

**"When You Talk - We Listen!"**



572

MANITOBA PUBLIC UTILITIES BOARD

Re:

MANITOBA HYDRO

COST OF SERVICE STUDY REVIEW

HEARING

Before Board Panel:

Marilyn Kapitany - Chairperson

Larry Ring, Q.C. - Board Member

Hugh Grant - Board Member

HELD AT:

Public Utilities Board

400, 330 Portage Avenue

Winnipeg, Manitoba

September 9, 2016

Pages 572 to 830

1 APPEARANCES  
2 Robert Gabor, Q.C. ) Board Chairperson  
3 Bob Peters ) Board Counsel  
4 Dayna Steinfield ) Board Counsel  
5  
6 Odette Fernandes ) Manitoba Hydro  
7 Janelle Hammond )  
8  
9 Byron Williams ) Consumer Coalition  
10  
11 Denise Pambrun ) City of Winnipeg  
12  
13 Bill Gange ) Green Action Centre  
14  
15 Christian Monnin ) GSS/GSM Group  
16  
17 George Orle ) MKO  
18  
19 Antoine Hacault ) MIPUG  
20  
21 Terrance Delaronde ) Manitoba Metis  
22 ) Federation  
23  
24  
25

	TABLE OF CONTENTS	
		Page No.
1		
2		
3	List of Exhibits	577
4	List of Undertakings	578
5		
6	CONCURRENT EVIDENCE PANEL RE: THE TREATMENT OF EXPORT	
7	COSTS, INCLUDING THE NUMBER OF EXPORT CLASSES AND THE	
8	ALLOCATION OF FIXED AND VARIABLE COSTS TO SUCH	
9	CLASSES:	
10	MICHAEL O'SHEASY, Previously Sworn	
11	ROBERT CAMFIELD, Previously Sworn	
12	WILLIAM HARPER, Previously Sworn	
13	A.J. GOULDING, Previously Sworn	
14	PATRICK BOWMAN, Previously Sworn	
15	PAUL CHERNICK, Previously Sworn	
16		
17	Cross-examination by Mr. Byron Williams	581
18	Cross-examination by Mr. Bill Gange	613
19	Cross-examination by Mr. Christian Monnin	617
20	Cross-examination by Mr. Antoine Hacault	631
21	Cross-examination by Ms. Odette Fernandes	663
22	Cross-examination by Mr. Bob Peters	676
23		
24		
25		

	TABLE OF CONTENTS (Con't)	
		Page No.
1		
2		
3		
4	CONCURRENT EVIDENCE PANEL RE: FUNCTIONALIZATION,	
5	CLASSIFICATION, AND ALLOCATION OF GENERATION AND	
6	TRANSMISSION ASSETS, INCLUDING THE HVDC SYSTEM AND THE	
7	U.S. INTERCONNECTION, BUT EXCLUDING WIND AND COAL	
8	ASSETS:	
9	MICHAEL O'SHEASY, Previously Sworn	
10	ROBERT CAMFIELD, Previously Sworn	
11	WILLIAM HARPER, Previously Sworn	
12	A.J. GOULDING, Previously Sworn	
13	PATRICK BOWMAN, Previously Sworn	
14	PAUL CHERNICK, Previously Sworn	
15		
16	Cross-examination by Mr. Byron Williams	716
17	Cross-examination by Mr. Christian Monnin	727
18	Cross-examination by Mr. Antoine Hacault	731
19	Cross-examination by Ms. Odette Fernandes	759
20	Cross-examination by Mr. Bob Peters	775
21		
22		
23		
24		
25		

	TABLE OF CONTENTS (Con't)	
		Page No.
1		
2		
3		
4	CONCURRENT EVIDENCE PANEL RE: THE CLASSIFICATION AND	
5	ALLOCATION OF DEMAND-SIDE MANAGEMENT:	
6	MICHAEL O'SHEASY, Previously Sworn	
7	ROBERT CAMFIELD, Previously Sworn	
8	WILLIAM HARPER, Previously Sworn	
9	A.J. GOULDING, Previously Sworn	
10	PATRICK BOWMAN, Previously Sworn	
11	PAUL CHERNICK, Previously Sworn	
12		
13	Cross-examination by Mr. Christian Monnin	805
14	Cross-examination by Ms. Odette Fernandes	811
15	Cross-examination by Mr. Bob Peters	816
16		
17	Certificate of transcript	830
18		
19		
20		
21		
22		
23		
24		
25		

## 1 LIST OF EXHIBITS

2	EXHIBIT NO.	DESCRIPTION	PAGE NO.
3	CAC-31	Excerpt from Hansard, dated June 18, 2001	580
5	MIPUG-27	Extracts from NFAT proceeding	634
6	MIPUG-28	NARUC manual	663
7	MH-77	Document referenced in footnote 23 on page 6 of William Harper's rebuttal evidence	671
10	CAC-32	Page 3-4 of Mr. Bowman's February 28th, 2014 NFAT evidence	716
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

1	LIST OF UNDERTAKINGS	
2	NO.	DESCRIPTION
3	2	Christensen Associates to advise
4		the panel what it calculates or
5		estimates the weighted energy
6		allocator is actually doing in
7		terms of classifying and
8		allocating some costs by demand
		455
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

1 --- Upon commencing at 8:30 a.m.

2

3 THE CHAIRPERSON: Good morning,  
4 everyone. It is 0830, and so today we're going to go  
5 with our second concurrent evidence panel, and our key  
6 issue will be the treatment of export costs including  
7 the number of export classes and the allocation of  
8 fixed and variable cost to such classes.

9 So, Mr. Williams, please.

10

11 CONCURRENT EVIDENCE PANEL RE: THE TREATMENT OF EXPORT  
12 COSTS, INCLUDING THE NUMBER OF EXPORT CLASSES AND THE  
13 ALLOCATION OF FIXED AND VARIABLE COSTS TO SUCH  
14 CLASSES:

15

16 MICHAEL O'SHEASY, Previously Sworn

17 ROBERT CAMFIELD, Previously Sworn

18 WILLIAM HARPER, Previously Sworn

19 A.J. GOULDING, Previously Sworn

20 PATRICK BOWMAN, Previously Sworn

21 PAUL CHERNICK, Previously Sworn

22

23

23 MR. BYRON WILLIAMS: Yes. Good  
24 morning, members of the panel. And I'll just indicate  
25 in -- in terms of our participation for the day we

1 estimate somewhere in total between fifty (50) and a -  
2 - minutes and an hour. We probably won't have any  
3 questions on DSM. I thank Mr. Orle and actually Board  
4 Member Grant for their questions which helped us to  
5 reduce our workload.

6 I will indicate that, like perhaps  
7 northern hydro generation, we may be a little capacity  
8 constrained in the first session, and I estimate that  
9 I'll take between thirty (30) and thirty-five (35)  
10 minutes. So if -- I'll stand down at thirty-five (35)  
11 minutes but if -- if I'm not completed I'll ask the  
12 Board to keep an open mind to letting us appear later  
13 in the day.

14 THE CHAIRPERSON: Okay. Thank you for  
15 that, Mr. Williams.

16

17 (BRIEF PAUSE)

18

19 MR. BYRON WILLIAMS: And -- and just  
20 if -- if I could, we have an excerpt from Hansard  
21 which was referenced in Mr. Harper's evidence from  
22 June 18th, 2001, and I'd ask that that be marked as  
23 Coalition Exhibit 31.

24

25 --- EXHIBIT NO. CAC-31: Excerpt from Hansard,

1 dated June 18, 2001

2

MR. KURT SIMONSEN: Thank you.

4

5 CROSS-EXAMINATION BY MR. BYRON WILLIAMS:

6 MR. BYRON WILLIAMS: And all my

7 questions will be directed to Mr. Bowman. Diana, if

8 you could pull up Public Utility Board Order 117/'06,

9 and in particular page 49, please.

10

11 (BRIEF PAUSE)

12

13 MR. BYRON WILLIAMS: Mr. Bowman, I  
14 won't ask you to go there but you'll recall that in  
15 your written evidence of June that you filed an  
16 attachment that -- that tried to summarize some of the  
17 Public Utility Board dialogue with regard to export  
18 classes over time. You recall that?

19 MR. PATRICK BOWMAN: Good -- good  
20 morning, Madam Chair, members of the Board. Yeah --  
21 yes, that's correct. There is an attachment.

22 MR. BYRON WILLIAMS: And in the course  
23 of that attachment, of course, you referenced Order  
24 117 / '06. Agreed?

25 MR. PATRICK BOWMAN: Yes. It was the

1 first of the three (3) main orders that deal with the  
2 subject.

3 MR. BYRON WILLIAMS: And I just want  
4 to direct your attention to the top of page 49 -- just  
5 scroll -- thank you, Diana, right there and just  
6 scroll a bit so we can see all of 'B' as well.

7 So here you see, Mr. Bowman, I'll ask  
8 you to agree the Board identifying that it's going to  
9 stick with one (1) export class and -- and  
10 articulating some of the -- the key reasons for  
11 rejecting the two (2) export classes. Agreed?

12 MR. PATRICK BOWMAN: Yes. The -- the  
13 decision was made in '06. That was the -- the  
14 rationale that was set out, yes.

15 MR. BYRON WILLIAMS: And just to focus  
16 in for a moment, sir, on item B. You'll see there  
17 that one (1) of the first factors cited by the Board  
18 is that in the '05/'06 year, firm export sales, in  
19 terms of unit export prices, were actually earning  
20 lower prices per unit than opportunity export sales.  
21 That was the Board's finding?

22 MR. PATRICK BOWMAN: That -- that was  
23 one (1) of the things cited, as I said, in '06. That  
24 wasn't true in '08 or '12 when these issues were  
25 reconsidered, but that -- nonetheless, that was

1 something cited in '06.

2 MR. BYRON WILLIAMS: And again, the  
3 Board's focussing on the fact that firm and  
4 opportunity export sales again are achieving similar  
5 average sales prices, agreed?

6 MR. PATRICK BOWMAN: Right, that was -  
7 - yeah, that was an interesting period.

8 MR. BYRON WILLIAMS: And if we could  
9 just go to page 51 of this same order. Scroll down  
10 just after 'J'. Thank you, Diana. After articulating  
11 a number of factors, I'll ask to the gree -- agree  
12 that the Board found it inappropriate to divide export  
13 sales into two (2) classes, and citing its concern  
14 about only variable costs against opportunity class,  
15 which had recently been represented almost 50 percent  
16 of export sales. Fair enough, Mr. Bowman?

17 MR. PATRICK BOWMAN: Yes. They --  
18 they didn't cite whether they meant export sales  
19 volume or export sales revenue, but that -- that's  
20 correct, they said 50 percent.

21 MR. BYRON WILLIAMS: And, mis -- Mr.  
22 Bowman, you're aware of 'B' that we just cited, the  
23 second one identified by the Board in terms of the --  
24 in that period of time, that specific year, with --  
25 with the opportunity sales per unit actually earning

1 more than -- than firm sales, agreed?

2 MR. PATRICK BOWMAN: When you say,  
3 "that specific year," I just want to be cautious,  
4 because I don't recall for the PCOSS or the IFF that  
5 was available at the time of that hearing, what year  
6 it would have been based on.

7 You -- you may recall that the -- the  
8 cost-of-service filing was a -- a -- in '06, occurred  
9 out of a sort of strange event where Hydro filed a --  
10 a GRA that had a cost-of-service in it. A process  
11 started on that GRA, I think -- I believe it was. And  
12 -- and then the GRA was withdrawn. And the Board  
13 accepted Hydro withdrawing the GRA but not the cost-  
14 of-service component, which continued into that  
15 review.

16 So I don't know how far before that the

17 --

18 MR. BYRON WILLIAMS: Well --

19 MR. PATRICK BOWMAN: -- the date is  
20 based on.

21 MR. BYRON WILLIAMS: -- thank you for  
22 that, Mr. Bowman. Perhaps we'll just go back to page  
23 49 for a second, sub -- and for 'B'. There you find  
24 an explicit finding by the Public Utilities Board that  
25 opportunity export sales per unit were earning more

1 than firm export sales of --

2 MR. PATRICK BOWMAN: Right. '05/'06

3 is cited there, correct.

4 MR. BYRON WILLIAMS: Thank you.

5 Diana, if you could be kind enough to pull up from the

6 cost-of-service methodology review Coalition 1-58AC

7 and the last page capturing the response. Coalition

8 1-58, and the last page, please.

9 Mr. Bowman, you're familiar with this

10 table from your review of the evidence at a high

11 level?

12 MR. PATRICK BOWMAN: I -- I looked at

13 it when you sent it out last night. I -- I don't --

14 it doesn't tick my memory from reviewing the evidence,

15 but I -- I take it that it's in the evidence.

16 MR. BYRON WILLIAMS: And this IR

17 response looks at total on-peak sales of Manitoba

18 Hydro for the decade running from '05/'06 out to

19 2014/'15, agreed?

20 MR. PATRICK BOWMAN: Yes.

21 MR. BYRON WILLIAMS: And it examines

22 on an annual basis both dependable and opportunity

23 peak sales measured by volume in gigawatt hours,

24 measured by revenue in -- in Canadian million --

25 dollars in the millions, and measured by average

1 price, agreed?

2 MR. PATRICK BOWMAN: Correct.

3 MR. BYRON WILLIAMS: And when we see  
4 the word 'peak', to simplify it in -- in language that  
5 both myself and My Friend, Mr. Hacault, could  
6 understand, that would mean prime time, when -- when  
7 prices tend to be superior. Would that be fair, sir?

8 MR. PATRICK BOWMAN: Well, it -- it  
9 actually defines it in the wording below the table.

10 If you want to be more precise, it says:

11 "The definition of on-peak is the  
12 five (5) by sixteen (16)."

13 Which is five (5) days a week, sixteen  
14 (16) hours a day.

15 MR. BYRON WILLIAMS: And it's prime  
16 time?

17 MR. PATRICK BOWMAN: Yes.

18 MR. BYRON WILLIAMS: And I just want  
19 to focus, if we can. We see that the table's  
20 essentially divided in -- on -- in half on the left-  
21 hand sale -- side, the report, the results for  
22 dependable in terms of gigawatt hours, revenues, and  
23 price, agreed?

24 MR. PATRICK BOWMAN: Yes.

25 MR. BYRON WILLIAMS: And on the right-

1 hand side, they do the same for opportunity, correct?

2 MR. PATRICK BOWMAN: Correct.

3 MR. BYRON WILLIAMS: So let's look at  
4 that snapshot around Order 117/'06, and there you'll  
5 see on the dependable side, Mr. Bowman, going four (4)  
6 columns in, the average price was about sixty dollars  
7 (\$60) per gigawatt hour, agreed?

8 MR. PATRICK BOWMAN: Yes.

9 MR. BYRON WILLIAMS: And for  
10 opportunity sales --

11 MR. PATRICK BOWMAN: I apologize.  
12 That -- that price would be dollars per megawatt  
13 hours.

14 MR. BYRON WILLIAMS: Sorry, I  
15 apologize. You don't need to apologize for that. And  
16 the average price for opportunity sales was seventy-  
17 two point seven three (72.73), agreed?

18 MR. PATRICK BOWMAN: Yes, in '05/'06.

19 MR. BYRON WILLIAMS: So that's higher  
20 on the opportunity side at that point in time, sir?

21 MR. PATRICK BOWMAN: Correct.

22 MR. BYRON WILLIAMS: And the volume we  
23 see dependable in that particular year was somewhat  
24 higher, but both in the 3,000 gigawatt hour range,  
25 somewhere between 3,000 and 4,000, agreed?

1                   MR. PATRICK BOWMAN: Yes.

2                   MR. BYRON WILLIAMS: So let's go to  
3 '08/'09 just for a second. And, Mr. Bowman, you'll  
4 observe on the dependable average price per gigawatt -  
5 - or megawatts hour, fifty-nine point four dollars  
6 (\$59.4), agreed? '08/'09, sir.

7                   MR. PATRICK BOWMAN: Yes.

8                   MR. BYRON WILLIAMS: And running  
9 across straight to the right on the opportunity side,  
10 seventy-one point seven eight (71.78), correct?

11                  MR. PATRICK BOWMAN: Yes, but I -- I  
12 would like to offer a caveat, if it's -- it's  
13 possible. I think Mr. Cormie would be concerned if I  
14 didn't add it at this stage. That average price of  
15 opportunity sales can be a misleading number, because  
16 opportunity sales are a mixture of sales in -- of  
17 different types in different periods as you can try to  
18 capture the market.

19                  And there will be higher-priced port --  
20 periods and -- and lower-priced periods. And it's  
21 very -- it can be very driven by the volume. For  
22 example, in very good water years, you end up having  
23 to -- you sell some opportunity sales at a very high  
24 price, but as you -- as you have more and more water,  
25 you eventually get less and less price for that.

1                   So your averages can be skewed by your  
2 volumes as well. So in this case, the average prices  
3 look almost the same, but if you look at the  
4 opportunity in volumes, the volumes were much lower.  
5 Which means that, if anything, probably the -- the  
6 hour-to-hour or the apples-to-apples comparison of  
7 opportunity prices had -- had -- would not be the  
8 same.

9                   But it's just a -- a caveat whenever  
10 looking at the average price numbers, the -- the  
11 volume is part of the story.

12                  MR. BYRON WILLIAMS: And I appreciate  
13 that, Mr. Bowman, but let's back up for a second. In  
14 the Board in 117/'06 made its findings in terms of  
15 average, agreed?

16                  MR. PATRICK BOWMAN: Yes.

17                  MR. BYRON WILLIAMS: And if we look in  
18 2011/'12, for example, sir, you'll see a volume for  
19 opportunity on-peak sales of 1,952 gigawatt hours,  
20 agreed?

21                  MR. PATRICK BOWMAN: Yes.

22                  MR. BYRON WILLIAMS: And that's a  
23 relatively low price, sir? A -- a rela -- relatively  
24 low volume in terms of opportunity?

25                  MR. PATRICK BOWMAN: Yes. Yes. Yes.

1                   MR. BYRON WILLIAMS: And that would  
2 also constitute, sir, the lowest average price per  
3 opportunity --

4                   MR. PATRICK BOWMAN: Right. That's --  
5 that's why it's -- this actually understates the  
6 degree of -- of likely market change, because you had  
7 a lower volume, which means you should have been able  
8 to target some of the best prices available, which  
9 means -- and which the -- the twenty-eight (28) if  
10 anything is -- the twenty-eight seventy --seventy-six  
11 (28.76) shown there is the average price for that year  
12 probably understates the degree to which the market  
13 had dropped compared to '05/'06.

14                  MR. BYRON WILLIAMS: Thank you for  
15 that. And you spoke of the calamitous drop, and I'm  
16 not -- and I'm using my words, Mr. Bowman. You may  
17 not have used those exact ones.

18                  But if we look at dependable sales  
19 average prices in '09/'10, we see them at fifty-eight  
20 point (58.) -- fifty-eight dollars fifteen cents  
21 (\$58.15) per gigawatt hour, agreed?

22                  MR. PATRICK BOWMAN: Yes.

23                  MR. BYRON WILLIAMS: A -- a bit of a  
24 drop from the year before?

25                  MR. PATRICK BOWMAN: Yes, but it -- it

1 doesn't make -- I wouldn't conclude that it's  
2 necessarily a meaningful change in the -- in -- in the  
3 data once -- once you consider the other factors I was  
4 talking about.

5 MR. BYRON WILLIAMS: Fair enough.  
6 When we go to the opportunity sales for that  
7 particular year, though, you'll see thirty-one point  
8 one four (31.14), which you will agree is a  
9 significant drop from the average price in '08/'09,  
10 agreed?

11 MR. PATRICK BOWMAN: Yes.  
12 MR. BYRON WILLIAMS: It was more than  
13 cut in half, correct?

14 MR. PATRICK BOWMAN: Oh, yes. Yes.  
15 MR. BYRON WILLIAMS: And --  
16 MR. PATRICK BOWMAN: It -- it was --  
17 it was definitely among the factors discussed in some  
18 detail in the -- the hearing leading to the -- the  
19 2012 order. That was -- that -- that was the -- the  
20 risk hearing, and one (1) of the highlights of the --  
21 the risk of Hydro is this exposure to opportunity  
22 market price variability.

23 MR. BYRON WILLIAMS: I thought you  
24 were going to say one (1) of the highlights was my  
25 cross on that very point, Mr. Bowman.

1                   Will you go that far?

2                   MR. PATRICK BOWMAN:    There was another  
3 question --

4                   MR. BYRON WILLIAMS:    I will -- I'll  
5 withdraw that -- I'll withdraw that question. I know  
6 what you really think, Mr. Bowman.

7                   Just to highlight the drop, as well,  
8 let's go back to '05/'06 for opportunity on-peak.  
9 There you're at an average price of seventy-two point  
10 seven three (72.73) with a pretty -- pretty high  
11 volume, as well, for opportunity sales. Agreed, Mr.  
12 Bowman?

13                  MR. PATRICK BOWMAN:    Yes.

14                  MR. BYRON WILLIAMS:    In contrast, we  
15 see the -- the 2011/'12 and -- and in comparison a  
16 drop from seventy-two point seven three (72.73) down  
17 to twenty-eight point seven six (28.76).

