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MANITOBA PUBLIC UTILITIES BOARD

Re: MANITOBA HYDRO'S APPLICATION  
FOR APPROVAL OF NEW ELECTRICITY RATES  
FOR 2010/11 AND 2011/12

Before Board Panel:

- Graham Lane - Board Chairman
- Robert Mayer, Q.C. - Board Member
- Len Evans - Board Member

HELD AT:

Public Utilities Board  
400, 330 Portage Avenue  
Winnipeg, Manitoba  
January 31, 2011  
Pages 2291 to 2489

1 APPEARANCES

2 Bob Peters )Board Counsel

3

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20 Gavin Wood )Independent Experts

21

22

23

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1 --- Upon commencing at 9:33 a.m.

2

3 THE CHAIRPERSON: Good morning, everyone.  
4 Mr. Peters...?

5 MR. BOB PETERS: Yes, thank you, Mr.  
6 Chairman. This morning I'd like to do a little bit of  
7 cleanup between now and the coffee break. I want to talk  
8 with the witnesses about some Bipole 3 issues, tidy up on  
9 some AOCI questions.

10 I also want to review the undertakings  
11 that Manitoba Hydro has filed to date. There's a few  
12 exhibits that I will turn to and have some questions in  
13 relation to. Those exhibits have been handed out to  
14 everybody in the room and, in addition to that, I believe  
15 they are on the Board's website for those who are  
16 following the transcripts from afar.

17 And then I'll turn to continuing with some  
18 questions related to Manitoba Hydro's development plans  
19 today.

20

21 MANITOBA HYDRO PANEL, Resumed

22

23 VINCE WARDEN, Resumed

24 DAVID CORMIE, Resumed

25 HAROLD SURMINSKI, Resumed

1 CONTINUED CROSS-EXAMINATION BY MR. BOB PETERS:

2 MR. BOB PETERS: Good morning, Mr.  
3 Warden.

4 MR. VINCE WARDEN: Good morning, Mr.  
5 Peters.

6 MR. BOB PETERS: Mr. Warden, on behalf of  
7 Manitoba Hydro, will you confirm that Manitoba Hydro will  
8 not construct Bipole 3 unless and until the term-sheeted  
9 export sales to Minnesota Power and Wisconsin Public  
10 Service are converted into signed legal long-term export  
11 contracts?

12 MR. VINCE WARDEN: No, Mr. Peters, can't  
13 do that. Bipole 3 is being constructed for reliability  
14 purposes first and foremost.

15 MR. BOB PETERS: Would you acknowledge  
16 then that the statement attributed to Manitoba Hydro's  
17 President and CEO in the Winnipeg Free Press article of  
18 September 18th of 2010 that was provided to your counsel  
19 over the weekend is incorrect because it stated -- and  
20 I'll quote the article, recognizing the article is not  
21 quoting Mr. Brennan directly. The article says, quote:

22 "Brennan said only long-term locked-in  
23 deals with American power companies  
24 will be used to backstop Bipole 3.  
25 Until those are signed the company

1                   won't go ahead with any big building  
2                   project."

3                   You see that quote, sir?

4                   MR. VINCE WARDEN:    I do, Mr. Peters, and  
5                   -- and thank you for providing this to us in advance  
6                   because I did have an opportunity to -- to think about  
7                   that and also to talk to Mr. Brennan.

8                   The -- the quote I think that you just  
9                   referenced indicates that the company won't go ahead with  
10                  any big building project.  It doesn't necessarily mean  
11                  Bipole 3, although it certainly would be inferred from  
12                  the words as -- that are written in that article.

13                  The big projects, though, that we  
14                  typically refer to not proceeding with, unless we have  
15                  signed contracts, are -- are Keeyask and Conawapa.  Those  
16                  are the -- those are the stations that are being built to  
17                  serve that -- those export loads.  At least initially  
18                  before -- before they're required for the Manitoba load.

19                  MR. ROBERT MAYER:  Mr. Warden, you will  
20                  admit there's some degree of confusion when immediately  
21                  prior to the sentence about not building anything big the  
22                  reference is made to Bipole 3?

23                  MR. VINCE WARDEN:  Well, remember it is  
24                  the Winnipeg Free Press, and I'm not saying that they're  
25                  -- I'm not saying that they're -- that they're inaccurate

1 in any way, it's just that sometimes quotes are taken a  
2 little bit out of context and I'm trying to put it in --  
3 in some context.

4

5 CONTINUED BY MR. BOB PETERS:

6 MR. BOB PETERS: Mr. Warden, can you  
7 indicate to the Board approximately the year in which  
8 Manitoba Hydro determined that it would build Bipole 3  
9 regardless of whether Manitoba Hydro would build Keeyask  
10 and/or Conawapa?

11 MR. VINCE WARDEN: Mr. Peters, it's been  
12 a long time. I'm -- I'm going to say at least ten (10)  
13 years it's been in our plans to build Bipole 3. But it  
14 was always recognized that Bipole 3 was required for  
15 reliability purposes. And -- and as Bipoles 1 and 2 age,  
16 there will be maintenance requirements. And taking down  
17 some parts of Bipole 1 and 2 for maintenance could really  
18 put the Manitoba system in jeopardy. So the longer we  
19 defer the -- the building of Bipole 3 the riskier it is  
20 that there will be an outage.

21 MR. BOB PETERS: I believe your answer  
22 then clarifies for the Board that Manitoba Hydro's plans  
23 are to proceed with the spending of somewhere between, if  
24 -- if I might, 2.2 billion and \$4 billion on Bipole 3  
25 without any locked-in deals with American power

1 companies?

2 MR. VINCE WARDEN: Well, 2.2 billion is  
3 the current, approved, official estimate for Bipole 3.  
4 There is a study currently underway of the design,  
5 construction, and estimate for Bipole 3 to make sure that  
6 we're doing the costs and the design is optimal for our  
7 requirements. We don't expect that to be completed until  
8 May/June time frame.

9

10 (BRIEF PAUSE)

11

12 MR. BOB PETERS: Is it implicit in your  
13 answer, Mr. Warden, that the costs of Bipole 3, whatever  
14 the final amount turns out to be, will be sought to be  
15 recovered solely from Manitoba's domestic ratepayers and  
16 not from Manitoba Hydro's export customers?

17 MR. VINCE WARDEN: Well, the cost of  
18 Bipole 3 will go into rate base and we'll recover from  
19 our export customers as we always do the maximum amount  
20 of costs that we can. So we get -- we maximize our  
21 revenues on the export market which contribute towards  
22 all of our costs. And once Bipole 3 is in -- in our  
23 fixed assets our export sales will subsidize those costs  
24 as well.

25 So we currently get about 30/35 percent of

1 our revenue from the export market and that is being used  
2 to subsidize ratepayers in Manitoba, it will continue to  
3 do that and the proportion may or -- maybe even increase  
4 in the future.

5 MR. BOB PETERS: Well, maybe we'll talk  
6 to Mr. Wiens when we come to the cost of service  
7 questions, but in terms of building in the costs of  
8 Bipole 3 into any express pricing under export contracts,  
9 it's not going to be a factor in the pricing of those  
10 contracts; is it?

11 MR. VINCE WARDEN: Well, again the -- the  
12 contracts are negotiated with the intent of getting the  
13 best deal possible so we maximize the price we get.  
14 We're always -- the people that are doing the  
15 negotiations are always cognizant of the costs that we're  
16 incurring, but that's not the main driver for the  
17 ultimate negotiated price.

18 MR. BOB PETERS: I might come back to  
19 this later, but as I understood Mr. Cormie's evidence it  
20 was much, as you've indicated, that his role is to  
21 negotiate the highest and best price he can on behalf of  
22 Manitoba Hydro and then bring it back to the Corporation  
23 for further consideration. Would that be correct?

24 MR. VINCE WARDEN: Yes.

25

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: I'll have a bit more on  
4 Bipole 3 later today, Mr. Warden. But I'd like to turn  
5 to "Accumulated Other Comprehensive Income", if we could  
6 just touch on that matter, sir.

7 From what the Board has heard so far,  
8 accumulated other comprehensive income is an accounting  
9 term that talks about the accumulation of gains and losses  
10 of Manitoba Hydro that are not recognized in the profit  
11 and loss accounts.

12 MR. VINCE WARDEN: That's correct.

13 MR. BOB PETERS: And so to that extent,  
14 the AOCI, as the acronym is, is not reflected in the  
15 income statement in IFF-09. That would also be correct?

16 MR. VINCE WARDEN: Correct. Well, maybe  
17 just to clarify that a little bit. When we say it's not  
18 reflected in any income statement, it is reflected in --  
19 in the income statement to the extent that when foreign  
20 currency gains or losses are realized, they are brought  
21 into the income statement, so AOCI is made up of --  
22 mainly of deferred foreign currency gains and losses.  
23 When debt matures -- when long-term debt matures then --  
24 the -- the gain or loss is -- is recognized in the net  
25 income. So to that extent it is -- it is reflected in

1 IFF-09.

2 MR. BOB PETERS: Until its recognized,  
3 AOCI amounts to gains and losses to Manitoba Hydro that  
4 have yet to be realized through the income statement?

5 MR. VINCE WARDEN: That's correct.

6 MR. BOB PETERS: And as you've said, the  
7 -- the major component of AOCI for Manitoba Hydro relates  
8 to foreign exchange gains and losses arising from the US  
9 denominated debt.

10 MR. VINCE WARDEN: Yes.

11 MR. BOB PETERS: That new standard in  
12 accounting, Mr. Warden, became effective January 1st of  
13 2007, if I have my dates right?

14 MR. VINCE WARDEN: Yes.

15 MR. BOB PETERS: And from -- for Manitoba  
16 Hydro's purposes, the AOCI balances have -- have  
17 fluctuated from positive to negative?

18 MR. VINCE WARDEN: Yes, they will  
19 fluctuate depending on the year-end rate of exchange.

20 MR. BOB PETERS: And looking at the --  
21 the various balance sheets from Manitoba Hydro, if you  
22 accept, subject to check, the opening balance adjustment  
23 to Manitoba Hydro was in the range of \$108 million?

24 Do you recall that, sir, when you first  
25 had to reflect AOCI?

1 MR. VINCE WARDEN: Yes, I do.

2 MR. BOB PETERS: And -- and then it went  
3 in 2008 fiscal year, \$305 million positive?

4 MR. VINCE WARDEN: Again, subject to  
5 check that sounds right.

6 MR. BOB PETERS: And then the following  
7 year, in 2009 fiscal year, it went negative to \$169  
8 million?

9 MR. VINCE WARDEN: Yes.

10 MR. BOB PETERS: And then in 2010 it was  
11 back up positive, \$285 million, approximately?

12 MR. VINCE WARDEN: That's correct. Yes.

13 MR. BOB PETERS: And it's forecast to  
14 remain positive, about 266 million in each of the two (2)  
15 test years that are before the Board?

16 MR. VINCE WARDEN: Yes. It depends again  
17 on the strength or weakness of the Canadian dollar  
18 relative to the US dollar.

19 MR. BOB PETERS: Manitoba Hydro's  
20 financial targets including debt-equity, Mr. Warden, I  
21 think we've agreed those have been set approximately a  
22 decade ago, have I got that right?

23 MR. VINCE WARDEN: Yes.

24 MR. BOB PETERS: And would it also be  
25 correct that those financial targets were set before AOCI

1 was part of the new accounting standard?

2 MR. VINCE WARDEN: Yes.

3 MR. BOB PETERS: Can you tell the Board  
4 why Manitoba Hydro has not adjusted its financial targets  
5 to reflect this new component that now needs to be  
6 reflected in the accounting standards?

7 MR. VINCE WARDEN: Well, Manitoba Hydro  
8 always did reflect the -- the gains or losses on foreign  
9 currency evaluations in it's financial statements. We --  
10 we had it set up either as a deferred charge or a  
11 deferred credit. AOCI -- an introduction of AOCI with  
12 the change in financial instruments, accounting  
13 standards, simply move that from a deferred charge or  
14 credit into the equity portion of the -- of the balance  
15 sheet.

16 So it's really a reclassification, and --  
17 and did not really -- it -- it wasn't the fact that it  
18 wasn't recognized before. In fact, it was recognized in  
19 the past. It's just been reclassified on the balance  
20 sheet.

21

22 (BRIEF PAUSE)

23

24 MR. BOB PETERS: Would it be correct that  
25 the AOCI was not a component in the debt-equity

1 calculation prior to 2008?

2 MR. VINCE WARDEN: We -- in the first  
3 year, in 2007/'08, we did exclude AOCI from the debt-  
4 equity calculation. And subsequently rethought that and  
5 decided to include that. Inasmuch as it is a part of  
6 equity -- it is a real part of equity, we have in -- I  
7 believe it's in '08/'09 we started including AOCI in the  
8 debt-equity calculation and made retroactive change for  
9 the previous year to reflect a consistent application of  
10 the AOCI.

11 MR. BOB PETERS: Thank you for that, sir.  
12 Maybe I should've picked a different year, but the debt-  
13 equity ratio of the Corporation going back then to 2005,  
14 for example, that would not have included any component  
15 on account of AOCI?

16 MR. VINCE WARDEN: I'd have to think  
17 about how we picked up the deferred charge, deferred  
18 credit in the debt-equity calculation. So, yeah, maybe I  
19 will reflect on that, Mr. Peters, and give you a more  
20 definitive answer.

21 It may very well have made no difference  
22 at all because I believe we've -- we did recognize the  
23 deferred charge or credit in the calculation of the debt-  
24 equity ratio.

25

1 (BRIEF PAUSE)

2

3 MR. VINCE WARDEN: Yes. We'll just  
4 confirm that, Mr. Peters.

5 MR. BOB PETERS: Mr. Warden, it may seem  
6 a long time ago and it probably was, but when we first  
7 started discussing the Corporation's financial status I  
8 believe you concurred with me that the Corporation's  
9 debt-equity, the equity component would improve if  
10 Manitoba Hydro in 2008 had used the same methodology as  
11 it used in 2009.

12 Do you recall our discussion on that, sir?

13 MR. VINCE WARDEN: Can't say as I do, Mr.  
14 Peters, sorry.

15 MR. BOB PETERS: Wasn't memorable. The  
16 point I was getting at, Mr. Warden, is that Manitoba  
17 Hydro's debt-equity has changed as a result of AOCI being  
18 included in the debt-equity ratio, correct?

19 MR. VINCE WARDEN: Well, Mr. Peters, that  
20 is the point I just wanted to clarify. So, we -- we will  
21 clarify and confirm that.

22 MR. BOB PETERS: All right. All right,  
23 thank you for that, sir. Mr. Warden will undertake to  
24 advise the Board as to whether AOCI has been a factor in  
25 the debt-equity ratio for the various fiscal years going

1 back to, I guess, 2005 or '06.

2 MR. VINCE WARDEN: Yes, we'll do that.

3

4 (BRIEF PAUSE)

5

6 MR. BOB PETERS: Just in terms of a  
7 transcript reference for that Undertaking, you might want  
8 to check transcript page 435, Mr. Warden, just to  
9 understand the -- the point I was getting at with you.

10 MR. VINCE WARDEN: Thank you.

11

12 --- UNDERTAKING NO. 43: Mr. Warden will undertake to  
13 advise the Board as to  
14 whether AOCI has been a  
15 factor in the debt-equity  
16 ratio for the various fiscal  
17 years going back to 2005 or  
18 '06.

19

20 (BRIEF PAUSE)

21

22 MR. BOB PETERS: Mr. Chairman and Board  
23 members, I want to turn to the undertakings the  
24 Corporation has given and I'm sure most parties have  
25 copies of their exhibits that Manitoba Hydro has

1 circulated in the hearing room. I've also circulated a  
2 copy of the various exhibits to the Board members so that  
3 they have a copy handy. I'd like to start on Manitoba  
4 Hydro Exhibit 15, if I could, Mr. Warden.

5

6 (BRIEF PAUSE)

7

8 CONTINUED BY MR. BOB PETERS:

9 MR. BOB PETERS: Mr. Warden, the IFF-09  
10 that's before the Board was filed as part of Tab 4 of  
11 Board counsel's book of documents in PUB Exhibit 15,  
12 correct?

13 MR. VINCE WARDEN: Yes.

14 MR. BOB PETERS: And the assumptions that  
15 underpinned IFF-09 were included in Tab 6 of Board  
16 counsel book of documents.

17 That also correct?

18

19 (BRIEF PAUSE)

20

21 MR. VINCE WARDEN: Mr. Peters, I don't  
22 think that's an all-inclusive list of the assumptions  
23 that underpin IFF-09 at Tab 6.

24 MR. BOB PETERS: You're telling the Board  
25 there's further assumptions, or you mean it goes out for

1 further years that you -- you're referring to?

2 MR. VINCE WARDEN: Well, I think your  
3 question was whether Tab 6 included the assumptions that  
4 underpin IFF-09, and there's many assumptions that go  
5 into the preparation of financial forecasts and -- and  
6 this -- that what is located at Tab 6 is not an all-  
7 inclusive list of assumptions.

8 MR. BOB PETERS: Is there an all-  
9 inclusive list of assumptions on the record of these  
10 proceedings?

11 MR. VINCE WARDEN: Well, I believe if we  
12 look at the IFF that is filed in that -- I'm just trying  
13 to locate the tab where we have that. But the IFF does,  
14 in the preamble to the IFF -- to the financial  
15 statements, that is, does include the list of the major  
16 assumptions. My only point was this isn't -- that Tab 6  
17 isn't all of the assumptions.

18 MR. BOB PETERS: All right. You're  
19 drawing the Board's attention that they can go to the  
20 actual full IFF document of some fifty (50)/sixty (60)  
21 pages if -- to review additional -- additional  
22 assumptions?

23 MR. VINCE WARDEN: Yes, and that's at  
24 Appendix 5.2.

25

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: The IFF-10 was Appendix  
4 76 as well, correct, sir?

5 MR. VINCE WARDEN: Yes.

6 MR. BOB PETERS: And to the comparable  
7 extent that the assumptions to IFF-09 are reflected in  
8 Tab 6 of the book of documents, the assumptions to IFF-10  
9 were included in response to a pre-ask question from PUB  
10 to Manitoba Hydro number 2. Do you recall that?

11

12 (BRIEF PAUSE)

13

14 MR. VINCE WARDEN: Mr. Peters, we'll  
15 accept that that is the case subject to checking.

16 MR. BOB PETERS: Yes, thank you, sir.  
17 And actually where my questions were going, sir, is that  
18 the domestic load shown in the assumptions to IFF-10 is  
19 now split or shown as energy at the meter with a new  
20 separate line item for domestic transmission losses.

21 Will you accept that also subject to  
22 check?

23 MR. VINCE WARDEN: Yes.

24 MR. BOB PETERS: All right. And I think  
25 it would be helpful, and I'll ask this by way of an

1 undertaking, for Manitoba Hydro to provide the Board with  
2 an undertaking to reconcile the two (2) line items of  
3 domestic energy sales in gigawatt hours, as well as the  
4 domestic losses in gigawatt hours, in the assumptions to  
5 IFF-10 with what is shown in the assumptions to IFF-09.  
6 Can that be done?

7 MR. VINCE WARDEN: Yes, we can do that.

8

9 --- UNDERTAKING NO. 44: Manitoba Hydro to provide the  
10 Board with an undertaking to  
11 reconcile the two (2) line  
12 items of domestic energy  
13 sales in gigawatt hours, as  
14 well as the domestic losses  
15 in gigawatt hours, in the  
16 assumptions to IFF-10 with  
17 what is shown in the  
18 assumptions to IFF-09.

19

20 CONTINUED BY MR. BOB PETERS:

21 MR. BOB PETERS: And likewise, sir, for  
22 another undertaking, would Hydro please provide an  
23 undertaking to reconcile the line items for the dollars  
24 of revenue of domestic energy sales in IFF-10 with the  
25 same line items in IFF-09. And in that undertaking it

1 would be helpful if Manitoba Hydro could define the  
2 energy intensive industrial rate revenues and specific  
3 other revenue items in the reconciliation.

4 MR. VINCE WARDEN: Yes, we can do that as  
5 well.

6  
7 --- UNDERTAKING NO. 45: Manitoba Hydro to provide an  
8 undertaking to reconcile the  
9 line items for the dollars of  
10 revenue of domestic energy  
11 sales in IFF-10 with the same  
12 line items in IFF-09. And  
13 define the energy intensive  
14 industrial rate revenues and  
15 specific other revenue items  
16 in the reconciliation.

17  
18 CONTINUED BY MR. BOB PETERS:

19 MR. BOB PETERS: Thank you, sir.

20 And, Mr. Warden, in IFF-10 the second-last  
21 line item of the assumptions indicates the average price,  
22 this is the assumptions out of pre-ask number 2, the  
23 average price of total Manitoba domestic energy sales is  
24 shown. However, the same line item in IFF-09 is stated  
25 differently and it would be helpful if Manitoba Hydro

1 could undertake to restate this one line item

2 "Total Manitoba domestic energy sales  
3 average price"

4 in IFF-09 so that it's comparable to what  
5 is filed in IFF-10. If that can be done.

6 MR. VINCE WARDEN: Yes.

7 MR. BOB PETERS: Thank you, sir.

8

9 --- UNDERTAKING NO. 46: In IFF-10 the second-last  
10 line item of the assumptions  
11 indicates the average price,  
12 this is the assumptions out  
13 of pre-ask number 2, the  
14 average price of total  
15 Manitoba domestic energy  
16 sales is shown. However, the  
17 same line item in IFF-09 is  
18 stated differently and if  
19 Manitoba Hydro could  
20 undertake to restate this one  
21 line item "Total Manitoba  
22 domestic energy sales average  
23 price" in IFF-09 so that it's  
24 comparable to what is filed  
25 in IFF-10.

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(BRIEF PAUSE)

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: I want to turn to Manitoba Hydro's Exhibit 16. It was in response to Undertaking number 6. Mr. Surminski, this may be something that you can assist the Board on. There's two (2) aspects I'd like to review with you, sir, for the benefit of the Board.

Dealing with the -- what we call "a carbon adder", this is to reflect what the estimated emissions cost or adder would be if there was a carbon penalty mandated by legislation.

Would that be a correct understanding, sir?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: And what Manitoba Hydro has shown in Exhibit 16 on the first page is that if the carbon penalty was fifteen dollars (\$15) a tonne, then there would be an additional cost added to the energy produced from fossil fuel.

MR. HAROLD SURMINSKI: Yes, correct.

MR. BOB PETERS: And just so we have the -- the understanding of your chart correct, Mr.

1 Surminski, if we look at the more efficient CCCT, that  
2 would be the kind of unit you would expect anybody going  
3 to market for a -- a gas turbine, that's likely where  
4 they would -- where they would shop -- what they would  
5 buy.

6 MR. HAROLD SURMINSKI: Yes, I'll qualify  
7 that. We gave a range and -- and today's turbines are --  
8 are likely more efficient than older ones of the past.

9 MR. BOB PETERS: Certainly, and if  
10 somebody was going out today -- if a utility was going  
11 out today to buy a gas turbine, they'd probably start by  
12 looking at the Cadillac -- the -- the more efficient end  
13 of the line.

14 MR. HAROLD SURMINSKI: Not necessarily.  
15 It -- they come with costs, so it depends on -- on the  
16 requirements of the purchaser.

17 MR. BOB PETERS: If the utility wanted  
18 the most efficient unit, then this is where they would  
19 start.

20 MR. HAROLD SURMINSKI: Yes.

21 MR. BOB PETERS: And is the only reason a  
22 utility wouldn't want the most efficient unit, capital  
23 costs?

24 MR. HAROLD SURMINSKI: Currently, without  
25 carbon regulation, but if -- if there is a premium on

1 carbon then efficiency does become a factor.

2 MR. BOB PETERS: It's not only a question  
3 of capital costs, it's also a question of operating costs  
4 or the fuel cost that goes in it, correct?

5 MR. HAROLD SURMINSKI: Yes, correct.

6 MR. BOB PETERS: All right. Let's keep  
7 with the more efficient CCCT column that you have, and  
8 there's an emissions rate of point four three (.43).  
9 That's the relative efficiency comparison amongst gas  
10 turbines.

11 Does that suggest this is 43 percent  
12 efficient?

13 MR. HAROLD SURMINSKI: No, this is the  
14 calculation of the emiss -- the emissions rate.

15 MR. BOB PETERS: So when we look at the  
16 more efficient CCCT, if there was a fifteen dollar (\$15)  
17 carbon value, the adder would be an extra decimal six  
18 four five (.645) cents a kilowatt hour.

19 MR. HAROLD SURMINSKI: Yes.

20 MR. BOB PETERS: If we went to the far  
21 right-hand side of the schedule shown at Exhibit Manitoba  
22 Hydro 16 on the same -- under the same carbon value, if -  
23 - if an existing less efficient coal plant was operating,  
24 and there was a fifteen dollar (\$15) assumed carbon  
25 value, then that would add approximately two point one

1 (2.1) cents per kilowatt hour for existing less efficient  
2 coal plants.

3 MR. HAROLD SURMINSKI: Yes, that's what  
4 the table indicates.

5 MR. BOB PETERS: And if carbon doubles to  
6 thirty dollars (\$30), then the carbon adder also doubles  
7 as the emission adder, correct?

8 MR. HAROLD SURMINSKI: Correct.

9 MR. BOB PETERS: On page 2 of 3 of  
10 Exhibit Manitoba Hydro 16, Manitoba Hydro provides some  
11 representative market costs of energy again based on some  
12 assumed fuel costs, correct?

13 MR. HAROLD SURMINSKI: Yes.

14 MR. BOB PETERS: If we stay with the more  
15 efficient CCCT column, here we see the unit efficiency  
16 expressed as a percentage, does that indicate then the  
17 relative efficiencies compared to the other combustion  
18 turbines that are shown on the chart?

19 MR. HAROLD SURMINSKI: Yes, those are  
20 efficiencies.

21 MR. BOB PETERS: And if we go to the fuel  
22 cost of three dollars (\$3) US per MMBTU, would you agree,  
23 Mr. Surminski, that that approximates to three dollars  
24 (\$3) a gigajoule?

25 MR. HAROLD SURMINSKI: Yes.

1 MR. BOB PETERS: There's a fairly high  
2 correlation between the dollars per MMBTU and the dollars  
3 per gigajoule?

4 MR. HAROLD SURMINSKI: Yes.

5 MR. BOB PETERS: Under that example, sir,  
6 with the more efficient CCCT the variable production cost  
7 would end up being two dollars (\$2) -- sorry, twenty-nine  
8 fifty (29.50) per megawatt hour or two point nine five  
9 (2.95) cents per kilowatt hour, would that be right?

10 MR. HAROLD SURMINSKI: Yes.

11 MR. BOB PETERS: And so what that's  
12 telling the Board is using one (1) of those turbines  
13 under these assumptions the output -- the variable cost  
14 output would be about three (3) cents a kilowatt hour?

15 MR. HAROLD SURMINSKI: Yes.

16 MR. BOB PETERS: That doesn't include the  
17 capital costs?

18 MR. HAROLD SURMINSKI: Yes.

19 MR. BOB PETERS: I am correct it does not  
20 include the capital costs?

21 MR. HAROLD SURMINSKI: Yeah, correct.  
22 Yes.

23 MR. BOB PETERS: All right. Thank you,  
24 sir. And when we talk capital costs, and Mr. Warden will  
25 have a chance to educate me further on that, but we're

1 really talking the fixed costs of depreciation and  
2 interest?

