERS:    And in it, you -- you  
2 considered Manitoba Hydro's method of evaluation as a  
3 -- and I think your words were, A with and without  
4 analysis. Did I capture that?

5                   MR. DOUGLAS SMITH:    Correct.

6                   MR. BOB PETERS:    You explained what  
7 that was, but can you tell this panel what other forms  
8 of analysis could have been used in respect of this  
9 transaction?

10                  MR. DOUGLAS SMITH:    We didn't consider  
11 that -- that question.

12                  MR. BOB PETERS:    Can you tell the  
13 Board whether Manitoba Hydro's with and without  
14 analysis is considered a best practice in the  
15 industry?

16                  MR. DOUGLAS SMITH:    I would consider  
17 it so.

18                  MR. BOB PETERS:    All right. And why  
19 would you say that?

20                  MR. DOUGLAS SMITH:    It -- it gets at  
21 the essence of -- of the question which is: What are  
22 the net impacts of doing or not doing the contract?

23                  MR. BOB PETERS:    Mr. Chair, I'd like  
24 to, on the public record, again thank the witnesses.  
25 Those complete my questions as well.

1 THE CHAIRPERSON: Thank you. We're  
2 going to -- sorry, re-examination, Mr. Haight, or --  
3 nothing.

4 MR. WILLIAM HAIGHT: Yeah. I think  
5 you can hear me. None. Thanks.

6 THE CHAIRPERSON: Thank you. That  
7 will end the public portion of the testimony. We're  
8 going -- to go to the CSI portion. So I will ask Mr.  
9 Hacault to dance his way out of the room. I believe  
10 that everybody else can remain.

11 If we could ask Ms. Steinfeld, if you  
12 could disconnect to the third floor, and Ms. Schubert,  
13 if you could ensure that our livestream is off, and  
14 the court reporter, if we could end the tape and go on  
15 to a separate CSI tape.

16

17 (HEARING NOW IN-CAMERA)

18

19 --- Upon adjourning at 4:24 p.m.

20

21 Certified Correct,

22

23 \_\_\_\_\_

24 Cheryl Lavigne, Ms.

25