18                  MR. PATRICK BOWMAN:    Yes.

19                  MR. BYRON WILLIAMS:    And finally with  
20 the most recent information available, at least in  
21 this response, '14/'15, we see still a twenty-five  
22 dollar (\$25) per gigawatt difference in average price  
23 between dependable and opportunity sales with  
24 dependable significantly higher.

25                  MR. PATRICK BOWMAN:    Yeah. It's a --

1 I think it's a litter higher than twenty-five (25)  
2 but, yes, dependable is significantly higher than  
3 opportunity in this example, yes.

4 MR. BYRON WILLIAMS: And I'm a --

5 MR. PATRICK BOWMAN: Or this -- I -- I  
6 said example. This data set, I'm sorry.

7 MR. BYRON WILLIAMS: And I appreciate  
8 that, Bowman -- Mr. Bowman. I'm trying to be  
9 conservative. You know me, I'm a conservative fellow,  
10 so.

11 Mr. Bowman, thank you for that. If we  
12 can -- if we can turn to the NFAT report, page 117 of  
13 306, I have just a couple of questions there.

14

15 (BRIEF PAUSE)

16

17 MR. BYRON WILLIAMS: And, Diana, if  
18 you could go down to the bottom three (3) paragraphs.  
19 Sorry, I've got in my paper copy page 117 of -- one  
20 one seven (117).

21

22 (BRIEF PAUSE)

23

24 MR. BYRON WILLIAMS: I -- I apologize  
25 for misspeaking. Thank you. And, Mr. Bowman, you'll

1 -- you'll understand that these are the summary  
2 observations of the Public Utilities Board in terms of  
3 the relative merits of plans with Keeyask versus the -  
4 - the merits of the Preferred Development Plan  
5 associated with Conawapa. Agreed?

6 MR. PATRICK BOWMAN: I'll -- I haven't  
7 looked at the heading of the section that we're in --

8 MR. BYRON WILLIAMS: If you could --

9 MR. PATRICK BOWMAN: -- but I'll --

10 MR. BYRON WILLIAMS: -- if you will  
11 accept that--

12 MR. BOB PETERS: -- I'll take it --

13 MR. BYRON WILLIAMS: -- that subject  
14 to check?

15 MR. PATRICK BOWMAN: -- subject to  
16 check. Yeah, that's fine.

17 MR. BYRON WILLIAMS: And if we focus  
18 on the last para -- sentence of the third paragraph  
19 you'll observe that the Board is drawing a comparison  
20 between the relatively higher amount of Keeyask sold  
21 under firm contract and related to the WPS sale, and -  
22 - and observing that it sees less risk of  
23 disappointing export revenues from Keeyask compared to  
24 Conawapa.

25 You understand that's the reference the

1 Board is making, Mr. -- Mr. Bowman?

2                           MR. PATRICK BOWMAN: Yes, but I think  
3 we have to be careful with this -- with -- with  
4 drawing the inference that I -- I think is inherent in  
5 the question you asked, which is at that point in time  
6 as Hydro brought forward those plans Keeyask was  
7 proposed as a project that Hydro wanted to build and  
8 as a result Hydro brought forward the contracts that  
9 it expected to underpin Keeyask and -- and the -- the  
10 dependable sales associated with it.

11                          Conawapa was not a project that Hydro  
12 was ready yet to say -- to make a decision on  
13 building. It was just a project it wanted to spend  
14 the next four (4) years or so bringing to the point  
15 where it could make a decision to build. So those  
16 contracts under -- underpinning Conawapa were not yet  
17 -- didn't yet exist.

18                          And -- and I -- I recall Mr. Cormie  
19 talking about a 500 megawatt block of power that was  
20 busy being shopped around three (3) different  
21 utilities which would have been linked to Conawapa,  
22 and -- and they didn't yet have that locked in. So  
23 that was -- at that time Conawapa had that risk  
24 associated where Keeyask didn't because you had the  
25 contracts. It wasn't saying Conawapa was inherently a

1 riskier plant, or something.

2 MR. BYRON WILLIAMS: I accept that,  
3 sir, and -- and in fact what it was saying was that  
4 the higher risk associated with Conawapa was  
5 associated with the uncertainty of future export  
6 revenues, specifically those flowing from Keeyask.

7 Agreed?

8 MR. PATRICK BOWMAN: I -- I think  
9 you're going to have to repeat the question. I  
10 apologize.

11 MR. BYRON WILLIAMS: Well, Mr. Bowman,  
12 drawing your attention to the second last paragraph  
13 there is the Board observing and concluding heightened  
14 and unacceptable risk associated with the Preferred  
15 Development Plan, and citing as one of the factors the  
16 uncertainty of future export revenues.

17 MR. PATRICK BOWMAN: Correct.

18 MR. BYRON WILLIAMS: And going on in  
19 the next paragraph to highlight the importance of  
20 Hydro achieving firm bilateral sales at premium  
21 prices, agreed?

22 MR. PATRICK BOWMAN: Well, I'll --  
23 I'll read the full sentence just to make sure that  
24 it's on the record:

25 "The panel considers it critical

1                   that Manitoba Hydro achieve firm  
2                   bilateral sales at premium prices  
3                   for its non-contracted surplus  
4                   energy."

5                   And I think the word "surplus" there is  
6 something we need to understand, that when someone  
7 says a firm bilateral sale, it probably means a  
8 dependable sale from -- dependable energy that is not  
9 currently needed for Manitoba's -- Manitoba's uses as  
10 opposed to surplus meaning opportunity energy.

11                  It doesn't necessarily mean that  
12 because you can have contracts for a bilateral  
13 contract to -- to sell opportunity energy to a party  
14 as well. But -- but the word "surplus" can be a bit  
15 imprecise.

16                  But that -- that is -- that is -- to  
17 me, that's -- that's a function of the fact that  
18 Conawapa was early -- earlier in its planning stages  
19 and did not have those -- those contracts that it  
20 could have and -- and would have presumably, and  
21 developed over the four (4) years before it was --  
22 people were ready to make a decision to put a shovel  
23 in the ground.

24                  MR. BYRON WILLIAMS: Thank you. I  
25 want to turn to another theme for our clients, the --

1 the second major issue we want to canvass today. And  
2 I'll observe that I'll do my best to get through it.  
3 We'll be -- we'll be running a bit pressure, so I'll -  
4 - but I certainly will do my best.

5 Ms. -- Diana, if you could pull up PUB  
6 Order 143/'04, page 51, and the second last paragraph.

7 And, Mr. Bowman, while we're waiting,  
8 without asking you to elaborate, and recognize time is  
9 tight, an issue of variance between you and Mr. Harper  
10 relates to the treatment of uniform rates and whether  
11 they should be a cost attributed to the export class,  
12 agreed?

13 MR. PATRICK BOWMAN: I -- I believe  
14 it's in -- an issue on which we have a different  
15 opinion in the context of the cost of service study.  
16 I -- I don't understand that to be an issue related to  
17 whether there's one (1) or two (2) export classes. So  
18 I just want to make sure that we understand that.

19 MR. BYRON WILLIAMS: The -- the issue  
20 is the attribution of costs to the export class,  
21 agreed, sir?

22 MR. PATRICK BOWMAN: Fair -- fair  
23 enough. I was reading this morning about the -- this  
24 morning's topics about the number of classes, and I  
25 didn't understand that to be related to the number of

1 classes. I understood that topic to relate to the  
2 uses of net export revenue, but that's -- it's neither  
3 here nor there. I just didn't want an implication to  
4 be misunderstood.

5 MR. BYRON WILLIAMS: Thank you. If we  
6 go to the second last paragraph of -- of page 51, just  
7 for introduction. And again, Mr. Bowman, you're --  
8 you're aware and you've referenced in your evidence  
9 the introduction of uniform rates by way of  
10 legislation in 2001, agreed?

11 MR. PATRICK BOWMAN: Yes.

12 MR. BYRON WILLIAMS: And in effect, it  
13 eliminated the rate zone distinctions for customers on  
14 the grid, and all rates in the previous zones 2 and 3  
15 were reduced to be the same as the rates charged in --  
16 in the City of Winnipeg, i.e., zone 1 --

17 MR. PATRICK BOWMAN: Yes.

18 MR. BYRON WILLIAMS: -- correct? And  
19 there was a consequential reduction in -- in revenues  
20 as a result of that, agreed?

21 MR. PATRICK BOWMAN: yes.

22 MR. BYRON WILLIAMS: And just for  
23 clarity's sake, zone 2, I hope you'll agree -- I'm  
24 dredging up my memories as well -- would be rural, and  
25 zone 3 would be northern.

1                   Is that your understanding as well, Mr.  
2 Bowman?

3                   MR. PATRICK BOWMAN:   It -- it sounds  
4 correct. I -- and I believe zone 1 was the -- the  
5 Manitoba Hydro portion of the City of Winnipeg in that  
6 era, but it sounds correct. I'll accept that.

7                   MR. BYRON WILLIAMS:   Okay. And -- and  
8 I think we're -- I'm going to suggest to you that zone  
9 1 was the entirety of the City of Winnipeg, but we'll  
10 -- we'll leave that -- let's -- let's leave that  
11 subject to check.

12                  MR. PATRICK BOWMAN:   Well, subject  
13 only to the Winnipeg hydro service area, but that's a  
14 question.

15                  MR. BYRON WILLIAMS:   And, Mr. Bowman,  
16 in terms of -- you'll be aware from your review of Mr.  
17 Harper's evidence that he referenced a dialogue in the  
18 Manitoba legislature with regard to this policy  
19 decision?

20                  MR. PATRICK BOWMAN:   Yes, throne  
21 speech, I believe.

22                  MR. BYRON WILLIAMS:   I'm going to  
23 direct you to Coalition Exhibit 31, which is the  
24 Hansard excerpt -- do you have that, sir? -- and to  
25 page 97, on the left-hand side of page 97 towards the

1 bottom. And keep scrolling down, please, Diana. And  
2 I want to assure the panel members that the -- the  
3 Public Interest Law Centre is nonpartisan, will fight  
4 with all governments, so -- so we're not picking sides  
5 here.

6                   But, Mr. Bowman, you'll -- you'll agree  
7 that this is Mr. Selinger. And I want to direct your  
8 attention to the last five (5) lines of that  
9 paragraph. He's talking about -- starting with, "We  
10 are doing a similar thing today," he's talking about  
11 moving to uniform rates and paying for that through  
12 the surpluses that we generate through export sale.

13                  Do you see that reference, Mr. Bowman?

14                  MR. PATRICK BOWMAN: I -- I see the  
15 reference. I -- I would understand this would  
16 probably be committee. Is that not a -- a committee?

17                  MR. BYRON WILLIAMS: It's -- it's in  
18 the -- the Natural Resources committee, I think, so.

19                  MR. PATRICK BOWMAN: Thank -- thank  
20 you. Yes. Yes, I -- no, I see the reference. Yes.

21                  MR. BYRON WILLIAMS: And expressly  
22 indicating that the intent, I'll suggest to you, was  
23 the not having to ask anyone to pay more. Do you see  
24 that reference, sir?

25                  MR. PATRICK BOWMAN: Yes. That --

1 that's what the -- the full quote:

2                   "We are doing a similar thing today  
3                   but with the advantage of not having  
4                   to ask anybody to pay more."

5                   Now, I -- I haven't read through  
6 previously to say what this -- what -- what it is  
7 similar to, but I -- I do notice it's been referenced  
8 as being similar to -- to lots of other provinces, as  
9 well, but I -- I apologize, I haven't read the full  
10 paragraph.

11                  MR. BYRON WILLIAMS: Mr. Bowman, if  
12 you -- if you need some help, if you go down to about  
13 line 8, you're going to see a reference to the uniform  
14 rate. You'll accept that this is a -- a conversation  
15 in terms of uniform rates, sir?

16                  MR. PATRICK BOWMAN: Oh, yeah,  
17 absolutely. Yeah. When it says, "We're" -- it's a  
18 long paragraph --

19                  MR. BYRON WILLIAMS: Oh.

20                  MR. PATRICK BOWMAN: -- that ends  
21 with, "We're doing a similar thing today." I don't  
22 know it's similar to what. If you give me a moment,  
23 I'll read the paragraph and --

24                  MR. BYRON WILLIAMS: Certainly.

25                  MR. PATRICK BOWMAN: -- comment

1 further. But, otherwise --

2 MR. BYRON WILLIAMS: I suggest to you  
3 it's a reference to rural electrification, sir. And  
4 you can accept that, subject to check.

5 MR. PATRICK BOWMAN: I -- I'll accept  
6 it, subject to check. I don't know how it's similar  
7 in that regard, then. But -- but, nonetheless, that  
8 was his statement.

9 MR. BYRON WILLIAMS: So if we could go  
10 back to Order 143/'04, and in particular, page 52.  
11 Thank you, Diana. And those -- that's per -- go down  
12 one (1) more line. That's perfect.

13 You'll see at the top of the page a  
14 discussion of the Z-O-R, or zone of reasonableness,  
15 Mr. Bowman?

16 MR. PATRICK BOWMAN: I see the  
17 reference.

18 MR. BYRON WILLIAMS: And you'll recall  
19 that in -- in -- at that era, the same as today, the  
20 zone of reasonableness was between point nine five  
21 (.95) and one point zero five (1.05), agreed?

22 MR. PATRICK BOWMAN: Yes.

23 MR. BYRON WILLIAMS: And, essentially,  
24 with unity being one (1), our revenue cost coverage  
25 ratios above and below unity within that range, the

1 zone of reasonableness, were generally considered  
2 acceptable, agreed?

3 MR. PATRICK BOWMAN: I -- I'd go even  
4 a step further. I'd say that you've -- Madam Chair,  
5 you've heard evidence about a -- a certain degree of -  
6 - of imprecision in -- in cost of service in some  
7 aspects. So it's -- it's not even that -- necessarily  
8 that it -- it's acceptable, it's that it is -- it is  
9 effectively indistinguishable from one (1). And it's  
10 -- and -- and it's -- it's usually expected that one  
11 would try to move those below -- below the zone of  
12 reasonableness up into it, those above down into it.

13 And you would then generally look to  
14 make sure that no one is consistently at the high end  
15 or the low end of the zone of reasonableness over  
16 time, but that within that band, the -- the numbers  
17 are effectively indistinguishable from one (1).

18 MR. BYRON WILLIAMS: And that's in  
19 recognition that there's subjectivity and judgment in  
20 allocating costs, agreed, Mr. Bowman?

21 MR. PATRICK BOWMAN: Yeah. And  
22 there's changes in things like loads over time, and  
23 you have to base it on a particular load year, and  
24 those type of things.

25 MR. BYRON WILLIAMS: Yeah. And fair

1 enough. And in our -- in our more cynical moments, we  
2 might suggest there is opinion piled upon judgment  
3 anchored in estimates when we're thinking of  
4 allocating costs?

5 MR. PATRICK BOWMAN: I believe it's a  
6 quote I've heard before. But I -- I think the bigger  
7 effect is that Mr. Harper does a -- a very good job of  
8 quoting the -- the Bonbright principles in his  
9 evidence at page 15, he reminded me this morning. And  
10 about six (6) of that list of eight (8) principles of  
11 a good rate, bullet 6 effectively says they should be  
12 linked to costs. And -- and bullet 8 is about  
13 efficiency, which you raised yesterday. Another one  
14 (1) of the bullets is about stability.

15 If you over -- overemphasize one (1) of  
16 those, you end up giving up on the other. So, for  
17 example, if you were to target a hundred point zero  
18 zero (100.00) every time, our rates might bounce up  
19 and down for all different reasons. That -- there are  
20 jurisdictions who do that. And they add the -- the  
21 expense of rate stability, they target one point zero  
22 zero (1.00).

23 When we say, Between ninety-five (95)  
24 and one-o-five (105), it's indistinguishable from one  
25 (1) and this is a tool to help us achieve rate

1 stability, that -- that's part of the balancing of  
2 those different -- different criteria.

3 MR. BYRON WILLIAMS: Thank you for  
4 that thoughtful answer. Let's -- let's turn our  
5 attention to the '04 year and -- and just observe  
6 where the various residential zones were within --  
7 within that -- or outside that zone of reasonableness.

8 Residential zone 1, which is associated  
9 somewhere with the City of Winnipeg is at ninety-six  
10 point three (96.3). Is that correct, sir?

11 MR. PATRICK BOWMAN: Yes.

12 MR. BYRON WILLIAMS: Zone 2 in rural  
13 Manitoba, and perhaps other parts of Winnipeg, ninety-  
14 eight point seven (98.7), sir?

15 MR. PATRICK BOWMAN: Yes.

16 MR. BYRON WILLIAMS: And the outlier  
17 in terms of the zone of reasonableness is the -- the  
18 northern at seventy-nine point six (79.6).

19 MR. PATRICK BOWMAN: Right, as it had  
20 been for -- for decades before, yeah.

21 MR. KURT SIMONSEN: About five (5)  
22 minutes, Mr. Williams.

23

24 CONTINUED BY MR. BYRON WILLIAMS:

25 MR. BYRON WILLIAMS: So in essence,

1 both the Winnipeg and rural subclassifications of  
2 residential were within that ZOR. Agreed?

3 MR. PATRICK BOWMAN: Yes.

4 MR. BYRON WILLIAMS: And the northern  
5 communities, including those represented by Mr. Orle,  
6 were -- were outside, correct?

7 MR. PATRICK BOWMAN: Yes.

8 MR. BYRON WILLIAMS: We're going to go  
9 to another table in just a moment, Mr. Bowman, but in  
10 essence, I'll suggest to you that the uniform rates  
11 collapsed the three (3) residential subclasses into  
12 one (1), and moved rates from zone 3 and zone 2 to  
13 Winnipeg rates. Is that fair?

14 MR. PATRICK BOWMAN: Yes.

15 MR. BYRON WILLIAMS: In effect, they  
16 lowered the combined class revenue, but they brought  
17 the same costs with them.

18 MR. PATRICK BOWMAN: They lowered the  
19 combined class revenue, correct. And they brought the  
20 same costs, yes.

21 MR. BYRON WILLIAMS: So if we could  
22 just go on in Order 143/'04 to page 54, the -- and  
23 there's a -- there should be a table there. And let's  
24 just go to residential again, Diana.

25 And so in essence, what happened using

1 the -- the PCOSS as it existed as of March 31st, 2004,  
2 the residential class was at 90.6 percent, sir? You  
3 see that --

4 MR. PATRICK BOWMAN: Yes.

5 MR. BYRON WILLIAMS: -- on the left-  
6 hand side? And we'll stick with that. We'll stay  
7 away from NERA, because that was its recommendations.

8 So in essence, if -- if one was part of  
9 that zone 1 subclass, sir, those ratepayers from Winni  
10 -- Winnipeg would have gone from being within the zone  
11 of reasonableness to outside of it, agreed? They  
12 would have moved from the -- the ninety-six (96) RCC  
13 down to ninety (90).

14 MR. PATRICK BOWMAN: Well, I think  
15 it's -- it's no longer a -- a relevant construct.  
16 Zone 1 doesn't exist anymore. This is one (1) of the  
17 -- the aspects of -- of cost-of-service that -- that  
18 we need to understand is cla -- how you design your  
19 classes is a decision that -- that has to be done in  
20 order to do the analysis. And we're constantly  
21 dealing with questions of do -- do two (2) customers  
22 belong in the same class.

23 At the extreme, every customer has a  
24 different cost profile. You know, the -- my -- my  
25 neighbour is a little further down the street than I

1 am, so he needs more wire than I do if I'm closer to  
2 the -- the main connection. But we don't -- we don't  
3 distinguish between those two (2) for purposes of  
4 classes. There's my other neighbour who works nights  
5 when I work days. We don't distinguish those two (2).  
6 We have a class and we -- we consider those -- those  
7 uses to be -- to be similar enough that we would  
8 charge them the same rates.

9                   And this -- at this point in time, you  
10 just have a -- a residential class, much like most  
11 jurisdictions would have, and the residential class  
12 has this -- this piece. Is there theoretically a -- a  
13 Winnipeg customer whose costs are different or -- or  
14 lower than a -- a northern customer? Possibly, but  
15 there's also very possibly a northern customer whose  
16 costs are lower than a Winnipeg customer.

17                   But we -- we can't do it at this sort  
18 of subclass level and -- without -- without coming up  
19 with a -- a sensible, thoughtful way of designing the  
20 classes. And the classes -- one -- one (1) version  
21 was zone 1, 2, and 3. That was -- that was something  
22 that -- that was ruled out at that point.

23                   MIPUG supported that. As a matter of  
24 fact, that -- the uniform rate. It was a -- was a --  
25 in my opinion, a good policy decision. It brought

1 Manitoba in line with a lot of other jurisdictions who  
2 were already doing this. We were behind the curve,  
3 and -- but it changed the class design. So I don't --  
4 I don't think you can infer, What if the classes  
5 looked different. At that point, there was one (1)  
6 residential class.

7 MR. BYRON WILLIAMS: So -- so let's  
8 back up for a second. The -- the risk of moving from  
9 within the zone of reasonableness to outside of the  
10 zone of reasonableness, Mr. Bowman, is that consumers  
11 might face rate rebalancing over and above the average  
12 rate increase, agreed?

13 MR. PATRICK BOWMAN: That -- that --  
14 what this -- what a number like ninety point six  
15 (90.6) says is that the -- the customer -- that  
16 customer class is not fully covering the cost that you  
17 would consider attributable to that class.