3 MR. HAROLD SURMINSKI: Yes.

4 MR. BOB PETERS: Would the Board be  
5 approximately correct, Mr. Surminski, if it took the fuel  
6 cost of three dollars (\$3) per MMBTU and the seven  
7 dollars (\$7) per MMBTU and just averaged them out to come  
8 to five dollars (\$5) a gigajoule and conclude that the  
9 electricity price from the variable cost of production  
10 would be about four and a half (4 1/2) cents a kilowatt  
11 hour?

12 MR. HAROLD SURMINSKI: Yes, I agree. You  
13 could interpolate between the two (2).

14 MR. BOB PETERS: It's a fairly direct  
15 correlation?

16 MR. HAROLD SURMINSKI: Yes.

17 MR. BOB PETERS: And -- and again,  
18 there's no -- there's no fixed costs included in that  
19 calculation?

20 MR. HAROLD SURMINSKI: Yes, correct. No  
21 fixed costs.

22 MR. BOB PETERS: And there's also no  
23 carbon adder to that calculation?

24 MR. HAROLD SURMINSKI: Yes.

25 MR. BOB PETERS: Mr. Cormie, would the

1 Board be correct in understanding your evidence that when  
2 selling on the export market from existing Manitoba Hydro  
3 resources, those would be some of the prices you'd be  
4 competing against as you go out to sell Manitoba Hydro's  
5 energy?

6 MR. DAVID CORMIE: Yes, Mr. Peters.  
7 Long-term contracts are considered as an alternative to  
8 customer-owned generation or energy purchased from other  
9 suppliers such as Manitoba Hydro. And they would include  
10 all the costs, capital, operating, emission costs, and --  
11 and we're competing on that basis.

12

13 (BRIEF PAUSE)

14

15 MR. BOB PETERS: But when you're out  
16 selling Manitoba Hydro's energy, Mr. Cormie -- and I  
17 guess this time I do mean you in the personal sense. You  
18 will be marketing Manitoba Hydro's energy against the  
19 variable productions costs of other utilities.

20 MR. DAVID CORMIE: We will be competing  
21 against their all-in costs, Mr. -- Mr. Peters, which  
22 includes the variable costs.

23 MR. BOB PETERS: All right. Does that  
24 answer change if you're talking opportunity sales, sir?  
25 If you're going out for opportunity sales, would you be

1 competing against just the variable costs of production  
2 of the counterparties?

3 MR. DAVID CORMIE: Yes.

4 MR. BOB PETERS: And it is only when you  
5 get to the long-term fixed contracts that you would want  
6 to factor in the all-in costs including fixed and  
7 variable costs.

8 MR. DAVID CORMIE: Yes. Some other  
9 factors that would be included, Mr. Peters, is -- is the  
10 factors associated with the transmission, the quality of  
11 Manitoba Hydro's product, and -- and our history in -- in  
12 -- and our -- and our alternatives, yes.

13 MR. BOB PETERS: I'm sorry. I didn't  
14 understand that last factor -- history and alternatives  
15 or history of alternatives? I wasn't sure what you said.

16 MR. DAVID CORMIE: No, Manitoba Hydro's  
17 historic pricing relative to market prices; we can  
18 compare that and see to the extent that we're able to get  
19 a -- above market prices, and so that reflects in -- in  
20 how Man -- Manitoba Hydro is viewed in the marketplace.  
21 And so, we want to ensure that we -- that we capture that  
22 value.

23 And -- and we also have to ensure that  
24 we're not leaving a better alternative on the table, so,  
25 you know, our al -- alternative markets also determine

1 what we're willing to offer energy out at.

2 MR. BOB PETERS: That last answer was if  
3 you had a -- a better offer from a counterparty that  
4 would reflect on where you would end up trying to  
5 consummate the deal.

6 MR. DAVID CORMIE: A better offer or a  
7 better strategic customer would affect the pricing, yes,  
8 because they are -- at -- there are sometimes some  
9 intanginable -- intangible values that need to be  
10 included.

11 MR. BOB PETERS: Before I leave Exhibit  
12 Manitoba Hydro 16, I just want to make sure, Mr.  
13 Surminski, that the Board's understanding of the -- of  
14 the coal costs is set out.

15 And if we look at the less efficient coal  
16 plant to pretend it's a -- an existing coal plant in some  
17 jurisdiction, when you talk about a fuel cost of a dollar  
18 fifty-six (\$1.56) per MMBTU, Mr. Surminski, that is  
19 comparable to seven dollar (\$7) natural gas.

20 Is that correct?

21

22 (BRIEF PAUSE)

23

24 MR. BOB PETERS: Mr. Surminski, let me  
25 just ask you -- and my question may have been confusing,

1 so let me re-ask it.

2                   When -- when the Board looks down to the  
3 less-efficient coal column on the far right-hand side of  
4 the table on page 2 of Manitoba Hydro Exhibit 16, can the  
5 Board conclude from that that a dollar fifty-six (\$1.56)  
6 per MMBTU for coal is roughly equivalent to seven dollars  
7 (\$7) a gigajoule for natural gas?

8

9                   (BRIEF PAUSE)

10

11                   MR. HAROLD SURMINSKI: Mr. Peters, no,  
12 they're not related they were -- just happened to be in -  
13 - in col -- or rows that correspond to each other. But  
14 they were just three (3) different coal prices that were  
15 provided and -- and the resulting variable costs for  
16 three (3) different coal prices. But they were not meant  
17 to correspond to natural gas prices.

18                   MR. BOB PETERS: All right.

19                   MR. HAROLD SURMINSKI: Coal prices and  
20 natural gas prices first of all, are not closely  
21 correlated.

22                   MR. BOB PETERS: All right, thank you for  
23 that clarification. What you're telling the Board,  
24 excuse me, is that when they consider the chart on page 2  
25 of Manitoba Hydro Exhibit 16, the coal should be

1 considered as a separate chart from that on the gas; they  
2 don't interrelate?

3 MR. HAROLD SURMINSKI: Yes, correct.

4 MR. BOB PETERS: All right. And when we  
5 look at the coal, the less efficient coal, you've picked  
6 a comparative price of a dollar-fifty-six (\$1.56) per  
7 MMBTU to reflect the cost of coal under -- under certain  
8 circumstances?

9 MR. HAROLD SURMINSKI: Yes, that's  
10 correct.

11 MR. BOB PETERS: And at that cost of  
12 coal, the resulting variable production cost of  
13 electricity would be about twenty-two dollars and  
14 seventy-two cents (\$22.72) per megawatt hour, or two  
15 point three (2.3) cents a kilowatt hour?

16 MR. HAROLD SURMINSKI: Yes, correct.

17 MR. BOB PETERS: And the coal prices,  
18 would it be correct, gentlemen, that against the coal  
19 price Manitoba Hydro will be competing for off-peak  
20 energy sales?

21

22 (BRIEF PAUSE)

23

24 MR. DAVID CORMIE: That -- that question,  
25 Mr. Peters, assumes that coal is the marginal source of

1 supply in the off-peak and that's not necessarily the  
2 case. At times it could be. At times it could be wind.  
3 At times it could be other hydro. At times it can be  
4 natural gas. So I don't think the answer to your  
5 question is yes. No.

6 MR. BOB PETERS: Is it -- is -- is coal  
7 the -- usually the marginal cost against which you're  
8 competing?

9

10 (BRIEF PAUSE)

11

12 MR. DAVID CORMIE: I don't know the  
13 answer to that question, Mr. Peters. I don't think  
14 that's -- we -- we -- at times we compete against coal,  
15 but I think we compete against all technologies and  
16 that's why the price goes up and down moment by moment  
17 because there's 6,000 units in the MISO market and one  
18 (1) of those units is -- determine the marginal price.  
19 Which one (1) it is at any point in time is not -- is --  
20 is -- is -- is not clear.

21 I think I also said that there are 60,000  
22 megawatt hour -- 60,000 megawatts of installed coal that  
23 will be shut down over the next while as a result of  
24 increasing restrictions on NOx, SOx, and particulate. So  
25 whether we're competing against it today is not

1 indicative of what we'll be competing against in the  
2 future. I think gas is more likely to be at the margin  
3 in the future than -- than coal.

4 MR. BOB PETERS: In fairness, Mr. Cormie,  
5 would Manitoba Hydro even know what the generator is  
6 that's -- that's producing the marginal cost of  
7 electricity against which you're -- you're pricing your  
8 product? Would you have any way of knowing that?

9 MR. DAVID CORMIE: I -- I believe on an  
10 annual basis MISO publishes the percent of time at which  
11 a particular technology is setting the market clearing  
12 price. But when it comes to long-term export sales we  
13 know generally what our customers are considering as an  
14 alternative. They publish that in the resources plans  
15 and, you know, we know what that competing technology is.

16 And what actually happens on a day-to-day  
17 basis is it's driven by a thousand different variables  
18 and -- and we just see the price that is calculated for  
19 the marginal value. And we don't necessarily know every  
20 five (5) minutes what unit is determining the market  
21 clearing price.

22 MR. BOB PETERS: Well, what would be  
23 coming on the market at less than two (2) cents a  
24 kilowatt hour if -- if not coal?

25 MR. DAVID CORMIE: I -- I don't think

1 coal is coming online, Mr. Peters. This is a  
2 hypothetical calculation. I don't know anybody who is  
3 seriously considering building new coal. Clearly, our  
4 customers aren't. They're considering a large hydro, and  
5 wind, and natural gas combustion turbines. They're not  
6 considering coal.

7 MR. BOB PETERS: Well, let's take this as  
8 a less efficient existing coal plant, Mr. Cormie, one  
9 that already exists. But are you suggesting to the Board  
10 that there is a technology out there that would be  
11 producing electricity at less than two (2) cents a  
12 kilowatt hour?

13 MR. DAVID CORMIE: Yes, hydro. There's  
14 wind generation, and once you factor in the cost of  
15 emissions and the cost of freight, I don't know if these  
16 -- these prices are reflective of -- of market prices.

17 It may cost you twenty dollars (\$20) a  
18 tonne to buy coal, but it might cost you forty dollars  
19 (\$40) a tonne to ship it from Montana to -- to Chicago,  
20 so we have to be really careful where that coal is  
21 generating. The -- the location of that coal determines  
22 its marginal price because there's the cost of fuel in  
23 there.

24 And if the market clearing price in MISO  
25 is being set in Eastern MISO that price may reflect the -

1 - the cost of transportation, as well. So all these  
2 factors need to be considered when you look at the cost  
3 of coal.

4                   Clearly, the cost of coal -- the cost of -  
5 - of coal-fired generation in Saskatchewan when -- when  
6 the -- when the generating station's at a mine mouth  
7 operation is completely different than the cost of a  
8 coal-fired generating station in Wisconsin where they  
9 have to haul the coal 600 miles or 800 miles from Montana  
10 to get it to the -- to the station. So I don't think you  
11 can generalize.

12                   MR. BOB PETERS: Mr. Surminski, when this  
13 table on page 2 of Exhibit 16 was prepared, the values  
14 resulting for the energy costs are based only on the  
15 variable costs of production, not the additional costs of  
16 which Mr. Cormie was speaking, are they?

17                   MR. HAROLD SURMINSKI: The -- if you note  
18 on page 3, the -- the second paragraph indicates that the  
19 reason for the range in coal costs is the variability in  
20 the distance for transportation. So -- so really the  
21 range is provided there to indicate the difference --  
22 differences in transportation costs of getting coal to  
23 the generator.

24                   MR. BOB PETERS: And then that's the only  
25 additional variable cost in the production calculation?

1 MR. HAROLD SURMINSKI: Yes. Unless you -  
2 - I'm not sure which other costs you're thinking of here.

3

4 (BRIEF PAUSE)

5

6 MR. BOB PETERS: Mr. Cormie, why would  
7 Manitoba Hydro bid into the market at less than one (1)  
8 cent a kilowatt hour if the cost of coal is at least two  
9 (2) cents a kilowatt hour?

10

11 (BRIEF PAUSE)

12

13 MR. DAVID CORMIE: Mr. Peters, Manitoba  
14 Hydro bids into the market at its -- at its variable  
15 cost. And a -- consider the -- the scenario that you're  
16 talking about at night where a -- a -- the operator of a  
17 coal-fired generating station -- although his variable  
18 costs may be two (2) cents a kilowatt hour, he has to  
19 consider the cost of not running, actually of shutting  
20 the station down if he -- if he doesn't clear the market.

21 And those shutdown costs may far exceed  
22 any money that he might save by leaving -- or he might  
23 save by leaving the unit running. And so large coal-  
24 fired generating stations have lots -- many -- I would  
25 say -- they have the -- they have the constraint that

1 they need to run continuously. And the -- the least  
2 expensive way for them to operate maybe is to leave the  
3 unit on and accept the market clearing price, even if it  
4 -- even if there is a loss associated with that operation  
5 at night time.

6                   Because the cost of shutting it down, the  
7 potential for forced outages, having to do the repairs,  
8 and then not being available for service the next day,  
9 those costs could far outweigh the -- the cost of -- of  
10 taking a loss at night.

11                   So a -- although the variable cost of the  
12 unit may be two (2) cents the -- if the owner of that  
13 station wants to keep it running, he won't necessarily  
14 offer it in at his variable cost. He'll offer it in at a  
15 cost that'll keep it -- that -- that it'll keep it  
16 running.

17                   And so I think comparing Manitoba Hydro's  
18 offer strategy to that of a company that has thermal  
19 generators, it's more complicated for them because they  
20 have other issues that they have to -- have to be  
21 concerned about. Manitoba Hydro has tremendous  
22 flexibility in starting and stopping units; coal-fired  
23 units don't, they have to run. And they will -- they  
24 will take the price, whatever it is, even if the -- even  
25 if the price goes negative. So I -- I'm hoping that's

1 helpful.

2 MR. BOB PETERS: Couple of points. When  
3 you said even if the price goes negative, help the Board  
4 understand that. That means that the counterparty will -  
5 - will be -- will pay others rather than put energy on  
6 the market?

7 MR. DAVID CORMIE: Yes. What happens  
8 when the price goes negative is that there is more supply  
9 than there is demand. And -- and so suppliers are  
10 willing to pay to keep their generators running. And --  
11 and they'll pay as much as their -- their -- up to the  
12 point of -- of their penalty.

13 So if -- if it costs ten thousand dollars  
14 (\$10,000) to shut the unit down they will let the price  
15 go negative to the point where on a unit basis their --  
16 their ten thousand dollars (\$10,000) is -- is -- that  
17 total is reached.

18 So negative prices are a way of telling  
19 companies to stop generating, and -- and negative prices  
20 send price signals to companies like Manitoba Hydro, if  
21 you can buy, buy now because we'll pay you to buy. And  
22 so at times Manitoba Hydro buys and gets paid to buy  
23 because of -- we have that ability. And so negative  
24 prices are an -- an effective way of managing the supply  
25 and demand of power.

1                   MR. BOB PETERS:    In terms of the price  
2 against which Manitoba Hydro is -- is bidding in its  
3 opportunity sales, Mr. Cormie, if Manitoba Hydro was to  
4 bid in at two (2) or three (3) cents a kilowatt hour  
5 would that simply mean Manitoba Hydro's energy won't be  
6 selected and therefore Manitoba Hydro bids in at it's --  
7 it's variable cost plus presumably a -- a margin?

8                   MR. DAVID CORMIE:   Manitoba Hydro will --  
9 will bid in at it -- at its variable cost, as will other  
10 generators, and if the market clears at that price or  
11 higher they will be happy. They will -- they'll be --  
12 they will be recovering their costs, they will be getting  
13 their -- the -- the margins that they need.

14                   And if the market were to clear at four  
15 (4) cents, even if Manitoba Hydro offered in at -- at one  
16 (1) cent and a coal-fired generator offered in at two (2)  
17 cents but the market cleared at four (4) cents, both of  
18 them would be profitable. Just that the hydro utility  
19 would have greater profits than a coal-fired utility.

20                   But there are times when we -- they --  
21 companies offer their energy and -- and the market clears  
22 below those prices, rather than -- rather than shutting  
23 down -- like Manitoba Hydro would shut down, we wouldn't  
24 generate, we would avoid the generating because we would  
25 be generating a loss.

1                   Some companies will choose to continue to  
2 generate. And -- and they will get a bill for continuing  
3 to generate because the prices have -- are now -- or  
4 they'll -- they'll be generating at a loss because  
5 they're generating at -- and the market is only paying  
6 them a price that's less than -- but they choose to do  
7 that because that's -- it's more than just a variable  
8 cost issue. They need to worry about their -- their  
9 start and stop costs and the -- and the costs of  
10 reliability.

11                   MR. BOB PETERS:    You refer to their stop  
12 and start costs as their -- as their penalty costs, Mr.  
13 Cormie?

14                   MR. DAVID CORMIE:    They -- that -- tho --  
15 those could be part of the factors, yeah.

16                   MR. BOB PETERS:    From your second-last  
17 answer it sounds as though other -- other companies are  
18 bidding into the market at Manitoba Hydro's variable  
19 cost.

20                   MR. DAVID CORMIE:    No. Other companies  
21 bid in at their own cost of generation -- their variable  
22 cost of gen -- everybody bids in at their variable cost.  
23 Then the market operator looks at all those varying bids  
24 and finds the -- finds the bid that -- all the bids that  
25 are in merit -- those bids that are priced lower than the

1 cost of serving the last megawatt of load -- those  
2 companies are all told, Yes, your offer is accepted.

3 Anybody who bids in at a -- at a cost  
4 that's higher than the -- the highest price needed to  
5 serve the last megawatt of load is then out of merit and  
6 they are -- they are -- those off -- those -- those bids  
7 are declined. They're not necessary to serve the load.

8 But Manitoba Hydro bids in at its -- at  
9 its variable cost, other generators bid at their variable  
10 cost, and -- and the market figures out which ones are in  
11 merit and which ones aren't.

12 MR. BOB PETERS: Has Manitoba Hydro ever  
13 not been successful in bidding in its -- at its variable  
14 cost, Mr. Cormie?

15 MR. DAVID CORMIE: Most days variable  
16 cost for our combustion turbines are -- are -- are too  
17 high. Some days our hydro doesn't clear the market  
18 because there's an oversupply of generation and the  
19 market clears below our variable cost or will clear  
20 negative.

21 And in those cases, we will -- we've also  
22 made offers to purchase and we will purchase at that  
23 price because we get paid to purchase.

24 MR. BOB PETERS: All right. Leaving  
25 aside your thermal plant, you're telling the Board that

1 even if Manitoba Hydro bids in at its variable cost of  
2 its hydro production, there are days when Manitoba  
3 Hydro's energy isn't -- isn't accepted in the market.

4 MR. DAVID CORMIE: Yes, because there are  
5 -- there are other companies who run wind facilities who  
6 are receiving a production tax credit of -- let's say  
7 they're getting ten dollars (\$10) a megawatt hour for  
8 every megawatt hour they produce. So they can let the  
9 market go down as low as negative ten dollars (\$10)  
10 before they lose money.

11 And so, they will bid in at -- at a -- at  
12 a negative amount, up to their production tax credit, and  
13 they can force the price of power to go negative. And in  
14 those situations Manitoba Hydro can't compete and we  
15 don't want to compete. We'd rather buy out of the market  
16 and -- and make money by being paid to purchase energy.

17 MR. BOB PETERS: Turning to -- Mr.  
18 Cormie, to a fixed-price arrangement such as the NSP  
19 contract extension, would the Board be correct in  
20 understanding your evidence, sir, that Manitoba Hydro  
21 does not seek to recover its fixed costs expressly in the  
22 prices charged to NSP?

23 MR. DAVID CORMIE: Because there are no  
24 facilities necessary to -- in to -- ne -- necessary for  
25 the transaction, all Manitoba Hydro needs to do is cover

1 its -- its variable costs to serve the sale.

2 And those variable costs will include the  
3 cost of water rentals, losses, power purchases at times  
4 when Manitoba Hydro's generation is needed to serve  
5 Manitoba load and either purchased energy or thermal  
6 generation is needed.

7 So, all the costs of serving the sale are  
8 -- are, in effect, the variable costs of running the  
9 power system for the term of the contract. But there --  
10 we'd -- we're -- we'd -- we'd -- we're not having to  
11 cover any fixed costs because we're not incurring any  
12 fixed costs in making the sale.

13

14 (BRIEF PAUSE)

15

16 MR. ROBERT MAYER: Mr. Cormie, in all the  
17 years I've been on the Board I -- God, I can't remember  
18 how long since I've said that -- I have never heard this  
19 concept of getting paid by somebody's power before. I  
20 can't believe that this is something that happens daily.  
21 I mean, what kind of percentage are we talking about?

22 Of your imports, what kind of percentage  
23 are you talking about where somebody pays you to actually  
24 take it off their hands?

25 MR. DAVID CORMIE: It's a -- it's a small

1 percentage of time, Mr. Mayer. It usually occurs in the  
2 spring when there's not a lot -- a large demand for  
3 electricity, so demand is down. It occurs at a time of  
4 year when there's a lot of wind energy being produced and  
5 generally there's a lot of hydro being produced because  
6 most US utilities don't have storage so they have to  
7 generate the water that's being -- flowing down the  
8 rivers as a result of the snow melt runoff.

9           Your comment about not having heard about  
10 it, well, it's -- it is quite recent and in the time that  
11 you've been on the Board the market has changed several  
12 times and there's been quite a -- quite a large  
13 development of new wind generating stations being built  
14 in the United States. Tens of thousands of new megawatts  
15 of wind turbines are coming on market and -- and that's  
16 driving -- that's changing the cost structure of the...

17           And then -- and then the US production tax  
18 credit makes it profitable for those companies to  
19 continue to make money even though the market clearing  
20 price goes negative. So if the price goes negative minus  
21 five dollars (\$5) but they're being paid ten dollars  
22 (\$10) by the government to produce they're still making  
23 five dollars (\$5). So the market price can go negative  
24 and they're still make... So it's only when -- when the  
25 -- when the market price goes below ten dollars (\$10), so

1 now let's say it's fifteen dollars (\$15), but the  
2 government is only paying them ten dollars (\$10) now  
3 they're losing five dollars (\$5). At that point they'll  
4 stop generating the wind.

5 And -- and so it's the -- the wind  
6 generators who are receiving a production tax credit that  
7 -- that -- that cause those situations mostly to occur.

8 MR. ROBERT MAYER: Thank you, sir.

9

10 CONTINUED BY MR. BOB PETERS:

11 MR. BOB PETERS: Mr. Cormie, can you  
12 advise the Board as to whether those production tax  
13 credits continue or whether there is a -- they've been  
14 stopped or do you -- can you update the Board on that?

15 MR. DAVID CORMIE: The production tax  
16 credits are renewed -- have been renewed every year or  
17 every couple of years in -- in the US Congress. I'm not  
18 sure whether the existing program has been extended. I -  
19 - I understand that it's still up in the air whether  
20 those production tax credits will continue.

21 But once a project is eligible for them,  
22 they continue to receive them for the life of the  
23 project. But new projects, whether they will be  
24 eligible, will depend on what Congress does.

25

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: Are there many new wind  
4 projects in the -- in the queue, Mr. Cormie?

5 MR. DAVID CORMIE: In -- in -- in  
6 Manitoba's market in the United States in South Dakota  
7 and North Dakota and in Minnesota, there still remains  
8 tens of thousands of undeveloped megawatts of wind.

9 What -- and those -- those will continue  
10 to be developed because the renewable portfolio standard  
11 that Minnesota has is one that grows with time. So by,  
12 for example, one (1) company needs to produce 30 percent  
13 of its -- supply 30 percent of its retail load by 2025  
14 from renewables. And so that's a -- that's a -- a limit,  
15 Mr. Peters, that's increasing with time and they will  
16 need to continue to develop their -- their renewable  
17 resources to achieve that. They're -- they're not there  
18 already, so additional wind developments need to be  
19 brought online.

20 MR. BOB PETERS: Mr. Cormie, if I can  
21 take you back to some previous answers to me this morning  
22 related to your selling opportunity, off-peak  
23 opportunity. You're telling the Board that to ensure  
24 that Manitoba Hydro's product has the best opportunity or  
25 the best chance to clear the market, you would bid it in

1 at Manitoba Hydro's variable cost rate, correct?

2 MR. DAVID CORMIE: It's our -- our  
3 variable cost plus the margin.

4 MR. BOB PETERS: I'm sorry, plus a  
5 margin?

6 MR. DAVID CORMIE: Yes.

7 MR. BOB PETERS: You've put that on the  
8 record before, have you not --

9 MR. DAVID CORMIE: Yes.

10 MR. BOB PETERS: -- in terms of the  
11 quantity? Was it 10 percent?

12 MR. DAVID CORMIE: What I said on the  
13 record before was that there is a margin.

14 MR. BOB PETERS: All right. I was  
15 throwing out a number; I thought you'd put a number on  
16 the record before, but if not...

17 Does -- does --

18 MR. DAVID CORMIE: I -- I think, in -- in  
19 general, that's -- that -- that would be a good number,  
20 Mr. Peters, but sometimes it's -- if the choice is to  
21 spill, then, you know, it -- it makes economic sense to  
22 make something.

23 MR. BOB PETERS: From that discussion  
24 we've had, Mr. Cormie, would it be correct for the Board  
25 to conclude that Manitoba Hydro's off-peak sale prices

1 will be, for the foreseeable future, relatively low and  
2 about the same level they are at now because of that  
3 competition?

4

5 (BRIEF PAUSE)

6

7 MR. DAVID CORMIE: I -- I think the  
8 current off-peak prices are low given that there is large  
9 amounts of surplus energy being put on the market from  
10 competing hydro in the MISO wind generation and -- and  
11 Manitoba Hydro's very high water conditions.

12 These are the -- this is the highest water  
13 conditions we've seen in many, many years. So many  
14 generators, like Manitoba Hydro, are -- are -- are -- are  
15 finding themselves long and are selling, which is  
16 lowering the -- the price of -- of off-peak energy. To  
17 say that that will continue into the future like that  
18 would require these unusual conditions to persist. And -  
19 - in -- in norm -- under norm -- more normal water  
20 conditions, both in Canada and in the United States, will  
21 -- will tend to firm up those prices.

22 In -- in addition to that, more  
23 transmission is being built from the Upper Midwest down  
24 into the -- the heart of -- of central United States, and  
25 that -- that will provide a firming to the market as

1 these transmission lines are -- are built.

2 I noticed the other day in the -- in the  
3 press that a large American transmission company is  
4 building seven hundred and sixty-five (765) kV lines into  
5 Iowa and -- and other states. And that will -- that will  
6 in -- in -- will firm up the price in -- that Manitoba  
7 Hydro sees for its off-peak energy as more transmission  
8 to those higher-cost regions is built.

9 So I think the low prices we're seeing now  
10 is -- is temporary. And then the last fac -- factor is  
11 the -- as -- as those existing coal-fired plants that  
12 can't meet the -- the new emerging emission restrictions  
13 with regard to NOx, SOx, and particulate matter are shut  
14 down, again, that will remove large coal-fired plant from  
15 base-load operation and will tend to firm up prices as  
16 well.

17 MR. BOB PETERS: So there needs to be a -  
18 - a few things happen before the prices will firm up in  
19 the long term then.

20 MR. DAVID CORMIE: In the short term,  
21 water conditions re -- need to return to normal. That  
22 will firm up prices. And then -- and then,  
23 directionally, you're right; new transmission and the  
24 shutdown of generating stations over the next few years  
25 are more longer-term factors.

1                   MR. BOB PETERS:    From that answer, Mr.  
2 Cormie, can the Board conclude that if high water  
3 conditions depress prices, then low water conditions will  
4 have the opposite effect?

5                   MR. DAVID CORMIE:    Yes, low water prices  
6 -- or low water raises prices because there is less con -  
7 - less -- less generation -- low-cost generation in the -  
8 - available and -- and, so, higher-cost units will set  
9 the market clearing price.

10                  MR. BOB PETERS:    In situations where  
11 there is less water available for the hydro generators,  
12 Mr. Cormie, there's also the risk of Manitoba Hydro  
13 running into higher priced imports because of shortage  
14 pricing or premiums put on the pricing of the market,  
15 correct?

16                  MR. DAVID CORMIE:    Well, if you -- if you  
17 describe the shortage pricing as the -- as the situation  
18 we experienced in 2003 when we were entering into  
19 bilateral transactions the -- the bookout transactions  
20 were -- that's -- that's no longer the case, Mr. Peters.

21                  We're now in a market, and -- and it's --  
22 it's -- in that -- in that market because generators must  
23 offer -- they can't withhold, shortage pricing is -- is  
24 not allowed and won't occur. We will pay the market  
25 clearing price and that won't be set by -- by one (1) of

1 our -- our bilateral customers.

2 So I don't -- I don't think that that  
3 situation will drive up prices in addition to what they  
4 would otherwise be just based on cost of generation.

5 MR. BOB PETERS: So the cost of  
6 generation will drive up the opportunity sales exports  
7 for Manitoba Hydro and it'll correspondingly drive up the  
8 import prices that Manitoba Hydro pays?

9 MR. DAVID CORMIE: Yes. I -- I think  
10 that's right. Manitoba Hydro doesn't set the market  
11 clearing price in general in the MISO. And our  
12 activities have very little -- little to do with market -  
13 - in establishing the market price. Our -- the  
14 quantities that we have, although they're large from  
15 Manitoba Hydro's perspective, are small relative to the  
16 market in -- in total.

17 And so market prices move mostly because  
18 of other factors besides Manitoba Hydro's activities.  
19 And I think from my perspective and from Manitoba Hydro's  
20 perspective, a world of higher prices, although it  
21 carries the risk of having to pay those high prices in  
22 drought conditions, nine (9) years out ten (10) will  
23 bring benefits to the company through higher export  
24 prices.

25 And -- and our -- in effect, the

1 probability curve of Manitoba Hydro's water supply  
2 showing that most years will be favourable water  
3 conditions. The benefits that we achieve from high  
4 prices, most of the time under favourable water  
5 conditions, will more than pay for the costs of -- of  
6 having to purchase energy during the years when we may  
7 have low water conditions.

8                   And that's -- that's why I -- we were  
9 discussing last week, Mr. Peters, that when we enter into  
10 a long-term transaction they have to be long enough in  
11 duration so that the risk of the water supply -- the risk  
12 of drought is spread out over many -- many years, so that  
13 you have nine (9) good years and -- and one (1) lean  
14 year, like as -- as they would say in other places.

15                   But -- 'cause in the -- in the lean years  
16 you -- you clearly have to go to the market to purchase  
17 some -- some energy. But a world of higher prices is --  
18 is a good thing in general for -- for a company like  
19 Manitoba Hydro who is naturally long.

20                   MR. BOB PETERS:    Mr. Chairman, with that  
21 answer, this might be an appropriate time for the morning  
22 recess if it suits the Board.

23                   THE CHAIRPERSON:    Interesting exchange.  
24 Very good. We will see you back in fifteen (15) minutes.

25

1 --- Upon adjourning at 10:49 a.m.

2 --- Upon resuming at 11:15 a.m.

3

4 THE CHAIRPERSON: Okay. Welcome back  
5 everyone. When Mr. Peters is rested and seated he can  
6 begin again.

7 MR. BOB PETERS: Yes, thank you, sir.

8

9 CONTINUED BY MR. BOB PETERS:

10 MR. BOB PETERS: The last exhibit I  
11 wanted to talk with the witnesses on this morning, Mr.  
12 Chairman, was Hydro Undertaking number 5, which made its  
13 way as Exhibit Manitoba Hydro 21. And this undertaking  
14 was an attempt to clarify some information that was  
15 provided in Tab 6 of the first book of documents, PUB  
16 Exhibit 15, and we were talking about the various costs  
17 and prices of imports and exports.

18 Would the Board's understanding be correct  
19 that when Manitoba Hydro buys energy the purchase price  
20 is an all-in price?

21

22 (BRIEF PAUSE)

23

24 MR. DAVID CORMIE: Buys energy in what  
25 circumstance, Mr. Peters?

1 MR. BOB PETERS: Mr. Cormie, when  
2 Manitoba Hydro buys wind, there's no separate charges for  
3 energy and capacity on the wind?

4

5 (BRIEF PAUSE)

6

7 MR. DAVID CORMIE: The power purchase  
8 agreements for wind energy are -- are all-in, Mr. Peters.  
9 And that just reflects though those costs -- or those --  
10 those charges that we pay to the -- to the developer and  
11 owner, but there are -- there may be other fixed costs  
12 associated with transmission improvements that are as a  
13 result of the power purchase, but they're not borne by  
14 the developer.

15 MR. BOB PETERS: Those are borne by  
16 Manitoba Hydro's domestic ratepayers?

17 MR. DAVID CORMIE: They're borne by  
18 Manitoba Hydro, yes.

19 MR. BOB PETERS: I was a bit more  
20 precise, I think, in my question. They're borne by  
21 Manitoba Hydro's domestic ratepayers?

22 MR. DAVID CORMIE: I think you have to  
23 ask Mr. Warden that answer, but they -- they are borne by  
24 Manitoba Hydro to the effect that they are paid for out  
25 of retained earnings or they're paid for out of rate

1 increases. It's -- that's -- that's the issue, Mr.  
2 Peters.

3 MR. BOB PETERS: All right. Sorry to put  
4 you on the spot on that. But the sum and substance the  
5 Board can take from that is that when you buy wind energy  
6 the developer or the wind farm vendor of the energy is  
7 not -- is not paying any fixed costs that Manitoba Hydro  
8 had to incur for Manitoba Hydro to be able to access that  
9 wind energy.

10 MR. DAVID CORMIE: For all the energy  
11 that we purchase under the power purchase agreement it's  
12 based on metered deliveries at the point of  
13 interconnection. And -- and -- and it's -- there are --  
14 there are no additional fixed charges associated with the  
15 purchase.

16 MR. BOB PETERS: And all of the charges  
17 upstream of the meter are those of the wind farm operator  
18 and developer?

19 MR. DAVID CORMIE: Yes.

20 MR. BOB PETERS: And all of those costs  
21 downstream of the meter then, fall to Manitoba Hydro to  
22 be recovered as -- as it does?

23 MR. DAVID CORMIE: Yes.

24 MR. BOB PETERS: And, Mr. Cormie, in that  
25 answer, Manitoba Hydro is dealing with two (2) wind farm

1 farms from which it will purchase wind energy, correct?

2 MR. DAVID CORMIE: Yes.

3 MR. BOB PETERS: And can the Board take  
4 that in both of those instances Manitoba Hydro has had to  
5 incur capital expenditures so that Manitoba Hydro can  
6 accept the wind energy?

7 MR. DAVID CORMIE: Yes.

8 MR. BOB PETERS: Is the quantification of  
9 those capital costs a matter of public record, Mr.  
10 Warden?

11

12 (BRIEF PAUSE)

13

14 MR. VINCE WARDEN: Your question, Mr.  
15 Peters, is whether we've put it on the public record or  
16 is it available to be placed on the public record?

17 MR. BOB PETERS: Fair question, Mr.  
18 Warden. The capital costs incurred by Manitoba Hydro to  
19 access the wind energy from the wind farms in Manitoba is  
20 not subject to confidentiality agreement, is it?

21 MR. VINCE WARDEN: No, I don't believe  
22 so. The power purchase agreements specify which costs  
23 will be incurred by the developer versus Manitoba Hydro  
24 and they could be different, depending on the  
25 circumstance.

1                   MR. BOB PETERS:    But in each of the two  
2   (2) wind farm examples, Manitoba Hydro has had to incur  
3   capital costs to take delivery of the wind energy?

4                   MR. VINCE WARDEN:    There have been some  
5   capital costs incurred, yes.

6                   MR. BOB PETERS:    Are you able to quantify  
7   for the Board what those costs were with respect to St.  
8   Leon and also what they were with respect to St. Joseph  
9   wind farms?

10                  MR. VINCE WARDEN:    Yes, we can do that.

11                  MR. BOB PETERS:    You'd do that by way of  
12   an undertaking or you have that readily at hand?

13                  MR. VINCE WARDEN:    No, I think I'd prefer  
14   to do that by way of an undertaking.  We'll -- we'll get  
15   that information for you.

16

17   --- UNDERTAKING NO. 47:       For Manitoba Hydro to  
18                                    quantify for the Board what  
19                                    those costs were with respect  
20                                    to St. Leon and also what  
21                                    they were with respect to St.  
22                                    Joseph wind farms

23

24                                    (BRIEF PAUSE)

25

1 CONTINUED BY MR. BOB PETERS:

2 MR. BOB PETERS: Mr. Warden, to -- would  
3 all of the capital costs related to the St. Joseph wind  
4 farm have already been incurred by Manitoba Hydro,  
5 recognizing that energy is now starting to stream from  
6 that facility?

7 MR. VINCE WARDEN: Yes.

8 MR. BOB PETERS: So for the clarity of  
9 the record then, the undertaking is to advise the Board  
10 of the capital costs incurred by Manitoba Hydro with  
11 respect to obtaining energy from the St. Leon wind farm  
12 and also from the St. Joseph wind farm as separate  
13 calculations.

14 MR. VINCE WARDEN: Yes, we'll do that.

15 MR. BOB PETERS: All right. Thank you,  
16 sir.

17 Mr. Cormie, the real-time market purchases  
18 that Manitoba Hydro makes, there's no separate price for  
19 capacity charges on -- on that product, is there?

20

21 (BRIEF PAUSE)

22

23 MR. DAVID CORMIE: No, there -- there are  
24 -- those are just energy, Mr. Peters.

25 MR. BOB PETERS: And likewise the day-

1 ahead market is just energy with no separate capacity  
2 charge?

3

4 (BRIEF PAUSE)

5

6 MR. DAVID CORMIE: Yes.

7 MR. BOB PETERS: And we could also put  
8 diversity agreements into that same category? That they  
9 -- it's an energy-only charge with no separate price for  
10 capacity?

11

12 (BRIEF PAUSE)

13

14 MR. DAVID CORMIE: Yes.

15 MR. BOB PETERS: Can you confirm, Mr.  
16 Cormie, that when Manitoba Hydro buys dependable energy  
17 the total price typically includes a capacity charge?

18

19 (BRIEF PAUSE)

20

21 MR. DAVID CORMIE: To the extent there is  
22 a -- a capacity component, that will be included, yes.

23

24 (BRIEF PAUSE)

25

1                   MR. BOB PETERS:    By that answer, Mr.  
2 Cormie, you're telling the Board that some purchases of  
3 dependable energy do not include a capacity component.

4                   MR. DAVID CORMIE:    Yes, that's true.

5                   MR. BOB PETERS:    Now, in response to the  
6 Undertaking number 5 at Manitoba Hydro Exhibit 21, there  
7 was -- the second half of the page provided calculations  
8 of unit energy prices using the volumes and revenues  
9 included in -- it's found on Tab 6 of the book of  
10 documents, page 28, in the top right-hand corner -- and  
11 Manitoba Hydro attempted to provide some clarification of  
12 those numbers.

13                               Is that correct?

14                   MR. DAVID CORMIE:    Yes.

15                   MR. BOB PETERS:    And in fairness, Mr.  
16 Cormie, only this morning was I able to have a typed  
17 interpretation of -- of the -- of the answer, at least in  
18 terms of what it may be, and provided a paper copy to  
19 your counsel.

20                               Did you happen to have a chance to look at  
21 that, sir?

22                   MR. DAVID CORMIE:    Yes, I have.

23                   MR. BOB PETERS:    Is it 100 percent  
24 correct?

25                   MR. DAVID CORMIE:    Not yet, Mr. Peters,

1 but I can give you the correct figures if you -- if you  
2 wish.

3 MR. BOB PETERS: Well, I'll -- I'll take  
4 them, but I think it would be helpful if the Board had a  
5 written Undertaking that would provide them. And I -- I  
6 -- I do appreciate that you haven't had much time with  
7 this document, Mr. Cormie, but would you undertake to  
8 maybe refile the chart that was provided to you to set  
9 out the unit prices for fiscal '09 and fiscal '10, as  
10 well as the quantity of energy and the total dollar  
11 amount?

12 MR. DAVID CORMIE: Yes, we can.

13

14 --- UNDERTAKING NO. 48: For Mr. Cormie to refile the  
15 chart that was provided him  
16 to set out the unit prices  
17 for fiscal '09 and fiscal  
18 '10, as well as the quantity  
19 of energy and the total  
20 dollar amount.

21

22 CONTINUED BY MR. BOB PETERS:

23 MR. BOB PETERS: All right, and --

24 MR. DAVID CORMIE: I can give you the  
25 bottom line now though, if you want to just pencil that

1 in.

2 MR. BOB PETERS: Certainly, I would, sir,  
3 yeah.

4 MR. DAVID CORMIE: So, the -- the -- the  
5 bottom row, the total; and, so, this is the total for --  
6 for just energy, Mr. Peters. There -- all the capacity  
7 and services amounts have been taken out.

8 Instead of four hundred and ninety-six  
9 (496) as the revenue total, it should be \$490 million.

10 Do you see that, Mr. Peters? Second  
11 column, bottom row.

12 MR. BOB PETERS: It's difficult. I'm  
13 with you now. Sorry, instead of four ninety-six (496) it  
14 should be...?

15 MR. DAVID CORMIE: Four hundred and  
16 ninety (490). And instead of four point nine zero (4.90)  
17 cents per kilowatt hour it should be four point eight  
18 four (4.84) cents per kilowatt hour.

19 And then moving over to 2009 and '10,  
20 instead of \$321 million, it should be \$355 million.  
21 Instead of two point nine six (2.96) cents a kilowatt  
22 hour for 2009 and '10, that amount should be three point  
23 two seven (3.27) cents per kilowatt hour.

24 MR. BOB PETERS: Thank you, Mr. Cormie,  
25 and when Manitoba Hydro files the written version, will

1 it correct any other numbers on that page?

2 MR. DAVID CORMIE: Yes, we will correct  
3 the table.

4 MR. BOB PETERS: All right, thank you for  
5 that, sir.

6

7 (BRIEF PAUSE)

8

9 MR. DAVID CORMIE: And I think, Mr.  
10 Peters, just as an explanation, the ancillary services  
11 line that you had -- had mentioned there, there is energy  
12 and capacity in that -- in the revenues there. And --  
13 and what you had done is backed out the total amount  
14 instead of just the capacity amount. And -- and -- and  
15 that's where the major change is -- but it was almost  
16 right.

17 MR. BOB PETERS: You're just saying that  
18 to make me feel better, but I'll -- I appreciate your --  
19 your gentleness and your willingness to provide a -- a  
20 written undertaking that will clarify that table, Mr.  
21 Cormie. Thank you very much.

22 MS. PATTI RAMAGE: Mr. Peters, if I could  
23 just jump in, just for the record, it's headed  
24 "Undertaking 21". It's Undertaking 5, Exhibit 21, just  
25 if anybody's trying to follow.

1                   MR. BOB PETERS:    Ms. Ramage, you already  
2 told me it was wrong; you didn't have to rub it in, but -  
3 - but we'll -- we appreciate your correction as well.  
4 It's Exhibit -- related to Exhibit 21 and it was  
5 Undertaking number 5, as you indicated.

6                   MR. DAVID CORMIE:    Mr. Peters, before the  
7 break we talked about shortage pricing and I had  
8 explained that we're now in a market rather than in  
9 bilateral arrangements, and I thought -- I was advised  
10 during break and reminded about the role of the market  
11 monitor, and you remember back in the Enron days in  
12 California and -- and the shenanigans that were happening  
13 at that time and as a result of that most electricity  
14 markets have established what's called a market monitor  
15 to ensure that market participants don't gain the system.

16                                 And -- and that's what hap -- MISO has a  
17 market monitor who looks at people who are in the  
18 business who can exercise market power and monitors their  
19 -- their market activities.  And -- and to the extent  
20 that they engage in anti-competitive behaviour, they --  
21 there are remedies -- they can be ejected from the market  
22 and -- and I'm -- I'm not sure of all the remedies.

23                                 But -- but -- so the -- the market has --  
24 has some oversight, independent oversight that -- that  
25 ensures that -- that companies offer in the generation

1 that they have available. Their -- they must offer and  
2 they must -- they must be consistent in their market  
3 activities. They can't try and extract a huge rents in  
4 circumstances where they have exhibit market power. And  
5 -- so I -- I just wanted to offer that information.

6

7 CONTINUED BY MR. BOB PETERS:

8 MR. BOB PETERS: Has the market monitor  
9 disciplined any party bidding into the MISO market that  
10 you're aware of, Mr. Cormie?

11 MR. DAVID CORMIE: I'm -- I'm not aware  
12 of that, Mr. Peters. I -- I don't know.

13 MR. BOB PETERS: Manitoba Hydro hasn't  
14 been disciplined by the market monitor?

15 MR. DAVID CORMIE: No.

16

17 (BRIEF PAUSE)

18

19 MR. BOB PETERS: Mr. Cormie, there was  
20 not a market monitor back in the '03/'04 drought that  
21 Manitoba Hydro experienced, was there?

22 MR. DAVID CORMIE: No, there wasn't.

23 MR. BOB PETERS: And that market monitor  
24 came to that position, in what, approximately 2005/2006?

25 MR. DAVID CORMIE: The MISO day 2 market

1 opened in -- on April the 1st, 2005. The market was  
2 being built in the years prior to that, so the market  
3 monitor may have been there -- it was there on day 1. It  
4 -- it may have been in place well before that, I just  
5 don't know the date.

6 MR. BOB PETERS: The market monitor was  
7 in place in 2006/'07?

8 MR. DAVID CORMIE: Yes.

9 MR. BOB PETERS: And as a result of the  
10 pricing that took place in that year there was no  
11 discipline to your knowledge to any of the parties that  
12 were selling into the MISO market?

13 MR. DAVID CORMIE: I don't have that  
14 information, Mr. Peters.

15 MR. BOB PETERS: You're not aware as to  
16 whether there was or was not any discipline actions?

17 MR. DAVID CORMIE: I'm unaware of the --  
18 the activities of the market monitor in that year.

19 MR. BOB PETERS: Can you indicate to the  
20 Board, had there been a market monitor in 2003/'04 would  
21 the results have been the same to your understanding or  
22 would there have been changes?

23 MR. DAVID CORMIE: Well, there wasn't a  
24 market, so there couldn't have been a market monitor.  
25 And -- and so had there been a market Manitoba Hydro

1 would've been able to exercise in the -- all the -- the  
2 use of all the financial instruments that were available.  
3 I -- yeah, I think that would be a -- just a different  
4 circumstance. So the outcome would've been different.

5 MR. BOB PETERS: I suppose in -- in your  
6 answer, Mr. Cormie, what you're indicating to the Board  
7 is that the market monitor would -- would be involved if  
8 there was suggestions of impropriety by any of the  
9 counterparties or participants in the market?

10 MR. DAVID CORMIE: Well, I think the  
11 market monitor is not only looking for those, Mr. Peters.  
12 He's -- he's -- they're -- they're -- certain companies  
13 can exercise market power whether that's a good thing or  
14 not or whether they do it knowingly or not the market  
15 monitor is -- monitors those situations and -- and  
16 ensures that -- that they -- that -- that -- that people  
17 with market power aren't taking unfair advantage of that.

18 And -- and that their -- their  
19 participation in the market is -- is cost-based and --  
20 and justifiable. The rates that are charged are -- are  
21 justify -- justified and there's no improper pricing  
22 activity.

23 MR. BOB PETERS: I think what you're also  
24 telling the Board, though, Mr. Cormie, is that you can't  
25 really compare what actually happened in '03/'04 to what

1 might have happened had there been a MISO market at that  
2 time.

3 MR. DAVID CORMIE: Yes.

4 MR. ROBERT MAYER: Mr. Cormie, I do get  
5 the impression, however, in the various times that you  
6 have discussed the market and the fact that it was not in  
7 place in '03/'04 was that your impression was that we  
8 likely wouldn't have had to pay the prices we did for  
9 imports during the drought.

10 MR. DAVID CORMIE: There -- there were  
11 certain charges that Manitoba Hydro had to pay and we --  
12 because we were limited in -- you know, in our options we  
13 weren't able to go to other companies and find out  
14 whether those were competitive prices.

15 But I -- I still believe that Manitoba  
16 Hydro's behaviour in situations of opportunity in the  
17 market are consistent with our counterparties' behaviour;  
18 we're -- we're all in a competitive business.

19 And nine (9) years out of ten (10) when  
20 that's to our advantage Manitoba Hydro doesn't go to  
21 them, to our customers, and say, you know, this year  
22 we're -- we think you're paying too much let's -- let's  
23 give you a discount. It's -- it's -- if you're in -- if  
24 you're in the marketplace, in a competitive marketplace,  
25 those are the rules and -- and you do the best you can.

1                   So I don't -- I don't blame anybody for --  
2 for -- for anything in 2003, I think -- I think that's  
3 just the way the marketplace -- you -- you -- you want to  
4 -- you want to be in the market you have to live and die  
5 by it.

6                   MR. ROBERT MAYER:   Mr. Cormie, I wasn't  
7 suggesting that anybody did anything improper. The  
8 impression I got from your evidence, however, was that  
9 now there is a much broader market, you don't have to  
10 deal with the specific counterparties that -- who know  
11 our situation intimately, and that you can acquire from a  
12 market that probably doesn't even know who Manitoba Hydro  
13 may be, and therefore we may not be affected by the kind  
14 of knowledge that the counterparty from whom you had to  
15 buy in 2003/2004.

16                   MR. DAVID CORMIE:   Yes, I -- I think you  
17 summarized that very well, Mr. Mayer.

18

19 CONTINUED BY MR. BOB PETERS:

20                   MR. BOB PETERS:   Mr. Warden, if I could  
21 turn to you, sir. When we were discussing the costs of  
22 Wuskwatim last day, I provided Manitoba Hydro with a  
23 calculation that Manitoba Hydro ended up wanting to  
24 refine. Do you recall that?

25                   MR. VINCE WARDEN:   Yes, I do.

1                   MR. BOB PETERS:    And at one (1) point it  
2    appeared that Manitoba Hydro was putting forward what may  
3    have loosely been termed the levelized costs of  
4    Wuskwatim.  Do you also recall that discussion?

5                   MR. VINCE WARDEN:    Yes.

6                   MR. BOB PETERS:    Would the Board be  
7    correct in understanding Manitoba Hydro's use of the term  
8    "levelized costs" as a costing methodology that is used  
9    when comparing possible alternative development sequences  
10   for new generation?

11                  MR. VINCE WARDEN:    Yes, it's typically  
12   used for that purpose.

13                  MR. BOB PETERS:    It's a -- it's a  
14   calculation done by Manitoba Hydro to compare its  
15   preferred development option with, let's say, it's  
16   alternative development option?

17                  MR. VINCE WARDEN:    It's used for that as  
18   well, yes.

19                  MR. BOB PETERS:    And it can be used by  
20   Manitoba Hydro to develop a number of possible sequences  
21   to help Manitoba Hydro conclude what should become its  
22   preferred option?

23                  MR. VINCE WARDEN:    Yes.

24                  MR. BOB PETERS:    And, as I understood,  
25   that will be something that Manitoba Hydro expects it

1 will be doing when it has its next major capital review?

2 MR. VINCE WARDEN: We will.

3 MR. BOB PETERS: Let's not do that here.

4 MR. VINCE WARDEN: Okay.

5 MR. BOB PETERS: Mr. Warden, when you do  
6 use your levelized cost calculations you will build in  
7 what is called a discount rate, is that correct?

8 MR. VINCE WARDEN: Yes, we will.

9 MR. BOB PETERS: And am I correct in  
10 understanding that the discount rate is used to bring all  
11 costs back to a -- a net present value --

12 MR. VINCE WARDEN: Yeah.

13 MR. BOB PETERS: -- number?

14 MR. VINCE WARDEN: Yes, that's correct.

15 MR. BOB PETERS: Is Manitoba Hydro's  
16 discount rate publicly known?

17 MR. VINCE WARDEN: No, Mr. Peters, I  
18 don't believe we put that on the record and there might  
19 be some sensitivity around that. It does provide some  
20 indication of Manitoba Hydro's view of future events and  
21 probably best to be -- not to be made public.

22 MR. BOB PETERS: Did you put a discount  
23 rate on the public record before the Clean Environment  
24 Commission when Wuskwatim was being reviewed?

25 MR. VINCE WARDEN: I would think -- I

1 don't know specifically, Mr. Peters, but I would think it  
2 would be reasonable that we did at that time.

3 MR. BOB PETERS: Would the discount rate  
4 have changed from that point in time, Mr. Warden?

5 MR. VINCE WARDEN: I would think that  
6 would be reasonable that the discount rate would have  
7 changed somewhat, yes.

8 MR. BOB PETERS: Can you indicate to the  
9 Board why the discount rate would change, if it did?

10 MR. VINCE WARDEN: Well, again it's  
11 Manitoba Hydro's view of the future and that view may  
12 have changed somewhat. I do -- I wouldn't expect in a  
13 material way, but I -- I think the discount rate is  
14 subject to -- to change over time.

15

16 (BRIEF PAUSE)

17

18 MR. BOB PETERS: I'm not sure how many --  
19 how many discount rates the Corporation has, Mr. Warden.  
20 So when Manitoba Hydro evaluate -- evaluates its Power  
21 Smart programs it also uses a discount rate, correct?

22 MR. VINCE WARDEN: Yes, it does.

23 MR. BOB PETERS: Manitoba Hydro has put  
24 on the public record in these proceedings the discount  
25 rate that it uses to evaluate Power Smart programs. You

1 -- you'll accept that?

2 MR. VINCE WARDEN: I -- I will, yes.

3 MR. BOB PETERS: The reference I can  
4 provide if requested, but is -- is that -- are we  
5 talking one discount rate or there -- or are there  
6 possibly multiple discount rates used by the Corporation?

7

8 (BRIEF PAUSE)

9

10 MR. VINCE WARDEN: Mr. Peters, I don't  
11 know specifically how different the discount rate that  
12 would be used for po -- evaluation of Power Smart  
13 programs versus our long-term capital projects. I --  
14 there may be a difference, but I'm not -- I'm not 100  
15 percent certain of that.

16 MR. BOB PETERS: Does Manitoba Hydro test  
17 different discount rates or does it pick one and stick  
18 with one?

19 MR. VINCE WARDEN: Well, we do do a lot  
20 sensitivity analysis, so the discount rate would be one  
21 of the sensitivities that we would test, yes.

22

23 (BRIEF PAUSE)

24

25 MR. BOB PETERS: Mr. Warden, I'll maybe

1 leave it as an undertaking that Manitoba Hydro can  
2 consider its position on the discount rate used in its  
3 assessment of major capital projects and determine  
4 whether or not that is on the public record presently or  
5 whether it is something that Manitoba Hydro will put on  
6 the public record, to give you some time to -- to look at  
7 that as well as the other -- other information that's  
8 before the Board.