18 MR. BYRON WILLIAMS: And so while you  
19 may consider it irrelevant for a Winnipeg consumer, or  
20 a Zone 1 or Zone 2 consumer, the mathematical  
21 byproduct of this is they would go from within the  
22 zone of reasonableness outside of the zone of  
23 reasonableness due to that policy decision, which may  
24 indeed have been a very good policy decision.

25 But that's the math?

1                   MR. PATRICK BOWMAN: Well, you  
2 reference it as a consumer. And I'm saying you --  
3 unless you design a class of that customer, you don't  
4 know that customer's RCC. All you know is the -- the  
5 RCC of the class to which that customer belongs.

6                   We never know the cost to serve an  
7 individual customer.

8                   MR. BYRON WILLIAMS: The coll --

9                   MR. KURT SIMONSEN: Do you have a  
10 bunch more, or?

11                  MR. BYRON WILLIAMS: No, I just have a  
12 couple -- a bit more.

13

14 CONTINUED BY MR. BYRON WILLIAMS:

15                  MR. BYRON WILLIAMS: The collection of  
16 consumers within those subclasses, mathematically went  
17 within the -- from within the zone reasonableness to  
18 outside of it?

19                  MR. PATRICK BOWMAN: Right. If I had  
20 been a -- a customer living in St. Vital, previously I  
21 had been in a class where I may have been a -- a  
22 higher cost to serve, a lower cost to serve, if  
23 someone could have ran it. I made -- but -- but I was  
24 allocated -- based on the rate design at that time I  
25 was allocated costs as collectively with the other

1 consumers in St. Vital and in other areas served by  
2 Manitoba Hydro within the City of Winnipeg.

3                         Once you changed it I became part of a  
4 class that -- that included other customers, some of  
5 which are higher cost to serve than me, some which  
6 were lower. On average, they were higher cost to  
7 serve than me.

8                         MR. BYRON WILLIAMS: And so by that  
9 mathematical event they became at risk of the rate  
10 increases that they had been promised would -- they  
11 would not be impacted by, agreed?

12                         MR. PATRICK BOWMAN: Well, if -- I pre  
13 -- if they had previously been in a class that was in  
14 the zone of reasonableness they probably would have  
15 faced average rate increases. If they were in a class  
16 that was below the zone of reasonableness, in theory,  
17 they would have re -- received above average  
18 increases.

19                         But it's not -- it -- it's in no way  
20 universal based on the table you just showed us. That  
21 -- that northern zone was at 80 percent for a decade  
22 and people didn't -- didn't try to jam their rates up  
23 to get them to 100 percent RCC.

24                         So there -- there are other  
25 considerations that go into rate design.

1                   MR. BYRON WILLIAMS: So if we go to  
2 Board Order 143/'04, page 7, and we'll just finish off  
3 here. Page 7 at the top. Sorry, Diana, yes. Yes,  
4 page 7. Thank you. Right there.

5                   And just you'll see Order 5 at the top.  
6 With that as context the Public Utilities Board made a  
7 decision in -- in order 143/'04 to allocate the cost  
8 of uniform residential rates as a first charge on net  
9 export revenue, agreed?

10                  MR. PATRICK BOWMAN: Yes.

11                  MR. BYRON WILLIAMS: I do appreciate  
12 the -- the indulgence of the Board in giving me a  
13 couple extra moments. Thank you very much.

14                  MR. KURT SIMONSEN: Madam Chair, if I  
15 could just remind all parties, if you have materials  
16 that you want on the screen, it would be nice to have  
17 those in advance. So if we can get those at the  
18 break, or before you're on. Thank you.

19                  THE CHAIRPERSON: Mr. Gange, please.

20

21 CROSS-EXAMINATION BY MR. BILL GANGE:

22                  MR. BILL GANGE: Thank you. Mr.  
23 Harper, you support -- support Manitoba Hydro's  
24 position to split the export class into firm and  
25 opportunity classes.

1                   Is that correct, sir?

2                   MR. WILLIAM HARPER:    That's correct.

3                   MR. BILL GANGE:    And, Diana, if we  
4 could have Mr. -- so Mr. Chernick in his review of --  
5 of this issue -- sorry, one (1) more, Diana. Yes,  
6 thank you.

7

8                   (BRIEF PAUSE)

9

10                  MR. BILL GANGE:    From his review, came  
11 to the conclusion that there are no fixed costs that  
12 are due to opportunity exports. And it's on the  
13 screen.

14                  Did you -- you heard him give that  
15 testimony yesterday?

16                  MR. WILLIAM HARPER:   Yes, I did.

17                  MR. BILL GANGE:    Are you in agreement  
18 generally with that -- that concept?

19                  MR. WILLIAM HARPER:   No, I'm not.

20                  MR. BILL GANGE:    You agree that  
21 there's -- that -- that there's no evidence that the  
22 opportunity sales advanced any plant addition?

23                  MR. WILLIAM HARPER:   I don't agree  
24 with that either.

25                  MR. BILL GANGE:    You don't? Are you -

1 - do you agree that -- that, with respect to any plant  
2 that was advanced for past opportunity sales, that at  
3 present in this cost of service study that, in taking  
4 those factors into consideration, the plant would have  
5 been less expensive to build at this point because it  
6 was built earlier?

7 MR. WILLIAM HARPER: I'm sorry, I'm  
8 going to have to ask you to walk through those  
9 multiple steps again. I apologize for not following.

10 MR. BYRON WILLIAMS: Okay. So Mr.  
11 Chernick had said that, with respect to -- because  
12 there's an argument that -- that plants were advanced  
13 for past opportunity sales. That's been made by some  
14 of the parties, correct, sir?

15 MR. WILLIAM HARPER: Well, I think --  
16 I think when you advance plant, you'll get opportunity  
17 -- you'll get both dependable and opportunity sales  
18 sooner. And depending upon -- depending upon the  
19 pricing that -- so then those -- that's going to be  
20 part of the economic evaluation that goes into whether  
21 or not it makes sense to advance the plant.

22 So I don't think I could conclusively  
23 say that -- you know, unfortunately, these analyses  
24 are usually done on a holistic basis where export  
25 sales are looked at in total. They aren't parsed down

1 in terms of what's the contribution specifically of  
2 opportunity versus dependable.

3                         The analysis is done on a total basis  
4 so that -- but when you look at that total basis, the  
5 case was there and I can't -- and I don't have any  
6 evidence that suggests that opportunity sales weren't  
7 part of that overall -- since they were part of the  
8 total, weren't part of the overall consideration and  
9 therefore didn't influence -- didn't influence the  
10 decision.

11                         MR. BILL GANGE: Right. Yes, and I --  
12 I understand that. But the question at this point in  
13 terms of looking at the cost of service study --

14                         MR. WILLIAM HARPER: Yes.

15                         MR. BILL GANGE: -- that if -- if a --  
16 if a plant was advanced for -- advanced, that at this  
17 point in the cost of service, the plant would be less  
18 -- would have been less expensive to build because  
19 there would have been less of an inflation factor.

20                         Not prepared to agree with that?

21                         MR. WILLIAM HARPER: No. I -- I think  
22 what I'm struggling with is the fact -- and it goes  
23 back to my -- my comments overall in terms of when  
24 you're looking at cost of service.

25                         I mean, in terms of looking at cost of

1 service and cost causality, I think if we try and  
2 parse it down too tightly in terms of what's going on  
3 in a specific year for a specific circumstance, we're  
4 going to start bouncing around and chasing our tail.

5 That's why it was my view that you  
6 should be taking more of a long -- a long-term view in  
7 terms of overall what's going on with these plants but  
8 what -- what's caused them to occur. And that longer-  
9 term perspective will also give you -- give you some  
10 more stability in -- in the overall cost of service.

11 And so that's where I'm having my -- my  
12 problem in terms of maybe I don't quite look at it the  
13 same way as Mr. Chernick does. And again, that's one  
14 of the areas where maybe experts choose to -- to  
15 disagree.

16 MR. BILL GANGE: Okay. Thank you.

17 Those are my questions.

18 Thank you, Madam Chair.

19 THE CHAIRPERSON: Thank you. Me.

20 Monnin...?

21

22 (BRIEF PAUSE)

23

24 CROSS-EXAMINATION BY MR. CHRISTIAN MONNIN:

25 MR. CHRISTIAN MONNIN: If I can start

1 with a little comment. Lawyers have to do continuing  
2 legal education. That's something that we have to do  
3 for our professional obligations.

4                   And I just an email this morning from  
5 Osgoode Professional Development for a program called  
6 Examining Expert Witnesses. "Hone your skills in this  
7 intensive workshop." The email's a little late, but  
8 I'll see what I can do.

9                   I'll start my questions with -- with  
10 Mr. Chernick. Diana, if you could please bring up Mr.  
11 Chernick's rebuttal, please, and at page 13, the  
12 second full paragraph:

13                   "Hence, it appears that  
14                   interruptible energy sales which may  
15                   be con -- contracted rather than  
16                   opportunity sales resulted in the  
17                   advancement of Limestone by one (1)  
18                   year from '91 to '90, and at the  
19                   timing of Wuskwatim and Keeyask  
20                   depended only on domestic and  
21                   contract load."

22                   And do I understand your evidence here,  
23 sir, that you understand interruptible energy to not  
24 be opportunity sales?

25                   MR. PAUL CHERNICK: The terminology is

1 used in different ways at different times. For many  
2 years, Manitoba Hydro has had surplus energy contracts  
3 which I understand to be contracts at fixed prices or  
4 some kind of formula price perhaps that are guaranteed  
5 so long as there's surplus energy. If we've got the  
6 energy, we'll provide it at that price.

7 So those are contract sales. They're  
8 not totally firm, but they're not opportunity sales.  
9 They're not day-to-day, week-to-week, month-to-month  
10 sales.

11 MR. CHRISTIAN MONNIN: Now, you were  
12 here on -- on September 7th and you heard the evidence  
13 from the Hydro panel?

14 MR. PAUL CHERNICK: Yes.

15 MR. CHRISTIAN MONNIN: And you heard  
16 the evidence from Mr. Cormie. And when I put to him  
17 the question to clear for the record whether  
18 interruptible energy meant -- referred to export --  
19 opportunity exports he replied in the affirmative.

20 Do you remember that?

21 MR. PAUL CHERNICK: Yes, I remember  
22 him saying that in the context of some particular  
23 document. I don't remember which one it was.

24 MR. CHRISTIAN MONNIN: I believe it  
25 was --

1                   MR. PAUL CHERNICK: He thought that  
2 that document was referring to opportunity as being  
3 interruptible. But there are interruptible contracts,  
4 as well.

5                   MR. CHRISTIAN MONNIN: And -- and that  
6 document, Diana, if you'd please go to the  
7 undertakings of LEI, page 2. And that is the quote  
8 that I put to Ms. -- to the Hydro panel to confirm  
9 that interruptible energy referred to opportunity  
10 sales?

11

12                   (BRIEF PAUSE)

13

14                   MR. PAUL CHERNICK: That would have  
15 been -- yeah, that was a 1985 decision. And assuming  
16 that Mr. Cormie's recollection of Manitoba Hydra --  
17 Hydro told the NEB wa - at the time as correct, in  
18 that context it meant that in -- the interruptible  
19 energy was opportunity. That was his recollection  
20 from thirty (30) years ago.

21                   MR. CHRISTIAN MONNIN: I -- I'd  
22 suggest to you that that - you're reading into what  
23 Mr. Cormie gave his evidence about his recollection  
24 about thirty (30) years ago. The question that was  
25 put to him was quite simple, was whether interruptible

1 energy referred to opportunity exports. And he  
2 answered, Yes.

3 Do you agree with that?

4 MR. PAUL CHERNICK: You can read the  
5 transcript. You can quote it in -- in your argument,  
6 but I -- I understood your conversation with him as  
7 referring to in that sentence did the NEB mean  
8 opportunity sales. But at that time, as I understand  
9 it, and I -- I'm not -- may not be quite right about  
10 the timing, but at that time, Manitoba Hydro was  
11 entering into long-term contracted surplus energy,  
12 interruptible energy sales.

13 So the NEB could have meant that Hydro  
14 was referring to contracted interruptible energy or  
15 spot interruptible energy, what you're calling  
16 opportunity. Or NEB may not have known what Hydro  
17 meant. And Mr. Cormie's memory of thirty (30) some  
18 years ago may be absolutely perfect. And he may  
19 remember that there was a discussion about short-term  
20 opportunity sales, and that's the evidence that we've  
21 got.

22 MR. CHRISTIAN MONNIN: One (1) last  
23 question on that point, Mr. Chernick. You'll agree  
24 with me if I suggest that the question that I put  
25 yesterday had no mention of what NEB thought or what

1 NEB considered and NEB wasn't mentioned at all in the  
2 question, correct?

3 MR. PAUL CHERNICK: My recollection is  
4 that we were looking at this page and that you were  
5 asking about interruptible energy in the context of  
6 that --

7 MR. CHRISTIAN MONNIN: And --

8 MR. PAUL CHERNICK: -- sentence.

9 MR. CHRISTIAN MONNIN: And -- and  
10 still, with regards to the questions that were put to  
11 Hydro, would you agree that during that question and  
12 answer between myself and Hydro, that they  
13 acknowledged that opportunity exports were at least a  
14 driver for Limestone, Wuskwatim, and Keeyask? Would  
15 you agree to that?

16 MR. PAUL CHERNICK: I don't know that  
17 they agreed that it was a driver. It was certainly  
18 the -- the case that opportunity sales were taking  
19 into account in some -- to some degree in the economic  
20 analysis.

21 MR. CHRISTIAN MONNIN: Mr. Bowman, in  
22 your evidence, I -- if I understand correctly, you  
23 state that opportunity exports should be assigned full  
24 embedded costs. Is that -- is that accurate?

25 MR. PATRICK BOWMAN: I -- I don't

1 think it's quite accurate. What I basically said was,  
2 I don't see anything in -- in the material Hydro filed  
3 to -- where they're proposing to change what the Board  
4 previously decided that would for some reason overturn  
5 what the Board had decided on many occasions.

6                   As a result, I would say we revert to  
7 using the method the Board decided, and -- and as --  
8 as the -- as the baseline. That we come into here  
9 with a set of Board approved methodologies, and I  
10 would say that's -- that's the starting point, or the  
11 -- the baseline for it unless there's some reason to  
12 change them.

13                  MR. CHRISTIAN MONNIN: And -- and  
14 based on that, it would -- would I be accurate or  
15 somewhat accurate that Manitoba -- Manitoba Hydro's  
16 view was that opportunity exports should not be  
17 assigned full embedded costs but only variable costs?

18                  MR. PATRICK BOWMAN: Manitoba Hydro  
19 was proposing that opportunity -- opportunity energy  
20 be only assigned the -- the variable costs, not -- not  
21 a -- a share of any fixed costs.

22                  MR. CHRISTIAN MONNIN: And would you  
23 view the proposal put forward by LEI on behalf of GSS  
24 and GSM that 63.8 percent share of exports can be  
25 viewed as relatively predictable, and should therefore

1 attract full embedded costs.

2                   Would you view that as a compromise  
3 between Hydro's position and -- and your position?

4                   MR. PATRICK BOWMAN: Well, there's a -  
5 - there's a -- a principal level, and there's a math  
6 level. I was -- and I believe I put this in the  
7 rebuttal testimony. I was encouraged. I thought LEI  
8 went down a -- a useful and interesting road by  
9 saying, Don't look at -- at this question the way that  
10 -- the way that -- that Hydro might when it's making a  
11 sale.

12                  If Hydro is making a sale, it wouldn't  
13 commit to sell this opportunity energy on a -- on a  
14 firm basis, because there is a -- a risk that in a  
15 terrible drought, it couldn't deliver it. So in that  
16 -- in that view, yes, this stuff is -- is really  
17 unreliable and -- and no buyer should buy it on that  
18 basis, and Hydro shouldn't -- shouldn't peddle it to  
19 the market on that basis, and I don't think they do.

20                  LEI went down a different road and  
21 said, Okay, but we're not worried about whether you  
22 should consider this lock solid for the sale. We  
23 should look as to whether it's -- it's reasonably  
24 foreseeable and reliable in your system. And -- and I  
25 -- I agree that that's a better type of question. Is

1 this energy reasonably foreseeable and reliable in  
2 your system?

3                         Where LEI and I would depart is on the  
4 mathematics. And I think -- I think it -- the -- the  
5 difference comes a bit from the -- the perspective,  
6 and it's not to -- to disagree with their perspective,  
7 but I think they -- they brought a perspective that  
8 was -- is very much based on a -- on a lender's type  
9 of view, a banking type of view, a -- where if you --  
10 if someone came to you and said, I want to borrow  
11 money and I'm going to base my -- my business plan on  
12 -- on opportunity sales -- in part on opportunity  
13 sales, and those opportunity sales are going to  
14 generate the cashflow to make my interest payments,  
15 and -- and they're going to be how I'm going to try to  
16 fulfill my -- my cash obligations each year, a -- a  
17 banking group might discount that in the thirties (30)  
18 or in some -- somewhere in your hydraulic record, you  
19 have a drought, they might discount.

20                         Somewhere in that hydraulic record, you  
21 have a flood, and I think if you brought them this --  
22 this incredibly long data set with these outside  
23 limits, they might say, No, come on, let's focus on  
24 what -- what's reasonable here. And they might say,  
25 Yeah, let's take -- do what LEI did. Look at -- look

1 at fifteen (15) years. How likely can I rely on this  
2 cashflow, and if -- if I'm -- if I'm relying on it to  
3 -- to pay my debts. Otherwise, you might have the  
4 cashflow and go bankrupt. I'm not prepared to -- to  
5 deal with that risk.

6 I'm saying that's a valid perspective  
7 if you're coming from a lender or a banking  
8 perspective, but I'm -- I'm more focussed on the basis  
9 for the investment, which is an even longer term than  
10 the banker. It's -- it's the -- the hundred-year  
11 perspective on the investment. It's the -- the  
12 Keeyask is going to be in the ground a long time.

13 And in that context, are opportunity  
14 sales reasonably foreseeable over the life of Keeyask?  
15 Are they -- are they reliable over the life of Keeyask  
16 to help pay for Keeyask? And I -- absolutely they  
17 are, or else the NFAT hearing never would have  
18 occurred. We wouldn't even have been talking about  
19 Keeyask. Those were -- they were -- they were central  
20 and integral, all of the opportunity sales, not just  
21 some standard deviation on the outside.

22 So I think they -- they had a very good  
23 principal that they used. I -- I just think it was  
24 applied, in my opinion, from a -- a bit of a -- a  
25 different context.

1                   MR. CHRISTIAN MONNIN: And -- and in  
2 that regard, you're referring to your evidence, and I  
3 think your evidence would be that:

4                   "What was put forward by the London  
5 Economics team is conceptually  
6 correct and that for Cost of Service  
7 purposes opportunity sales cannot be  
8 viewed as whimsical, unpredictable,  
9 take them as you get them sales.  
10 These sales are predictable -- are a  
11 predictable part of Hydro's economic  
12 reality over the long-term."

13                  Is that correct?

14                  MR. PATRICK BOWMAN: That's -- I like  
15 that quote.

16                  MR. CHRISTIAN MONNIN: So do I.

17                  MR. KURT SIMONSEN: About five (5)  
18 minutes, please, Mr. Monnin.

19                  MR. PATRICK BOWMAN: But I think it's  
20 -- it's consistent with what the Board said where it  
21 said opportunity sales are not a byproduct of Hydro's  
22 system. That was the Board's quote in -- in one (1) -  
23 - one (1) of the orders that I reviewed. It might  
24 have been 5/'12.

25                  Actually, I take it back. It was

1 116/'08.

2

3 CONTINUED BY MR. CHRISTIAN MONNIN:

4                   MR. CHRISTIAN MONNIN: Mr. Chernick, a  
5 question for you in -- in a more general way. Do you  
6 agree that the GSS/GSM customer class plays a disprop  
7 -- proportionate share based on the RCCs?

8                   MR. PAUL CHERNICK: Are you asking me  
9 whether that's Manitoba Hydro's calculation? Because  
10 if so, yes, that's Manitoba Hydro's calculation. I  
11 would do the analysis differently so I'd get a  
12 different RCC. I don't know what that would be and  
13 we'll find out when we see PCOSS17 and start doing  
14 revisions to it.

15                  MR. CHRISTIAN MONNIN: So based on an  
16 analysis that you would do on some fur -- further date  
17 you might have a different view, but what -- what is  
18 presently on the record, you agree that there's a  
19 disproportionate share?

20                  MR. PAUL CHERNICK: I -- I answered  
21 your question. I can tell you what Manitoba Hydro  
22 calculated. I don't know what I would calculate.

23                  MR. CHRISTIAN MONNIN: Mr. Bowman,  
24 same question to you.

25                  MR. PATRICK BOWMAN: Do you mind

1 repeating the question just for clarity?

2 MR. CHRISTIAN MONNIN: In a very  
3 general sense -- general way, do you agree that the  
4 GSS/GSM customer class pays a disproportionate share  
5 based on the RCC?