9 MR. VINCE WARDEN: Yes, we can do that.

10 MR. BOB PETERS: All right, thank you.  
11 Can you, without indicating what -- what amount or how --  
12 what -- what the end result is, can you indicate to the  
13 Board how it is constructed -- how the discount rate is  
14 constructed.

15 MR. VINCE WARDEN: I think we'll do that  
16 as part of the undertaking, Mr. Peters. I think that  
17 would be of more value.

18 MR. BOB PETERS: Thank you, sir.

19  
20 --- UNDERTAKING NO. 49: Manitoba Hydro to consider  
21 its position on the discount  
22 rate used in its assessment  
23 of major capital projects and  
24 determine whether or not that  
25 is on the public record

1                   presently or whether it is  
2                   something that Manitoba Hydro  
3                   will put on the public  
4                   record. And without  
5                   indicating what the end  
6                   result is, to indicate to the  
7                   Board how the discount rate  
8                   is constructed.

9

10 CONTINUED BY MR. BOB PETERS:

11                   MR. BOB PETERS:    When Manitoba Hydro  
12                   settles on a discount rate, so long as there is  
13                   consistency in all the factors being analyzed in the  
14                   different scenarios, then Manitoba Hydro will conclude  
15                   that the comparisons are valid or apples to apples, as  
16                   we've said in this Hearing.

17                   MR. VINCE WARDEN:    Yes.

18                   MR. BOB PETERS:    I don't want to go  
19                   further with you than that on the levelized cost  
20                   calculations, Mr. Warden. So I think what you can take  
21                   from that is that we can assume that Keeyask and Conawapa  
22                   and -- have -- have been constructed, for my questions.

23                   MR. VINCE WARDEN:    All right.

24                   MR. BOB PETERS:    I want to focus on the  
25                   rates and the rate impacts of consumers on those

1 projects.

2 Would that be okay?

3 MR. VINCE WARDEN: Yes.

4 MR. BOB PETERS: And what I want to do is  
5 a continuation of your and the Chairman's discussion from  
6 transcript 2252 and 2253, if you need to refer to it,  
7 where we examine the accounting attribution of profit or  
8 loss.

9 Do you remember that discussion with the  
10 Chairman?

11 MR. VINCE WARDEN: Yes.

12 MR. BOB PETERS: And the accounting  
13 attribution of profit and loss; that would show up on the  
14 income statement, for those of us who are less  
15 accounting-inclined than the two (2) of you.

16 Would that be correct?

17 MR. VINCE WARDEN: Profit and loss would  
18 -- would show up on the income statement, yes.

19 MR. BOB PETERS: I think, to simplify our  
20 discussions, Mr. Warden, we could also make the  
21 assumption that the generating station that I focus on is  
22 the one (1) and the only generating station in Manitoba  
23 Hydro's system, and now we're going to develop the IFF  
24 income statement related to that generating station on a  
25 high-level basis.

1 Can we try to do that?

2 MR. VINCE WARDEN: Sure.

3 MR. BOB PETERS: We'll focus on the  
4 revenue requirement and then look at the rates to recover  
5 the revenue requirement, which is what Manitoba Hydro  
6 does at its general rate applications in any event,  
7 correct?

8 MR. VINCE WARDEN: Correct.

9 MR. BOB PETERS: So, Mr. Chairman and  
10 Board members, we're -- we're going to take this  
11 discussion to the day that Wuskwatim comes in service,  
12 which we understand to be in Manitoba Hydro's fiscal year  
13 2012.

14 And, again, I want to assume that the  
15 generating station is fully functional at the beginning  
16 of the fiscal year and the revenue is received over the  
17 course of a fiscal year, so we don't get into those mid-  
18 year adjustments.

19 Would that be fair, Mr. Warden?

20 MR. VINCE WARDEN: Sure.

21 MR. BOB PETERS: And from what you and  
22 Mr. Rainkie have explained, because Wuskwatim is coming  
23 in service in my example, all the costs that are  
24 capitalized and incurred and now have to crystalize and  
25 be accounted for on the income statement.

1 MR. VINCE WARDEN: Correct.

2

3 (BRIEF PAUSE)

4

5 MR. BOB PETERS: You corrected me last  
6 day, Mr. Warden, that the proper capital cost for  
7 Wuskwatim was -- the best estimate we have is \$1.6  
8 billion?

9 MR. VINCE WARDEN: That's right.

10 MR. BOB PETERS: And when we have to  
11 determine an interest rate that would attract -- be  
12 attracted to that debt, would we be correct in using  
13 Manitoba Hydro's forecast of the long-term debt rate?

14 MR. VINCE WARDEN: Well, we would be more  
15 correct to use the interest rate that was in effect when  
16 the funds were actually borrowed to finance Wuskwatim.

17 But I think, Mr. Peters, for purposes of  
18 your illustration, when we -- when we started this  
19 discussion, you used 6 percent which is pretty close to  
20 what the cost of those funds would be during the  
21 construction period.

22 MR. BOB PETERS: Would we have to add the  
23 1 percent debt guarantee fee to that 6 percent, Mr.  
24 Warden?

25 MR. VINCE WARDEN: No. The 6 percent

1 would be inclusive of the debt guarantee fee.

2

3

(BRIEF PAUSE)

4

5

MR. BOB PETERS: Wouldn't we be more  
6 correct to use Manitoba Hydro's weighted average cost of  
7 debt going forward, Mr. Warden?

8

MR. VINCE WARDEN: Well, the weighted  
9 average cost of debt, I think you were -- in your  
10 example, Mr. Peters, you were -- you wanted to use one  
11 (1) generating station that's supplying the Manitoba load  
12 and what would the cost impact be. Now, if we want to --  
13 to use the weighted average we can do that, but that's  
14 the weighted average rate that's been used to finance all  
15 capital projects at Manitoba Hydro historically, that's  
16 embedded -- embedded cost of -- cost of debt.

17

MR. BOB PETERS: Would that be Manitoba  
18 Hydro's best forecast of what the cost of debt will be  
19 going out into the long-term?

20

MR. VINCE WARDEN: The -- the embedded  
21 cost of debt would not be the best forecast, no. The  
22 forecast is just what it is. It's a -- it's a forecast  
23 of what rates will be in the future. They don't  
24 necessarily bear any resemblance to the past.

25

MR. BOB PETERS: So in my example, Mr.

1 Warden, with Manitoba Hydro no longer being able to  
2 capitalize interest charges, can we agree that the  
3 finance expense is at least equal to the annual interest  
4 charge?

5 MR. VINCE WARDEN: The finance expense is  
6 equal to the annual interest charge. I think you're  
7 talking one and the same, yes.

8 MR. BOB PETERS: And then in -- in my  
9 example, to recover those capital costs a depreciation  
10 expense would have to be included in the -- in the income  
11 statement, correct?

12 MR. VINCE WARDEN: That's right.

13 MR. BOB PETERS: And that depreciation  
14 expense would be 1 1/2 to 2 percent a year, somewhere in  
15 that range?

16 MR. VINCE WARDEN: Yes.

17 MR. BOB PETERS: And I've also suggested  
18 that Manitoba Hydro would incur some operating and  
19 administration costs, and in addition to that we know  
20 there would have to be water rental fees, correct?

21 MR. VINCE WARDEN: Yes.

22 MR. BOB PETERS: And in addition there  
23 would be capital tax?

24 MR. VINCE WARDEN: Yes. And -- and I  
25 believe, Mr. Peters, you were attempting to clarify

1 whether or not the 1 percent that we used for purposes of  
2 estimating the operating and administrative costs would  
3 include the capital tax, and I have confirmed that --  
4 that the 1 percent does in fact include capital tax.

5 MR. BOB PETERS: So you're comfortable  
6 with an estimate of -- of 1 percent for -- for OM&A plus  
7 water rentals plus capital taxes --

8 MR. VINCE WARDEN: Yes.

9 MR. BOB PETERS: Or is it a little higher  
10 than that?

11 MR. VINCE WARDEN: No. That would be  
12 reasonable, to use 1 percent.

13 MR. BOB PETERS: And there's no need to  
14 assume any fuel or power purchases for my example because  
15 those aren't factors in the -- in the running of  
16 Wuskwatim?

17 MR. VINCE WARDEN: That's right.

18

19 (BRIEF PAUSE)

20

21 MR. BOB PETERS: Still on the debt  
22 calculation or the debt interest, Mr. Warden. Manitoba  
23 Hydro doesn't earmark its long-term debt by project, does  
24 it?

25 MR. VINCE WARDEN: No, it does not.

1                   MR. BOB PETERS:    And that's why Manitoba  
2 Hydro uses a weighted average long-term cost of debt?  It  
3 averages them out over all of the projects that it runs?

4                   MR. VINCE WARDEN:   Well, when you say  
5 "uses" a weighted average cost of debts, are you implying  
6 a purpose?

7                   MR. BOB PETERS:    For inclusion in the IFF  
8 calculations.

9                   MR. VINCE WARDEN:   Well, when determining  
10 what our finance expense is going to be for IFF purposes  
11 we would look at the existing long-term debt on a spe --  
12 on a specific basis.  So we don't -- we don't just take  
13 our long-term debt and apply a weighted average rate to  
14 that debt, we would look at each debt issue and calculate  
15 what the finance expense will be based on a specific  
16 identification of debt and the -- and the related  
17 interest rate on that debt.

18                   MR. BOB PETERS:    Thank you for that, sir.  
19 When we add up the -- the numbers that you've provided to  
20 us as we construct an IFF, if we use 6 percent interest  
21 all-in, including the provincial debt guarantee fee,  
22 depreciation in 1 1/2 to 2 percent I suppose, OM&A plus  
23 water rentals and capital tax of 1 percent, we're roughly  
24 8 1/2 to 9 percent per year of costs to -- to pay for the  
25 Wuskwatim project?

1                   MR. VINCE WARDEN:   Well, not really  
2 because the 6 percent that you've used for illustrative  
3 purposes assumes that Wuskwatim is 100 percent debt  
4 financed and that just isn't the case. We -- we do use  
5 internally-generated funds, that's why we have a minimum  
6 -- minimum capital coverage target ratio of one point  
7 two-zero (1.20) which means that in any given year 20  
8 percent of our funding will be provi -- if we meet our  
9 capital target exactly, 20 percent of our funding for  
10 major generation transmission will be provided from an  
11 inter -- internally-generated funds.

12                   So no, we can't assume that the 6 percent  
13 will be -- hit the operating statement in any -- the  
14 first year of operation of -- of Wuskwatim.

15

16                   (BRIEF PAUSE)

17

18                   MR. BOB PETERS:   When Manitoba Hydro  
19 calculates its financial target for the capital coverage,  
20 Mr. Warden, isn't it Manitoba Hydro's practice to exclude  
21 major new generation and transmission from having to pass  
22 that capital coverage test?

23                   MR. VINCE WARDEN:   It is. And -- and the  
24 reason we do that is we want to be -- be certain that we  
25 recover, at the very minimum, our base capital. So if

1 our capital coverage ratio is one hundred (100) then we  
2 would recover -- we would fund internally all of our base  
3 capital expenditures. To the extent, though, that it's  
4 over one hundred (100), 20 percent of that funding will  
5 be available for funding major generation transmission.

6 MR. BOB PETERS: Mr. Chairman, in light  
7 of the hour, this might be an opportune time to take the  
8 lunch recess.

9 THE CHAIRPERSON: Sounds good.

10

11 --- Upon recessing at 11:59 a.m.

12 --- Upon resuming at 1:23 p.m.

13

14 THE CHAIRPERSON: Ms. Ramage...?

15 MS. PATTI RAMAGE: Yes, there's a number  
16 of undertakings that have been distributed, and I'll just  
17 run through them quickly, following which Mr. Cormie is  
18 going -- we're planning on having him respond to one on  
19 the record. Felt that it would be easier to just do it  
20 orally.

21 But the first one in the package that's  
22 been distributed is Manitoba Hydro Under -- Undertaking  
23 32 which has been given Manitoba Hydro Exhibit number 34,  
24 and that deals with quantification of the US opportunity  
25 sales in 2004 and 2005 made on-peak, and a breakdown for

1 2005 and '06; the thirteen hundred (1300) gigawatt hours  
2 sold to the US by on-peak and off-peak.

3

4 --- EXHIBIT NO. MH-34: Response to Undertaking 32.

5

6 MS. PATTI RAMAGE: The next undertaking  
7 is number 22. It is the -- Manitoba Hydro providing it's  
8 best es -- estimate as to when Wuskwatim will be required  
9 to serve domestic load, and that has been given Manitoba  
10 Hydro Exhibit number 35.

11

12 --- EXHIBIT NO. MH-35: Response to Undertaking 22.

13

14 MS. PATTI RAMAGE: Next is Manitoba Hydro  
15 Undertaking number 27; filing with the Board a listing of  
16 gigawatt hours of load that's been lost since 1981, and  
17 that has been assigned Exhibit Manitoba Hydro 36.

18

19 --- EXHIBIT NO. MH-36: Response to Undertaking 27.

20

21 MS. PATTI RAMAGE: Next, Manitoba Hydro  
22 Undertaking number 28 is a -- describe the calculation of  
23 speculative increase and how loss is included, and that's  
24 been given Manitoba Hydro Exhibit 37.

25

1 --- EXHIBIT NO. MH-37: Response to Undertaking 28.

2

3 MS. PATTI RAMAGE: Followed by Manitoba  
4 Hydro Undertaking number 25; refiling Figure 7 showing  
5 top consumer forecast for three (3) different load  
6 forecasts all in the same graph. And that's been  
7 assigned Manitoba Hydro Exhibit number 38.

8

9 --- EXHIBIT NO. MH-38: Response to Undertaking 25.

10

11 MS. PATTI RAMAGE: Then next is Manitoba  
12 Hydro Undertaking 38 which is assigned Manitoba Hydro  
13 Exhibit 39. Manitoba Hydro is advising the Board of RSD  
14 charges it has paid on an annual basis since 2005.

15

16 --- EXHIBIT NO. MH-39: Response to Undertaking 38.

17

18 MS. PATTI RAMAGE: Then next is Manitoba  
19 Hydro Undertaking number 39, which is assigned Manitoba  
20 Hydro Exhibit 40, and that's information regarding  
21 whether since like Winnipeg Regulation in 1976 Manitoba  
22 Hydro hydraulic generation exceeded domestic load.

23

24 --- EXHIBIT NO. MH-40: Response to Undertaking 39.

25

1 MS. PATTI RAMAGE: And next is Manitoba  
2 Hydro, the long awaited, Undertaking number 3. It has  
3 been assigned Manitoba Hydro Exhibit number 41 and that  
4 is quantifying the transmission and ancillary service  
5 costs that Manitoba Hydro put in forecast for 2010, as  
6 well as the two (2) test years.

7

8 --- EXHIBIT NO. MH-41: Response to Undertaking 3.

9

10 MS. PATTI RAMAGE: And then, as I  
11 indicated at the outset, if perhaps Mr. Cormie could  
12 respond to Undertaking I believe it's number 16, and  
13 that's dealing with the Burntwood River versus Winnipeg  
14 River situation, I think.

15 MR. DAVID CORMIE: Yes. This was a  
16 question that Mr. Mayer had asked about comparing the  
17 generating capabilities on the Winnipeg River to those on  
18 the Burntwood River, and kind of explaining whether they  
19 were comparable or not.

20 And there's several factors that go into  
21 the production of -- of electricity at a particular site.  
22 One (1) is the head, and one (1) is the average river  
23 flow, and one (1) is the efficiency of the generating  
24 station, and -- and the -- and the last factor is to the  
25 extent how much of the head is captured by the

1 development of the site.

2                   With regard to flow, the flows, Mr. Mayer,  
3 are -- like you said, they're very similar, around 32,000  
4 cubic feet per second on the Winnipeg River and about  
5 that flow on the Win -- on the -- on -- on the -- the  
6 Burnt -- the Burntwood River.

7                   With regard to head, there are six (6)  
8 developable sites on the Winnipeg River and a site like  
9 the Seven Sisters' site that was developed in the early  
10 '30s is comparable to the site at Wuskwatim. It has  
11 about -- about 64 feet of head, about sixty (60) of which  
12 has been developed.

13                   And if you've been to Seven Sisters you'll  
14 notice that there's a terrace channel downstream of the  
15 plant, and that's trying to capture some of that  
16 undeveloped head, and it -- they didn't really finish  
17 that job so there's still some work there that could be  
18 done to improve the output of that plant.

19                   The other thing is that those turbines at  
20 those generating stations, the ones that have yet to be  
21 returbined with modern -- modern turbines have a lower  
22 average efficiency of -- in the order of 80 percent. So  
23 the 80 to 82 percent of the ener -- potential energy can  
24 be captured, and if you compare that to a new site, like  
25 let's say Limestone, where you can get over 90 percent of

1 the energy.

2                   So you can -- 10 percent of the energy --  
3 there's an efficiency effect have -- having new turbines  
4 compared to the old turbines, and -- and that's what  
5 drives Manitoba Hydro to returbine those units as they --  
6 as they go out for maintenance for generator rewinds.

7                   So if you -- if you adjust for those  
8 factors, you know, there -- there are sites on the  
9 Winnipeg River like Seven Sisters that could produce the  
10 same capacity as we're installing at Wuskwatim once you  
11 make, you know, modern turbines that develop all the head  
12 and -- and use modern design technology in the -- in the  
13 evaluation.

14                   MR. ROBERT MAYER: I suppose, Mr. Cormie,  
15 the one that -- now, I may be wrong on this, but I  
16 thought -- and I think I still think that the -- that the  
17 last generating station developed on the Winnipeg River  
18 was Pine Falls. I'm not sure whether that's correct. I  
19 believe it is one (1) of the more recent ones, in any  
20 event.

21                   And it sort of amazed me that it's showing  
22 a capacity of, I think, 88 megawatts. And I look at the  
23 forebay behind Pine Falls, I look at the rapids  
24 downstream of Pine Falls, there seems to be a -- usually  
25 a significant volume of water there. And I -- I just

1 don't understand the difference, especially trying to  
2 compare Pine Falls to -- to Wuskwatim.

3 MR. DAVID CORMIE: Well, the -- the drop  
4 of water at Pine Falls is 40 feet. Wuskwatim has a drop  
5 of water close to 70 feet. So if you just adjust for the  
6 head, Pine Falls has more modern turbines, installed in  
7 early 1950s and some of them have been upgraded since  
8 then. But it's not -- it was McArthur is the -- was the  
9 last station in 1955/1956, and we have yet to returbine  
10 those -- those units at that station.

11 But once you make the adjustments for  
12 head, and mostly it's the developed head that makes the  
13 difference, there should be no difference in potential  
14 at the site.

15 MR. ROBERT MAYER: I suppose the next  
16 question that has to be asked, why didn't you go  
17 downstream and build below Manitou Rapids and back it all  
18 the way up?

19 MR. DAVID CORMIE: You're right. There  
20 is still a little bit of develop overhead at the Manitou  
21 Rapid site but it -- it was uneconomical and -- and still  
22 is uneconomical to develop. The -- the last factor is  
23 that the -- the -- the flow on the Burntwood River is  
24 relatively steady at -- probably at 30 to 32,000 CFS.  
25 Whereas the flow in the Winnipeg River ranges from, you

1 know, as low as 6,000 CFS in 1977 to a hundred and fifty  
2 thousand (150,000). So a lot of the average -- a lot of  
3 the flow that's built into that average is flow that's  
4 spilled during high water years. And so on average you  
5 get much more energy generated from the flow on the  
6 Burntwood River than you do on the Winnipeg River. So --

7 MR. ROBERT MAYER: That -- that's largely  
8 as a result of the Churchill River diversion. And you  
9 have control of that at -- at -- at Notigi?

10 MR. DAVID CORMIE: That's correct.  
11 There's still spillage occurring at Missi Falls but it's  
12 -- I think -- I would -- I would say that the -- the --  
13 the Churchill River, because of regulation by Reindeer  
14 Lake is much highly -- much more regulated than the  
15 Winnipeg River is for power.

16 MS. PATTI RAMAGE: Yes, I realized once  
17 Mr. Cormie began that I'd cut myself off a little early.  
18 There's one (1) more undertaking, and we'll totally mess  
19 up our numbering system if I don't get it on the record,  
20 and that was Manitoba Hydro undertaking number 24, which  
21 we've given Manitoba Hydro Exhibit 42.

22 That's the last in the package and that's  
23 dealing with the IFF assumptions for the Wuskwatim Power  
24 Limited Partnership Export Revenues.

25

1 --- EXHIBIT NO. MH-42: Response to Undertaking 24.

2

3 THE CHAIRPERSON: Thank you, Ms. Ramage  
4 and the Panel. Thank you very much. A lot of hard work  
5 went into this. Mr. Peters...?

6

7 CONTINUED BY MR. BOB PETERS:

8 MR. BOB PETERS: Thank you, Mr. Chairman.

9 Mr. Warden before the lunch recess we were  
10 talking about creating an IFF on account of Wuskwatim and  
11 one (1) of the items that we talked about was the OM&A  
12 costs and we picked, essentially out of the air, a 1  
13 percent OM&A costs. Do you recall that?

14 MR. VINCE WARDEN: Yes, I -- I don't  
15 think it was out of the air, though, Mr. Peters. I  
16 believe that is the number we used for -- for planning  
17 purposes.

18 MR. BOB PETERS: Can you indicate to the  
19 Board what factors are included in that OM&A for planning  
20 purposes?

21

22 (BRIEF PAUSE)

23

24 MR. VINCE WARDEN: Mr. Peters, I'd have  
25 to undertake to get you a breakdown of that. I think you

1 asked the question earlier as to whether or not it  
2 included the capital tax and we did confirm that it did  
3 include the capital tax. But as to exactly what is  
4 included in there will -- we will undertake to provide  
5 that.

6 MR. BOB PETERS: All right. That would  
7 probably be helpful.

8

9 --- UNDERTAKING NO. 50: Manitoba Hydro to indicate to  
10 the Board what factors are  
11 included in that OM&A for  
12 planning purposes

13

14 CONTINUED BY MR. BOB PETERS:

15 MR. BOB PETERS: Does that -- does your  
16 answer, Mr. Warden, imply that the OM&A for planning  
17 purposes may be different than when it's -- when the OM&A  
18 actually hits the income statement?

19 MR. VINCE WARDEN: No, I don't think so.  
20 I think the -- that estimate of 1 percent is intended to  
21 reflect what the actual cost will be.

22 MR. BOB PETERS: Would you expect the  
23 cost to be allocated based on the percent of generation  
24 that Wuskwatim is relative to the entire system  
25 generation?

1 MR. VINCE WARDEN: When you say  
2 allocated, are you -- do you mean for cost of service  
3 purposes?

4 MR. BOB PETERS: I was thinking of that,  
5 Mr. Warden, in terms of when it comes time to calculate  
6 the OM&A costs would you look to be more specific in  
7 terms of what percent of the entire Manitoba Hydro  
8 generation comes from the one plant, in terms of  
9 assigning an OM&A value to it for the -- for the common  
10 costs or the shareable costs incurred by Manitoba Hydro?

11 MR. VINCE WARDEN: Well, the OM&A costs  
12 will be what they will be and they will be allocated  
13 based on the projected cost to be incurred in the test  
14 years which will differ by plant depending on what kind  
15 of maintenance programs might be planned for those  
16 upcoming years.

17 MR. BOB PETERS: Rather than just costs  
18 that can be specifically allocated though, Mr. Warden --  
19 like, you talk about the -- the maintenance related to a  
20 specific plant. What about the common costs that are  
21 incurred by Manitoba Hydro that have to then be shared  
22 amongst the various assets?

23 MR. VINCE WARDEN: When you say "common  
24 costs" --

25 MR. BOB PETERS: Your salary.

1 MR. VINCE WARDEN: Well, the -- my  
2 salary, for example, would -- would not be allocated back  
3 to the generating facilities, it would be included -- and  
4 again, for cost of service purposes it would be included  
5 in a general and administrative category that would be  
6 allocated on a different basis.

7 MR. BOB PETERS: It -- it would form part  
8 of an overhead that would be allocated?

9 MR. VINCE WARDEN: Well, it would -- it  
10 would form part -- part of the total of operating and  
11 administrative costs. Overhead is a different matter  
12 with respect to how costs are allocated to -- to  
13 different functions within the utility. And my salary is  
14 prob -- probably a bad example because under IFRS will  
15 not be -- my costs and other executive costs will not be  
16 included in -- in overhead.

17 MR. BOB PETERS: Yeah. And I wasn't  
18 trying to single out your cost, but I -- just -- but --  
19 but I -- but I appreciate your -- your explanation to the  
20 Board in terms of how that would transpire, sir. Thank  
21 you.

22 THE CHAIRPERSON: Mr. Warden, are you  
23 saying basically that Wuskwatim, which is a -- going to  
24 operated by a -- a partnership in a sense, is not  
25 allocated any common shared Manitoba Hydro expenses?

1                   It's only allocated, if you like,  
2 incremental expenses for people who are actually working  
3 at that plant -- like, there wouldn't be a sharing of  
4 say, for example, Mr. Cormie's unit in selling the power  
5 or executive powers or the cost of your main building?

6                   MR. VINCE WARDEN:    Sorry, Mr. Chairman,  
7 for purposes of the partnership agreement that's a  
8 different -- that -- it -- the costs are, in fact,  
9 allocated in accordance with the -- the partnership  
10 agreement.

11                   I think Mr. Peters and I were having a  
12 different discussion with respect to hypothetical costs  
13 incurred by Wuskwatim when they're placed in service, but  
14 I didn't interpret that to be how costs were -- were  
15 shared in the partnership agreement, if -- if that's the  
16 case, that is -- that is entirely different.

17

18 CONTINUED BY MR. BOB PETERS:

19                   MR. BOB PETERS:    No, in -- in fairness,  
20 Mr. Warden, I wasn't thinking of the partnership  
21 allocation either.  What you're telling the chairman now  
22 is that to -- to construct the income statement related  
23 to the Wuskwatim Power Limited Partnership Agreement, by  
24 agreement there are certain costs that are included and  
25 certain costs that are excluded from that agreement.

1 MR. VINCE WARDEN: Yes.

2 MR. BOB PETERS: All right. And I think  
3 those were summarized at the last GRA. We had an  
4 explanation on the record as to what was included and  
5 what was not included. Do you recall that?

6 MR. VINCE WARDEN: Yes, I believe that's  
7 right.

8 MR. BOB PETERS: And in general, in my  
9 example, the 1 1/2 percent number that you've calculated  
10 and I'll -- I think we'll best wait for the -- the  
11 undertaking to see where -- where, if at all, that takes  
12 us, sir, so thank you.

13 Mr. Warden, I want to turn -- before the  
14 break we were having a discussion about, you know, what -  
15 - what annual cost would be attributed to a particular  
16 generating station, and in my example we were picking  
17 Wuskwatim.

18 You provided an answer just before lunch  
19 to the effect that maybe my numbers were appropriate if  
20 we were financing or Manitoba Hydro was financing  
21 Wuskwatim all by debt. But there was an indication that  
22 Manitoba Hydro might be using some internally-generated  
23 funds to pay for some of the costs.

24 Do you recall that discussion?

25 MR. VINCE WARDEN: Yes.

1                   MR. BOB PETERS:    Well, I just want to  
2 remind you that in my example, let's -- I've -- I've  
3 tried to isolate Wuskwatim as the only -- the only  
4 resource on the system.

5                   You recall that?

6                   MR. VINCE WARDEN:    Yes.

7                   MR. BOB PETERS:    And if it is the only  
8 resource on the system, there would be no other revenue  
9 stream from any other sources, correct?

10                  MR. VINCE WARDEN:    In the hypothetical  
11 example, Mr. Peters, yes, then we would have to -- in  
12 that example, we would have to look at what would be the  
13 best way -- the fairest way -- of recovering those costs  
14 from -- from ratepayers.

15                  MR. BOB PETERS:    And we'll come to that,  
16 Mr. Warden, because whether they're recovered from  
17 internally-generated funds, as -- as part of your answer,  
18 or as my suggestion, let -- let's just assume that it's  
19 all 100 percent debt financed, the second part of the  
20 equation has to be: How do we recover the costs?

21                  And maybe we can defer that discussion  
22 until then. Would that be okay?

23                  MR. VINCE WARDEN:    Sure.

24                  MR. BOB PETERS:    And, so, all of that  
25 aside, we're going to come up with a -- a certain

1 percentage to char -- to multiply against the capital  
2 costs, and we -- we'll come up with an amount that the  
3 Corporation needs to pay annually on account of  
4 Wuskwatim, correct?

5 MR. VINCE WARDEN: Correct, and that, I  
6 think, Mr. Peters, is why I was attempting to -- the last  
7 time we were together, I was attempting to explain that  
8 if we wanted to look at the way we would -- would recover  
9 those costs, in a hypothetical example as we're  
10 discussing, then the way to do that would be to look at  
11 the costs to p -- pay back both the principal and  
12 interest over the life of that facility. And I believe  
13 we calculated an amount that would achieve that.

14 MR. BOB PETERS: And -- and that was  
15 using your levelized approach, correct?

16 MR. VINCE WARDEN: Well, it is levelized,  
17 but it's -- I don't want to over complicate it. It's  
18 simply the equal annual amount that will replay a loan of  
19 1.6 billion over sixty-seven (67) years at 6 percent  
20 interest, that we were discussing.

21 So that calculation in -- incorporates  
22 both interest and depreciation -- depreciation being the  
23 repayment of principal -- over the life of the facility.

24 MR. BOB PETERS: And I guess where your  
25 methodology and mine are -- are different, and I think --

1 want -- I want the Board to understand the differences --  
2 is that yours looks out over sixty-seven (67) years, and  
3 in mine, I'm really focussing on the first year out.

4 MR. VINCE WARDEN: Yes, that's true, and  
5 I think both meth -- methods have their advantages and  
6 disadvantages, and I guess if you're looking at just the  
7 first year, then you really have to look at the reality  
8 of where the funds are coming from. And that's what I  
9 was -- I think we were discussing before lunch.

10 MR. BOB PETERS: All right, well, we're  
11 going to get to that, Mr. Warden, and we'll -- we'll look  
12 at where those funds are going to come from.

13 But whether we -- whe -- whether we add up  
14 the percentages that we've used and it comes out to 8 1/2  
15 or 9 percent, or I think I did initially even a high  
16 number just to make the math round out a little bit  
17 better.

18 But using, I think, the 9 percent figure  
19 against the 1.6 billion, there were annual costs of 144  
20 million, and then I would have divided that -- well,  
21 that's 144 million that has to be recovered in the rates,  
22 either from domestic customers or from export.

23 That would be the two (2) sources, Mr.  
24 Warden?

25 MR. VINCE WARDEN: Recognizing that the

1 depreciation component that you factored in there is  
2 partially recovering the financing costs, as well. So  
3 there's a -- somewhat of a doubling in that respect, but  
4 -- but with that qualification I'll agree with your --  
5 your calculation.

6 MR. BOB PETERS: I'm not clear as to why  
7 the depreciation would include interest or finance  
8 expense if -- if the depreciation was just on account of  
9 the capital cost.

10 MR. VINCE WARDEN: Well, the financing  
11 cost during construction, actually. That's what I was  
12 referring to, the 2 per -- the -- whatever depreciation  
13 rate, whatever we're using there, 2 percent  
14 approximately, that would be recovering the costs of  
15 financing during construction.

16 MR. BOB PETERS: That's financing that's  
17 already been -- been incurred?

18 MR. VINCE WARDEN: Yes.

19 MR. BOB PETERS: And so going forward  
20 that those financing costs that had been incurred will  
21 continue to carry interest at I think we -- we settled on  
22 6 percent as an approximate number going forward until  
23 it's paid off?

24 MR. VINCE WARDEN: Yes.

25 MR. BOB PETERS: And -- and whether the

1 dollar amount is, you know, 144 million a year or even  
2 150 million a year, Mr. Warden, at -- at that range I  
3 don't suppose the rounding hurts. That has to be  
4 recovered from either the export customer or the domestic  
5 customer? Wouldn't that be the only two (2) sources of  
6 possible recovery of those costs?

7 MR. VINCE WARDEN: Or from retained  
8 earnings. You know, to the extent that you're not  
9 recovering the costs in -- in the very first year then  
10 retained earnings will bear that difference.

11 MR. BOB PETERS: All right. Let's  
12 assume, I guess, Manitoba Hydro has retained earnings in  
13 my example and what you're telling the Board is that to  
14 the extent that the domestic customer and the export  
15 customer don't recover the costs one could expect the  
16 equity to be depleted?

17 MR. VINCE WARDEN: Drawn down.

18 MR. BOB PETERS: I thought that's what I  
19 said? Drawn down or depleted?

20 MR. VINCE WARDEN: Depleted.

21 MR. BOB PETERS: Not totally depleted,  
22 but you -- you would source -- whatever isn't paid by the  
23 domestic customer or the export customer would come out  
24 of the retained earnings and draw that down or reduce  
25 that?

1 MR. VINCE WARDEN: Yes.

2 MR. BOB PETERS: All right. I didn't  
3 mean to suggest bring it to zero, but I think we're in  
4 agreement that it would -- it would be the last source of  
5 revenue to pay -- to pay those annual costs?

6 MR. VINCE WARDEN: That's right.

7 MR. BOB PETERS: When I gave my example  
8 previously, the -- the number worked out a lot cleaner in  
9 the sense that it calculated on an energy basis to ten  
10 (10) cent a kilowatt hour, and with the revisions you've  
11 made certainly I'll acknowledge it would be maybe it's  
12 nine (9) or nine and a half (9 1/2) cents, I'm not sure,  
13 but let's -- let's for my example use the approximate ten  
14 (10) cent if we -- would you be okay with that?

15 MR. VINCE WARDEN: Okay.

16 MR. BOB PETERS: And we know that if  
17 every kilowatt hour comes out of Wuskwatim and is costing  
18 on a -- on a per unit basis is approximately ten (10)  
19 cents, we then have to see whether domestic rates are  
20 going to contribute to that?

21 MR. VINCE WARDEN: Yes.

22 MR. BOB PETERS: And we do know in our --  
23 in our example today the energy from Wuskwatim is not  
24 currently required for domestic Manitoba load?

25 MR. VINCE WARDEN: That's right.

1 MR. BOB PETERS: And in fairness, Ms.  
2 Ramage did file an undertaking and I just haven't read  
3 it. I think there's a date in there in terms of which  
4 the Company estimates Wuskwatim will be used for -- will  
5 be required for domestic load.

6 Would you know that offhand or would you  
7 have --

8 MR. VINCE WARDEN: 2018/'19, I believe is  
9 the -- '19/'20 I'm told.

10 MR. BOB PETERS: So if the energy from  
11 Wuskwatim is not required for domestic Manitoba load,  
12 based on current projections, until fiscal year 2020,  
13 then all of the energy, being 1,515 gigawatt hours, is  
14 available to be sold on the export market, does that  
15 follow?

16 MR. VINCE WARDEN: Yes.

17 MR. BOB PETERS: And we know that to sell  
18 Wuskwatim energy on the export market there is currently  
19 no dependable firm export contract that relies on  
20 Wuskwatim.

21 Is that correct, in the first year at  
22 least?

23 MR. VINCE WARDEN: Yes, that's right.

24 MR. BOB PETERS: At some point in time  
25 presumably the NSP arrangement may require some Wuskwatim

1 energy --

2 MR. VINCE WARDEN: Right.

3 MR. BOB PETERS: -- depending on domestic  
4 load growth?

5 MR. VINCE WARDEN: That's right.

6 MR. BOB PETERS: And so if there's no  
7 firm dependable export contract then a hundred percent of  
8 it could be turned over to the power sales and operations  
9 people to be available as opportunity sales?

10 MR. VINCE WARDEN: Yes. I think, Mr.  
11 Peters, it is important though to clarify in that same  
12 undertaking which I don't have in front of me, but when  
13 Wuskwatim was originally planned it was -- well,  
14 originally to be built as a merchant plant.

15 The Manitoba load, I believe, did go up to  
16 the point where it was required to serve the Manitoba  
17 load. We've had, as we've discussed earlier, some  
18 changes again to the Manitoba load which has pushed the  
19 date for Wuskwatim required to serve the Manitoba load  
20 back to '19/'20, but --

21 MR. BOB PETERS: 2020. Oh, you meant --  
22 sorry, fiscal year --

23 MR. VINCE WARDEN: Yes.

24 MR. BOB PETERS: -- '20 -- '19/'20?

25 MR. VINCE WARDEN: Yes.

1 MR. BOB PETERS: sorry, sir.

2 MR. VINCE WARDEN: Yes, fiscal year '20.  
3 Yes. The point of that being is that, you know, the --  
4 the Manitoba load is variable and we have to plan for  
5 contingencies.

6 So the fact that we've got Wuskwatim there  
7 to backstop any load growth -- and you can see, and this  
8 is Undertaking 22, there's a -- a year, 2014/'15, where  
9 there's a system surplus, without Wuskwatim, of 2  
10 gigawatt hours, so running very, very close. So I think  
11 the fact that we've got Wuskwatim coming online is -- is  
12 a really good thing. Even though it may not be required  
13 until fiscal '20.

14 MR. BOB PETERS: I -- I think the Board  
15 has your point but if your surplus is only 2 gigawatt  
16 hours that rounds closer to zero which means that you --  
17 you need to have something -- some generating source in  
18 mind in case the electricity is needed in Manitoba?

19 MR. VINCE WARDEN: Well -- well, I think  
20 for -- for planning purposes or at least for what we know  
21 today Wuskwatim is not needed until fiscal '20. However,  
22 I was -- I did want to point out there are years inter --  
23 in the intervening years the surplus is very low without  
24 Wuskwatim.

25 MR. BOB PETERS: You could use other

1 means to -- to bridge that short supply such as  
2 dependable imports --

3 MR. VINCE WARDEN: Yes.

4 MR. BOB PETERS: -- Mr. Warden? Yeah?

5 MR. VINCE WARDEN: Yes, absolutely.

6 MR. BOB PETERS: All right. Now, help  
7 the Board, Mr. Warden, understand the dollars and cents  
8 of the transaction if we again assume Wuskwatim on a per  
9 energy basis comes in at about ten (10) cents a kilowatt  
10 hour. If there are no firm export sales we know that the  
11 opportunity sales this past year are in the two (2) to  
12 three (3) cent range, correct?

13 MR. VINCE WARDEN: Correct.

14 MR. BOB PETERS: And we know that if  
15 there was a dependable contract available for some or all  
16 of the Wuskwatim energy, the average dependable price was  
17 less than six (6) cents this past year.

18 MR. VINCE WARDEN: Yes.

19 MR. BOB PETERS: In those instances, the  
20 Corporation will find itself having put in a resource  
21 under current days' costs, when the market price and the  
22 long-term contract prices presumably, don't yet return a  
23 hundred percent of the costs that it takes to run the  
24 generating station, correct?

25 MR. VINCE WARDEN: That's right.

1 MR. BOB PETERS: And in those  
2 circumstances, Manitoba Hydro's business case suggests  
3 that those resources will be available long-term for  
4 Manitoba, correct?

5 MR. VINCE WARDEN: Yes.

6 MR. BOB PETERS: And therefore Manitobans  
7 should contribute to that shortfall through their current  
8 rates to some extent. Do you agree with that?

9 MR. VINCE WARDEN: With the emphasis on  
10 "to some extent," Mr. Peters, yes.

11 MR. BOB PETERS: You're telling the Board  
12 that -- that Manitobans aren't being asked to -- to pay a  
13 hundred percent of the shortfall?

14 MR. VINCE WARDEN: Yeah, the -- that's  
15 absolutely right. They're not being asked to pay a  
16 hundred percent of the shortfall. In fact, if we're  
17 using the ten cents (10) as an example, the average is  
18 approximately four and a half (4 1/2) cents, considering  
19 all ratepayers. So there's a -- a gap between the ten  
20 (10) cents and the four and a half (4 1/2) cents which  
21 is being made up with a very modest contribution by  
22 ratepayers if this rate application is approved.

23 MR. BOB PETERS: You picked four and a  
24 half (4 1/2) cents figure, Mr. Warden, and you did that  
25 because that's an approximate average price of all of

1 Manitoba Hydro's domestic sales prices.

2 MR. VINCE WARDEN: Yes.

3 MR. BOB PETERS: Let -- let's stay with  
4 the ten (10) cents only because of the math being  
5 relatively easy, Mr. Warden. And if the output cost is  
6 ten (10) cents and the best the market will do on an  
7 opportunity basis is three (3) cents, then the shortfall  
8 is seven (7) cents per kilowatt hour?

9 MR. DAVID CORMIE: Mr. Peters, I'm dying  
10 to jump in here because --

11 MR. BOB PETERS: Please, do.

12 MR. DAVID CORMIE: -- although we haven't  
13 -- we don't -- we haven't laid it out the table, Manitoba  
14 Hydro does have customers in the queue that can be served  
15 from the firm output of Wuskwatim. So your assumption  
16 that this energy is just going to go to the opportunity  
17 market may not necessarily be true.

18 We haven't been active in the short-term  
19 market because of the -- Wuskwatim was needed to serve  
20 Manitoba load, but with the decline in domestic load and  
21 the freeing up of that surplus we are actively marketing  
22 this power. So some of it will go to the opportunity  
23 market, the non-firm, but we're confident that we can  
24 sell all the firm dependable energy that Wuskwatim will -  
25 - will bring out at least past the 2015 date.

1 MR. BOB PETERS: It was one of my  
2 questions, Mr. Cormie, I wasn't going to ignore you all  
3 afternoon.

4 But -- but you've now told the Board that  
5 if Wuskwatim's not needed for the next eight (8) or nine  
6 (9) years there's an opportunity in there to sell the  
7 dependable portion of Wuskwatim, correct?

8 MR. DAVID CORMIE: Yes.

9 MR. BOB PETERS: And the dependable  
10 portion of Wuskwatim, isn't that the 1,515 gigawatt hours  
11 that I'm using?

12 MR. DAVID CORMIE: It's the twelve-fifty  
13 (1,250), Mr. Peters, fifteen-fifty (1,550) is the  
14 average, twelve-fifty (1,250) is the dependable.

15 MR. BOB PETERS: Thank you for that.  
16 What you're telling the Board and -- and instead of  
17 marketing all 1,515 gigawatt hours as opportunity, the  
18 best case scenario would be for Manitoba Hydro to sell  
19 one thousand two hundred and fifty (1,250) as dependable  
20 under a long-term firm dependable type contract, if  
21 possible, for as many years out as you can

22 MR. DAVID CORMIE: I think we would sell  
23 to the -- the amount of surplus that's shown in the  
24 supply and demand table that Mr. -- that we had -- that  
25 we supplied in that undertaking -- I can't remember the

1 name.

2 MR. BOB PETERS: It was undertaking 22,  
3 and I don't have it in front of me, sir.

4 MR. DAVID CORMIE: The one that had the  
5 two (2) in it -- surplus --

6 MR. BOB PETERS: Oh yes. Okay

7 MR. DAVID CORMIE: To the extent that  
8 there's a surplus there without Wuskwatim we would be  
9 marketing that -- now, we may not nec -- necessarily have  
10 all twelve-fifty (1,250) available in each and every year  
11 because ultimately some will be needed to serve the  
12 Manitoba load.

13 MR. BOB PETERS: Okay. Thank you again  
14 for that clarification.

15 So to the extent, Mr. Warden, that Mr.  
16 Cormie is successful in selling as -- as much as  
17 available on the dependable market, instead of getting  
18 two (2) to three cents a kilowatt hour you'd expect it to  
19 come in closer to five (5) to six (6) cents a kilowatt  
20 hour on average, using today's average prices.

21 MR. VINCE WARDEN: Using today's, yes,  
22 but I would expect them to do even better than that.

23 MR. BOB PETERS: Sounds like a job  
24 performance challenge to Mr. Cormie. What you're saying  
25 in that answer, Mr. Warden, is that you expect that Mr.

1 Cormie will be selling into a situation where the  
2 economies of both Canada and the United States are  
3 hopefully rebounding and energy prices are on the rise,  
4 at least in the not-too-distant future.

5 MR. VINCE WARDEN: Yes.

6 MR. BOB PETERS: And, Mr. Cormie, you can  
7 perhaps best answer this, that if you are going out --  
8 did I take it that you'd be looking at a contract only  
9 about five (5) years in duration, or did I underestimate  
10 the term on that?

11 MR. DAVID CORMIE: At least five (5)  
12 years, Mr. Peters, and given that Keeyask is scheduled to  
13 come into service around 2020, there is unsold surplus  
14 off Keeyask. So a longer-term power sale than just five  
15 (5) years is -- is highly likely.

16 MR. BOB PETERS: Is it highly likely, and  
17 your counsel will tell me if I've gone too far -- that  
18 it's highly likely that the -- the prices will exceed the  
19 average firm dependable prices that Mr. Warden has put on  
20 the record in these proceedings?

21 MR. DAVID CORMIE: Mr. Peters, I'd be  
22 very disappointed if that's all I got for the power for  
23 Manitoba Hydro.

24 MR. BOB PETERS: You may be disappointed  
25 -- your boss will be really disappointed from the sounds

1 of things, so.

2                   What you're telling -- telling us all, Mr.  
3 Cormie, is that the difference to be made up between the  
4 ten (10) cent number that I used and whatever number  
5 you're able to sell the dependable energy for will narrow  
6 the more successful you are.

7                   MR. DAVID CORMIE:    Yes.  I -- I'm not  
8 sure, Mr. Peters, that we can get ten (10) cents prior to  
9 2020 but it will be pretty close.

10                  MR. BOB PETERS:    To the extent that you  
11 can indicate to the Board, is the output from Wuskwatim  
12 available to be put under contract starting the day that  
13 Wuskwatim generates dependable energy or is there going  
14 to be a lag in terms of what will be likely under a  
15 dependable contract?

16                  MR. DAVID CORMIE:    I'm -- there -- there  
17 will be a lag, Mr. Peters.  We --

18                  MR. BOB PETERS:    That -- that's fine.  In  
19 that case, Mr. Warden, the longer the lag the more  
20 pressure there is on domestic rates to pick up the  
21 shortfall or the subsidy between the costs of Wuskwatim  
22 and what is being gained by opportunity export sales.

23                  MR. VINCE WARDEN:    Mr. Peters, I think  
24 that as we've indicated in our financial forecast, we are  
25 prepared or forecasting that our debt-equity ratio will

1 deteriorate over the next decade because of this --  
2 because of the magnitude of investments we are making.

3           So Wuskwatim, although it's not nearly as  
4 large as Keeyask/Conawapa, the same principles apply so  
5 that we will have a slight deterioration in the debt-  
6 equity ratio with the recognition that there will be a  
7 strong recovery in the years subsequent to that.

8           So we're not asking ratepayers to make up  
9 that difference, otherwise we'd be asking for our debt-  
10 equity ratio to be maintained where it is today. We're  
11 not asking for that. We are prepared to see the debt-  
12 equity ratio deteriorate with the confidence that it will  
13 -- will rebound in the subsequent decade.

14           MR. BOB PETERS:    Is it a matter, Mr.  
15 Warden, where you can tell the Board how much of the  
16 retained earnings will be expended, utilized, depleted,  
17 based on the costs of Wuskwatim that are not being  
18 recovered from either opportunity or firm export sales in  
19 Manitoba Hydro's projections?

20           MR. VINCE WARDEN:   Well, it does depend,  
21 to a certain extent, to how successful Mr. Cormie is in  
22 negotiating a dependable sale contract. So the extent to  
23 which retained earnings will be drawn down will depend a  
24 lot on how successful Mr. Cormie is in that regard.

25           MR. BOB PETERS:    Manitoba Hydro has

1 embedded an assumption in their IFF as to how successful  
2 he will be? Would that be fair to say?

3 MR. VINCE WARDEN: Well, there is an  
4 assumption with respect to the return we will receive on  
5 export sales, yes.

6 MR. BOB PETERS: And would it be correct  
7 that you don't want to put that information on the public  
8 record because that would disadvantage Mr. Cormie in his  
9 negotiations?

10 MR. VINCE WARDEN: Yes. That's right.

11 MR. BOB PETERS: So, I'll leave the --  
12 the dollar amount of that and stay with the principle  
13 concept, Mr. Warden. For the first period of time or the  
14 lag period that Mr. Cormie referred to, the only revenue  
15 available for the Wuskwatim power will be opportunity  
16 export sales, which are presently averaging in the two  
17 (2) to three (3) cent per kilowatt hour range, do you  
18 agree?

19 MR. VINCE WARDEN: Yes, I do agree.  
20 Recognizing again that the two (2) to three (3) cent --  
21 two (2) to three (3) cent range is reflective of economic  
22 conditions which we are expecting to recover in the near  
23 future.

24 MR. BOB PETERS: And therefore using  
25 those numbers, Mr. Warden, the seven (7) cent difference

1 between the costs of Wuskwatim energy and what -- and  
2 what Manitoba Hydro's able to secure for it on the  
3 opportunity export market will be covered by either  
4 domestic ratepayers or retained earnings?

5 MR. VINCE WARDEN: Yes. But not for the  
6 entire period.

7 MR. BOB PETERS: No.

8 MR. VINCE WARDEN: We're -- we're talking  
9 the first year only, and as that depreciation number  
10 starts to accumulate then the interest costs will -- will  
11 go down, and under the methodology we're talking there  
12 will be a -- a crossover point that will occur a num -- a  
13 number of years out. I'm not exactly sure what that  
14 number is, but it will be a number of years out.

15 MR. BOB PETERS: I was going to suggest  
16 to you it would be at least ten (10), maybe twenty (20)  
17 years out. Does that sound within the bounds of reason?

18 MR. VINCE WARDEN: No. I wouldn't expect  
19 it to be that far out, actually, but -- I would expect it  
20 to be sooner than that, Mr. Peters.

21 MR. BOB PETERS: Sooner than twenty (20)  
22 years or sooner than ten (10) years?

23 MR. VINCE WARDEN: If I had to guess it  
24 would be around the ten (10) year mark, but I probably  
25 shouldn't guess.

1 MR. BOB PETERS: All right.

2

3 (BRIEF PAUSE)

4

5 MR. BOB PETERS: Do you want to leave  
6 that outstanding, Mr. Warden, or did you want to take a  
7 mortifying shot at it now on the record?

8 MR. VINCE WARDEN: Well, Mr. Peters, it  
9 really depends on the assumption of export prices. So if  
10 they stay at two point three (2.3) cents then of course  
11 it's going to take a very long time, but we're not  
12 expecting that to be the case.

13 MR. BOB PETERS: All right. Mr. Warden,  
14 without disclosing the amounts can you indicate to the  
15 Board how Manitoba Hydro apportions the shortfall between  
16 the domestic customer and the retained earnings?

17 MR. VINCE WARDEN: Well, to the extent  
18 that we're only asking for 2.9 percent rate increase in  
19 this proceeding -- sorry, 2.9 times two (2) to be clear,  
20 then the contribution -- if -- if we use 4 1/2 percent as  
21 the -- or -- sorry, four point five (4.5) cents per  
22 kilowatt hour as the average and add 2.9 percent times  
23 two (2) onto that, then that's a relatively small  
24 percentage that's -- that is coming from the domestic  
25 consumer versus retained earnings during this period

1 where export prices are low.

2 MR. BOB PETERS: Thank you for that  
3 explanation, sir. Let's turn to -- I might come back to  
4 the Wuskwatim Power Limited Partnership, I might have  
5 some questions after the afternoon recess, Mr. Warden,  
6 but let's -- let's move on to -- to discuss Keeyask again  
7 on a fairly high level.

8 I think we've seen on the development  
9 plans that Keeyask's new in-service date is fiscal year  
10 2020, correct?

11 MR. VINCE WARDEN: Fiscal year 2020, yes.

12 MR. BOB PETERS: The same year that's now  
13 forecast Wuskwatim's energy will be needed to start  
14 supplying Manitobans with energy?

15 MR. VINCE WARDEN: Yes.

16 MR. BOB PETERS: There's going to be a  
17 lot of energy available in fiscal year 2020? A lot of  
18 new energy available?

19 MR. VINCE WARDEN: Well, to the extent  
20 that it's available will depend on contracts, firm export  
21 contracts, that have been negotiated in that interim  
22 period.

23 MR. BOB PETERS: Well, and in my example  
24 Keeyask and Conawapa have been green-lighted and  
25 constructed, so you've passed that hurdle, and the only

1 way Manitoba Hydro would want to pass that hurdle is if  
2 there were long-term contracts that underpinned Conawapa  
3 and Keeyask, correct?

4 MR. VINCE WARDEN: Correct.

5 MR. BOB PETERS: So let's assume in our  
6 discussions going forward that Conawapa and Keeyask have  
7 been built and that the contracts that have been  
8 previously term-sheeted are -- are in force and Manitoba  
9 Hydro has included those in its -- in its planning  
10 process.

11 Are you with me?

12 MR. VINCE WARDEN: I am. Yes, I am.

13 MR. BOB PETERS: All right. And when we  
14 look at Keeyask and the most recent capital expenditure  
15 forecast update of \$5.6 billion, and again applying the  
16 math that we did in terms of interest costs and  
17 depreciation and OM&A and water rental fees and capital  
18 tax, I just want you to assume for round numbers purposes  
19 that there's a \$500 million a year cost attributed to  
20 Keeyask, at least in its first year.

21 Are you prepared to do that, Mr. Warden?

22 MR. VINCE WARDEN: Well, I'd prefer to  
23 use the methodology that we discussed with respect to a  
24 levelized number, but yes, I agree that using your  
25 methodology it will work out to about \$500 million for --

1 in the very first year.

2 MR. BOB PETERS: And -- and I just want  
3 to remind you that I had understood that your levelized  
4 cost discussions were valuable when you were going  
5 through -- when you go through the process to have -- to  
6 seek approvals of your major capital projects, but in my  
7 questioning we're past that point.

8 Would that be understood by you, sir, for  
9 the purposes of my questions?

10 MR. VINCE WARDEN: I think, though, we  
11 are talking hypothetical to a certain extent and I -- I  
12 do believe for the hypothetical discussion it's more  
13 reflective to use the levelized number than -- than the  
14 very first year number as you've calculated it, Mr.  
15 Peters.

16 MR. BOB PETERS: All right. Well, I  
17 think the Board's got your point on that and it certainly  
18 is clearly on the record, but I'm going to stick to my  
19 methodology, if I can call it that, and take credit for  
20 it even though you don't grade it very highly, Mr.  
21 Warden.