6 MR. PATRICK BOWMAN: In a -- I'll  
7 accept the general premise. I'd encourage you to go  
8 to page 5 of the presentation I delivered yesterday,  
9 which -- which shows the best calculation of the RCCs  
10 that -- that we're able to do on the -- with the  
11 recommendations.

12 And if you look down on the table it  
13 shows the general service small non-demand is  
14 currently paying in -- in those numbers, 104 percent  
15 of costs. It's about \$5.5 million more in -- 5.6  
16 million more in -- in revenue than its cost. General  
17 service small demand cost is -- is also up, one-o-  
18 three point four (103.4).

19 General service medium is -- is close  
20 to 100 percent. And each of those is before they  
21 receive any allocation of NER. So if there was a  
22 credit NER back to customers those -- those numbers  
23 would be a bit higher.

24 So they're -- they're above one hundred  
25 (100). They're -- they're pretty -- some of them are

1 getting close to being meaningful above one hundred  
2 (100), so. But tho -- tho -- I -- I think it's better  
3 to answer the question numerically this way.

4 MR. CHRISTIAN MONNIN: Thank you.

5 Those are my questions.

6 THE CHAIRPERSON: Thank you. Mr.  
7 Orle, please.

8 MR. GEORGE ORLE: Thank you, Madam  
9 Chair. MKO is satisfied with the questions asked by  
10 Mr. Williams and Mr. Monnin. We have no further  
11 questions.

12 THE CHAIRPERSON: Thank you. Given  
13 that, I think we will go to break and we can possibly  
14 afford a less parsimonious break than was listed on  
15 the schedule and take fifteen (15) minutes. So please  
16 come back at a quarter to.

17

18 --- Upon recessing at 9:29 a.m.

19 --- Upon resuming at 9:46 a.m.

20

21 THE CHAIRPERSON: All right. So we  
22 are ready to continue. Me. Hacault si'l vous plais.

23 MR. ANTOINE HACAUT: Merci, Madam  
24 President.

25

1   CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

2                   MR. ANTOINE HACAULT: The first  
3 question, which I'll be asking, except for Mr. Bowman  
4 across the way, is to get a better understanding of  
5 what factual information each of you have gathered  
6 prior to writing your reports.

7                   First, if I could start to my right,  
8 Mr. Harper. Did you have an opportunity to read the  
9 transcripts of the 2006 Cost of Service proceedings on  
10 the issues of opportunity sales and capacity?

11                  MR. WILLIAM HARPER: I did not  
12 specifically read all the transcripts for -- for this  
13 particular proceeding. I participated in -- in that  
14 proceeding and -- and was -- was aware of what  
15 transpired and the resulting Board's report, but I did  
16 not go back and specifically re-read all the  
17 transcripts for this.

18                  MR. CHRISTIAN MONNIN: Mr. Golding,  
19 can you answer the question as to whether or not you  
20 had an occasion to look at any of the transcripts of  
21 the 2006 cost-of-service proceeding?

22                  MR. A.J. GOULDING: I did not  
23 specifically look at this particular transcript.

24                  MR. ANTOINE HACAULT: And, Mr. O'Shea  
25 -- O'Sheasy --

1                   MR. MICHAEL O'SHEASY: Yes.  
2                   MR. ANTOINE HACAULT: -- did --  
3                   MR. MICHAEL O'SHEASY: I did not have  
4 an opportunity to --

5                   MR. ANTOINE HACAULT: Okay. Mr.  
6 Camfield...?

7                   MR. ROBERT CAMFIELD: Also, I did not  
8 have the opportunity to review the transcript.

9                   MR. ANTOINE HACAULT: And finally,  
10 last but not least, what's your answer?

11                  MR. PAUL CHERNICK: Oh. I thought --  
12 I was waiting for my name. No, I have not read the --  
13 the 2006 transcripts.

14                  MR. ANTOINE HACAULT: Okay. Now, the  
15 next question, starting again from my -- my right, Mr.  
16 Harper, what about the -- the transcripts of the  
17 recent NFAT on Keeyask and Conawapa and the report on  
18 the issue of the role of export sales, and in  
19 particular, opportunity sales?

20                  MR. WILLIAM HARPER: Again, I did not  
21 specifically read them for this. I -- I sat through  
22 and participated actively in those hearings.

23                  I read those transcripts as part of my  
24 support -- as part of my support to PILC in -- in  
25 assisting them in their participation and their --

1 writing their final submissions. But I did not go  
2 back and read every transcript for this particular  
3 proceeding.

4 MR. ANTOINE HACAULT: What about you,  
5 Mr. Goulding?

6 MR. A.J. GOULDING: I have a similar  
7 answer to -- to Mr. Harper. For the purposes of this  
8 proceeding, I did not specifically read those  
9 documents.

10 MR. ANTOINE HACAULT: Had you read  
11 them in the past?

12 MR. A.J. GOULDING: I had reviewed  
13 some of these documents in the context of the Site C  
14 review in -- in BC, but I did not go back and refresh  
15 my memory of them for this proceeding.

16 MR. ANTOINE HACAULT: Okay. Mr.  
17 O'Sheasy...?

18 MR. MICHAEL O'SHEASY: No, sir, I did  
19 not review those transcripts.

20 MR. ANTOINE HACAULT: Mr. Camfield...?

21 MR. ROBERT CAMFIELD: Similarly, I did  
22 not review those transcripts.

23 MR. ANTOINE HACAULT: And Mr.  
24 Chernick...?

25 MR. PAUL CHERNICK: I was involved in

1 the NFAT proceeding to some extent, and I reviewed  
2 some of the transcripts at the time, but I did not go  
3 back to them for this case.

4 MR. ANTOINE HACAULT: Thank you. I  
5 distributed last night a document or some pages,  
6 extracts from the Needs for and Alternatives To  
7 proceeding, which I believe can be marked as MIPUG-27.

8 MR. KURT SIMONSEN: Correct. Thank  
9 you.

10

11 --- EXHIBIT NO. MIPUG-27: Extracts from NFAT  
12 proceeding

13

14 CONTINUED BY MR. ANTOINE HACAULT:

15 MR. ANTOINE HACAULT: Just as a  
16 general preamble, this relates to one (1) of the  
17 documents in the Board's book of documents. They had  
18 asked for an update with respect to this particular  
19 exhibit, which had been filed in those proceedings.

20 And in the interests of time, I'll  
21 perhaps go to somebody who may have some recollection  
22 of what occurred in there, Mr. Harper. If we go to  
23 page 3 of -- of 5 in that first set of documents,  
24 there's a heading, Contracted Surplus Energy, which  
25 was Table 2.

1                   And in the lower right-hand side,  
2 there's a value for all that contracted surplus of one  
3 (1) -- about \$1 billion.

4                   Is it consistent with your recollection  
5 that this surplus energy, which is distinguished from  
6 dependable energy, was presented in that hearing as  
7 being of that value?

8                   MR. WILLIAM HARPER: Yes, it is. I  
9 believe this undertaking was provided in the response  
10 to -- in response to sort of the -- actually, it was  
11 one (1) of the first opening days, I believe, when --  
12 I believe it was the -- excuse me if I had it wrong.  
13 I think it was pre -- president -- president of the  
14 Corporation, wasn't it?

15                  MR. ANTOINE HACAULT: You're right.  
16 It was Scott Thomson, yeah.

17                  MR. WILLIAM HARPER: What was -- at  
18 that time, he was making some comments about the total  
19 values of -- value of the contracts that had been --  
20 that -- that had been sort of planned for. And there  
21 was someone's question as to whether they were all  
22 dependable contracts, or whether some of them were --  
23 you know, what the dollar value of that.

24                  I think he said \$9 to \$10 billion was,  
25 and I think this undertaking indicated that some of

1 them were dependable contracts, some of them -- but  
2 they're -- also included in there were values for what  
3 would be depend -- less dependable or sur -- surplus  
4 type sales as well.

5 I think there's three (3) tables here.  
6 I was -- because I think there's two (2) different  
7 tables dealing with two (2) different types of -- of  
8 surplus sales, if I'm not mistaken.

9 MR. ANTOINE HACAULT: You're  
10 absolutely correct. And the next page details the  
11 non-contracted surplus energy sales, right?

12 MR. WILLIAM HARPER: This is -- this  
13 is, to my understanding, is right. And I guess it had  
14 to do with the degree to which they were in processes  
15 and negotiation with -- with various parties.

16 MR. ANTOINE HACAULT: And the total  
17 for this non-contracted, which is over and above  
18 dependable on the right -- bottom right-hand corner,  
19 is another \$3.4 billion?

20 MR. WILLIAM HARPER: Right. That --  
21 that, plus the dependable, went to the total of about  
22 -- somewhere around \$10 billion, I think, in total.

23 MR. ANTOINE HACAULT: And that \$10  
24 billion, you've got an excellent memory, is on the  
25 next page, page 5 of 5.

1                   MR. WILLIAM HARPER: My memory isn't  
2 that good. I read it last night, so.

3                   MR. ANTOINE HACAULT: And you're  
4 absolutely correct in -- in having your refreshed your  
5 memory that it was the President, Scott Thomson, who  
6 was presenting for the Corporation, and the then-Board  
7 member, Richard Bel. And we can go a couple of pages  
8 in. It's page 96 of that transcript. It's the next  
9 page.

10                  And at line twe -- line 20, Board  
11 member Bel asked the -- the president, Scott, what  
12 proportion of the total cost of Conawapa and Keeyask  
13 is suffered -- covered by these new export contracts  
14 depending on their being built.

15                  And then, if we continue to the top of  
16 page 97, that's where the president says, Well, we've  
17 got \$9 billion worth of them. And then Board counsel,  
18 Mr. Peters, subsequently asked a series of questions  
19 which led to this undertaking. And the -- that  
20 transcript is -- part of the transcript is also  
21 included in this document, which I won't get into.

22                  Now, there was further information  
23 provided in that hearing with respect to opportunity  
24 sales. Is that consistent with your memory, Mr.  
25 Harper?

1                   MR. WILLIAM HARPER: Yes, I believe  
2 the -- the -- there -- there was a discussion. I  
3 don't think there was -- I don't -- don't really --  
4 there -- there was -- there was information on -- yes,  
5 there was information on opportunity sales. I'll see  
6 where you're going in terms of what types were  
7 discussed there, yeah.

8                   MR. ANTOINE HACAULT: Yes. So what  
9 I've also extracted is part of the NFAT report. And,  
10 in particular, Diana, if you'd go to -- go to page 24.  
11 In the first full paragraph, midway through that  
12 paragraph, a sentence starts, and I'm quoting:

13                   "Approximately 60 percent of  
14                   Manitoba Hydro's projected export  
15                   revenues are based on these  
16                   opportunity sales."

17                   Is that consistent with your  
18 recollection of that?

19                   MR. WILLIAM HARPER: Yes. I think  
20 that's also consistent with the response I gave to Mr.  
21 Gange earlier, which was that it was a package.  
22 Opportunity sales were part of the package, and  
23 therefore part of the overall consideration, yes.

24                   MR. ANTOINE HACAULT: And when we were  
25 considering all of this, we were looking at this

1 system-wide as to what the system itself was able to  
2 handle, not just one (1) particular plant?

3 MR. WILLIAM HARPER: Right. We --  
4 right. Because it's an integrated system and it works  
5 on an integrated basis, they were looking at plans as  
6 a whole and what was the implication of specific plans  
7 of hol -- of holistic plans as opposed to individual  
8 stations. That's correct.

9 MR. ANTOINE HACAULT: And, Diana, if  
10 you can flip to page 30 of the report, please. At the  
11 bottom of the page, there's a heading, "Export revenue  
12 projections." Page 3-0, 30. It's also part of the  
13 package.

14

15 (BRIEF PAUSE)

16

17 MR. ANTOINE HACAULT: So at the bottom  
18 of that page, and I'm going to read into the record  
19 the paragraph that starts:

20 "Over the past decade, Manitoba  
21 Hydro has exported between 10,000-  
22 12,000 gigawatt hours of electricity  
23 annually. Its preferred development  
24 plan is predicated, and..."

25 Is that your understanding, that the

1 plans were predicated on exports?

2 MR. WILLIAM HARPER: Well, exports  
3 were -- exports were critical to the support of the --  
4 of the economics of the Preferred Plan. If they had  
5 been no exports, it would not have been the preferred  
6 plan.

7 MR. ANTOINE HACAULT: And the sentence  
8 continues:

9 "And Manitoba Hydro currently  
10 predicts a cumulative 6.9 billion of  
11 contracted firm energy revenues  
12 between 2015 and 2036."

13 So about a twenty (20) year time  
14 period?

15 MR. WILLIAM HARPER: I -- I think -- I  
16 think that would be the number, I think, if that  
17 aligns -- I think if my memory -- going back aligns  
18 with what we saw in that undertaking.

19 MR. ANTOINE HACAULT: Yes.

20 MR. WILLIAM HARPER: I guess it's the  
21 next line, if -- if you're going to go there, that  
22 bothers me a bit because the \$10 billion was the total  
23 of both sur -- opportunity and the dependable as  
24 opposed to just the opportunity sales, so I'm not too  
25 sure -- I'm not too sure if -- if the next line is

1 correct. I -- I'm sorry, but --

2 MR. ANTOINE HACAULT: Yeah. And  
3 there's another part of the report that actually deals  
4 with that and -- and details the additional  
5 opportunity, and maybe we need to go there but I think  
6 it's -- we can -- I don't need to do this for purposes  
7 of the evidence this morning.

8 MR. WILLIAM HARPER: Right.

9 MR. ANTOINE HACAULT: There's actually  
10 another table in this report that details the  
11 additional opportunity over and above this table --

12 MR. WILLIAM HARPER: Okay.

13 MR. ANTOINE HACAULT: -- getting us to  
14 a total of \$10.1 billion in opportunity sales, so if  
15 we can just proceed on that basis for now.

16 MR. WILLIAM HARPER: Yeah. You know,  
17 I -- I get --

18 MR. BYRON WILLIAMS: Madam Chair, is  
19 Mr. Hacault asking the witness to confirm that  
20 statement, or is he testifying?

21

22 CONTINUED BY MR. ANTOINE HACAULT:

23 MR. ANTOINE HACAULT: Can -- can you  
24 accept, subject to check, that this \$10 billion in  
25 opportunity sales is in fact \$10.1 billion of

1 opportunity sales?

2 MR. WILLIAM HARPER: I'll -- I'll  
3 accept subject to check. I was just off the top of my  
4 head having trouble recon -- reconciling this number  
5 with the undertaking I'd -- I'd seen earlier --

6 MR. ANTOINE HACAULT: Yeah.

7 MR. WILLIAM HARPER: -- but -- but  
8 I'll -- I'll take subject to check that -- that  
9 there's additional information available that bring --  
10 brings it up to this total.

11 THE CHAIRPERSON: Me. Hacault, are you  
12 going to produce that information for Mr. Harper?

13 MR. BYRON WILLIAMS: We -- we would  
14 just take a -- if -- if we get a reference from Mr.  
15 Har -- Mr. Hacault offline, we'll -- we'll certainly  
16 check that, and if that -- if that will move things  
17 along. I don't mean to be slowing things down.

18 THE CHAIRPERSON: Okay.

19

20 CONTINUED BY MR. ANTOINE HACAULT:

21 MR. ANTOINE HACAULT: Now, if we could  
22 bring up MIPUG-24?

23

24 (BRIEF PAUSE)

25

1                   MR. ANTOINE HACAUT: I had some time  
2 to start going through this with Manitoba Hydro, but  
3 hadn't yet gone through it in much detail and that's  
4 why I also asked who might have been around at the  
5 hearing.

6                   If we can put this thing back into  
7 context, there's a comparison of a five (5) unit  
8 Conawapa and a ten (10) unit Conawapa, and trying to  
9 get through the thought process of in Hydro's planning  
10 why it would choose one configuration over the other.

11                  Are you with me so far, Mr. Harper?

12                  MR. WILLIAM HARPER: Yes, I -- I'm  
13 with you so far. I -- I was here actually and -- and  
14 heard Mr. -- Mr. Cormie's testimony on -- on this  
15 earlier this week. And having listened to his  
16 testimony I'm not sure there's much more I -- I can  
17 add but I'll -- I'll go along with you.

18                  MR. ANTOINE HACAUT: If we go to --  
19 further into this document, there's the extract of the  
20 transcript at page 583.

21

22                  (BRIEF PAUSE)

23

24                  MR. ANTOINE HACAUT: Which is how  
25 this particular -- at line 17 to 23, is how this

1 particular exhibit was created. It was Mr. Peters  
2 with his eloquent questions again asking for another  
3 undertaking. I don't know how he gets away with all  
4 these. So he asked for the assumed costs comparing  
5 those, and Mr. Surminski said, Yeah, we consider those  
6 in our res -- resource plans so we'd be able to  
7 provide them to you.

8                           And then once that document gets  
9 introduced we go further into the transcript. It  
10 would be page 1,164.

11

12                           (BRIEF PAUSE)

13

14                           MR. ANTOINE HACAULT: There's various  
15 questions that are asked, and this is not related to  
16 the particular Conawapa example. It relates to  
17 Kelsey. If you can see the answer of Mr. Surminski at  
18 lines 11 to 19. I'll quote for the record:

19                           "We do an assessment of the program,  
20                           like system efficiency improvement -  
21                           - or for -- Kelsey based on the  
22                           business case which -- considers all  
23                           possible flow conditions. And in  
24                           the process, opportunity energy  
25                           comes in and firm energy, if there

1                   is any."

2                   At line 17:

3                   "In that plant there really wasn't  
4                   any. But I would say opportunity  
5                   energy was a big part of the  
6                   justification."

7                   Is that something consistent with what  
8                   you understood?

9                   MR. WILLIAM HARPER: Well, I -- I  
10          understood Mr. Surminski to say that. It's what he  
11          testified to. I -- I can -- you know, they say they  
12          did the analysis taking into account oppor --  
13          opportunity sales. He's saying it was a big part of  
14          the justification. I -- I can accept that.

15                   MR. ANTOINE HACAULT: Okay. And if we  
16          go to page 1,203, there's a continuation at line 20.  
17          It's a question by Ms. McCaffrey. I'm quoting:

18                   "If you turn to page 2 of that  
19          document you'll see there's an --  
20          one (1), and it's discussing the  
21          class of Kelsey. If you need to  
22          familiarize yourself or refresh your  
23          memory, you can have a moment to  
24          look that over. I'll just ask a  
25          couple questions on it."

1                   And then the next page, 1,204, "The  
2 witness is ready." Says, "Go ahead, please." And the  
3 question is:

4                   "Can you confirm this project was  
5 not required to serve domestic  
6 customers with the exception of, I  
7 guess, 20 million for Unit number 5,  
8 which refer -- which it refers to  
9 there had been a defective winding?  
10                  But, otherwise, this project was not  
11 required to serve domestic  
12 customers. Is that fair?"

13                  And Mr. Suminski responds, "Yes, I can  
14 confirm that." And then the discussion continues.

15                  "And, also, can you confirm this  
16 project of some 96 million as being  
17 undertaken to enhance exports?"

18                  And Mr. -- I won't read the rest of  
19 that question. He answers:

20                  "Yes, there is no firm energy  
21 associated with it. So opportunity  
22 energy would be counted in --  
23 counted on, counting on the export  
24 market."

25                  And then the questioning continues at

1 line 23.

2 "So this is an example then.

3 Manitoba Hydro is undertaking a  
4 substantial capital expenditure  
5 related solely to opportunity  
6 energy?"

7 The next page, please, Diana. Mr.

8 Cormie, "Correct." And he continues his answer.

9 "Just to put that into context,  
10 Wuskwatim is 200 megawatts. We're  
11 spending a billion dollars and  
12 you're increasing the capacity here  
13 by 77 megawatts for a total of a  
14 million dollars, so it's an  
15 incremental improvement to state  
16 station and it has a huge rate of  
17 return."

18 It's a 20 percent rate of return.

19 That's fantastic returns, Mr. Cormie. Now, is that  
20 consistent with your recollection of the hearing?

21 MR. WILLIAM HARPER: Yes. The only  
22 comment I would make is there -- there seems to be  
23 somewhat -- on the face of it there seems to be  
24 somewhat of an inconsistency in the -- in the  
25 explanation here because we are getting an additional

1 megawatts of capacity.

2 Now, the view may be we did not need  
3 the capacity at that particular point in time or in  
4 the short-term, but, eventually, that capacity, as --  
5 as demand growed -- grew on the system, would -- would  
6 become a benefit to the system.

7 I guess you'd have to discount that  
8 back somewhat, so it may not provide that much  
9 benefit. But it seems to me, in -- in a proper  
10 analysis, that 77 megawatts would have -- should have  
11 contributed some -- made some contribution to the  
12 economics of the program even if it was a small  
13 contribution.

14 With that caveat, I -- I can generally  
15 accept what's being said here.

16 MR. ANTOINE HACAULT: And thank you  
17 for that explanation. When I ask for the questions in  
18 the next set, we're going to get into things like  
19 this, the capacity that comes with export-based  
20 decisions and -- and in generating stations. So I  
21 might follow up some questions with you on that.

22 Then if we go on to page 1209 -- sorry,  
23 1210.

24 MR. WILLIAM HARPER: I think we're  
25 back on Conawapa now?

1                   MR. ANTOINE HACAUT: Yeah, we're back  
2 on Conawapa. You're absolutely right. And there's --  
3 Mr. Cormie is explaining -- and the full answer can be  
4 read at a later time. I'm not intending to cut any  
5 part of his explanation on purpose. It's just I don't  
6 -- I'm limited in my time.

7                   So if we go to line 8, Mr. Cormie's  
8 explaining the Corporation's position that:

9                   "Although you can't depend -- depend  
10                  on it, on average, you will get --  
11                  you will get a significant benefit  
12                  from the additional energy that's  
13                  produced."

14                  And Ms. McCaffrey who's questioning him  
15 says:

16                  "And that benefit again we're  
17                  talking about here is an increase in  
18                  opportunity sales?

19                  MR. CORMIE: Right."

20                  So you -- so the opportunity, although  
21 it's the opportunity, it does affect the cost of  
22 electricity in Manitoba. Is that also consistent with  
23 your recollection of that hearing?

24                  MR. WILLIAM HARPER: Yes. Like this  
25 particular -- this particular undertaking was not one

1 I spent a lot of time on, but sort of the general  
2 messaging and the principles being set out there are -  
3 - are consistent -- consistent with my understanding.

4 MR. ANTOINE HACAULT: Thank you.

5 Diana, sorry, I didn't identify this to  
6 you prior, but MH-76 is the presentation by  
7 Christensen Associates. And if we could go to slide  
8 6. I've got a different one in mine that says two (2)  
9 types of export sales. There, five (5). That's  
10 because he went -- I don't know.

11 So my question, Mr. O'Sheasy, is that,  
12 as I understand it, you set out in a summary form what  
13 you feel are distinguishing characteristics between  
14 opportunity sales and dependable sales to then  
15 continue your analysis as to whether there should be  
16 direct or fixed costs attributed to those two (2)  
17 categories.

18 Is that fair?

19 MR. MICHAEL O'SHEASY: That's fair.

20 There are more considerations than are just listed  
21 here, but your comment's fair.

22 MR. ANTOINE HACAULT: Yeah. So these  
23 would be the more significant ones that you wanted to  
24 bring to the Board's attention.

25 Is that fair?

1                   MR. MICHAEL O'SHEASY: That's fair,  
2 plus it's -- I think it's easier to wrap your -- your  
3 head around and understand.

4                   MR. ANTOINE HACAULT: Now, we've heard  
5 some discussion about the 2006 decision of the PUB,  
6 the 2008 decision of the PUB, and the 2012 decision of  
7 the PUB on cost of service.

8                   Are you following me so far?

9                   MR. MICHAEL O'SHEASY: Yes.

10                  MR. ANTOINE HACAULT: And the first  
11 bullet that you indicate with respect to opportunity  
12 sales is that they're short notice and short duration.  
13 And I would suggest to you, sir, that that's not new.  
14 That was a characteristic that existed in 2006, 2008,  
15 and 2012.

16                  Do you agree or disagree?

17                  MR. MICHAEL O'SHEASY: I think I would  
18 agree.

19                  MR. ANTOINE HACAULT: And the second  
20 bullet indicates:

21                  "When water conditions permit in  
22 excess of dependable energy sales."

23                  Again, I would suggest to you that  
24 that's not a new characteristic. That existed in  
25 2006. It existed in 2008. And it existed in 2012.

1 Would you agree?

2 MR. MICHAEL O'SHEASY: I would agree.

3 MR. ANTOINE HACAULT: And the third  
4 bullet indicating:

5 "Non-firm sales are not backed up by  
6 Manitoba Hydro resources."

7 Again, that would not be new. That  
8 would be something -- that -- that would have been a  
9 characteristic in 2006, 2008, and 2012. Wouldn't you  
10 agree?

11 MR. MICHAEL O'SHEASY: That's my  
12 understanding.

13 MR. ANTOINE HACAULT: Okay. And then  
14 if we go to dependable sales, the first bullet you've  
15 indicated is "long notice and duration." Again, I  
16 would suggest to you, sir, that that's not a  
17 characteristic which is different in 2006, 2008, or  
18 2012. Do you agree?

19 MR. MICHAEL O'SHEASY: I would agree.

20 MR. ANTOINE HACAULT: And the same  
21 would be true of the next three (3) bullets, sir?

22 Instead of me going through of them -- "served under  
23 low flow conditions." The next bullet:

24 "Firm sales and originate from  
25 Manitoba Hydro resources."

1                   The last bullet:

2                   "Can enable advancements for new  
3                   generation to take advantage of  
4                   markets for dependable sales."

5                   Each of those bullets are not new.

6 They're characteristics that existed in 2006, 2008,  
7 and 2012. Would you agree?

8                   MR. MICHAEL O'SHEASY: Yes, I would,  
9 but let me caveat that by -- I'm -- I'm comfortable  
10 saying that those are characteristics today. I'm not  
11 nearly as experienced or aware of exactly what was  
12 happening in '06 and '08, but I don't think it's  
13 unrealistic to assume that they're -- they were there  
14 in '06, but I -- I'm not as comfortable attesting to  
15 that as much as I am that those are the  
16 characteristics today.

17                  MR. ANTOINE HACAULT: And from your  
18 answer, you're more comfortable in 2012, and you  
19 become less comfortable going backwards.

20                  MR. MICHAEL O'SHEASY: Correct.  
21 Correct. It has something to do with age.

22

23                   (BRIEF PAUSE)

24

25                  MR. ANTOINE HACAULT: Diana, I have

1 decided, contrary to what I told you initially,  
2 because it went a bit quicker than I thought, to go  
3 to the NARUC manual. Page 7.

4

5 (BRIEF PAUSE)

6

7 MR. ANTOINE HACAULT: I'll pick on  
8 somebody else. What about Mr. Goulding? Firstly, can  
9 you explain the significance of this manual from a  
10 general sense in your industry?

11 MR. A.J. GOULDING: So the manual is  
12 one (1) way, an increasingly out-of-date way, to  
13 consider rate-making. And it does include some  
14 principals that, as with those of Bonbright, are  
15 considered to be -- 'timeless' is perhaps a bit of an  
16 exaggeration, but -- but are continue -- are  
17 considered to hold through a wide range of  
18 circumstances.

19 It -- it's meant as -- as a guide to  
20 regulators in the United States and many other  
21 jurisdictions also look to this document as one (1)  
22 way of informing their thoughts on rate-making.

23 MR. ANTOINE HACAULT: And for the  
24 basic principals, would it be useful for somebody like  
25 me to read?

1                   MR. A.J. GOULDING: I wouldn't start  
2 with -- with this. I would probably start with  
3 Bonbright, frankly speaking --

4                   MR. ANTOINE HACAULT: Okay.

5                   MR. A.J. GOULDING: -- but I would use  
6 this as a -- as a second or third. I -- I don't have  
7 this on my -- on my syllabus for students at -- in my  
8 electricity markets course.

9                   MR. ANTOINE HACAULT: Okay. Now, at  
10 page 7, there's a heading lower -- that describes  
11 transmission. So I'll read it into the record:

12                   "A utilities transmission system  
13                   consists of highly integrated bulk  
14                   power supply facilities, high  
15                   voltage power lines, and substations  
16                   that transport power from the point  
17                   of origin (either its own generation  
18                   or delivery points from other  
19                   utilities) to load centres  
20                   then] (either in its own franchise  
21                   territory or for delivery to other  
22                   utilities).

23                   Transmission function is generally  
24                   concluded at the high voltage side  
25                   of a distribution substation owned

1                   by the utility or at other points  
2                   where the ownership of bulk power  
3                   supply facility changes."

4                   Now, is this a concept that is still  
5 useful today, sir?

6                   MR. A.J. GOULDING: Yes, and no. The  
7 -- the concept itself is quite common, although it  
8 varies in its implementation. So the question of what  
9 constitutes high voltage, for example, varies from  
10 jurisdiction to jurisdiction.

11                 Increasingly, we're having to rethink  
12 what constitutes transmission in the sense that many  
13 jurisdictions are looking at things like non-  
14 transmission alternatives to assure a more holistic  
15 view of the transmission systems function.

16                 And we're also beginning to get into  
17 questions about, where does storage sit if, for  
18 example, it is being used to facilitate the  
19 transmission function.

20                 MR. ANTOINE HACAULT: And I gather you  
21 would agree with me, then, that if we're looking at  
22 the discussions we're having here about Bipole III,  
23 we've come up with a new concept that's not discussed  
24 in this manual, which is called generation-related  
25 transmission. That's a new concept that didn't exist

1 in 1992 and has been created in some jurisdictions.

2 Is that fair?

3 MR. A.J. GOULDING: I'd want to be a  
4 little bit cautious in responding to your question in  
5 that we've always had the concept of a generator lead,  
6 right. Now, you know, conceptually, this was  
7 generally something where you'd say, All right, I've  
8 got a generator. The high-voltage transmission line  
9 is, you know, 'X' kilometres away, and I'm going to  
10 connect that generator to the transmission system.

11 That piece of wire, you know, is caused  
12 by the generator and that's -- that's very clear.

13 Now, when you get to a distant power station that is  
14 connected to a high-voltage transmission line, that --  
15 it -- it begins to be a little -- a little bit  
16 complicated as to whether a reasonable person could  
17 say, Well, we've got this very large isolated  
18 generating station and we're building high-voltage  
19 transmission to it.

20 That high-voltage transmission is  
21 clearly integrated into the rest of the transmission  
22 system. Is that transmission caused by the  
23 generation, or is it caused by the need for greater  
24 reliability on the transmission system?

25 And so you start to have concepts that

1 the greater the distance that the transmission line is  
2 going and the -- the bigger the challenge is for a  
3 regulator to -- to determine whether that is  
4 essentially a generation-caused wire or a  
5 transmission-caused wire.

6 I -- I apologize for not being clear  
7 cut.

8 MR. ANTOINE HACAULT: No, and thank  
9 you for that answer. And I want to know some of your  
10 thought process in distinguishing between generator  
11 related. And you've, as I understood your answer,  
12 reliability, so for the demand side.

13 Why do you make that dis -- distinction  
14 between generator-related? I can understand that.  
15 We've got a number of little stations everywhere that  
16 have leads to -- you know, to various spots, so that  
17 part I'm -- I'm understanding.

18 The part that I'd like to know the kind  
19 of thinking behind, why do you distinguish between  
20 generator-related and reliability-related? What's  
21 your thought process in -- in causing that  
22 distinction?

23 MR. A.J. GOULDING: Sure. And I think  
24 that's a -- again, a question that is evolving. But  
25 if we think about it from a transmission planner's

1 perspective, right, rather than from a generation  
2 developer's perspective, right, the generation part of  
3 the utility, they're looking at, you know, How do we  
4 serve the needs for energy and capacity, right?

5                   The transmission system is bound to  
6 particular requirements with regards to NERC  
7 standards, for example. I'm speaking generally, not -  
8 - not specifically, here. But the transmission  
9 planner is bound by certain reliability requirements,  
10 certain expectations. And they are building the  
11 transmission system accordingly.

12                  And so they may look at a situation,  
13 you know, changing patterns of load, for example, that  
14 have made the transmission system less reliable,  
15 right? The -- summer line loadings have changed  
16 because you've had growth in a particular subdivision,  
17 or you've had some industrial load added in a  
18 particular part of the province.

19                  And it's not that the province is  
20 energy or capacity short. It's that the transmission  
21 system is -- has become less reliable because of the  
22 location of load, the location of generation, changes  
23 in a variety of other factors.

24                  And so the transmission planner says,  
25 Okay, I'm going to do 'X', right? I'm going to

1 upgrade a substation, I'm going to add a line. And  
2 the purpose of those lines is to improve reliability.

3                   And if you -- if you actually look at  
4 the planning document, there will be somewhere a  
5 justification that this facility is being built to  
6 improve reliability. And -- and so that's why I make  
7 the distinction. And --

8                   MR. KURT SIMONSEN: About five (5)  
9 minutes, Mr. Hacault.

10                  MR. ANTOINE HACAULT: Thank you.

11

12 CONTINUED BY MR. ANTOINE HACAULT:

13                  MR. ANTOINE HACAULT: And how would  
14 the distinction help me decide whether it's more like  
15 transmission or more like generation?

16                  MR. A.J. GOULDING: Sure. So I think  
17 that, again, speaking generally, I would be looking at  
18 -- and I won't be able to cite from -- from memory,  
19 for example, the five (5) factor test that FERC has,  
20 which is really to distinguish between transmission  
21 and distribution. But it has some applicability here.

22                  I would be looking at the primary  
23 purpose of the line. Does the line serve essentially  
24 a single generation node? And if that's the case, are  
25 there any other customers on the line? Was the line's

1 construction premised on serving a particular piece of  
2 generation, or was it premised on the fact that we  
3 need redundancy, right?

4 We have a set of other aging lines.

5 We're concerned about them, and we need -- we need to  
6 have some additional capability.

7 If -- if you look -- I apologize for  
8 bringing in an Alberta example, but the lengthy  
9 discussion on some of the north-south transmission  
10 that was going to strengthen the ability to move  
11 generation south, that nonetheless was caused by a  
12 reliability concern based on economic growth. It  
13 wasn't caused by any particular generator.

14 And -- and so that's -- that's kind of  
15 how I would make the distinction.

16 MR. ANTOINE HACAULT: And if it's a  
17 reliability concern, you would tend to put it into the  
18 transmission pot as opposed to the generation pot?

19 MR. A.J. GOULDING: Yes, I would.

20 MR. ANTOINE HACAULT: Thank you.

21 Those are all my questions at this time.

22 MR. KURT SIMONSEN: Madam Chair, it's  
23 the Board secretary. There's been a bit of offline  
24 discussion here as to whether the NARUC manual should  
25 be entered in as an exhibit since Mr. Hacault, and I

1 think probably others have also referred to it. If  
2 Mr. Hacault has -- has no objections I'd like to call  
3 it an exhibit.

4 MR. ANTOINE HACAULT: In a very  
5 general way I don't have an issue. I'm not too sure I  
6 -- sometimes I get nervous about copyright, and if  
7 it's available on the public website of the PUB some  
8 people might get nervous about it. Maybe what we  
9 could do is with respect to the pages that have been  
10 referenced we can undertake to mark those.

11 If the Board doesn't have any issues on  
12 -- on copyright, I don't have any issues putting it  
13 but I don't want to be somebody who's going to be  
14 perceived as causing copyright issues. That's my only  
15 caveat. Otherwise, absolutely. If -- if there's an  
16 electronic -- electronic copy that's been provided to  
17 the Board we could mark it as the next MIPUG exhibit.

18 MR. KURT SIMONSEN: We have an  
19 electronic copy, Madam Chair. I suggest that we --  
20 we'll make it available to all the parties, and mark  
21 it as MIPUG --

22 THE CHAIRPERSON: Okay.

23 MR. KURT SIMONSEN: -- 28.

24 THE CHAIRPERSON: Agreed. Thank you.

25

1 --- EXHIBIT NO. MIPUG-28: NARUC manual

2

3 THE CHAIRPERSON: Ms. Fernandes,  
4 please...?

5 MS. ODETTE FERNANDES: Thank you,  
6 Madam Chair.

7

8 CROSS-EXAMINATION BY MS. ODETTE FERNANDES:

9 MS. ODETTE FERNANDES: Mr. Bowman,  
10 I'll first start off with you. That shouldn't be a  
11 surprise. This morning you were having a discussion  
12 regarding the predictability of oppor -- opportunity  
13 sales.

14 Now, with respect to opportunity sales,  
15 would you agree that even if average flows are greater  
16 than dependable flows you don't know what price you're  
17 going to get with any degree of predictability?

18 MR. PATRICK BOWMAN: Yes. In any  
19 given hour, yes, absolutely.

20 MS. ODETTE FERNANDES: And you'd agree  
21 that the only thing we can really reasonably predict  
22 is that in most years we will have surplus water?

23 MR. PATRICK BOWMAN: Yeah. I -- I  
24 guess maybe I will caveat the response I just get --  
25 gave. You can -- in certain types of agreements you

1 can -- you -- you could have price predictability  
2 without volume predictability. You could imagine a  
3 deal with a counterparty that says, I'll sell you this  
4 energy if I have it and we already know the price.  
5 It's just a question as to whether I have it, for  
6 example.

7 That -- that type of thing could lead  
8 to a known price but an unknown quantity. But in  
9 general we would -- I would say, yes, in -- in -- over  
10 any reasonable horizon you don't know the -- the price  
11 but you do know that the -- the quantity is -- is  
12 likely to exist in most years.

13 MS. ODETTE FERNANDES: And do you  
14 accept that revenue from the sale of any energy  
15 derived from higher than dependable flows is dependent  
16 on the market conditions?

17 MR. PATRICK BOWMAN: Yes.

18 MS. ODETTE FERNANDES: And do you  
19 agree that market conditions can be such that  
20 opportunity sales cannot regularly be dependent upon  
21 to realize revenue equal to or even close to full  
22 embedded costs?

23

24 (BRIEF PAUSE)

25

1                   MR. PATRICK BOWMAN: Okay. There --  
2 there was a number of -- of words in there. I just  
3 want to be very precise but so could -- would you mind  
4 asking the question again?

5                   MS. ODETTE FERNANDES: Yes.

6                   MR. PATRICK BOWMAN: Okay.

7                   MS. ODETTE FERNANDES: Do you agree  
8 that market conditions can be such that opportunity  
9 sales cannot regularly be dependent upon to rel -- to  
10 realize revenue equal to or even close to full  
11 embedded cost?

12                  So you can't guarantee that 100 percent  
13 of the time you're going to realize revenue equal to  
14 full embedded cost.

15                  MR. PATRICK BOWMAN: It -- it -- with  
16 the cav -- regularly is the part I was getting caught  
17 on.

18                  MS. ODETTE FERNANDES: Okay.

19                  MR. PATRICK BOWMAN: A hundred percent  
20 of the time, absolutely.

21                  MS. ODETTE FERNANDES: Okay. And if  
22 opportunity sales, or potential opportunity sales  
23 drove the choice -- if we look at Wuskwatim for  
24 example, between Wuskwatim and a gas turbine, would  
25 you agree that the appropriate measure of the cost is

1 the incremental cost of the plant that was chosen  
2 versus the thermal alternative?

3

4 (BRIEF PAUSE)

5

6 MR. PATRICK BOWMAN: You're -- to make  
7 sure I understand the question, it sounds like you're  
8 effectively saying there are -- that when you make a  
9 decision on a plant or on a plan, there are -- it's  
10 like a layer cake, and you have to look at the layers  
11 of -- of the different supply components, and the last  
12 increment on the benefit side is the opportunity  
13 revenue you might get and the -- the -- as a result,  
14 you might only look at the last increment on the cost  
15 comparison between the -- the plant and the -- the  
16 turbine you're talking about.

17 And I -- I don't think that's a fair  
18 characterization. I think that's dismissive of the  
19 fact that -- that the opportunity sales are as real to  
20 the plant as the dependable energy is, as -- as is the  
21 capacity, three (3) -- three (3) components. And --  
22 and they're as critical to your decision to proceed  
23 with the plant as the others.

24 They may have some degree of  
25 uncertainty on dollar value. They may have a degree

1 of uncertainty as to whether they arise in any given  
2 year. But they -- they -- I don't think they have any  
3 less uncertainty over the -- the horizon of which you  
4 make economic decisions. And -- and I don't think  
5 it's fair to think of them as the -- the last  
6 increment, the byproduct, as the Board cited it when  
7 it rejected this logic.

8                   They're -- they're integral. They're  
9 absolutely a part of the -- of the inherent decision  
10 on the plant.

11                  MS. ODETTE FERNANDES: And you won't  
12 dispute that there have been many other factors other  
13 than the availability of opportunity sales that  
14 factors into a choice, such as choosing Wuskwatim?

15                  MR. PATRICK BOWMAN: I completely  
16 agree. There -- there are a long list of factors that  
17 one looks at when you choose a plant like Wuskwatim.

18                  MS. ODETTE FERNANDES: And those could  
19 include environmental, and then provincial and local  
20 economic benefits?

21                  MR. PATRICK BOWMAN: Yes.

22                  MS. ODETTE FERNANDES: Okay. And  
23 you'd also agree that there are also risks when you're  
24 associating two (2) different types of plants and  
25 doing the comparison?

1                   MR. PATRICK BOWMAN: Oh, yeah,  
2 absolutely, yes. And that's what the quilt was -- I  
3 think illustrated in a -- in a very good visual way,  
4 the -- the green and red quilt we had up on the screen  
5 yesterday.

6                   MS. ODETTE FERNANDES: Thank you.

7 Now, we heard from Mr. Cormie on Wednesday about how  
8 opportunity sales will be entered into on the basis of  
9 product availability. So if I can have transcript  
10 page 252, please.

11                  And so if I look at line 3, Mr.  
12 Cormie's indicated:

13                  "And so the water has to be in the  
14 reservoir or there has to be a  
15 significant snow pack on the ground  
16 before we're convinced that we can  
17 enter into short-term firm sales  
18 that commit the Company to supplying  
19 it beyond the dependable energy  
20 criteria."

21                  Do you recall that testimony?

22                  MR. PATRICK BOWMAN: Yes.

23                  MS. ODETTE FERNANDES: In addition to  
24 seasonal forward sales, a large portion of opportunity  
25 sales are made up of the sales in the day ahead market

1 where, if Manitoba Hydro has surplus water and  
2 generation it may offer to sell the energy in the day  
3 ahead.