22 There's \$500 million a year of costs that  
23 have to be covered related to Keeyask?

24 MR. VINCE WARDEN: Yes.

25 MR. BOB PETERS: All right. Proceeding

1 on that basis, if we know that the output of Keeyask --  
2 I'm not sure what's gross and what's net now that you and  
3 the Vice Chairman have looked at that but probably around  
4 4400 gigawatt hours would be a reasonable output.

5 MR. VINCE WARDEN: 4430 I believe is  
6 average.

7 MR. BOB PETERS: All right. Well then if  
8 we do the math it comes up close enough to eleven and a  
9 half (11 1/2) cents a kilowatt hour again?

10 MR. VINCE WARDEN: Yes, I agree.

11 MR. BOB PETERS: Eleven (11) or eleven  
12 and a half (11 1/2) cents?

13 MR. VINCE WARDEN: Using that  
14 methodology, yes, I agree.

15 MR. BOB PETERS: All right. So we're --  
16 so we're back to a number again and that number of eleven  
17 (11) or eleven and a half (11 1/2) cents a kilowatt hour,  
18 it's currently much larger than the average four point  
19 five (4.5) cents a kilowatt hour for domestic use,  
20 correct?

21 MR. VINCE WARDEN: Yes.

22 MR. BOB PETERS: But we know that Keeyask  
23 isn't being built with a view to serving the domestic  
24 load anytime soon. Isn't that also correct?

25

1 (BRIEF PAUSE)

2

3 MR. VINCE WARDEN: Depends what you mean  
4 by anytime soon, Mr. Peters. It's not that far behind  
5 Wuskwatim in terms of requirement for the -- for the  
6 Manitoba load.

7 MR. BOB PETERS: All right. I -- I don't  
8 have --

9 MR. VINCE WARDEN: So it's '21/'22. So  
10 it's two years later.

11 MR. BOB PETERS: Does that answer suggest  
12 that all of the Wuskwatim power will then be used up for  
13 the Manitoba load between 20 -- 2020 and 2022?

14 MR. VINCE WARDEN: Yeah, that seems  
15 reasonable actually. The growth in the Manitoba load in  
16 that year should -- Wuskwatim is only 200 megawatts, so,  
17 yeah, it would be approximately two (2) years.

18 MR. BOB PETERS: And so then let's focus  
19 on Keeyask's first year then of production as forecast,  
20 that would be a hundred percent for export purposes,  
21 correct?

22 MR. VINCE WARDEN: First year, yes.

23 MR. BOB PETERS: And the same discussion  
24 we've had, Mr. Warden, is that we find ourselves in a  
25 situation where we know the costs at least at that

1 snapshot period of time would be north of eleven (11)  
2 cents a kilowatt hour. To the extent the export contract  
3 doesn't match those costs, there's going to at least  
4 initially be some contribution required from either the  
5 domestic ratepayer or the retained earnings that have  
6 been created in the Corporation.

7 MR. VINCE WARDEN: Well, with that very  
8 large qualification, to the extent that the export  
9 contracts don't cover that amount, so I -- I wouldn't  
10 assume that necessarily.

11 MR. BOB PETERS: Well, we don't know on  
12 the public record what the -- what the firm portion is of  
13 the -- the firm dependable portion is of the sale that  
14 will be served out of the Keeyask Generating Station, do  
15 we?

16 MR. VINCE WARDEN: No, we don't know that  
17 -- or at least on the public record we don't know that.

18 MR. BOB PETERS: But we -- I think we  
19 know that not all of the load from all of the energy from  
20 Keeyask is going to be sold as firm dependable energy.

21 MR. VINCE WARDEN: Well, I wouldn't  
22 necessarily say that either. If -- again, if there's  
23 surplus available that we can depend on, that is  
24 dependable, then there's no reason why that couldn't be  
25 sold.

1 MR. BOB PETERS: Well, intuitively that  
2 makes sense, Mr. Warden, but I'm wondering that Manitoba  
3 Hydro will only commit the long-term sales to the maximum  
4 level of the dependable energy that flows from Keeyask.

5 MR. VINCE WARDEN: Yes, I think that's  
6 what I said -- to the extent that it's dependable.

7 MR. BOB PETERS: And so anything above  
8 dependable, moving up to average or even above average,  
9 that would be -- that would be sold on the export market  
10 as opportunity sales.

11 MR. VINCE WARDEN: Of the opportu -- yes.

12 MR. BOB PETERS: And I was -- I was using  
13 about forty-four hundred (4400) -- I think you used  
14 forty-three hundred (4300) -- as -- that would be an  
15 average out -- under average conditions, that would be  
16 the output from Keeyask?

17 MR. VINCE WARDEN: No, I think I said  
18 forty-four thirty (4430), so.

19 MR. BOB PETERS: And -- and the forty-  
20 four thirty (4430) would be the --

21 MR. VINCE WARDEN: Average.

22 MR. BOB PETERS: -- average?

23 MR. VINCE WARDEN: Yes.

24 MR. BOB PETERS: So not all of that  
25 forty-four thirty (4430) that contributes to our

1 calculating the eleven and a half (11 1/2) cent a  
2 kilowatt hour cost of Wuskwatim would be sold as  
3 dependable energy.

4 MR. VINCE WARDEN: No, that's right.

5 MR. BOB PETERS: Okay, that was the point  
6 I was trying to come to. So we expect, then, that if  
7 there's opportunity sales, we also know, do we not, from  
8 history, that in most years the opportunity sales are, on  
9 average, less than the dependable sale prices?

10 MR. VINCE WARDEN: Well, I think that's -  
11 - in most years? Okay, there -- there are definitely  
12 exceptions to that, but in -- in most years that's  
13 probably true. There's many years in which they're very  
14 close.

15 MR. BOB PETERS: And I think we learned  
16 or the Board perhaps heard the evidence that if the water  
17 supply is less than average that will cause the prices to  
18 -- to rise on the opportunity export sales. That's the  
19 expectation, in any event.

20 MR. VINCE WARDEN: Yes.

21 MR. BOB PETERS: And so, the years in  
22 which the export prices from opportunity will average  
23 more than the export prices from dependable are probably  
24 restricted to the years in which there is below average  
25 flows.

1                   MR. DAVID CORMIE:    I think, Mr. Peters,  
2   the other dimension is that as the Manitoba load grows we  
3   have a market for off-peak energy in Manitoba, so -- and  
4   the tie-line becomes less and less loaded as the domestic  
5   load grows and so there's more and more opportunity to  
6   put energy into the on -- on-peak hours.

7                   And Wuskwatim will help us do that, and  
8   clearly, once Keeyask comes online, we will be able to  
9   put more energy into the on-peak hours because Keeyask  
10  will bring new on-peak transmission available.  So, it --  
11  you know, I think high-water years will -- will --  
12  there'll be less dilution of prices as -- as the Manitoba  
13  load grows.

14                  MR. BOB PETERS:    In that answer, Mr.  
15  Cormie, there was two (2) points that struck me.  One was  
16  you're suggesting that rather than sell on the export  
17  opportunity market, you will have to sell to the Manitoba  
18  domestic market.

19                  MR. DAVID CORMIE:   Well, that, and in  
20  lower-flow years our surpluses will go to displace  
21  purchases that -- that would -- in the wintertime that  
22  we'd be normally making in the off-peak, so it doesn't  
23  necessarily mean that additional water -- or additional  
24  energy is going to off-peak market.  It -- it can  
25  displace imports and it can go into additional on-peak

1 sales.

2

3

(BRIEF PAUSE)

4

5

MR. BOB PETERS: Mr. Cormie, can we just  
6 tidy up a point that you mentioned in I think your third  
7 last answer to me.

8

When -- when Keeyask generating station  
9 comes on, Keeyask doesn't bring with it any additional  
10 transmission, does it?

11

MR. DAVID CORMIE: Well, Keeyask will  
12 only be built if it drives the new export sales, and  
13 there won't be any export sales unless there's new  
14 transmission associated with it. Our -- our goal is to  
15 generate market access. And -- and so to build a plant  
16 without bringing a new transmission is not in Manitoba  
17 Hydro's plans. We need new transmission to come with  
18 this generation.

19

MR. BOB PETERS: All right. And -- and  
20 so when you gave your answer you were assuming it built  
21 into the situation as Keeyask is built and it would be  
22 under situations that have a -- a long-term contract,  
23 similar to what maybe currently is negotiated that brings  
24 transmission with it from counterparties?

25

MR. DAVID CORMIE: Yes. And our goal is

1 a new 500 kV line with at least 1,000 megawatts of  
2 additional on-peak exports.

3 MR. BOB PETERS: If I can just tidy up on  
4 the Conawapa generating station, Mr. Warden.

5 We know that the capital expenditure  
6 forecast is calling for Conawapa to come in as probably  
7 the most expensive generating station ever planned or  
8 built in Manitoba, at about \$7.8 billion in the 2010  
9 Capital Expenditure Forecast?

10 MR. VINCE WARDEN: It's the most -- most  
11 expensive in terms of total capital costs but not -- not  
12 on a per unit basis.

13 MR. BOB PETERS: And on a per unit basis  
14 Keeyask is probably the -- the most expensive, would that  
15 be true?

16 MR. VINCE WARDEN: Yes.

17 MR. BOB PETERS: And Conawapa would be  
18 probably coming in on a per unit basis comparable to  
19 Wuskwatim, maybe even a bit less than Wuskwatim?

20 MR. VINCE WARDEN: Comparable to  
21 Wuskwatim, yes.

22 MR. BOB PETERS: And under my math  
23 methodology, Mr. Warden, the annual cost would be about  
24 \$700 million a year attributed to Conawapa, do you accept  
25 that for the purpose of our discussion?

1                   MR. VINCE WARDEN:    Based on your  
2 methodology, Mr. Peters, yes.

3                   MR. BOB PETERS:    All right.  And the  
4 output of Conawapa, I'm using on average 7,100 --

5                   MR. VINCE WARDEN:    Yes.

6                   MR. BOB PETERS:    -- gig -- gigawatt hours  
7 a year?

8                   MR. VINCE WARDEN:    Yes.

9                   MR. BOB PETERS:    And that brings it in at  
10 approximately ten (10) cents, maybe a little bit under,  
11 but that's again roughly what Keeyask was running?

12                   MR. VINCE WARDEN:    Right.

13

14                                   (BRIEF PAUSE)

15

16                   MR. BOB PETERS:    Mr. Surminski and Mr.  
17 Cormie and Mr. Warden, taken from Mr. Cormie's answer  
18 that there will be no Keeyask without long-term contracts  
19 that provide some transmission associated with it -- I've  
20 got that correct, do I not?

21                   MR. DAVID CORMIE:    Yes.

22                   MR. BOB PETERS:    And, Mr. Surminski, in -  
23 - when we reviewed the capital res -- or sorry, the power  
24 resource plan, in the event of the no-sale scenario which  
25 was, I think, an alternative that the Corporation had set

1 up. It's in the book of documents. The Corporation was  
2 going to rely on building Conawapa instead of Keeyask as  
3 the next generation. Did I have that right?

4 MR. HAROLD SURMINSKI: Yes, you have that  
5 right.

6 MR. BOB PETERS: And why would the  
7 Corporation plan on building Conawapa rather than Keeyask  
8 as the next alternative generation in the event there was  
9 no sale.

10 MR. VINCE WARDEN: Because, Mr. Peters,  
11 as we just discussed, Conawapa is a lower cost plant on a  
12 per unit basis.

13

14 (BRIEF PAUSE)

15

16 MR. BOB PETERS: Mr. Cormie, when the  
17 capital expenditure forecast comes out on an annual  
18 basis, does that cause you to go running back to your  
19 counterparties to try to re-open negotiations or do you  
20 have to pay little attention to that in terms of the  
21 process of your negotiating long-term contracts?

22 MR. DAVID CORMIE: No, I -- I don't have  
23 to go back to my -- my customers. However, every one of  
24 these long-term contracts has certain conditions that  
25 must be satisfied before Manitoba Hydro is obligated to

1 make delivery. And one of those ob -- one of those  
2 conditions precedent is that Manitoba Hydro has to -- has  
3 to be satisfied, at the time that it makes a final  
4 commitment to construct, that it's still in its best  
5 interest to do so, and the Board of Manitoba Hydro at  
6 that time that that decision needs to be made will look  
7 at the situation and -- and make that decision.

8           The contracts that are signed last year,  
9 and hopefully will be signed in the next year or so, for  
10 these transactions have all those protections in and  
11 allows our obligations to be set aside if no new  
12 generation or transmission is built associated with these  
13 transactions.

14           So if this transaction -- these  
15 transactions don't -- can't be justified there's -- if a  
16 -- if a good justification can't be made and the -- and  
17 the Board of Manitoba Hydro chooses not to build new  
18 generation as a result, the transactions terminate.

19           MR. BOB PETERS: I think in a previous  
20 answer, Mr. Cormie, you -- you said there was an  
21 independent review of the arrangements after they were  
22 negotiated. Did I hear that right?

23           MR. DAVID CORMIE: And I -- yes, you did.  
24 And that -- and at -- and at each one of these decision  
25 points there will be a review made whether Manitoba Hydro

1 should take the next step, whether it's through the  
2 licensing process or whether it's to commit capital  
3 dollars to actual construction.

4 MR. BOB PETERS: Is that independent  
5 review done by the Manitoba Hydro-Electric Board? Is  
6 that the party to whom you're referring or was there a  
7 different internal review process?

8 MR. DAVID CORMIE: There is an internal  
9 review process and there may be external review process  
10 as well, but that's -- generally it's an internal review.

11

12 (BRIEF PAUSE)

13

14 MR. BOB PETERS: Are you able to provide  
15 any more information to the Board at this time as to what  
16 independent review process occurs at different stages of  
17 the contract going through to completion?

18 MR. DAVID CORMIE: That independent  
19 review involves other divisions in Manitoba Hydro besides  
20 my division which is responsible for negotiating the  
21 transaction, financial planning, our power planning  
22 division. It goes through middle office, the contracts  
23 are scrutinized, a business case is made to -- to proceed  
24 or not, and that's not under my -- under my purview. I  
25 don't -- I'm not involved in that process.

1                   MR. BOB PETERS:    It's inde -- you've said  
2   it's independent.  It's indeben -- independent of -- of  
3   your authority.

4                   Is that a fair way to put it?

5                   MR. DAVID CORMIE:    Yes, it's -- wouldn't  
6   be appropriate for my area to negotiate and then tell  
7   Manitoba Hydro that it's a good deal and they should  
8   trust me.  It's not -- that's not the way we -- we do it.

9                   I -- I go out and do my best and -- and  
10  let others in the Company decide whether -- and,  
11  ultimately, the Executive and the Board of Directors will  
12  look at the business case, and I -- I'm not responsible  
13  for making the business case.

14                  MR. BOB PETERS:  And, well, we just talked  
15  about in the last couple of questions that, what you've  
16  called independent review, that review is conducted by  
17  Manitoba Hydro's employees, correct -- or their Board of  
18  -- the Board of Directors?

19                  MR. DAVID CORMIE:    Yes, and -- and as Mr.  
20  Warden has indicated, we go through a -- a needs for and  
21  an alternatives to review that -- where we will have to  
22  demonstrate that this is in the best interests of -- of  
23  the Province and Manitoba Hydro, and that our plans can -  
24  - are tested and will -- will withstand testing.

25                  MR. BOB PETERS:    And the ex -- the -- the

1 external review you're talking about is the acronym that  
2 Mr. Warden has given it -- NFAAT -- is that right?

3 MR. DAVID CORMIE: Yes, we had an NFAAT  
4 for Wuskwatim and we will have one for Keeyask and I  
5 expect we will have one for Conawapa as well.

6

7 (BRIEF PAUSE)

8

9 MR. BOB PETERS: And when it comes time  
10 for providing those internal reviews, Mr. Cormie, the  
11 business case for that isn't written by your department,  
12 it follows -- it falls on other -- either the middle  
13 office or the power planning group to come up with the  
14 business case to either support or refute possibility of  
15 the long-term contracts that you've negotiated?

16 MR. DAVID CORMIE: Yes, that's not -- not  
17 in my department, no.

18

19 (BRIEF PAUSE)

20

21 MR. BOB PETERS: I want to turn to the  
22 transmission aspects of -- of Manitoba Hydro's capital --  
23 capital plans, and the Board can take from the answers  
24 previously provided that Manitoba Hydro, to sell under  
25 new long-term contracts to counterparties, will require

1 new generation and new transmission from northern  
2 Manitoba.

3 MR. VINCE WARDEN: Yes.

4 MR. BOB PETERS: And the preferred  
5 choice, at this point of time, to bring down the energy  
6 from northern Manitoba is to construct a new bipole --  
7 Bipole 3.

8 MR. VINCE WARDEN: That's the current  
9 plan, yes.

10 MR. BOB PETERS: And, Mr. Warden,  
11 regardless of who uses the energy on Bi -- that comes off  
12 of Bipole 3 or comes down from the north on Bipole 3,  
13 there's going to also be a cost that has to be recovered,  
14 correct?

15 MR. VINCE WARDEN: Yes.

16 MR. BOB PETERS: And if we use the \$2.2  
17 million figure -- I'm sorry -- \$2.2 billion figure, which  
18 is Manitoba Hydro's Capital Expenditure Forecast '09 as  
19 well as the number used in Capital Expenditure Forecast  
20 '10, and we use my methodology again, which you've been  
21 gracious enough to put your caveats on the record, but at  
22 least -- at least play along with me -- the cost on an  
23 annual basis for Bipole 3 will be about \$200 million a  
24 year based on a capital cost of \$2.2 billion.

25 MR. VINCE WARDEN: Yes.

1 MR. BOB PETERS: And the amount of energy  
2 that can come down on average on -- on -- on Bipole 3  
3 would be about 11,500 gigawatt hours a year?

4 Is that a number we're comfortable  
5 agreeing to?

6

7 (BRIEF PAUSE)

8

9 MR. BOB PETERS: Let me -- I've just  
10 sought a clarification that I probably should have shot -  
11 - sought before I opened my mouth the first time. But  
12 the -- the capacity of Bipole 3 exceeds the capacity of  
13 Keeyask and Conawapa.

14 Am I correct on that?

15

16 (BRIEF PAUSE)

17

18 MR. DAVID CORMIE: Mr. Peters, we haven't  
19 sized Bipole 3 yet --

20 MR. BOB PETERS: Okay.

21 MR. DAVID CORMIE: -- so it may or may  
22 not, but it's -- I don't think it would be a good thing  
23 not to size it appropriately for Keeyask and Conawapa.

24 MR. BOB PETERS: Well, we'll -- all  
25 right, let's -- let me approach it this way, Mr.

1 Surminski.

2 I think you've agreed with me that  
3 Conawapa average energy is about 7,100 gigawatt hours a  
4 year, correct?

5 MR. HAROLD SURMINSKI: Yes.

6 MR. BOB PETERS: And the average output  
7 from Keeyask is about four thousand 4,430 gigawatt hours  
8 a year?

9 MR. HAROLD SURMINSKI: Yes.

10 MR. BOB PETERS: So, if I add those  
11 together and I come up with about 11,500 gigawatt hours,  
12 we can -- Manitoba Hydro can assume that that's -- that's  
13 the minimum amount of energy that's going to be coming  
14 down the line in any event.

15 MR. HAROLD SURMINSKI: Yes.

16 MR. BOB PETERS: And \$200 million a year  
17 divided by the 11,500 gigawatt hours a year would, on a -  
18 - on an energy basis, run the cost to about one point  
19 seven (1.7) cents a kilowatt hour.

20 MR. HAROLD SURMINSKI: Yes.

21 MR. BOB PETERS: Just while we're on the  
22 topic of costing it that way, Mr. Surminski, if -- if the  
23 -- the number was \$4 billion, which we're not saying it  
24 is, but if it was \$4 billion, then the annual cost to  
25 service the Bipole 3 would be more in the range of \$360

1 million, correct?

2 MR. HAROLD SURMINSKI: Yes, based on that  
3 assumption.

4 MR. BOB PETERS: And based on that  
5 assumption, then the cost on a per-kilowatt-hour-conveyed  
6 basis would be closer to three (3) cents a kilowatt hour.

7 MR. HAROLD SURMINSKI: Yes.

8 MR. BOB PETERS: Now, Mr. Warden, let's  
9 talk about the cost recovery of the expenditures related  
10 to Bipole 3, because you clarified very first thing this  
11 morning that the Bipole is going to be built regardless  
12 of whether Keeyask and Conawapa are required to service a  
13 long-term contract.

14 Have I got that right?

15 MR. VINCE WARDEN: That's the plan.

16 MR. BOB PETERS: That's the current plan.

17 MR. VINCE WARDEN: Yes.

18 MR. BOB PETERS: And we also know that  
19 the Bipole 3 is a required piece of transmission to bring  
20 down Conawapa energy --

21 MR. VINCE WARDEN: Yes.

22 MR. BOB PETERS: -- and I may have an  
23 undertaking outstanding with Mr. Surminski, unless it was  
24 in the package that I haven't reviewed yet, to discuss  
25 whether or not Bipole 3 is needed for some, most, or all

1 of the Keeyask output, that's coming, Mr. Surminski?

2 MR. HAROLD SURMINSKI: No. We have  
3 submitted the response to that one and -- and in that one  
4 we indicated that it's not appropriate to deal with the  
5 energy flow on the bipole, it's -- it's -- from the  
6 capacity perspective. So it's difficult to -- to  
7 allocate energy flow.

8 MR. BOB PETERS: On that undertaking, and  
9 I'll have to check with your counsel, I thought we may  
10 have provided something in writing, but maybe you've  
11 responded to that and I'm -- we're at -- we're just  
12 flying at different altitudes here.

13 MR. HAROLD SURMINSKI: No. We -- we have  
14 not responded to that detailed request, and I don't  
15 believe we -- we will, actually, because it's not  
16 appropriate to evaluate loading on -- on bipoles from the  
17 energy perspective.

18 It's -- it's a much more complicated study  
19 that has to analyze capacity on a hourly, monthly, daily,  
20 throughout the year, so that was a very approximate  
21 approach trying to allocate energy flow from an annual  
22 generation of -- of Conawapa and Keeyask. It's -- it's  
23 just not an appropriate approach at all.

24 MR. BOB PETERS: Well, we'll think about  
25 that further, Mr. Surminski, make sure the Board

1 understands your point and we'll review that undertaking,  
2 make sure we have the information that -- that you -- you  
3 indicate is needed.

4 But would -- would the Board be correct in  
5 understanding that the output of Keeyask and the output  
6 of Wuskwatim totalling about 11,500 gigawatt hours a year  
7 is expected to come down on -- on the Bipole 3?

8 MR. HAROLD SURMINSKI: You mean Keeyask  
9 and Conawapa, you said Wuskwatim, but, yes.

10 MR. BOB PETERS: Thank you for correcting  
11 me and thank you. Now, Mr. Warden, whether Bipole adds  
12 one point seven (1.7) cents per kilowatt hour or adds  
13 three (3) cents a kilowatt hour, neither of those numbers  
14 are used by Manitoba Hydro in calculating what the export  
15 sales should return, have I got that right?

16 MR. VINCE WARDEN: I -- I -- to the  
17 extent that Bipole 3 is required for reliability  
18 purposes, then it would not be appropriate to assign that  
19 cost to export contracts. Having said that, as Mr.  
20 Cormie indicated, the business case that is being put  
21 together, that will be put together, that will be  
22 reviewed once the sales contracts are to that stage,  
23 we'll look at all the costs.

24 And we'll look at the costs of comparing  
25 the sale versus the no -- no-sale scenario to make sure

1 that it is in fact in the best interest of ratepayers  
2 that we're proceeding with a -- with a sale case for --  
3 for -- that is more robust than the alternative.

4 MR. BOB PETERS: Well -- well, two (2)  
5 thoughts there, Mr. Warden. One (1) is you include in  
6 the numerator of your analysis of sale versus no-sale the  
7 costs of Bipole and then you also add them in the  
8 denominator, as I understood your tests?

9 MR. VINCE WARDEN: That would be true,  
10 yes.

11 MR. BOB PETERS: Which -- doesn't that  
12 also tell the Board that when you do that Bipole is -- is  
13 completely removed as a factor from the sale versus no  
14 sale analysis, it cancels itself out?

15 MR. VINCE WARDEN: I think when we're  
16 looking at the sales though we will look at not only the  
17 costs of generation but all the -- also the cost of  
18 delivering those sales.

19 MR. BOB PETERS: All right. And you're  
20 prepared to acknowledge that included in the costs of  
21 delivering on those sales is an amount attributed to  
22 Bipole 3?

23 MR. VINCE WARDEN: Well, I am saying that  
24 the sales will contribute towards the -- the costs of  
25 Bipole 3. Yes.

1                   MR. BOB PETERS:   Well, let's go back to  
2 my numbers and we can pick Keeyask. I think you agreed  
3 to -- with me that on a per energy basis under my math  
4 and formula, it was kicking out about eleven/eleven and a  
5 half (11/11 1/2) cents a kilowatt hour, correct?

6                   MR. VINCE WARDEN:   Yes.

7                   MR. BOB PETERS:   And let's just suppose  
8 the worst case for Bipole when we put in a -- a \$4  
9 billion figure, so it's an extra three (3) cents a  
10 kilowatt hour, correct?

11                  MR. VINCE WARDEN:   I -- I'm very  
12 uncomfortable going along with that calculation, Mr.  
13 Peters, because it assumes the costs for -- for the  
14 Bipole that is based more on newspaper reports than --  
15 than sound analysis.

16                  MR. BOB PETERS:   All right. Let's  
17 ratchet it back to one point seven (1.7) cents instead of  
18 three (3) cents for the Bipole 3, that would make you  
19 less uncomfortable?

20                  MR. VINCE WARDEN:   It would.

21                  MR. BOB PETERS:   And if I add the one  
22 point seven (1.7) cents for Bipole 3 to the eleven and a  
23 half (11 1/2) cents that my math turns out on Keeyask,  
24 we're still above thirteen (13) cents a kilowatt hour  
25 combined on those two (2) items?

1 MR. VINCE WARDEN: Yes. We're right  
2 around thirteen (13) cents. That's right.

3 MR. BOB PETERS: And then if we have our  
4 discussion -- and were not going to, but we have our  
5 discussion all over again in terms of how do you recover  
6 that thirteen point two (13.2) cents there's not a  
7 suggestion, is there, that the export contracts are going  
8 to average in excess of thirteen point two (13.2) cents?

9 MR. VINCE WARDEN: Well, I don't want to  
10 suggest a price for those contracts, Mr. Peters.

11 MR. BOB PETERS: All right. And so  
12 whatever amount is recovered under the export contracts,  
13 the balance has to be picked up by the domestic ratepayer  
14 or the retained earnings?

15 MR. VINCE WARDEN: Yes. Following the  
16 logic of our previous discussion, yes.

17 MR. BOB PETERS: And to the extent that  
18 it comes out of retained earnings the domestic ratepayer  
19 is again going to be asked to contribute to increasing  
20 those retained earnings to a level where the Corporation  
21 will at some point return to its target debt-equity  
22 ratio?

23 MR. VINCE WARDEN: No, not necessarily.  
24 The retained earnings will decline during this period of  
25 investment, but the recovery will come subsequently from

1 export contracts. So I wouldn't make the assumption that  
2 the recovery will come from contributions by domestic  
3 ratepayers.

4 MR. BOB PETERS: Would you go so far as  
5 to say the contribution from contracts can only happen if  
6 the export price is average greater than thirteen point  
7 two (13.2) cents?