4                   Would you accept that?

5                   MR. PATRICK BOWMAN: Yes, that's  
6 another of the types of -- of opportunity sales. I  
7 think this was an item this morning. That when one  
8 gets into these -- these words, they can have specific  
9 meanings, and -- and sometimes we use them  
10 interchangeably but they don't mean the same thing.

11                  I think up above gives an example, the  
12 first quote you gave me, that when something says  
13 something is a firm sale, up above it's clarifying it  
14 can be a firm sale and still not be from dependable  
15 energy. And -- and down here you -- you highlight it  
16 still could be an opportunity sale even though it's  
17 made on a firm -- short-term firm basis. And this is  
18 highlighting there are other types of opportunity  
19 sales that are made on a -- on a day-ahead or into-  
20 the-market basis.

21                  Opportunity is not just these MISO  
22 transactions, they -- they're a wide range of types of  
23 sales that -- that are made that are simply not linked  
24 to dependable energy, or dependable energy criteria,  
25 more accurately.

1                   MS. ODETTE FERNANDES: And so in terms  
2 of these different types of sales -- and I noted  
3 yesterday that -- I believe it was yesterday, that you  
4 indicated that you were -- you were having discussions  
5 with MIPUG members about some of these issues and  
6 you've had various conversations with you (sic).

7                   Now, in your conversations, can you  
8 indicate whether MIPUG members would be com --  
9 comfortable with having six (6) months or less  
10 advanced notice or assurance that their loads can be  
11 served?

12                  MR. PATRICK BOWMAN: I -- I would  
13 hesitate to speak for the members. But I think it's  
14 fair to say that they -- they plan their plants around  
15 -- around a certain energy price at a certain  
16 availability.

17                  Sometimes we hear that they would like  
18 a broader suite of options from Hydro by having a  
19 different set of -- an option to participate in a  
20 different set of prices with a different level of --  
21 of assured supply or reliability.

22                  But, in general, all of those -- all --  
23 I would say it's fair to say all of the -- the MIPUG  
24 members rely on a large portion of their power being  
25 at a known -- a price known in advance for a supply

1 that is as firm as -- as Manitoba Hydro can make it.  
2 They may want other tiers of power that's available to  
3 them, for example, at a preferred price but for a  
4 lower reliability.

5 Curtailable service is an example.

6 It's a sur -- there could be other type of surplus  
7 energy arrangements.

8 MS. ODETTE FERNANDES: Okay. Thank  
9 you, Mr. Bowman. Now, if I can turn to Mr. Harper  
10 just for a minute. Mr. Harper, if we go to page 6 of  
11 your rebuttal. Now this section addresses the  
12 question of the role played by exports in the  
13 selection of generation expansion plans.

14 And I'll go down to -- thank you, Diana  
15 -- footnote 23. And that was a document that you  
16 referenced in your rebuttal evidence. And I'd like to  
17 mark that as a Manitoba Hydro exhibit in this  
18 proceeding, and I believe that would be Manitoba Hydro  
19 Exhibit number 77.

20

21 --- EXHIBIT NO. MH-77: Document referenced in  
22 footnote 23 on page 6 of  
23 William Harper's rebuttal

25

1 CONTINUED BY MS. ODETTE FERNANDES:

2 MS. ODETTE FERNANDES: Right. Oh,  
3 sorry, Diana. Back to page 6 just for a second. If I  
4 go to the top of that page, you've indicated that the  
5 levelized costs of energy for Wuskwatim compared  
6 favourably to that of the gas-fired alternatives,  
7 correct?

8 MR. WILLIAM HARPER: That's correct.

9 MS. ODETTE FERNANDES: And so if I  
10 turn now to Manitoba Hydro Exhibit number 77 and I  
11 turn to page 2, I -- I take it by that statement you  
12 mean that the Wuskwatim plant at the time of the NFAT  
13 review was estimated to have a levelized cost per  
14 megawatt hour of sixty-six dollars and ten cents  
15 (\$66.10). And that's shown I believe at the bottom.

16 MR. WILLIAM HARPER: Which one? The  
17 one that's also shown at the very top -- top of the  
18 page in a little bit bigger number as well?

19 MS. ODETTE FERNANDES: Yeah. The one  
20 that's in bold. And if we turn to the levelized costs  
21 of the CCCT which is page 3, to which the Wuskwatim  
22 plant was compared, it was estimated to have a  
23 levelized cost of -- a base cost of sixty dollars and  
24 sixty-three cents (\$60.63) before the consideration of  
25 any incrementally high natural gas prices or

1 environmental premiums, correct?

2 MR. WILLIAM HARPER: Yes. I think in  
3 this case, when I was looking at it, I'd say there --  
4 there were a range of prices depending upon what  
5 assumption you used about the price of natural gas and  
6 the extent to which there were environmental pre --  
7 premiums or I guess emission costs included in that.

8 So there was a range of between sixty  
9 dollars and sixty-three cents (\$60.63) and seventy-  
10 nine dollars and nineteen cents (\$79.19).

11 MS. ODETTE FERNANDES: Right. So if  
12 you consider the -- if you include the incremental  
13 high gas prices and the environmental prev --  
14 premiums, the leveled costs of the CCCT was seventy-  
15 nine (79) -- seventy-nine dollars and nineteen cents  
16 (\$79.19) per megawatt hour, which is actually more  
17 than the leveled costs of Wuskwatim in this  
18 document, correct?

19 MR. WILLIAM HARPER: Yes. That's why  
20 I think I was saying, "favourably," because I saw it  
21 fell somewhere in the middle. And then if you'll  
22 notice, there was also a further footnote explaining  
23 my qualification around the "favourably" as well.

24 MS. ODETTE FERNANDES: Yeah. And so  
25 then if we turn to the last page, the leveled costs

1 of the simple-cycle turbine, the leveled costs --  
2 the base cost of it is seventy-two dollars and forty -  
3 - forty-seven cents (\$72.47) before natural gas --  
4 before that natural gas high-price scenario and the  
5 high environmental premium, correct?

6 MR. WILLIAM HARPER: That's correct.

7 MS. ODETTE FERNANDES: And that base  
8 cost was more than the leveled costs of -- of  
9 Wuskwatim?

10 MR. WILLIAM HARPER: That's correct.

11 MS. ODETTE FERNANDES: So would you  
12 agree with me then that Wuskwatim was a competitive  
13 option even without the consideration of opportunity  
14 sales, just based on the review in this document?

15 MR. WILLIAM HARPER: It's -- no, I  
16 can't, because I think the issue was the calculation  
17 of the leveled cost, if you go back to the very  
18 first page and you look at it, leveled cost is  
19 basically comparing -- the way you get the cost per  
20 kilo -- kilowatt hour is you basically discount the  
21 costs in the numerator and you discount the kilowatt  
22 hours in the denominator and you do a division.

23 It's -- I took a long time to wrap my  
24 mind around it as well. But -- but the key thing is  
25 here, if you notice the amount of energy they used

1 when they were doing the calculation -- it's up in the  
2 top right-hand corner -- was 1,520 gigawatt hours,  
3 which was the average, which is in excess of the  
4 dependable.

5                   So they were assuming when they did  
6 this calculation that you would be able -- that that  
7 was a cost assuming you'd be able to produce and get  
8 value of because you'd be able to -- you'd be able to  
9 actually produce and I guess sell on an average.

10                  The cost -- if you could sell all you  
11 had, you'd get sixty-six (66) dol -- sixty-six dollars  
12 and ten cents (\$66.10) per megawatt hour. But -- so  
13 but that assumed in it there was some opportunity  
14 sales. It also assumed there even that you could sell  
15 all of the dependable energy, which may not have been  
16 the case.

17                  And so that's -- that in my mind is  
18 where the whole role of exports and how much of that -  
19 - how much of that -- if you can't -- if it can't all  
20 be used -- if it can all be used domestically, then I  
21 agree 100 percent with what counsel was saying.

22                  But if it can't all be used  
23 domestically, then to what extent can export revenues  
24 help just take up those additional megawatt hours and  
25 make the economics work.

1 MS. ODETTE FERNANDES: Thank you, Mr.  
2 Harper. Thank you, Madam Chair.

3 MR. BYRON WILLIAMS: Madam Chair, if -  
4 - and if I could just ask My Friend from Hydro, it's  
5 probably my fault, because we've kind of used the word  
6 NFAT interchangeably, the one (1) that was in 2014 and  
7 the one (1) that was in 2004.

8 And I think it was -- but if she could  
9 just confirm that the NFAT that she was referring to  
10 was the Wuskwatim NFAT from the -- when -- whenever it  
11 was. I -- I remember it vaguely.

12 MS. ODETTE FERNANDES: Yes, I can  
13 confirm that was the Wuskwatim NFAT from 2003.

14 THE CHAIRPERSON: Thank you, Ms.  
15 Fernandes. Mr. Peters, please.

16

17 CROSS-EXAMINATION BY MR. BOB PETERS:

18 MR. BOB PETERS: Thank you and good  
19 morning. My first line of questioning to the panel  
20 will be an attempt to assist the Board in  
21 understanding the objectives of each of the experts  
22 and what they were using when they came to the  
23 determination as to what costs should be included in  
24 the export class, and whether there is an objective to  
25 maintain a positive net export revenue.

I say that, because the Board has heard  
Ms. Derksen say to the effect that she cannot con --  
conceive of a negative net export revenue. And I  
think Mr. Harper and Mr. Todd yesterday say  
essentially that overall most of that time that export  
revenue should be positive.

7 So let me ask questions of each of you  
8 and your succinct answers will be helpful. And I  
9 might follow Mr. Hacault's approach and go down the  
10 line.

11

12 (BRIEF PAUSE)

13

14 MR. BOB PETERS: So starting with you,  
15 I suppose, Mr. Harper, even though we heard from you  
16 yesterday, is the reason to have an export class at  
17 this point in time in the Cost of Service to determine  
18 the amount of expected excess or residual export  
19 revenue that will be realized so that it can be divided  
20 amongst the rate classes in a -- in a fair manner as  
21 determined by the Board?

22 MR. WILLIAM HARPER: At the end of the  
23 day we get to the same point, but I -- I don't quite  
24 agree with the reason. I think the reason is, first  
25 of all, to assign a reasonable portion of cost to

1 exports and then look at what is left over as opposed  
2 to trying to come up with a reasonable amount of net  
3 export revenue.

4 I think the objective is trying to come  
5 up with a reasonable cost assignment to exports and  
6 then because prices are set by the market, whatever's  
7 left over is net export revenue.

8 MR. BOB PETERS: Mr. Goulding...?

9 MR. A.J. GOULDING: Could you repeat  
10 the question?

11 MR. BOB PETERS: Well, it was finding  
12 out if one (1) of the -- or if the -- the reason to  
13 have an export class in terms of your recommendation  
14 in the Cost of Service Study is so that there can be a  
15 determination of an expected excess or residual amount  
16 that can be divided among the rate classes in a way  
17 that the Board would see fair?

18 MR. A.J. GOULDING: So I think when we  
19 look at this, I -- I like to refer back to Mr. Todd's  
20 discussion yesterday about the potential dividend that  
21 comes from export sales similar to what we see in  
22 terms of off system sales in -- in some systems in the  
23 United States.

24 And so the ultimate purpose, I believe,  
25 of the export class is to determine a means of

1 allocating those benefits back to customers. And you  
2 can argue about whether it should be part of a Cost of  
3 Service Study or not, but if it is a part of a Cost of  
4 Service Study then you need to look at the costs that  
5 are associated with creating the ability to export.

6 MR. BOB PETERS: All right. I have  
7 your point. Mr. Bowman...?

8 MR. PATRICK BOWMAN: I think my answer  
9 will be largely similar to Mr. Harper's. I -- I think  
10 the end result is as you describe, but I would focus  
11 on the flip side of the coin, that you're not doing  
12 this to define a net export revenue, but it will  
13 ultimately allow you to do that.

14 You are doing it to consider cost  
15 allocation, not -- not revenue allocation. And I -- I  
16 -- the only -- the only place where Mr. Harper and I  
17 draw a distinction is he -- he said you're trying to  
18 measure costs. I framed yesterday and had a quote  
19 from my submission where I said you're trying to  
20 measure an -- an appropriate contribution from exports  
21 towards the assets that they drive. That may not be  
22 exactly the same thing as measuring the cost, and --  
23 and I gave the example of the -- you know, you might -  
24 - you might make a sale for twenty (20) cents that has  
25 costs of nineteen (19).

1                   It doesn't matter if there's some value  
2 or service level that says that that sale costs three  
3 (3) or four (4) or whatever. You -- you have the  
4 opportunity -- or -- or some embedded cost to that.  
5 You have the opportunity to -- to sell it for twenty  
6 (20) and -- and you incurred nineteen (19) in  
7 incremental costs. You better -- you better recover  
8 that -- that cost.

9                   MR. BOB PETERS: Thank you, Mr.  
10 Bowman. From Christensen Associates, Mr. O'Sheasy,  
11 Mr. Camfield, one (1) of you gets to answer the  
12 question on behalf of the -- the company.

13                  MR. MICHAEL O'SHEASY: I think our  
14 answer would be, number 1, we need to clarify what is  
15 the purpose of Manitoba Hydro? The purpose of  
16 Manitoba Hydro, I think we will agree, is that -- is  
17 to provide highly reliable electricity to domestic  
18 customers in a least-cost fashion. And I think it's  
19 pretty much as simple as that.

20                  Now, in doing so -- in achieving that  
21 least-cost objective, it's wise for the Utility to  
22 take advantage of opportunities to achieve that least-  
23 cost objective via export sales. So I -- I envision  
24 export sales as a tool to achieve the overall  
25 objective.

1                   And therefore when we do PCOSS -- and  
2 the purpose of PCOSS is obviously to divide a cost  
3 amongst the rate class to see how well rates are  
4 covering costs. It -- I think it's helpful -- it's --  
5 it's informative, it's important to see this -- the  
6 secondary activities, and I don't mean by using the  
7 word "secondary" to diminish their importance at all,  
8 but they're not the primary reason -- they're not the  
9 main reason that Manitoba Hydro is in business.

10                  The additional activities we call  
11 export sales, I think it's informative, I think it's  
12 important to know how well they cover cost. And I'm  
13 not -- I don't want to imply that by looking at the  
14 export class you can see how well they're covering  
15 costs, because you really need to look at how well  
16 they're covering incremental costs or marginal costs.

17                  But it does inform by looking at those  
18 revenues compared to what we consider to be fair and  
19 cost -- cost-causative type of allocated embedded  
20 costs. So I -- I'm being long-winded, and I'm  
21 violating your premise, but I'll -- I'll shorten it up  
22 real quick.

23                  Number 1, I -- I think it's important  
24 to have them isolated out and looked at because of  
25 their magnitude and their importance to Manitoba

1 Hydro. They do influence cost on Manitoba Hydro, and  
2 they're -- it's important to know how those pieces fit  
3 together and how well they -- they satisfy and --  
4 speculation of cost in terms of achieving the overall  
5 objective and purpose of Manitoba Hydro.

6 MR. BOB PETERS: Mr. Chernick,  
7 anything left to -- to add -- to add?

8 MR. PAUL CHERNICK: I -- I find that I  
9 agree with Mr. Bowman to a shocking extent, although I  
10 -- I have to say that many utilities do the same kinds  
11 of things that Manitoba Hydro does with its export  
12 class without having a separate export class just by  
13 the way that allocates costs and export revenues to  
14 the domestic classes.

15 So you don't have to have an export  
16 class. I think it makes it a little more transparent.  
17 The conversation in this case about where the money  
18 came from, where it goes to, I think is a little  
19 clearer with -- with the export class.

20 MR. BOB PETERS: Let me follow up on  
21 Mr. Harper who started this off, and -- and put  
22 another question to the panel.

23 Mr. Harper, is a reason for the export  
24 class so that we can use one (1) method to allocate  
25 generation and transmission cost to the exports,

1 essentially meaning that we agree that those are the  
2 costs incurred to create the exports, and then be free  
3 to abandon that G&T linkage to allocate the revenue  
4 that's deemed excess or residual in a different  
5 manner?

6                           MR. WILLIAM HARPER: Again, I think  
7 that the overall objective at the end of the day -- I  
8 -- I think you had some adjectives and descriptives in  
9 there that are -- you know, I -- I wouldn't agree  
10 with, but -- but I -- I think -- I think the -- I  
11 think we went down this path to begin with because the  
12 concern -- the concern was that if we were following  
13 the old method, at the end of the day, we were getting  
14 what some people had defined as problematic, other  
15 people have defined as perverse results in terms of a  
16 customer cla -- a customer class would increase its  
17 load, costs would go up, but those costs would be  
18 disproportionately allocated to other customer  
19 classes, which wasn't consistent with the overall  
20 fundamental principle of cost/causation.

21                           And this was tracked back to how we  
22 were allocating the G&T costs associated with exports,  
23 you know, through related exports. And so there was a  
24 view that we -- we needed to modify the cost  
25 allocation meth -- methodology somewhat.

1                           And one (1) way of doing that I thought  
2 was, is -- was trying to -- if we can identify a  
3 reasonable portion of costs that -- that, from a cost-  
4 of-service perspective, exports should be carrying,  
5 and then perhaps al -- allocate what was re -- what  
6 was remaining, which would be the net export revenue,  
7 in a different way, that would give us a result that,  
8 at the end of the day, would -- at a -- on a holistic  
9 level would -- would be more appropriate from -- form  
10 a cost/causation perspective and improve the cost-of-  
11 service study.

12                          MR. BOB PETERS: Mr. Goulding, I'll  
13 take out some of the fancy adjectives that offended  
14 Mr. Harper. But is one (1) reason for the export  
15 class that we can use G&T as a determination of the  
16 costs for that -- those exports, and then whatever is  
17 the net export revenue, we can allocate that in a way  
18 differently than just on G&T responsibility?

19                          MR. A.J. GOULDING: I think I would  
20 answer somewhat more broadly in terms of what the  
21 purpose is in that the purpose allows for a more  
22 detailed examination of relevant costs and an  
23 organized approach to allocating them in a way that is  
24 fair and reasonable.

25                          Now, the outcome of that is that

1 generation and transmission costs are considered, and  
2 -- and then the bene -- the net benefits are -- are  
3 allocated. But I would set the purpose at a slightly  
4 higher level than to say that the exact purpose is --  
5 is for determining the G&T costs.

6 MR. BOB PETERS: Mr. Bowman...?

7 MR. PATRICK BOWMAN: Is it unfair to  
8 get me to -- get you to ask the question again?

9 MR. BOB PETERS: I'd like to know, Mr.  
10 Bowman, if a reason for the export class is so that we  
11 can use G&T costs as the cost of those exports, and  
12 then abandon the G&T linkage to allocate any revenue  
13 that's deemed excess or surplus or residual from that  
14 -- from that activity.

15 MR. PATRICK BOWMAN: A result of  
16 having the export class allows you to do that. I -- I  
17 accept that. Is it -- I don't -- I don't think it's -  
18 - it's the reason or the driver. And I think we need  
19 to be very careful about suggesting that somehow with  
20 N-E-R we're going to -- by defining this N-E-R we're  
21 going to have some grand solution to either of two (2)  
22 problems that I sometimes hear a referenced.

23 That somehow, 1) we can use it to  
24 effectively judge Mr. Cormie's performance, that  
25 somehow this N-E-R is telling us if Hydro's making

1 money on the export markets or losing it. It won't do  
2 that, and I think that needs to be clear.

3                   And the second is, I think we need to  
4 be clear that within the bounds we're talking about N-  
5 E-R is not going to be the -- the solution to  
6 efficiency or -- or grand allocation questions or  
7 something.

8                   And I -- I jotted down that, under the  
9 proposal that existed previously -- under the -- the  
10 approach that existed previously, this N-E-R would  
11 have been allocated to industrial customers, take an  
12 example, about 17 percent of the N-E-R. They would  
13 have gotten credit under the old G&T method. Under  
14 GT&D they get about 14 percent.

15                 If you accept Hydro's numbers, that's  
16 about a hundred million dollars of N-E-R. A  
17 difference of 3 percent means a difference of \$3  
18 million in allocation to the class on a class that  
19 pays about \$180 million in revenues.

20                 This is -- that's not -- if you think  
21 you've got a marginal cost or efficiency or some  
22 other, that is -- that is not about solving that  
23 problem. That -- that N-E-R in -- in that -- at that  
24 scale is -- it is -- it is a bit of revenue that  
25 people can -- can fight over the best use of, but it

1 is not the -- the defining feature of -- of the grand  
2 dividend to Manitobans or the best way to -- to avoid  
3 subsidization of rates or something.

4 MR. BOB PETERS: I hesitate to turn to  
5 you again, Mr. O'Sheasy, but I will -- I will ask if -  
6 - if you have a succinct answer for me.

7 MR. MICHAEL O'SHEASY: No, I don't  
8 have a succinct, but I'll try to get one.

9 No -- no, I don't agree that the  
10 purpose of export -- an export class is so we can  
11 allocate costs using G&T. I think the purpose that we  
12 have an export class, we talked about earlier in the  
13 first question, it just so happens that we need to  
14 allocate costs out to it for the objectives that we  
15 talked about. And we do that with G&T.

16 And the -- the continuation of your  
17 question about and so we can allocate NER back in a  
18 different fashion or whatever fashion, I think we  
19 should -- we would seriously think about having an  
20 export class even if there were no NER.

21 NER is the leftover. If there's no  
22 leftover, I still think we should look at our export  
23 sales to see how well we -- we believe they cover what  
24 we think is fair and adequate allocated embedded  
25 costs. Done.

1                   MR. BOB PETERS: Yes, Mr. Chernick?

2                   MR. PAUL CHERNICK: I think I'm  
3 agreeing with a number of people that -- that what you  
4 described is not a purpose of having the export class.  
5 You may want to allocate the costs to the class  
6 differently than you allocate the use of the net  
7 export revenues.

8                   But you could get the same results  
9 without an export class just based on the way that you  
10 allocate for example the Affordable Energy Fund or the  
11 -- and the -- the revenues from wholesale sales and  
12 the -- the costs of -- of GNT and overhead and so on.

13                  MR. BOB PETERS: All right. Let me  
14 follow that question -- or that answer, Mr. Chernick,  
15 with a question, starting with Mr. Bowman.

16                  Mr. Bowman, since Ms. Derksen isn't on  
17 the panel, I understood you to say earlier in this  
18 hearing that if -- if the Board was to allocate costs  
19 to the export classes in the same way as we allocate  
20 the net export revenue, then there is an argument that  
21 you maybe don't even need an export class.

22                  MR. PATRICK BOWMAN: The -- the  
23 results would be mathematically equivalent.

24                  MR. BOB PETERS: And they're  
25 equivalent, Mr. Bowman, because it's -- it's a wash in

1 the vernacular that you're -- you're charging costs to  
2 certain classes, and then you're reimbursing them  
3 based on the same criteria.

4 MR. PATRICK BOWMAN: Right. Your end  
5 result would be mathematically equivalent. Your steps  
6 in between would look different, but your end result  
7 would be mathematically equivalent. You would end up  
8 coming up with a -- a cost to cust -- and this is what  
9 happened in the old days before we had an export  
10 class.

11 You'd end up with a measured cost to  
12 customers that overstates their cost responsibility  
13 because they're allocated all of the generation and  
14 transmission system, even though exports is using a  
15 substantial part of it. But then you'd credit them  
16 back a bunch of export revenues to -- to bring them  
17 back to the -- the same result you would as if you had  
18 an export cost.

19 MR. BOB PETERS: Does anybody on the  
20 panel disagree with Mr. Bowman's mathematical  
21 conclusion?

22 MR. PAUL CHERNICK: You can  
23 mathematically get the same result with or without an  
24 export class, that's correct. And I would broaden it  
25 -- your question to say, regardless of whether you're

1 going to use G&T going both ways, the same allocator  
2 going both ways, or whether you want to do it  
3 differently, you can get the same result.

4 MR. BOB PETERS: Mr. Harper, another  
5 question. Is allocating only variable costs to the  
6 export class equivalent to having no export class?

7

8 (BRIEF PAUSE)

9

10 MR. WILLIAM HARPER: I'm sorry. Maybe  
11 you should start at the other end of the row. I'm  
12 trying -- I'm trying to work through -- through -- I'm  
13 trying to work through the mathematics in my mind.

14 MR. BOB PETERS: And maybe that -- I -  
15 - I thought of that as Mr. Bowman was speaking. But  
16 if we -- we know how Manitoba Hydro proposes to  
17 allocated variable costs to both the opportunity and  
18 the firm exports, correct?

19 MR. WILLIAM HARPER: That's correct.

20 MR. BOB PETERS: And so if -- if there  
21 was only the allocation of the variable costs to the  
22 export class, is that equivalent to having no export  
23 class?

24 MR. WILLIAM HARPER: I guess I was --  
25 the reason I was struggling was I was trying to figure

1 out, at the end of the day -- right now, when -- when  
2 we have no export class, that's effectively what hap -  
3 - happens -- what happened before, my understanding  
4 was.

5 There were just variable costs  
6 allocated to the -- to -- to exports, and then the  
7 difference. But the trick was the difference at the  
8 end, when you came up with what was then a much bigger  
9 number for what we might call net export revenue, you  
10 allocated that back to all the customers in a certain  
11 fashion.

12 And I guess so you say it's equivalent  
13 to what happened if you have no export class, I -- I'm  
14 then struggling with and that might depend on how you  
15 allocated -- if we did the same thing -- if we did the  
16 same thing we -- we did before and how you would  
17 assume you would treat those costs if you did have an  
18 export class, it could or could not end up being the  
19 same result.

20 MR. BOB PETERS: All right. I'll take  
21 that answer, Mr. Harper, and I'll -- I'll change the  
22 question and I'll start with you, Mr. Goulding.

23 What advice would you give the Board  
24 regarding all the items that the Board has to account  
25 for in the cost-of-service study if the export class

1 was eliminated?

2

3 (BRIEF PAUSE)

4

5 MR. A.J. GOULDING: Just let me repeat  
6 the question. So it's: What advice would I give the  
7 Board on the elements to take into account in a cost-  
8 of-service study if the export class were eliminated?

9 MR. BOB PETERS: Correct.

10

11 (BRIEF PAUSE)

12

13 MR. A.J. GOULDING: I think that for  
14 the most part, those elements are the same that you  
15 would take into account in -- in any cost-of-service  
16 study. I particularly want to pay attention to how  
17 the elimination of the export class affected  
18 incentives.

19 So I would be looking at the rate  
20 impact and comparing it to the -- to the status quo.  
21 And again, let me step back a minute. Your question  
22 was with regards to specifically cost allocation. It  
23 really wasn't a question of rate design.

24 So let me modify my answer a little  
25 bit, although it's frustrating to do so, because in --

1 in fact, I would probably want to be looking beyond  
2 the cost allocation question. But let me -- in  
3 sticking to the cost allocation question, I think one  
4 (1) of the things that I would be particularly  
5 concerned about is whether there are very specific  
6 costs that are, in fact, caused by exports that we are  
7 not monitoring appropriately by eliminating the export  
8 class.

9                           So I'm going to give a ridiculous  
10 hypothetical just for the sake of exposition. Let's  
11 imagine that somebody decided that they were going to  
12 grow the trading desk by a factor of ten (10), all  
13 right. And they were going to just charge this  
14 through to -- to customers when -- when in fact, that  
15 cost really is not caused by a particular customer  
16 class. It's caused by an activity, and it may or may  
17 not be appropriate.

18                           And so I would -- I would want to be  
19 sensitive to whether there are specific costs that are  
20 actually caused by the export activity that then may  
21 not be appropriately allocated if there is no export  
22 class.

23                           MR. KURT SIMONSEN: Madam Chair, Mr.  
24 Peters has about five (5) minutes, but in canvassing  
25 other parties, they're all comfortable if Mr. Peters

1 want to go to 11:30.

2

3 CONTINUED BY MR. BOB PETERS:

4                   MR. BOB PETERS: Thank you. I'll  
5 continue with this question, then, and we'll -- we'll  
6 see how we go.

7                   Mr. Bowman, yesterday when you were in  
8 the back row, had a different perspective on things.  
9 You were at the point of saying you didn't want the  
10 Board to discontinue an export class, correct?

11                  MR. PATRICK BOWMAN: Yes.

12                  MR. BOB PETERS: And you said that  
13 there were a number of reasons, but I don't think you  
14 articulated them, but let's flip it around and say,  
15 what advice would you give the Board regarding the  
16 items that they have to take into account for cost-of-  
17 service if they decided to eliminate an export class?

18                  MR. PATRICK BOWMAN: Madam Chair, I  
19 will take -- take the question under a -- an  
20 assumption that you wouldn't necessarily stop thinking  
21 about exports in cost of service. They'd have to be  
22 dealt with somehow. And that as a result, you might  
23 be under a model, something like we had before we  
24 created the export class, where exports were assigned  
25 certain costs that were just the -- the variable

1 pieces.

2                   And I think the key advice I would have  
3 is -- is that even though almost no costs are being  
4 allocated to the exports in that situation, just these  
5 low variable, don't lose sight of the fact that  
6 exports are driving and needed to pay for the assets  
7 that are in the cost-of-service study, that they're  
8 not -- that they don't all of a sudden turn into some  
9 large valued pot that can be used for purpose 'X' or  
10 purpose 'Y'.

11                  Part of the concern that I have about  
12 not having an export class is that -- is that without  
13 an allocation to the export class, if you only have  
14 the -- this credit -- some kind of -- like a credit  
15 back to generation and transmission. The class -- the  
16 class I work for, let's pick some round numbers, would  
17 have a report or a cost-of-service study at this point  
18 that says they -- they cost about four (4) cents, to  
19 use round numbers.

20                  If we went back to the model that  
21 existed in 2001 before the class, and -- and you had a  
22 lot of export revenue, you might look at that cost-of-  
23 service study and only be able to derive two (2)  
24 numbers. One number would say five (5) cents, which  
25 is the cost if we assigned the entire system to

1 domestic customers but ignored -- did -- didn't have  
2 any export allocation there, which we know is too  
3 high.

4                   And then we take all this export  
5 revenue and assign it back to generation and  
6 transmission, and you report another number that says  
7 three and a half (3 1/2) cents. And people would come  
8 in the room and say, oh, but that's a subsidized  
9 number. It cost five (5) cents to serve this kind of  
10 class. Look, we've got to go back to this old number  
11 that says five (5) cents, when -- when right now we're  
12 sitting here and we know under the facts that it would  
13 -- that are here we're within a range of about four  
14 (4) cents, to use the -- that type of number.

15                  So you would no longer be able to  
16 derive a number that -- that says what is the -- what  
17 is the component someone all -- all -- could allege as  
18 a subsidy or a credit from an export activity as  
19 opposed to the component that is a reason -- the  
20 reasonable allocation -- reasonable contribution of --  
21 of exports towards the immediate cost.

22                  MR. BOB PETERS: Thank you, Mr.  
23 Bowman.

24                  Mr. O'Sheasy or Mr. Camfield, have you  
25 any different advice to give to the Board in what they

1 have to account for in the event that an export class  
2 was eliminated?

3                           MR. MICHAEL O'SHEASY: I like the way  
4 you phrase it, "any different." I would agree that  
5 it's important that the -- any direct or primarily  
6 export driven cost be considered if you were to do  
7 away with the export class. You got to consider that  
8 -- that -- how those costs are being imposed on other  
9 parties if they don't --

10                          MR. BOB PETERS: Just let me interrupt  
11 you. Give the Board, please, an example of that. Are  
12 you --

13                          MR. MICHAEL O'SHEASY: Well, I think  
14 Mr. Goulding gave one (1) example. He --

15                          MR. BOB PETERS: Trading desk?

16                          MR. MICHAEL O'SHEASY: A trading desk,  
17 for example, that's primarily driven -- or in large  
18 part or maybe 100 percent part by exports, if that  
19 trading desk doesn't go away who's going to pay for  
20 it, for example. It -- it might be a transmission  
21 line that its only purpose is to sell into another  
22 market. Direct expenses that don't go away but were  
23 there to serve exports, who pays for those and how?  
24 So I -- I would agree that that's an important  
25 consideration.

1                   A second consideration that I want to  
2 emphasize is you've got to -- you're going to have to  
3 wrestle with, okay, those export revenues and cost --  
4 in PCOSS, how do I allocate those to the -- the rate  
5 classes? If you allocate those to the rate classes in  
6 a way that doesn't reflect the costs that we're saying  
7 right now those exports should be responsible for,  
8 you're going to -- you're going to flip around your  
9 RCCs and you don't want to do that, I don't think, not  
10 in -- in the short term.

11                  So bottom line, I want to be as  
12 succinct as possible, don't forget that just because  
13 they go away now all of a sudden you -- you can ignore  
14 how you allocate those what are export revenues to the  
15 rate classes. And then finally what Mr. Bowman --  
16 Bowman was saying I think is important, too.

17                  That there will always be the need and  
18 -- to make -- for -- to ensure -- or not ensure but be  
19 comfortable that export sales are, indeed, covering an  
20 adequate level of agreed to cost. Just because you've  
21 put them through the cost-of-service study doesn't  
22 mean that I'm going to be comfortable right now that  
23 they're serving their purpose of minimizing or  
24 lowering the cost to domestic customers.

25                  MR. BOB PETERS: Mr. Camfield, you

1 want to --

2 MR. ROBERT CAMFIELD: Yes. You can  
3 tell that I want to pitch in on this, can't you? The  
4 concern I have is one of transparency because of the  
5 sheer magnitude of the export sales Manitoba Hydro.

6 And so if we did not have an explicit  
7 export class, as you're suggesting in your premise of  
8 your question, then I would suggest that a subsidiary  
9 report be drawn by the Board to observe under some  
10 cost allocation regime what the generation and  
11 transmission cost attributable to that class happens  
12 to be. An issue of transparency, essentially.

13 MR. BOB PETERS: All right. Thank  
14 you. And, Mr. Chernick, anything different to add?

15 MR. PAUL CHERNICK: Well -- well, I  
16 think the narrow answer to your question is, which I  
17 think was what would the Board have to do with  
18 allocations? I -- I think that the cost allocations,  
19 the alloca -- well, the numbers in the allocators  
20 would change but the approaches could be exactly the  
21 same as you would use with the -- the class, it's just  
22 that each class would have a greater share of weighted  
23 energy, and would have a greater share of -- of 2CP  
24 and so on.

25 You would have to figure out how you're

1 going to allocate things like the URA and the AEF,  
2 which are paid out of the net energy revenues. And  
3 then you have decide how you want to allocate the net  
4 energy revenues, which might be somewhere between a  
5 composite G&T allocator or -- and a total revenue  
6 allocator.

7 So it's -- it would not be terribly  
8 complicated, but I agree with the transparency issue,  
9 that you still would like to know what's going on in  
10 that very large part of the business.

11 MR. BOB PETERS: All right. Thank  
12 you. Going into stoppage time, if I -- thank -- thank  
13 the referees for that. I think I have a way to speed  
14 us up a little bit. On a scale of 1 to 5, where 5 is  
15 that you agree, 3 is you are uncertain, and 1 is you  
16 disagree, I want your answers to the following  
17 statements. Remember 5 is you agree, 1 is you  
18 disagree, and 3 is really, you don't know.

19 So a Board decision that eliminates the  
20 export class can still lay out a cost-of-service  
21 method that fairly allocates costs among the rate  
22 classes, Mr. Harper?

23 MR. WILLIAM HARPER: I would be  
24 uncertain simply because, unless the Board also  
25 indicated what they were going to do with the export

1 revenue, I guess they come -- at the end of the day,  
2 that has to be allocated, too. I don't know whether  
3 it would be fair or not, so I -- I'm uncertain.

4

5 (BRIEF PAUSE)

6

7 MR. WILLIAM HARPER: Well, yes, three  
8 (3). Sorry. I can't count.

9 MR. BOB PETERS: Sorry to stump you  
10 with the numbers, Mr. -- Mr. Harper. But I was asking  
11 whether or not the -- whether a decision that  
12 eliminates an export class can still lay out a cost-  
13 of-service method that fairly allocates the costs  
14 among the rate classes, not -- not --

15 MR. WILLIAM HARPER: No.

16 MR. BOB PETERS: -- has it, but can  
17 it?

18 MR. WILLIAM HARPER: It -- it can if  
19 all the other pieces are treated appropriately, yes.

20 MR. BOB PETERS: All right. Down the  
21 line, Mr. Goulding...?

22 MR. A.J. GOULDING: I think I would  
23 echo Mr. Harper in the sense that I think it can, but  
24 it needs to be quite mindful of the issues that have  
25 been laid out by Mr. Bowman and Mr. Harper.

1 MR. BOB PETERS: Thank you.

2 MR. PATRICK BOWMAN: Four point five  
3 (4.5).

4 MR. BOB PETERS: Thank you.

5 MR. MICHAEL O'SHEASY: Four point-o  
6 (4.0). And I think it would require a good  
7 consultant.

8 MR. BOB PETERS: All right.

9 MR. ROBERT CAMFIELD: Three point one  
10 (3.1). And I would suggest it would require two (2)  
11 good consultants.

12 MR. BOB PETERS: All right.

13 MR. ROBERT CAMFIELD: I -- I generally  
14 concur, but with -- seriously, I generally concur with  
15 Mr. Harper's concerns, namely five (5), but with the  
16 addition of a subsidiary calculations that I'd  
17 mentioned for transparency purposes.

18 MR. PAUL CHERNICK: Five (5).

19 MR. BOB PETERS: All right. Here's  
20 another one. And Mr. Bowman gave me the idea for this  
21 one, and it's to -- to grade Mr. Cormie. One (1) --  
22 five (5), again, is you're agreeing, one (1) is you  
23 disagree, and three (3) is you're not sure.

24 The net export revenue calculated  
25 through a cost-of-service methodology does not tell us

1 anything about whether any resource decisions have  
2 turned out well or not?

3 MR. WILLIAM HARPER: I'd agree.

4 MR. BOB PETERS: That would be a five  
5 (5)?

6 MR. WILLIAM HARPER: That would be  
7 five (5).

8 MR. BOB PETERS: All right. Mr.  
9 Goulding?

10 MR. A.J. GOULDING: Five (5).

11 MR. BOB PETERS: Mr. Bowman, it was  
12 your -- you -- you ceded the question, so I know your  
13 answer, I hope.

14 MR. PATRICK BOWMAN: But your -- your  
15 question was in the negative, it does not tell us  
16 anything.

17 MR. BOB PETERS: Do you agree that it  
18 -- it doesn't tell us whether any resource decisions  
19 have turned out well or not?

20 MR. PATRICK BOWMAN: Yeah, five (5).

21 MR. MICHAEL O'SHEASY: Five (5).

22 MR. ROBERT CAMFIELD: Five (5).

23 MR. PAUL CHERNICK: You have  
24 consensus.

25 MR. PATRICK BOWMAN: Thank you.

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: Let's try this one.

4 Mr. Chernick, we'll start at your end of the table.

5 Again, five (5), you're agreeing, one (1), you're  
6 disagreeing. The number of issues that need to be  
7 addressed in a cost of service methodology is  
8 measurably decreased if the export class is  
9 eliminated?

10 MR. PAUL CHERNICK: One (1). You have  
11 to deal with all the same issues, you just put them in  
12 different places.

13 MR. ROBERT CAMFIELD: No change, one  
14 (1).

15 MR. MICHAEL O'SHEASY: One (1).

16 MR. PATRICK BOWMAN: I -- I disagree.  
17 I think it's considerably simplified, so four (4).

18 MR. A.J. GOULDING: One (1).

19 MR. WILLIAM HARPER: One (1).

20 MR. BOB PETERS: And, Mr. O'Sheasy, in  
21 one (1) of your answers to me earlier you talked about  
22 the allocation of the net export revenue, but let's  
23 ask the question this way. And again, five (5) is you  
24 agree, one (1) is you disagree.

25 And it's, do you agree that a negative

1 net export revenue doesn't mean that a mistake has  
2 been made in the Cost of Service allocation?

3 MR. MICHAEL O'SHEASY: Five (5).

4 MR. BOB PETERS: So you agree that a  
5 negative NER doesn't necessarily mean there's a  
6 mistake that's been made?

7 MR. MICHAEL O'SHEASY: I agree.

8 MR. BOB PETERS: Thank you. And, Mr.  
9 Chernick?

10 MR. PAUL CHERNICK: I would say it  
11 doesn't indicate that a mistake was made, it indicates  
12 that perhaps you should rethink the methodology, but  
13 that it's necessarily wrong.

14 MR. BOB PETERS: Mr. Bowman...?

15 MR. PATRICK BOWMAN: I -- I don't  
16 think it indicates a mistake was made.

17 MR. A.J. GOULDING: I don't think it  
18 indicates a -- a mistake in the cost allocation.

19 MR. WILLIAM HARPER: I have the same  
20 answer.

21 MR. BOB PETERS: Thank you. All  
22 right. Let's leave the short answer questions and,  
23 Mr. O'Sheasy -- Mr. O'Sheasy, in an exchange you had  
24 yesterday with Mr. Hacault you agreed with the  
25 statement, and I -- I can pull out the transcript if

1 you need it, but it was to the effect that the  
2 generation and transmission assets are the -- the  
3 assets that make the export sales possible?

4 MR. MICHAEL O'SHEASY: From a  
5 functional perspective you need --

6 MR. BOB PETERS: Yes, and in fact your  
7 -- your -- the statement on the record was you were  
8 heavy on the functionalization?

9 MR. MICHAEL O'SHEASY: Correct.

10 MR. BOB PETERS: But all you're -- all  
11 you're really saying is that the assets that are  
12 determined to be generation assets and transmission  
13 assets through functionalization, those are the assets  
14 needed for exports?

15 MR. MICHAEL O'SHEASY: That's what I'm  
16 saying. Correct. You could not make an export sale  
17 if you didn't have those functions available, I don't  
18 believe.

19 MR. BOB PETERS: All right. And then  
20 I think you even went further when you talked with me  
21 and you agreed that there was not a cost causal basis  
22 for allocating net export revenue based on  
23 distribution?

24 MR. MICHAEL O'SHEASY: That's correct.

25 MR. BOB PETERS: And that was in

1 essence because distribution assets didn't have a part  
2 in causing the export revenues?