8 MR. VINCE WARDEN: Well, remember these  
9 are long-term contracts and the -- the thirteen (13)  
10 cents that you calculated is declining as the  
11 contribution towards the financing costs goes down, so  
12 there will be a crossover point at some point in the  
13 future. So, yes, ultimately those contracts will cover  
14 the costs of -- of our investments

15 MR. BOB PETERS: You had previously put  
16 on the record that there was a crossover point some I  
17 think twenty-three (23) years out when comparing the IFF  
18 for the preferred development plan versus the alternative  
19 development plan. Is that the approximate time frame of  
20 the crossover that you're referring to in your last  
21 answer, sir?

22 MR. VINCE WARDEN: Compared to the -- to  
23 the alternative, yes, which -- which really just  
24 emphasizes the point, Mr. Peters, that do nothing is not  
25 an option. There has to be more facilities installed to

1 meet the Manitoba load and we're looking at what is the  
2 best investment for -- for the Manitoba ratepayer  
3 ultimately and when -- that's when we compare to  
4 alternatives. And the preferred development plan shows  
5 that over the long-term it's -- it's to the advantage  
6 over any other alternative that we've developed.

7 MR. BOB PETERS: And that long-term is  
8 the forty (40) year development -- the long-term  
9 development plan that you filed where the crossover took  
10 place between the recommended and the alternative some  
11 twenty-three (23) years out?

12 MR. VINCE WARDEN: Yes.

13 MR. BOB PETERS: All right. Mr.  
14 Chairman, with that answer, this might be an opportune  
15 time for the afternoon recess if it suits the Board?

16 THE CHAIRPERSON: Yes.

17

18 --- Upon recessing at 2:54 p.m.

19 --- Upon resuming at 3:22 p.m.

20

21 THE CHAIRPERSON: Okay. Welcome back  
22 everyone. Mr. Peters you can carry on at your leisure.

23 MR. BOB PETERS: Thank you, sir.

24

25 CONTINUED BY MR. BOB PETERS:

1 MR. BOB PETERS: I wanted to maybe get  
2 Mr. Warden's advice to the Board on Manitoba Hydro  
3 Exhibit 41, it was an Undertaking number 3 that was filed  
4 this afternoon. Then I'm going to turn to the Wuskwatim  
5 Partner Limited Partnership Agreement, and then I want to  
6 even talk to Mr. Warden further about Bipole 3.

7 So, Mr. Warden, can we start please with  
8 the Manitoba Hydro Exhibit 41?

9 MR. VINCE WARDEN: Yes, I think, though,  
10 Mr. Surminski would -- as the primary author will  
11 probably speak to this, depending on what the questions  
12 are.

13 MR. BOB PETERS: Certainly, sir. I want  
14 to look at the tables on page 205 of Manitoba Hydro  
15 Exhibit 41, and I just want to start with the export  
16 sales line item and look at the test year 2010/'11,  
17 that's the first test year, correct, Mr. Surminski?

18 MR. HAROLD SURMINSKI: Yes, correct.  
19 Although I am not familiar with the terminology. I don't  
20 use the terminology "test years".

21 MR. BOB PETERS: I probably would get  
22 along well with you, sir, because I'm like that too, but  
23 we'll -- we'll use the words that Manitoba Hydro has  
24 used. And you're forecasting export sales in the range  
25 of \$313 million that year. That would be a correct

1 interpretation by the Board of Table 1A on Manitoba Hydro  
2 Exhibit 41?

3 MR. HAROLD SURMINSKI: That is the total  
4 under the extraprovincial category.

5 MR. BOB PETERS: And we see that in the  
6 second test year, or fiscal 2012, or 2011/'12, however  
7 you want to label it, the export sales are expected to --  
8 to increase somewhat dramatically, correct?

9 MR. HAROLD SURMINSKI: Yes, and there is  
10 a -- a reason for that.

11 MR. BOB PETERS: And you're going to tell  
12 us the reason, please?

13 MR. HAROLD SURMINSKI: Yes, it's the  
14 change in methodology for one (1) thing, and it is also  
15 the assumption that the export prices will -- will return  
16 back to where we had forecas -- forecasted them to be say  
17 two (2) years ago.

18 MR. BOB PETERS: You know those reasons  
19 you answered wasn't the reason I expected you'd give us,  
20 Mr. Surminski. So when you say there's a change in the  
21 methodology, what methodology changes in calculating  
22 export revenues?

23 MR. HAROLD SURMINSKI: It's a change in -  
24 - in volumes more so because of the approach of -- of  
25 utilizing all ninety-four (94) flow conditions as opposed

1 to a single median expected flow in the previous year.

2

3

(BRIEF PAUSE)

4

5 MR. BOB PETERS: What you're telling the  
6 Board, though, Mr. Surminski, is the methodology change  
7 is -- is only a function of the year out in the IFF.  
8 It's the same methodology you run in all your IFFs, isn't  
9 it? Once you get out three (3) years you are using the  
10 ninety-four (94) year mean?

11 MR. HAROLD SURMINSKI: Yes, correct.

12 MR. BOB PETERS: I see. So the reason  
13 this big bump that's apparent here goes from 313 million  
14 to 531 million is that the forecast is just using a  
15 ninety-four (94) year average at that point in time, not  
16 really based on current situations or even a forecast of  
17 current situations.

18 MR. HAROLD SURMINSKI: That is the basis  
19 for the number. The reason for the increase is -- is the  
20 unit price and -- and the unit price was indicated in the  
21 -- in the table that -- that summarized unit prices.

22 MR. BOB PETERS: You -- you're referring  
23 to PUB book of documents, Tab 6, and the unit price goes  
24 from four point one (4.1) cents to six point five (6.5)  
25 cents a kilowatt hour.

1 MR. HAROLD SURMINSKI: Yes, correct.

2 MR. BOB PETERS: Mr. Surminski, if we go  
3 down to the water rental line and look at the 2011 fiscal  
4 year compared to the fiscal year 2012 water rental fees,  
5 they actually go down by a couple of million dollars,  
6 correct?

7 MR. HAROLD SURMINSKI: Yes, correct.

8 MR. BOB PETERS: And is that a function,  
9 then, of going from the forecasted flows in 2011 to what  
10 the -- the mean flow would be for that -- for that 2012  
11 test year?

12 MR. HAROLD SURMINSKI: Generally, except  
13 it's not the mean flow; it's the average of all ninety-  
14 four (94) flow conditions.

15 MR. BOB PETERS: So it -- it's the mean  
16 of ninety-four (94) flow conditions.

17 MR. HAROLD SURMINSKI: The mean water  
18 rentals corresponding to each. Water rental costs are  
19 calculated for each of the ninety-four (94) flow  
20 conditions and then averaged.

21 MR. BOB PETERS: So, even though you may  
22 be getting new generation coming on in the fiscal 2012  
23 year from Wuskwatim, the water rental fees are forecast  
24 to go down.

25 MR. HAROLD SURMINSKI: Relative to the

1 previous year and median -- median flows always produce  
2 more energy than the average of ninety-four (94) -- more  
3 hydraulic energy. So there is an automatic difference in  
4 water rentals between the two (2) methodologies.

5 MR. BOB PETERS: Thank you for that, sir.  
6 Turn to the Winnipeg -- I'm sorry, the Wuskwatim Power  
7 Limited Partnership Agreement, and this was filed in, I  
8 believe, Undertaking number 24 which will be marked as  
9 Manitoba Hydro Exhibit 42.

10 Have you found that, sir?

11

12 (BRIEF PAUSE)

13

14 MR. BOB PETERS: Mr. Warden, maybe I'll  
15 turn to you to start, please. The question directs the  
16 Board to PUB Manitoba Hydro Second Round Question 38B.

17 Have you located that, sir?

18 MR. VINCE WARDEN: I've located the  
19 reference to 38B, yes. We'll just pull that up, Mr.  
20 Peters.

21

22 (BRIEF PAUSE)

23

24 MR. BOB PETERS: Just a few questions, if  
25 I might, Mr. Warden. The revenue is based on average

1 export prices for power delivered to the US border based  
2 on actual generation.

3 Would that be -- be correct?

4 MR. VINCE WARDEN: Yes.

5 MR. BOB PETERS: And when you say "actual  
6 generation", it is based on the actual prices obtained at  
7 -- metered and delivered for the energy sold?

8 MR. VINCE WARDEN: Yes.

9 MR. BOB PETERS: And it is for both firm  
10 and off-peak sales, sir?

11 MR. VINCE WARDEN: It is.

12 MR. BOB PETERS: But I think you've told  
13 the Board it does not include the existing NSP  
14 arrangement.

15 MR. VINCE WARDEN: That's right, yes.

16 MR. BOB PETERS: It is only based on  
17 future export contracts, is that correct?

18 MR. VINCE WARDEN: Well, it's based on  
19 export revenue -- actual export revenues, excluding the  
20 NSP contract.

21 MR. BOB PETERS: Excluding the existing  
22 NSP contract, correct?

23 MR. VINCE WARDEN: Yes, correct.

24 MR. BOB PETERS: But it will include any  
25 revenues that flow under the renegotiated or extended NSP

1 arrangement.

2 MR. VINCE WARDEN: That's right.

3 MR. BOB PETERS: And will -- when will  
4 the revenues from that NSP arrangement flow; will it be  
5 2015?

6 MR. VINCE WARDEN: Yes.

7 MR. BOB PETERS: To get the power to the  
8 US/Manitoba border there will be the application of line  
9 losses of approximately 10 percent.

10 MR. VINCE WARDEN: From point of  
11 generation, yes.

12 MR. BOB PETERS: It's assumed the point  
13 of generation is northern Manitoba?

14 MR. VINCE WARDEN: Yes.

15 MR. BOB PETERS: And the average  
16 generation depicted in the PUB Manitoba Hydro Second  
17 Round 38B that you've turned up, it shows 1,515 gigawatt  
18 hours on an annual basis?

19 MR. VINCE WARDEN: Yes.

20 MR. BOB PETERS: And then would the Board  
21 be correct in interpreting that the revenue of this  
22 schedule would be based on the net generation of  
23 approximately 1,515 gigawatt hours times 90 percent to  
24 yield 1,364 gigawatt hours?

25 MR. VINCE WARDEN: Do you have a

1 reference to the 1,364 gigawatt hours --

2 MR. BOB PETERS: Yeah, I was trying to  
3 give it in my question, Mr. Warden. I took the --

4 MR. VINCE WARDEN: Oh, so you --

5 MR. BOB PETERS: -- the average energy  
6 multiplied by 90 percent --

7 MR. VINCE WARDEN: Sorry, you --

8 MR. BOB PETERS: -- to account for line  
9 losses.

10 MR. VINCE WARDEN: Sorry, you just  
11 calculated that?

12 MR. BOB PETERS: Yes, sir.

13 MR. VINCE WARDEN: Okay. We'll go along  
14 with that.

15 MR. BOB PETERS: That would be the -- the  
16 correct methodology to calculate, is take 90 percent of  
17 the -- of the average generation that would be available  
18 from Wuskwatim?

19 MR. VINCE WARDEN: Yes.

20

21 (BRIEF PAUSE)

22

23 MR. BOB PETERS: You understand my -- my  
24 math would -- would provide the proxy of the energy to be  
25 delivered at the US border for . . .

1                   MR. VINCE WARDEN:    Yes, I understand the  
2 math, Mr. Peters.  I thought you were referring to a  
3 specific schedule when you re -- referenced the 1,364  
4 gigawatt hours.

5                   MR. BOB PETERS:    Well, recognizing the 1,  
6     364 gigawatt hours, if you're giving us in the schedule  
7 the Wuskwatim revenue we can -- we can derive a -- an  
8 average price from that in terms of, at least, for the  
9 forecast, correct?

10

11                                   (BRIEF PAUSE)

12

13                   MR. VINCE WARDEN:    Yes, Mr. Peters, we'll  
14 go along with your last point.

15                   MR. BOB PETERS:    All right.  If I divided  
16 the revenue by the -- by the net generation amount I come  
17 up with about seven point nine (7.9) cents a kilowatt  
18 hour.  And you'll take that subject to check?

19

20                                   (BRIEF PAUSE)

21

22                   MR. VINCE WARDEN:    Yes.

23                   MR. BOB PETERS:    The agreement also  
24 applies a risk premium or marketing charge of 3 percent  
25 of the gross delivered revenue?

1 MR. VINCE WARDEN: Yes.

2 MR. BOB PETERS: And what is the risk  
3 related to that risk premium?

4

5 (BRIEF PAUSE)

6

7 MR. BOB PETERS: Mr. Warden, let me  
8 rephrase that question if I could. Looking at page 138  
9 of Order 116 of '08, the Board has indicated that:

10 "WPLP is to pay Manitoba Hydro 3  
11 percent of the partnership's gross  
12 revenues to contribute towards the  
13 marketing and transmission costs and  
14 risks borne by the Corporation."

15 So to that extent there's also some  
16 transmission costs included in that 3 percent number?

17 MR. VINCE WARDEN: Yes, Mr. Peters. I'll  
18 agree with that.

19 MR. BOB PETERS: And in terms of the  
20 actual risk or risks borne by WPLP, what risks are they  
21 bearing?

22

23 (BRIEF PAUSE)

24

25 MR. VINCE WARDEN: Yes. Mr. Peters, the

1 way the agreement is structured the energy is metered at  
2 the generating station and it's Manitoba Hydro's  
3 responsibility to get that into the -- to the market.

4 So if that -- if their energy, for  
5 whatever reason, does not -- is not sold in the export  
6 market or if it's -- there's an outage that occurs for a  
7 system-related issue, that is Manitoba Hydro's risk. And  
8 the premium or the fee is intended to cover that.

9

10 (BRIEF PAUSE)

11

12 MR. ROBERT MAYER: Mr. Warden, I'm not  
13 understanding how we're getting the power generated from  
14 Wuskwatim to anywhere close to anything that looks like  
15 an American border. The major transmission lines coming  
16 out of Wuskwatim, if I recall correctly, are two (2)  
17 going -- two (2) lines going to the Snow Lake area and  
18 then one (1) going further on to Ralls Island. I thought  
19 what that might do would be divert some of the power that  
20 you were sending north out of Grand Rapids and sending  
21 that south.

22 But where are you -- how are you getting  
23 Wuskwatim power on to the Bipole line or down to any  
24 border at all with the possible exception of the  
25 Saskatchewan border?

1                   MR. VINCE WARDEN:   Well, I think, Mr.  
2 Mayer, the Wuskwatim power goes into the -- into Manitoba  
3 Hydro's grid system, and from there -- and that's the  
4 reason that there is this risk premium associated with  
5 how that energy is -- is marketed and how it gets to the  
6 -- to the border ultimately. But to the extent that it  
7 gets into the grid then it's displacing energy that would  
8 otherwise be used to serve domestic.

9                   MR. ROBERT MAYER:   My thought was that of  
10 course you could probably divert some of Kelsey because  
11 there's a line going into the -- Thompson is -- will be  
12 joined or is joined I think already to the -- to  
13 Wuskwatim, and we're certainly -- we've been taking our  
14 power out of Kelsey allegedly for the last fifty (50) odd  
15 years. I'm -- I was sort of assuming that okay, we'll  
16 take that piece of the power out of the mix and send some  
17 power back down to the other side. And what we're really  
18 -- is getting shipped south is probably coming probably  
19 from no farther away than Kelsey, I would expect.

20                   MR. DAVID CORMIE:   Mr. Mayer, just as an  
21 example. Last week we had 200 megawatts at Kettle was  
22 put onto the AC system to ship to southern Manitoba. So  
23 there is -- there is AC transmission down the west side  
24 of the province that can used to bring a northern  
25 generation south.

1                   Part of the \$300 million that we spent on  
2 upgrading the transmission -- northern transmission for  
3 Wuskwatim was -- was spent to enhance that transfer  
4 capability south and it will come down the AC system, not  
5 down the DC system.

6                   MR. ROBERT MAYER:    I thought the reason  
7 we had to build bipole lines is because we -- it -- it  
8 really wasn't worthwhile trying to transport significant  
9 amounts of power that distance over alternating current  
10 lines?

11                   MR. DAVID CORMIE:    Well, there -- there  
12 are times when it does make sense, Mr. Mayer.  It -- it  
13 may be more expensive but if there's a derate on the DC  
14 at that time, rather than not generating it's better to  
15 ship it on the AC network and -- and that was -- that's  
16 what happened last week.  And -- and so there is transfer  
17 capability besides what's on the DC.

18                   MR. HAROLD SURMINSKI:   Mr. Peters, maybe  
19 just a further or some clarification on what the  
20 Wuskwatim Partnership and how the payments and -- and the  
21 whole formula was developed.  It was not developed on --  
22 on the export market per se, it was developed on the  
23 premise of what is the value of the product as it's  
24 metered to the Manitoba Hydro system, and I was involved  
25 in -- in deriving the value for that.



1 adjusted as changes in export prices  
2 are experienced and realized and are to  
3 be based on the actual output of  
4 Wuskwatim generating station, reduced  
5 by the average system line loss for the  
6 Manitoba Hydro system, currently 10  
7 percent."

8 As I quote from Board Order 116/'08, page  
9 138. Do you agree with that?

10 MR. HAROLD SURMINSKI: I don't recall  
11 exactly, but that -- I was -- that's one (1) way of -- of  
12 back-calculating what the average -- what -- you know,  
13 how the formula should work.

14 MR. BOB PETERS: Well, that's -- that's  
15 what you're telling the Board you actually did, is you  
16 came up with a number that you felt was the value and  
17 then you back-calculated a formula to achieve that same  
18 end?

19 MR. HAROLD SURMINSKI: Yes.

20

21 (BRIEF PAUSE)

22

23 MR. BOB PETERS: Mr. Surminski, when you  
24 calculated the value of the Wuskwatim product to Manitoba  
25 Hydro, you had a number in mind, correct? It ultimately

1 came to a number?

2 MR. HAROLD SURMINSKI: It -- it was  
3 derived by a simulation analysis. It was -- it was a  
4 simulation without Wuskwatim in the system, followed by a  
5 simulation with. Take the difference between the two and  
6 that's the incremental value of the product to the  
7 Manitoba Hydro system.

8 MR. BOB PETERS: And whatever number that  
9 generated, then a formula was reduced to writing in the  
10 agreement -- in the WPLP agreement.

11 MR. HAROLD SURMINSKI: Yes, that's  
12 correct.

13 MR. BOB PETERS: And it may be that the  
14 formula doesn't achieve the same value number that  
15 Manitoba Hydro calculated.

16 Is that also possible?

17 MR. HAROLD SURMINSKI: At the time, it  
18 did.

19 MR. BOB PETERS: And, as of today, it  
20 won't.

21 MR. HAROLD SURMINSKI: We have not tested  
22 that, but...

23 MR. BOB PETERS: But you're agree with me  
24 because of the decline in the export prices -- the  
25 average export prices.

1 MR. HAROLD SURMINSKI: Yes, in the short  
2 term things may not work out, but there are these cycles  
3 -- economic cycles -- and over the longer term we  
4 expected the -- the revenues from the formula to be equal  
5 to the value to the system.

6 MR. BOB PETERS: You agreed, Mr.  
7 Surminski, with my math -- or at least Mr. Warden did and  
8 I thank him for that -- when I took the \$108 million of  
9 revenue in the forecast and divided it by 90 percent of  
10 the average energy output, and that came up with seven  
11 point nine (7.9) cents a kilowatt hour.

12 Do you remember that discussion?

13 MR. HAROLD SURMINSKI: Can you remind me  
14 what year that was for?

15 MR. BOB PETERS: Certainly, sir. That's  
16 2013 where the revenue -- the revenue is \$108 million.  
17 And I divided that by the one thousand three hundred and  
18 sixty four (1,364) gigawatt hours which was 90 percent of  
19 the average output of Wuskwatim.

20 MR. HAROLD SURMINSKI: Yes.

21 MR. BOB PETERS: And what you're -- what  
22 -- what the Board should take from our prior exchange,  
23 Mr. Surminski, is that even though seven point nine (7.9)  
24 cents a kilowatt hour is embedded into this forecast by  
25 way of the back calculation that we're able to do, the

1 amount that is actually going to be paid out to Wuskwatim  
2 Power Limited Partnership Agreement will be most likely  
3 something different that seven point nine (7.9) cents a  
4 kilowatt hour.

5 MR. HAROLD SURMINSKI: Yes, the  
6 partnership wanted to share in the upside as well --  
7 well, they wanted to share in the upside, but, as a  
8 result, they'd have to share in the downside, too.

9

10 (BRIEF PAUSE)

11

12 MR. BOB PETERS: Mr. Warden, Mr.  
13 Surminski, recognizing that this arrangement with the  
14 Wuskwatim Power Limited Partnership Agreement is as the  
15 Board indicated in Order 116 of '08 and -- can the Board  
16 understand from the filing in this case that Manitoba  
17 Hydro has essentially replicated much of the Wuskwatim  
18 Power Limited Partnership Agreement with respect to the  
19 Keeyask Agreement?

20 MR. HAROLD SURMINSKI: Yes, in -- in  
21 general, a similar philosophy was used in that approach  
22 and, in fact, there are comparisons made between them, so  
23 they have to be relatively similar.

24 MR. BOB PETERS: The calculation of  
25 revenues -- and I'm jumping ahead to Tab 50 of the second

1 volume of the book of documents and, in particular, page  
2 156 in the top right-hand corner, Mr. Surminski, so  
3 second-last page in the entire book of documents.

4

5 (BRIEF PAUSE)

6

7 MR. BOB PETERS: Mr. Surminski, I should  
8 apologize, I'm putting you to a lot of work for what  
9 might be a very simple question. But we may cover this  
10 further later.

11 But in terms of the calculation of the  
12 revenues payable under the joint Keeyask development  
13 agreement is it comparable to that of the Wuskwatim Power  
14 Limited Partnership Agreement which included 90 percent  
15 of the average as well as a 3 percent risk premium to  
16 Manitoba Hydro?

17

18 (BRIEF PAUSE)

19

20 MR. VINCE WARDEN: Mr. Peters, that  
21 agreement on Keeyask is sill -- still subject to  
22 finalization. So it probably is premature for us to  
23 comment on the content of that agreement to that extent.

24

25 (BRIEF PAUSE)

1                   MR. BOB PETERS:    If we do the same math  
2 going out to 2020 that we just did, Mr. Surminski, we can  
3 come up with Manitoba Hydro's assumed average export  
4 price?

5

6                                   (BRIEF PAUSE)

7

8                   MR. HAROLD SURMINSKI:    I'm not sure, Mr.  
9 Peters, are you talking about Wuskwatim or Keeyask now?

10                   MR. BOB PETERS:    Sorry to be confusing,  
11 sir, I'm -- I'm speaking still of Wuskwatim.

12                   MR. HAROLD SURMINSKI:    Yes, you can  
13 calculate a unit price for every year just by dividing  
14 the revenue by the energy quantities, if that's what I  
15 understand your question to be.

16                   MR. BOB PETERS:    And help the Board  
17 understand, Mr. Surminski and Mr. Warden, that in the  
18 years in which the production from Wuskwatim are  
19 considered to be resulting in losses to the Corporation,  
20 is it still possible for the Wuskwatim Power Limited  
21 Partnership Agreement to receive monies from Manitoba  
22 Hydro?

23

24                                   (BRIEF PAUSE)

25

1                   MR. VINCE WARDEN:    Mr. Peters, the  
2   Wuskwatim revenues do depend on export revenues  
3   materializing in accordance with the forecast.  So if the  
4   unit price that we were discussing earlier stays as low  
5   as it is for opportunity exports, the point at which the  
6   partnership becomes profitable is deferred.

7                   MR. BOB PETERS:    And even though the  
8   partnership is not profitable is it possible for the --  
9   any of the partners to receive dividends during the years  
10  of it not being profitable?

11

12                                   (BRIEF PAUSE)

13

14                   MR. VINCE WARDEN:    Mr. Peters, I don't  
15  have the specifics of that at my fingertips, but there  
16  is, I believe, provision in the agreement for dividends  
17  to be paid should the partnership remain unprofitable for  
18  an extended period.

19                   MR. ROBERT MAYER:    Mr. Warden, I thought  
20  in fact we didn't call them dividends.  I thought there  
21  was provisions in the agreement for advancement against  
22  future dividends in the early years as opposed to calling  
23  them dividends.

24                   MR. VINCE WARDEN:    Okay.  That's probably  
25  a better way of expressing it.  There is a provision for

1 payments, and -- and, yes, you're right, probably  
2 referring to those payment as dividends is not correct.

3 MR. ROBERT MAYER: Well, and I think it  
4 was -- the other piece of that is, is that I thought they  
5 were advancements against dividends so that when the  
6 dividends started to flow those advancements would be  
7 taken into account.

8 MR. VINCE WARDEN: Yes.

9

10 CONTINUED BY MR. BOB PETERS:

11 MR. BOB PETERS: Thank you, sir. I want  
12 to turn to the Bipole 3. I had a couple more areas to  
13 discuss in the time we -- we have available.

14 And you'd indicated earlier that you  
15 weren't comfortable using a hypothetical capital costs  
16 that haven't yet been confirmed by way of Manitoba  
17 Hydro's study, would that be fair?

18 MR. VINCE WARDEN: Yes.

19 MR. BOB PETERS: You also indicated  
20 earlier that Manitoba Hydro was in the process of  
21 updating its study, is that also correct?

22 MR. VINCE WARDEN: Yes.

23 MR. BOB PETERS: Who's requested the  
24 updated study?

25 MR. VINCE WARDEN: Management has

1 requested that update.

2 MR. BOB PETERS: And why has management  
3 requested it?

4 MR. VINCE WARDEN: Management has  
5 requested the update to -- simply to confirm that not  
6 only the cost estimates but the design and construction  
7 is optimum for -- for constructing the Bipole on the --  
8 on the west side of the province.

9 MR. BOB PETERS: When you say "the design  
10 and construction is optimal" does that -- does that mean  
11 it's subject to reconsideration on terms of the west side  
12 or is it -- is it just a -- is it predetermined that it  
13 will be the west side and nothing else?

14 MR. VINCE WARDEN: All the studies are --  
15 are based on the west side.

16 MR. BOB PETERS: And so what needs to be  
17 optimized? Can you relate that in non-engineering terms  
18 to me?

19 MR. VINCE WARDEN: Well, in non-  
20 engineering terms, the sizing of the -- of the  
21 facilities, both the transmission line and the converter  
22 equipment, we want to ensure ourselves that the converter  
23 equipment that we're -- that is being proposed is going  
24 to meet the needs not only short-term, but long-term, and  
25 the sequence of events that transpires or is projected to

1 transpire after Bipole 3.

2                   So we want to take into account a -- a  
3 comprehensive review of transmission requirements for the  
4 province, not only for Bipole 3 but beyond Bipole 3.

5                   MR. BOB PETERS: Is this the first  
6 comprehensive review requested since 2003?

7                   MR. VINCE WARDEN: Well, I'm not sure  
8 when the last comprehensive review requested was, but  
9 this one will probably -- well, it will be more  
10 comprehensive than -- than any review undertaken in the  
11 past.

12                   MR. BOB PETERS: And that review is  
13 expected to be completed in a couple of months, if I  
14 understood your previous evidence?

15                   MR. VINCE WARDEN: Well, it'll be  
16 completed no later than June.

17                   MR. BOB PETERS: Will Manitoba Hydro  
18 provide a copy of that to this Board, recognizing this  
19 Board may still be engaged at or about that time?

20                   MR. VINCE WARDEN: Well, the results of  
21 that review I expect will be public, yes.

22                   MR. BOB PETERS: So you'll accept the  
23 undertaking to provide a copy to the Board on it being  
24 made available?

25

1 (BRIEF PAUSE)

2

3 MR. VINCE WARDEN: Yes, Mr. Peters, I  
4 think that's -- that's fair.

5

6 --- UNDERTAKING NO. 51: Manitoba Hydro to provide  
7 comprehensive review of  
8 transmission requirements for  
9 the province

10

11 CONTINUED BY MR. BOB PETERS:

12 MR. BOB PETERS: Mr. Warden, can we  
13 explore the discussion about the reliability aspects of  
14 Bipole 3 for a few minutes. You've said on a number of  
15 occasions that Manitoba Hydro is characterizing Bipole 3  
16 as being required for reliability reasons, correct?

17 MR. VINCE WARDEN: Yes.

18 MR. BOB PETERS: And the reliability  
19 reasons Manitoba Hydro references, are those restricted  
20 to the domestic customers reliability or does that extend  
21 to the export customers reliability?

22 MR. VINCE WARDEN: First and foremost,  
23 domestic customer -- customers but certainly that extends  
24 to export customers as well.

25 MR. BOB PETERS: When we look at

1 reliability, would it be correct that the bipoles were  
2 built -- Bipole 1, maybe back in the early 1970s and  
3 Bipole 2 in the later 1970s?

4 MR. VINCE WARDEN: That time frame is --  
5 is about right, Mr. Peters.

6 MR. BOB PETERS: Those bipoles were built  
7 following Kettle maybe and Long Spruce, being built at or  
8 about the same time as those generating stations were  
9 built?

10 MR. VINCE WARDEN: Yes.

11 MR. BOB PETERS: Would it be correct to  
12 say that there's been only one (1) reliability incident  
13 since Bipoles 1 and 2 were constructed, and that being  
14 the wind event in the mid-1990s?

15 MR. VINCE WARDEN: Well, there's only  
16 been one (1) weather-related incident. There are other  
17 issues with respect to maintenance of aging equipment,  
18 but those fortunately, have not resulted in an incident  
19 to date. But the more time goes on, the more risk there  
20 is associated with that.

21 MR. BOB PETERS: When Manitoba Hydro  
22 talks about reliability, I suppose up until an event  
23 occurs that requires there to be a Bipole 3, it's a  
24 theoretical justification or need for a new bipole.

25 Would you agree with that?

1                   MR. VINCE WARDEN:    Sorry, would you just  
2 repeat that, Mr. Peters?

3                   MR. BOB PETERS:    What I was suggesting is  
4 that whether you call it reliability or not, up until  
5 there is a -- an actual need for Bipole 3 to perform when  
6 Bipoles 1 and 2 aren't available to perform, the  
7 reliability need is -- is a theoretical need.

8                   MR. VINCE WARDEN:    Well, when that  
9 theoretical though becomes an actual, it's too late.

10                  MR. BOB PETERS:    I'm not disagreeing with  
11 that, but until it happens it still is theoretical,  
12 correct?

13                  MR. VINCE WARDEN:    It is, but, you know,  
14 we had a -- a weather event at Elie, category 3 I think  
15 it was, such that it could have taken out -- if that had  
16 been a few miles north and closer to Winnipeg it -- it  
17 could have resulted in a major disaster.

18                  MR. BOB PETERS:    It would have taken out  
19 Bipole 3 --

20                  MR. ROBERT MAYER:    You mentioned a much  
21 smaller storm that did take out both the bipole lines  
22 just north of Winnipeg a few years ago.

23                  MR. VINCE WARDEN:    Yes, Mr. Mayer. I  
24 think Mr. Peters referenced that earlier as the one (1)  
25 incident that has taken down the bi -- fortunately, at

1 the time it occurred at a time -- a time of the year  
2 where there was no interruption to the Manitoba load.

3 MR. ROBERT MAYER: I remember the -- I  
4 remember the television announcements about "would  
5 everybody please conserve their power; we've lost 95  
6 percent of the power transporting down from northern  
7 Manitoba." They asked everybody to take it easy on the  
8 power. My wife went and turned off the lights and I  
9 said: Where we live, we probably got more power than we  
10 ever know what to do with.

11 I -- I -- I do remember the announcements  
12 and they were asking people to cut back immediately upon  
13 the -- the event happening.

14 MR. VINCE WARDEN: Certainly proves the  
15 value of interconnections with neighbouring utilities.

16

17 CONTINUED BY MR. BOB PETERS:

18 MR. BOB PETERS: And it was those  
19 interconnections that allowed Manitoba Hydro to service  
20 the load back when it did have the interruptions because  
21 of Bipoles 1 and 2 being down.

22 MR. VINCE WARDEN: Yes.

23 MR. DAVID CORMIE: Mr. Peters, I don't  
24 know how public this is, but during the forest fire  
25 season last spring we had to derate both bipoles because

1 of -- and operate the -- the DC system at a -- at a lower  
2 voltage because of the arcing that was occurring during  
3 the smoke of the forest fires. Those kind of events  
4 happen and our customers aren't aware of them because we  
5 are able to reduce our export sales, we purchase power  
6 and they -- they end up being, you know, part of normal  
7 system operation.

8 But to suggest that we've only had one (1)  
9 event in the life of the -- of the bipoles I think is --  
10 that's un -- I -- I don't think that's a fair  
11 characterization. Our system is put at risk quite  
12 frequently. It's just that we're -- we're able to manage  
13 it without causing an interruption to our customers.

14 MR. BOB PETERS: The one (1) event that I  
15 referenced, Mr. Cormie, being a weather event, you  
16 translate a forest fire to be a weather event?

17 MR. DAVID CORMIE: It's like drought, Mr.  
18 Peters, yeah. It's all the weather.

19 MR. BOB PETERS: Have we agreed on the  
20 record, Mr. Warden, maybe Mr. Surminski and Mr. Cormie,  
21 that -- and, again, subject to our debate over the  
22 undertaking outstanding -- it's an engineering fact that  
23 Bipole 3 will be needed to make Conawapa and Keeyask  
24 viable?

25 MR. DAVID CORMIE: Without Bipole 3

1 there's insufficient transmission to bring their  
2 generation south. So, you're -- you're correct there.

3 MR. BOB PETERS: There would be  
4 insufficient to bring the generation -- all the  
5 generation -- south during peak times.

6 Wouldn't that be correct?

7 MR. DAVID CORMIE: There's insufficient  
8 transmission to bring the existing generation south for  
9 both -- for the existing generation fleet, and to the  
10 extent that we built new generation without adding new  
11 transmission, that would even compound the problem even  
12 worse.

13 Fortunately, we have export customers who  
14 are willing to share in that risk in our -- and have  
15 curtailment provisions so that if our DC system goes down  
16 we can cut the power.

17 Unfortunately, we don't have those same  
18 curtailment provisions with our domestic customers. They  
19 expect the power will be there all the time.

20 MR. BOB PETERS: The need for Bipole 3  
21 with the Wuskwatim and Keeyask generating stations, Mr.  
22 Cormie, without them you wouldn't -- Manitoba Hydro  
23 wouldn't be able to bring down the energy from those  
24 generating stations and sell it during peak times.

25 MR. DAVID CORMIE: That's correct.

1 MR. BOB PETERS: Is it possible that  
2 Manitoba Hydro could bring down some of the energy, but  
3 on off-peak times?

4 MR. VINCE WARDEN: Mr. Peters, I think  
5 you said "Wuskwatim". Did you mean Conawapa?

6 MR. BOB PETERS: Yes, I apologize. I  
7 meant to speak of Conawapa and Keeyask. If I didn't, I  
8 meant to.

9 Mr. Cormie, does that change your answer  
10 at all?

11 MR. DAVID CORMIE: I -- could you answer  
12 the question again?

13 MR. BOB PETERS: Certainly, sir.

14 MR. DAVID CORMIE: I was thinking of some  
15 other question when I answered.

16 MR. BOB PETERS: I -- I was suggesting  
17 that to bring the power from Conawapa and Keeyask down  
18 during peak hours, Manitoba Hydro would need the Bipole  
19 3. And I think you agreed with that, subject to my  
20 having maybe misspoken.

21 MR. DAVID CORMIE: Yes.

22 MR. BOB PETERS: You agree with that.

23 MR. DAVID CORMIE: Yes.

24 MR. BOB PETERS: And then I asked,  
25 leaving aside the peak hours, could some of that energy

1 from Keeyask, as an example, be brought down to southern  
2 Manitoba during non-peak times?

3 MR. DAVID CORMIE: Well, Mr. Peters,  
4 you're -- you're -- the scenario you are developing  
5 assumes that we would still build Keeyask without  
6 building adequate generation outlet transmission, and I  
7 think they have to come together; if you don't have a  
8 transmission you won't build a generation. You wouldn't  
9 build a generation and rely on the existing DC system.  
10 We wouldn't be -- we wouldn't justify the construction of  
11 those plants to serve an export sale unless we could  
12 bring it down in the on-peak because that's when the  
13 customers want it; they don't want our energy in the off-  
14 peak.

15 So you can't unravel the puzzle  
16 selectively. You either have an export sale that -- that  
17 justifies the construction of new generation or you have  
18 -- you have nothing. And you build a -- you build some  
19 generation resource that doesn't need Bipole 3 and it  
20 doesn't need an -- an export transaction. But -- like, I  
21 don't -- I don't think you can un -- I don't think you  
22 can unwind it the way you're doing it.

23 MR. BOB PETERS: Well, I wasn't trying to  
24 unwind it, in fairness to myself, Mr. Cormie. What I was  
25 trying to get the Board to understand is that bringing

1 down the Keeyask energy off-peak isn't going pay the --  
2 aren't going -- isn't going pay the bills, it's not going  
3 bring in enough revenue.

4 MR. DAVID CORMIE: Well, that's -- and  
5 clearly we -- we would -- we wouldn't be -- we wouldn't  
6 build it if we didn't have transmission because it -- it  
7 -- we would not be able to serve the -- the export sales  
8 and, therefore, we wouldn't have -- we wouldn't be  
9 building generation. The -- the --

10 MR. BOB PETERS: Mr. Warden, Mr. Cormie,  
11 Mr. Surminski, has Manitoba Hydro been directed by NERC  
12 or MISO to expand the HVDV -- DC system in Manitoba?

13

14 (BRIEF PAUSE)

15

16 MR. DAVID CORMIE: Man -- Manitoba Hydro  
17 has not been directed, but the -- the adequacy of our  
18 HVDC system is on the -- on the radar, Mr. Peters. And  
19 we're quite concerned that -- that we need to improve the  
20 reliability of our DC system.

21 MR. BOB PETERS: Mr. Surminski, if there  
22 were no export constraints would it be correct that the  
23 reliability concerns for the domestic load could be  
24 satisfied by adding a thousand megawatt combined cycle  
25 combustion turbine capacity in southern Manitoba?

1 (BRIEF PAUSE)

2

3 MR. DAVID CORMIE: Mr. Peters, in order  
4 to provide the same level of reliability as -- as Bipole  
5 3, that generation needs to be running continuously so  
6 that when an emergency occurs the -- the generation is  
7 already online. A thousand megawatts of gas generation  
8 would be insufficient for the loss of both Bipoles and  
9 there would be an unserved load if all you were to  
10 install was 1,000 megawatts of combustion turbine.

11 MR. BOB PETERS: You'd need something in  
12 addition to that?

13 MR. DAVID CORMIE: You need at least that  
14 amount and it would grow with time as the Manitoba load  
15 grows.

16 MR. BOB PETERS: Mr. Chairman, with that  
17 last answer and there's to be a brief meeting amongst  
18 council at the end of the day, I wonder if this might be  
19 an opportune time to seek the Board's permission to wind-  
20 down the questioning of the panel until we next meet.

21 THE CHAIRPERSON: Thank you, Mr. Peters.  
22 We've got a couple of comments to make, but first, just  
23 for basic information following up on this Wuskwatim  
24 discussion. Our understanding was that the initial  
25 closing was to coincide with the start of the access road

1 construction. That's done, is it not? The entry of NCN  
2 into the partnership, the minimum investment. It says:

3 "Payment at initial closing, time to  
4 coincide with the start of the access  
5 road construction."

6 Well, we're well past that, are we not?

7 MR. VINCE WARDEN: Sorry, Mr. Chairman.  
8 I'm not -- I'm not clear on your -- on your question.

9 THE CHAIRPERSON: My question is I guess  
10 whether -- is NCN in the partnership?

11 MR VINCE WARDEN: NCN does not have to  
12 declare the extent of their involvement in the  
13 partnership until the first unit in-service date.

14 THE CHAIRPERSON: Okay. Now, the  
15 original plan that you'd referred to before was that the  
16 financing was basically 75 percent borrowed money, 25  
17 percent equity, correct?

18 MR. VINCE WARDEN: Yes.

19 THE CHAIRPERSON: So when the plan was  
20 designed, it was designed, if I recall properly, for 900  
21 million, so at 1.6 billion does that move the equity  
22 requirement up to 400 million?

23 MR. VINCE WARDEN: Yes, it does. We'll  
24 maintain the 75:25 ratio.

25 THE CHAIRPERSON: So NCN would still have

1 the opportunity of taking an interest up to 33 percent?

2 MR. VINCE WARDEN: Yes.

3 THE CHAIRPERSON: And they -- they don't  
4 have to make that decision until the in-service date?

5 MR. VINCE WARDEN: Correct.

6

7 (PANEL RETIRES)

8

9 BOARD COMMENTS:

10 THE CHAIRPERSON: Thank you, sir. A few  
11 comments. In another day we will be into February and  
12 thereafter March as we all know will also quickly fly by.  
13 Board counsel has circulated a revised hearing schedule  
14 and calendar with planned hearing dates extending well  
15 past April of 2011.

16 Yet Manitoba Hydro has requested  
17 finalization of the April 1, 2010 interim rates, as well  
18 as a new additional rate adjustments effective April 1st  
19 of 2011. One (1) of the many important questions in  
20 matters before the Board is whether the Board should  
21 receive, consider submissions, respecting the  
22 establishment of interim rates for April 1st, 2011, or  
23 await the conclusion of the oral hearing with much  
24 testimony, cross-examination, and final arguments yet to  
25 come.

1                   The Board would like to hear from Mani --  
2 not today by the way -- the Board would like to hear from  
3 Manitoba Hydro and the Intervenors on this topic and will  
4 set aside time to hear your submissions. To assist the  
5 parties the Board can appreciate there being various  
6 points of view.

7                   On one hand, and after looking at Hydro's  
8 application and projections for the two (2) test years,  
9 it appears there is a possible case for not proceeding  
10 with a rate increase for April 1st, 2011.

11                   Hydro asserts, as it's done on several  
12 occasions, that the Corporation is in it -- in its  
13 strongest fiscal position of its history. Corporation's  
14 reported results for 2009/'10 were above forecast while  
15 the projections for 2010/'11 and '11/'12 were improved  
16 over the last set of estimates.

17                   It would appear that good water flow  
18 conditions and domestic rate increases combined with  
19 lower than anticipated finance costs assisted by lower  
20 interest rates and a higher Canadian dollar have helped  
21 the Corporation endure a period of lower than expected  
22 average export prices.

23                   From the evidence to date, inflation is  
24 relatively tame, as are interest rates, and the strength  
25 of the Canadian dollar has resulted in a major turn for

1 the better with respect to accumulated other  
2 comprehensive income. Although the higher Canadian  
3 dollar seemingly has brought negative implications for  
4 export revenue in Canadian dollars.

5           Despite the Corporation's claim of being  
6 in the best financial condition of its history and, on  
7 the other hand, Manitoba Hydro has urged the Board in its  
8 consideration of Manitoba Hydro's rate proposals to look  
9 at the bigger picture past the test years and the  
10 Corporation's reputed current financial strength.

11           Hydro has asked the Board to also consider  
12 Manitoba Hydro's current cost projections in excess of 17  
13 billion, including Wuskwatim, for major new generation  
14 and transmission development to take place in what the  
15 Corporation portrays as its decade of investment.

16           And when one does look deeper, so to  
17 speak, and considers the projects -- or the prospects of  
18 future years, are there a) contrary indications with  
19 respect to Hydro's position and prospects, and b) could  
20 those contrary indications be interpreted as suggestive  
21 of a need for another rate increase, one to take effect  
22 April 1st, 2011?

23           The Board notes that events have not  
24 unfolded as Manitoba Hydro likely wanted. For example,  
25 despite continued water flows above median export volumes

1 the Utility's non-domestic customers have not returned  
2 export revenues as forecast. Export prices for both firm  
3 and opportunity sales have been very low, averaging below  
4 four (4) cents, with apparently no immediate expectation  
5 for a significant improvement.

6           The estimates of construction costs for  
7 the Utility's decade of investment continue to move  
8 upwards, some might say at an alarming pace. Some of the  
9 new estimates are much higher than forecast at the time  
10 the two (2) outstanding term sheets were entered into.  
11 Those term sheets having been negotiated in late 2007 and  
12 early 2008.

13           And there appears to be considerable  
14 uncertainty as to what the most current all-in projection  
15 of the cost of Bipole 3 is, and whether the prospects of  
16 higher cost for the project are reflected in the current  
17 IFF and the source or sources of recovery of such costs.

18           The projected in-service dates of the  
19 planned new generating plants are required if the term  
20 sheets become firm contracts and term sheet volumes have  
21 been set back at least a year, although expenditures  
22 related to the planned new construction continue to be  
23 incurred and deferred.

24           So far at this proceeding there has been  
25 no -- no definitive indication as to when the term sheets

1 will be finalized and become long-term fixed-price  
2 contracts, contracts that will apparently require the  
3 proposed new generation and transmission investments.

4 Little has been provided to date on the  
5 public record other than that negotiations continue. We  
6 are unaware as to whether there is progress with American  
7 regulatory bodies or if there has been at least tentative  
8 actions as to planning and preparing for counterparty  
9 investment in transmission in the United States to hook  
10 up the hydro.

11 Hydro has long acknowledged the importance  
12 of natural gas prices to its export price expectations  
13 and since the term sheets were entered into it has become  
14 publicly known that shale gas is economically extractable  
15 and this, combined with reserve estimate increases and  
16 actual production gains, has driven down natural gas  
17 prices. Price is also negatively affected by the  
18 relatively soft, at least in comparison with prior  
19 forecasts, industrial demand in both Canada and the  
20 United States.

21 Hydro's load forecasts have been lowered  
22 with, on the domestic front, industrial demand reduced by  
23 the closure and cutbacks of significant users of  
24 electricity and indications of further plans for future  
25 reductions. Perhaps representative of these recent

1 developments, that is lower export prices and lower than  
2 forecast domestic load, Manitoba has defer -- Manitoba  
3 Hydro has deferred bringing forward a new EIIR -- R  
4 application.

5                   The advent of carbon pricing appears no  
6 closer at hand with economic and political events in the  
7 United States seemingly giving little indication of  
8 immediate improvements to come on that front. A view  
9 augmented by the recently announced closure of the  
10 Chicago Climate Exchange Market.

11                   Continuing possible observations for  
12 parties to this hearing to consider and provide comment  
13 on, drawing on the evidence filed and given to date,  
14 include Manitoba Hydro's OM&A gross expenditures continue  
15 to increase and the Utility's practice of deferring and  
16 capitalizing expenses related to expected future capital  
17 construction continues. Perhaps close to 25 percent of  
18 Manitoba Hydro's asset base is now represented in  
19 construction in progress, deferred, intangible, and  
20 regulatory costs. Costs that are mostly pending  
21 amortization. Amortization partly dependent upon the  
22 realization of the forecasts of the decade of investment.

23                   Standing back a bit, when Manitoba Hydro -  
24 - when one considers Manitoba Hydro's audited financial  
25 results over the years some might be struck by the

1 volatility experienced in annual net income. As well,  
2 IFRS and its implications for rate setting remain an open  
3 issue. It is unfortunate that Manitoba Hydro wasn't able  
4 to gain the big four (4) accounting firms permission to  
5 file it's report to members of the CEA on the topic.  
6 Clearly, upcoming IFRS standards and the implications for  
7 Manitoba Hydro's current future forecasts are worthy of  
8 consideration.

9                   With respect to Manitoba Hydro's debt-  
10 equity ratio, there may be questions as to the present  
11 target and the interpretation of the components used to  
12 determine the ratio for rate-setting purposes.

13                   Firstly, should AOCI be included as part  
14 of the equity component for rate-setting purposes? AOCI,  
15 since it's introduction, I believe in the 2008 Annual  
16 Report, has proved to be very volatile, moving from  
17 positive to negative to positive, dependent upon currency  
18 shifts.

19                   Manitoba Hydro's longer-term forecast  
20 assumed the Canadian dollar will weaken. What if it  
21 doesn't? It is of interest as well that while AOCI is  
22 driven by currency shifts, there are also other possible  
23 mark-to-market valuations that could be considered.

24                   When considering Hydro's fiscal strength -  
25 - not whether or not its accounts are presented in

1 accordance with GAAP, which presumably is the case, what  
2 about the recognition and characterization of what may be  
3 a significant gap between present mark to market pension  
4 obligations all-in and pension assets.

5           In any case, when the debt-equity ratio  
6 target was established, AOCI wasn't on the horizon. And  
7 also on the topic of the debt-equity ratio and a  
8 consideration of Hydro's fiscal strength, should  
9 contributions in aid of construction be a component of  
10 equity for rate setting purposes.

11           A reason for a change could be a customer  
12 from whom Manitoba Hydro has extended power to, closes.  
13 As well, should regulatory assets, intangibles, and  
14 deferred costs be deducted from retained earnings to  
15 arrive at what could be described as firm equity; firm in  
16 the sense that it will not be amortized away over time or  
17 is illiquid before the ratio was calculated.

18           These and other questions have not been  
19 resolved or thoroughly tested to date in recent hearings.  
20 Yet another major question with respect to considering  
21 the financial strength of the Utility involves the  
22 current target for the debt-equity ratio. The question  
23 is whether the target range for the debt and equity  
24 relationship should be reset or left as is. Some might  
25 or could hold that it is one thing to have a 75:25 ratio

1 as the target when the Utility's assets and debts each  
2 approximate, say, about 10 billion.

3 But what if both assets and debts are  
4 expected to double or even triple? And what if the  
5 future forecast of debt and equity and net income are  
6 made based on term sheets that have yet to be transformed  
7 into binding contracts?

8 I think all would agree that Hydro's  
9 operations, actions, situation prospects and risks  
10 represent a very complex mix. Perhaps the parties should  
11 weigh in on yet another major question as to what degree  
12 should the debt-equity ratio, however structured and  
13 whatever ratio is chosen as the target, play a role in  
14 the determination and setting of the rates of any  
15 particular time.

16 On a point referenced in CAC/MSOS's  
17 opening comments, that being the consideration of  
18 intergenerational equity, should the present generation  
19 share in the risk, perhaps to be reflected in higher  
20 rates, of at least some of the planned capital  
21 investments, either not proceeding or proceeding at less  
22 than a net present value return than originally and even  
23 currently expected.

24 From the evidence, it appears that  
25 Wuskwatim has not worked out as was expected at the Clean

1 Environment Needs and Justification Review. Are the  
2 parties concerned about the prospects related to the  
3 planned decade of investment?

4 In short, should not the generation that  
5 is speculating -- and I do not use that word in a  
6 pejorative way -- i.e., this generation of ratepayers,  
7 participate rate-wise with the generation of ratepayers  
8 expected to use the power.

9 Manitoba Hydro had on its books of account  
10 at -- as of its last year end, 2 billion in construction  
11 in progress and a thirty -- and a further 300 million in  
12 regulated assets and intangible assets.

13 Granting that a considerable amount of  
14 construction in progress relates to Wuskwatim, which is  
15 expected to soon be in service, it seems we're not  
16 dealing with a case where planned investments have a more  
17 or less certain return, as it would appear. We currently  
18 neither have firm -- neither have firm sales contracts  
19 nor firm construction cost estimates.

20 Some may argue that the situation requires  
21 a sharing between this generation and future generations  
22 of this risk, this by way of the setting of rates.

23 Please take this time to address your  
24 minds as to whether Manitoba Hydro is speculating on  
25 behalf of current and future ratepayers with its

1 financial forecasts, and with the revised capital costs  
2 not included in the twenty (20) year IFF-09 or a  
3 correspondingly detailed twenty (20) year IFF-10, which  
4 is yet to be filed with the Board.

5           How should the upside of Manitoba Hydro's  
6 position be seen? How symmetrical is the downside risk  
7 to the upside risk? What is your view? To assist the  
8 Board and Intervenors, Manitoba Hydro should file before  
9 March the 9th the twenty (2) year IFF-10 and twenty (20)  
10 year CAF-10 as discussed by Mr. Warden.

11           Additionally, by March 9th Manitoba Hydro  
12 is to file the four (4) various twenty (20) year IFF  
13 scenarios that were requested in PUB/MH Pre-Ask-4.  
14 Manitoba Hydro forecast rate increases above the rate of  
15 inflation stretching out a decade or more. In fairness,  
16 it may be possible to speculate that those projected rate  
17 increases, if export prices do not recover from current  
18 levels and improve sharply and fairly quickly, could be  
19 portrayed as being optimistic. That is, is it possible  
20 that the rate increases may be required to be higher?

21           Well, we have yet to hear from many  
22 witnesses and consider significant evidence from those  
23 witnesses related to risk and related matters. This  
24 Board feels obliged to ask the question and seek your  
25 submissions as to whether it would be advisable to

1 consider revising rates on an interim rate -- interim  
2 basis as of April 1st, 2011.

3 Accordingly, we expect to hear the views  
4 of the parties on this topic on March the 9th. And  
5 through these comments this notice provides Manitoba  
6 Hydro time to file the requested IFF and CEF scenarios,  
7 and each party over a month to ponder the questions that  
8 have been raised.

9 The Board understands the preference of  
10 some Intervenors to respond to questions and issues  
11 raised by the Board, so we hope our comments are  
12 considered in that context and are of assistance to the  
13 parties.

14 Of course, parties are not limited in  
15 their expected March 9th submissions to only the  
16 questions and issues identified by the Board. The Board  
17 has not raised specific details of rate design issues and  
18 whether such issues as the basic monthly charge, across  
19 the board rate increases or differentiated rate  
20 increases, demand concessions, or inverted rates should  
21 be considered relative to interim rate discussions.  
22 Accordingly, please feel free to expand the scope of your  
23 submissions.

24 All this having been said, be assured the  
25 Board's mind is far from being made up, nor if interim

1 rates were established would it be made up on a final  
2 basis. The basic questions are what represents prudence  
3 and what represents just and reasonable rates in the  
4 situation and time we face and are currently in.

5 Accordingly, the Board will schedule oral  
6 submissions from the parties on March the 9th -- for  
7 March the 9th commencing with Manitoba Hydro to be  
8 followed by the Intervenor with an opportunity for a  
9 brief reply by Manitoba Hydro following Intervenor  
10 submissions.

11 Should any party want to file written  
12 submissions instead of oral submissions or to supplement  
13 their written submissions, they are welcome to do so.

14 Thank you for your attention. We now  
15 stand adjourned.

16

17 (PANEL RETIRES)

18

19 --- Upon adjourning at 4:36 p.m.

20

21 Certified Correct

22

23

24 \_\_\_\_\_  
Cheryl Lavigne, Ms.

25