3 MR. MICHAEL O'SHEASY: I think you  
4 said net export revenues, NER, and net export revenues  
5 are the leftover. And so with that caveat, correct.

6 Yes.

7 MR. BOB PETERS: All right. And now  
8 let's take those answers and look at a statement that  
9 was in your 2015 report. And Ms. Villegas, it's -- it  
10 was Appendix 2 of Manitoba Hydro's filing, page 7.  
11 And yes, on section 2.3, the second sentence.

12 And I'll read it into the record, Mr.  
13 O'Sheasy, and then I'll ask you a question. You wrote  
14 in your report, quote:

15 "This residual net revenue does not  
16 have a cost foundation, as it is  
17 purely excess revenue from a  
18 competitive market."

19 Close quotes. That's in your report,  
20 sir?

21 MR. MICHAEL O'SHEASY: Yes, sir.

22 MR. BOB PETERS: When you say that  
23 this excess revenue or residual revenue doesn't have a  
24 cost foundation, are you suggesting that this residual  
25 revenue didn't arise as a result of GNT assets?

1                   MR. MICHAEL O'SHEASY: No, I think you  
2 had to have the GNT assets for the entire export  
3 revenues to arrive.

4                   MR. BOB PETERS: But then you say the  
5 residual net revenue does not have a cost foundation.  
6 What is the cost foundation that it doesn't have?

7                   MR. MICHAEL O'SHEASY: I think it was  
8 the day before yesterday, it might have been  
9 yesterday, I was trying to give an example of how  
10 their -- the cost foundation has already been  
11 allocated away.

12                  Imagine that you have export sales of a  
13 certain reven -- revenue amount, say a hundred dollars  
14 (\$100) and we've allocated eighty dollars (\$80) worth  
15 of costs. We feel like that's a fair cost allocation  
16 to export sales.

17                  And then all of a sudden nothing in the  
18 world changes except we got a carbon tax. And the  
19 revenue we get from these export sales is now two  
20 hundred dollars (\$200). The hundred dollars extra is  
21 the NER. That's the extra revenue that we get, but  
22 the cost foundation that we referred to has already  
23 been taken care of in the allocation methodology.

24                  MR. BOB PETERS: Okay. I think I'm  
25 getting your point.

1                   Ms. Villegas, if you could, PUB Exhibit  
2 23 was a book of documents that was provided. And if  
3 we could turn to page 14 of that -- of that exhibit.

4                   Mr. O'Sheasy, this doesn't -- isn't  
5 quite the example you just gave, but what we see on  
6 the screen and the Board will see is that, under one  
7 methodology that's defined here as Order 116/'08,  
8 there's a net export revenue that a negative number,  
9 negative \$147 million, correct?

10                  MR. MICHAEL O'SHEASY: Correct.

11                  MR. BOB PETERS: And then we can see  
12 that if we use a different methodology in PCOSS14,  
13 there's a different net export revenue, and likewise  
14 with the PCOSS14 amended?

15                  MR. MICHAEL O'SHEASY: Correct.

16                  MR. BOB PETERS: So the methodology  
17 changed, and the costs that underpinned that gross  
18 export revenue stayed the same. It's just in the  
19 allocations against that gross export revenue that  
20 change. And you threw in a carbon tax which this  
21 doesn't, but that would give rise to different net  
22 export revenues?

23                  MR. MICHAEL O'SHEASY: The cost -- I  
24 think you said the cost allocation change, that didn't  
25 give rise to different revenues, right?

1                           MR. BOB PETERS: No, not -- not the  
2 cost allocation changing. The -- what we've done here  
3 is we've -- we've determined how to apply the cost of  
4 service study.

5                           MR. MICHAEL O'SHEASY: I'm -- I'm  
6 getting confused. The gross export revenue, it's  
7 whatever we get from the export marketplace. And I  
8 don't -- I'm not sure why that changes between  
9 studies.

10

11                         (BRIEF PAUSE)

12

13                         MR. BOB PETERS: I -- I think Mr.  
14 Bowman's helping you that one (1) of them might have  
15 been forecast and one (1) of them might have been  
16 actual.

17                         MR. MICHAEL O'SHEASY: Okay. All  
18 right. So the -- the assumption about export revenues  
19 changed, and that had a big impact on NER. Is that  
20 your question?

21                         MR. BOB PETERS: Let -- let me give it  
22 -- let me -- let me rephrase it and ask it this way:  
23 that if -- if Manitoba Hydro was to sell a kilowatt  
24 hour of exported electricity and they used generation  
25 and transmission assets to cause that sale, if they

1 got paid ten (10) cents or if they got paid twenty  
2 (20) cents for that kilowatt hour, that doesn't change  
3 the fact that they used to generation and transmission  
4 assets to cause that sale.

5 MR. MICHAEL O'SHEASY: Correct.

6 MR. BOB PETERS: Okay. I -- I think  
7 I've got your point, sir. I'd like to possibly move  
8 on.

9

10 (BRIEF PAUSE)

11

12 MR. BOB PETERS: Oh, it was a point  
13 that perhaps, Mr. Bowman, I'd like to just clarify  
14 with yourself and Mr. Goulding in the time I have  
15 left.

16 Your evidence, Mr. Bowman, was to the  
17 effect that the opportunity sales contributed to the  
18 type of generation chosen by Manitoba Hydro when they  
19 -- when they make a decision on -- on what to next  
20 build. And that's one (1) of the reasons you suggest  
21 that should -- that opportunity sales should be  
22 allocated fixed costs?

23 MR. PATRICK BOWMAN: Yes, and -- and  
24 we focus on the type of generation, but it's actually  
25 somewhat -- somewhat even broader than that. And I

1 think this is a point that's missed when we talk about  
2 losing -- losing an export class or how well an export  
3 class can track.

4                   The -- the value of the market in ex --  
5 opportunity sales can drive all sorts of decisions  
6 within Hydro. And -- and they're not even things you  
7 would necessarily be able to identify easily.

8                   Like, for example, to use an  
9 experiment, a thought experiment, if -- if the value  
10 of the opportunity market went up ten (10) times,  
11 going into the future, Hydro may go a lot further to  
12 buy higher cost but lower loss transformers every time  
13 it's replacing a transformer on its system.

14                  That -- that decision as to whether to  
15 use a low-loss, higher-cost transformer or a higher-  
16 loss, low-loss (sic) transformer embedded in -- in  
17 assets, it'll be in their books all over. But it's  
18 being driven by whether opportunity sales are high or  
19 low. It's clearly only done because, if you change  
20 the opportunity sales, you end up with a different  
21 type of investment.

22                  So, it's really easy when we sit here  
23 and talk about a Keeyask or something, but it's a lot  
24 -- this -- this is -- is relatively pervasive, and I  
25 think the Board highlighted that in -- in some of

1 these earlier orders.

2 MR. BOB PETERS: Mr. Goulding, your  
3 view is that both dependable and opportunity exports  
4 are predictable, and because of that predictability,  
5 they should be allocated a share of fixed costs.

6 Would that be a correct summary?

7 MR. A.J. GOULDING: Yes.

8 MR. BOB PETERS: And you landed on,  
9 was it 63.8 percent of all exports should be viewed as  
10 predictable and allocated a fixed share?

11 MR. A.J. GOULDING: Yes.

12 MR. BOB PETERS: Does that 63.8  
13 percent mean that there's a -- an approximate 27  
14 percent chance that Hydro has significantly  
15 understated the revenue requirements?

16 MR. A.J. GOULDING: No. The -- the  
17 purpose here is to provide for an appropriate  
18 allocation of the fixed costs to the export class, as  
19 it currently exists.

20 It is not to make a comment on the  
21 extent to which Hydro has overstated or understated  
22 their revenue requirements.

23 MR. BOB PETERS: So you'd agree that  
24 in the test year, the opportunity export revenue was  
25 considered a --or is -- is considered an expectation

1 that it's going to occur?

2                   MR. A.J. GOULDING: So I -- just so  
3 that I repeat. So I would agree that in the test  
4 year, the opportunity revenue is an expectation that  
5 it's going to occur. Yes, I would.

6                   MR. BOB PETERS: All right. Thank  
7 you. Madam Chair, with those answers, I'd like to  
8 thank the panel, again, on this second of the key  
9 issues. Those are my questions.

10                  THE CHAIRPERSON: Thank you, Mr.  
11 Peters. So we will break for lunch and resume at  
12 12:15. Thank you.

13                  MR. BYRON WILLIAMS: Madam Chair, if -  
14 - if I might, and the Board's -- perhaps has already  
15 contemplated this, but if the Board does dec -- decide  
16 to give us guidance in terms of some of the issues  
17 that it would appreciate comment on for the -- the  
18 purposes of closing argument, whether that would be  
19 helpful, some direction in terms of some of the issues  
20 in particular that the -- the Board's seeking advice  
21 on.

22                  We -- we'll do our thing, but if we --  
23 if there's particular issues the Board wishes to  
24 identify, I think that would be helpful.

25                  THE CHAIRPERSON: Okay, thank you,

1 Mr. Williams.

2

3 --- Upon recessing at 11:30 a.m.

4 --- Upon resuming at 12:18 p.m.

5

6                   THE CHAIRPERSON: I believe we're  
7 ready to resume, and our issue this afternoon is going  
8 to be the simple matter of functionalization,  
9 classification, and allocation of generation and  
10 transmission assets, including the HVDC system and the  
11 US interconnection, but excluding wind and coal  
12 assets.

13                   Take it away, Mr. Williams.

14

15 CONCURRENT EVIDENCE PANEL RE FUNCTIONALIZATION,  
16 CLASSIFICATION AND ALLOCATION OF GENERATION AND  
17 TRANSMISSION ASSETS, INCLUDING THE HVDC SYSTEM AND THE  
18 U.S. INTERCONNECTION, BUT EXCLUDING THE WIND AND COAL  
19 ASSETS

20

21                   MICHAEL O'SHEASY, Previously Sworn

22                   ROBERT CAMFIELD, Previously Sworn

23                   WILLIAM HARPER, Previously Sworn

24                   A.J. GOULDING, Previously Sworn

25                   PATRICK BOWMAN, Previously Sworn

1 PAUL CHERNICK, Previously Sworn

2

3 CROSS-EXAMINATION BY MR. BYRON WILLIAMS:

4 MR. BYRON WILLIAMS: Well, I'm a  
5 little afraid that the question as phrased will be  
6 longer than my questions. But I do want to refer Mr.  
7 Bowman to some of his evidence. And I would like to  
8 introduce as an exhibit Coalition Exhibit 32, page 3-4  
9 of Mr. Bowman's February 28th, 2014, NFAT evidence.

10

11 --- EXHIBIT NO. CAC-32: Page 3-4 of Mr. Bowman's  
12 February 28th, 2014 NFAT  
13 evidence

14

15 MR. BOB PETERS: And I want to go  
16 right to the footnote, being footnote twen -- 34.  
17 And, Mr. Bowman, you'll see here that you've got a bit  
18 of a discussion about, while Manitoba Hydro was  
19 framing Bipole III as a reliability issue --  
20 initiative, it was also clear to you that the  
21 development was complimentary to the NFAT proposals,  
22 agreed?

23 MR. PATRICK BOWMAN: Yes, you couldn't  
24 have had the NFAT hearing we had if Bipole III was not  
25 already in Hydro's plans.

1                   MR. BYRON WILLIAMS: And -- and the  
2 point you make is that without Bipole III, there would  
3 have been a -- a plan for 1,500 megawatts of natural  
4 gas generation targeted for 2017, agreed?

5                   MR. PATRICK BOWMAN: Yeah, that -- I -  
6 - I'm trying to -- I -- I do see that. And -- and  
7 it's -- it's referencing -- I -- I don't know what an  
8 OL10-2 reference is off the top of my head, but it  
9 says it was an exhibit in the hearing, which -- in --  
10 in our GRA, which I recall. And I do believe that's  
11 where people were pushing Hydro on whether Bipole III  
12 was -- had an alternative in the form of natural gas  
13 generation.

14                  In that case, they said they'd have to  
15 build 2,000 megawatts, 1,500 in 2017, and an  
16 additional 500 by 2025.

17                  MR. BYRON WILLIAMS: You can always go  
18 back, but this -- this is your footnote. Would it be  
19 fair to suggest to you that that 1,500 megawatts would  
20 be a -- a peaker CT, sir?

21                  MR. PATRICK BOWMAN: Probably, not  
22 necessarily. As we said, it's -- I -- I think Mr.  
23 Harper said it well, that you have to look at all of  
24 the attributes and -- and costs of -- of the asset you  
25 put into place. The evidence of La Capra in the NFAT,

1 for example, looked at whether you should be  
2 considering SCCTs, simple -- simple-cycle peakers, as  
3 your -- as your -- your alternative, or a combined  
4 cycle type of -- of turbine, but it would be a -- a  
5 natural gas generation.

6                   The first tranche would have been  
7 installed in the south as an alternative to Bipole  
8 III. Bipole III's primarily about reliability and  
9 backing up Bipole I and II, so -- so it would have  
10 been something that doesn't run very often. It  
11 probably would have been -- been a -- a peaker, but --  
12 but there would have to be a full economic evaluation  
13 to know.

14                  MR. BYRON WILLIAMS: And as I  
15 understand what you just said, and this is subject to  
16 check if you feel the need, it would be located in the  
17 south, no doubt near Winnipeg, and that it would be  
18 there, not to serve load, I'll suggest to you -- to  
19 you, but as a backup if northern generation failed?

20                  MR. PATRICK BOWMAN: Yeah. Some --  
21 sometimes when you have a -- a transmission system  
22 that is -- is inferior, or is not meeting the tests,  
23 that -- as your load grows, you -- you need more,  
24 sometimes you can use the transmission solution, and  
25 sometimes you can use the generation solution to

1 achieve the same thing.

2                   And even though you -- fundamentally,  
3 you have a -- you have all the -- the gen -- you have  
4 the generation you need, you just have a transmission  
5 shortfall, sometimes, rather than running another  
6 wire, it's -- it's easier to -- to solve it for --  
7 with generation.

8                   MR. BYRON WILLIAMS: The thinking  
9 being to -- to keep the lights on the event the  
10 bipoles failed?

11                  MR. PATRICK BOWMAN: Yeah, that --  
12 that's the driver, yes.

13                  MR. BYRON WILLIAMS: Thank you. Mr.  
14 Bowman, just a few more questions. And I -- I know  
15 there's a big scout tent raising out in your neck of  
16 the woods this weekend. If I could get Diana to pull  
17 up PUB/MH-1-66(a) from the '14/'15, '15/'16 GRA. It  
18 might have already been put. I might have seen it  
19 somewhere in someone's books -- book of documents.

20                  But, Mr. Bowman, if we -- Diana, if we  
21 could go to page 2 of 3, please.

22

23                  (BRIEF PAUSE)

24

25                  MR. BYRON WILLIAMS: And, Mr. Bowman,

1 you're familiar with this document. You've seen it in  
2 -- in proceedings in the past?

3 MR. PATRICK BOWMAN: Yeah. The first  
4 time I remember reviewing it was when -- I believe it  
5 was in Board counsel's book of documents in this  
6 hearing. I -- I don't remember necessarily seeing it  
7 in the past. And I -- I'm familiar with it. I've  
8 seen the numbers. I -- I'm not positive I necessarily  
9 understand all of it, but let -- let's go down the --

10 MR. BYRON WILLIAMS: Yeah.

11 MR. PATRICK BOWMAN: -- road with --  
12 and see if we --

13 MR. BYRON WILLIAMS: And if you be --  
14 become uncomfortable, you'll me know, Mr. Bowman?

15 MR. PATRICK BOWMAN: Yes.

16 MR. BYRON WILLIAMS: And, in essence -  
17 - and I'll suggest to you this was in response to a --  
18 a question trying to get insight into the current and  
19 future usage of the -- the bipole system.

20 And if we -- I'll suggest to you that  
21 if we look at the -- at the top left, it's looking,  
22 the second column in, at the capacity in megawatts for  
23 the generating stations, being Kettle, Long Spruce,  
24 and Limestone?

25 MR. PATRICK BOWMAN: Yes.

1                   MR. BYRON WILLIAMS: And that capacity  
2 from those three (3) stations is three (3) -- 3,570  
3 megawatts, agreed?

4                   MR. PATRICK BOWMAN: Yes.

5                   MR. BYRON WILLIAMS: And if we move  
6 over a little bit to the right, in term -- under  
7 capacity on the right-hand side of that first column,  
8 I'll suggest to you that what it's trying to capture  
9 is the capacity of Bipole I and II, which I'll suggest  
10 to you is 3,854 megawatts, agreed?

11                  MR. PATRICK BOWMAN: Yeah, my first  
12 confusion is that it's under a heading that says,  
13 "HVDC Losses". And so that was where I was starting  
14 to -- starting to get confused. But it does say 3,854  
15 megawatts. I'll -- I'll give you that.

16                  MR. BYRON WILLIAMS: And, Mr. Bowman,  
17 you can write that number down if -- if you want, I'm  
18 going to come back to it when we go to the next page,  
19 3,854. So on the -- going to the -- the next page, we  
20 again have that similar column in terms of the -- the  
21 capacity of the generating stations, but you'll agree  
22 that we've added Keeyask to the mix of Kettle, Long  
23 Spruce, and Limestone, agreed?

24                  MR. PATRICK BOWMAN: Yes.

25                  MR. BYRON WILLIAMS: And that has a

1 capacity of forty-two hundred (4,200) as presented in  
2 this table, correct?

3 MR. PATRICK BOWMAN: Yes.

4 MR. BYRON WILLIAMS: Going to the  
5 right, this is a look at -- at the capacity if we add  
6 Bipole III to the mix of the other two (2) Bipoles.

7 And yields 5,854 megawatts, correct?

8 MR. PATRICK BOWMAN: Yes, that's the  
9 number that's shown there. Again, it's under a col --  
10 column called, "HVDC Losses," but it is a megawatt  
11 number and it -- it is clearly not the losses on the  
12 line. There's too much number for that.

13 MR. BYRON WILLIAMS: So, Mr. Bowman,  
14 if we took that right-hand column and -- and stroked  
15 out Bipole III and we stroked out the 2,000 megawatts,  
16 that would put us back to the 3,854 capacity related  
17 to Bipoles I and -- and II, agreed?

18 MR. PATRICK BOWMAN: Yes.

19 MR. BYRON WILLIAMS: And if we took  
20 that and then looked at the capacity of -- of Keeyask,  
21 Kettle, Long Spruce, and Limestone and realizing that  
22 electrical systems operations are complex, but if  
23 those stations were working full out, that would  
24 present some capacity problems for the Bipoles I and  
25 II, agreed?

1                           MR. PATRICK BOWMAN: Yes. Yes,  
2   Bipoles I and II do not provide enough capacity to get  
3   out the full capability of the northern system were  
4   one to develop -- develop Keeyask. You can see here  
5   that they would have enough energy transfer  
6   capability, that -- that number is shown one (1)  
7   column left of the -- of the capacity number you  
8   showed me.

9                           So the issue is a -- is an inability to  
10   supply at -- at the highest peak output. That's --  
11   that's why I'm -- I'm talking about Bipole III as a --  
12   as a peak resource, a coincident peak-type resource,  
13   but that -- it is -- it clearly shows that the  
14   capacity is -- cannot be delivered.

15                        MR. BYRON WILLIAMS: Now, Mr. Bowman,  
16   I've been quite unsuccessful in asking any questions  
17   about the open access transmission tariff in this  
18   hearing. I'm going to ask you one (1) or two (2). If  
19   you feel able to answer, please do.

20                        Is it your understanding that once a  
21   Hydro service is functionalized as transmission that  
22   it is tariffable under the open axis transmission  
23   tariff?

24                        MR. PATRICK BOWMAN: My understanding  
25   for the information Manitoba Hydro filed is that the

1 open access transmission tariff is developed off of a  
2 -- a list of assets which is desired to be consistent  
3 with the PCOSS, but it wouldn't necessarily be.

4 Is that -- did that address the  
5 question?

6 MR. BOB PETERS: It might have  
7 addressed the question. If it did, the question was  
8 poorly asked. So let me try it again. In the event  
9 that a Hydro service is functionalized as  
10 transmission, is it your understanding that it -- that  
11 it can be -- a fee can be charged for usage of it  
12 under the open access transmission tariff?

13 MR. PATRICK BOWMAN: When you say  
14 "hydro system" do you specifically mean hydraulic  
15 generation, or do you mean Manitoba Hydro as  
16 generally?

17 MR. BYRON WILLIAMS: I mean a -- and  
18 again perhaps I was imprecise. I mean a Manitoba  
19 Hydro line that they determined is transmission.  
20 They've functionalized as transmission --

21 MR. PATRICK BOWMAN: Okay.

22 MR. BYRON WILLIAMS: -- if you're  
23 familiar with that --

24 MR. PATRICK BOWMAN: I -- I understand  
25 how you're using the term then now. Now, can you ask

1 the question again just...

2 MR. BYRON WILLIAMS: Is it your  
3 understanding that once a line is functionalized as  
4 transmissions it's tariffable under OAT?

5 MR. PATRICK BOWMAN: Not necessarily.  
6 I think there is -- when -- when you say -- I'm taking  
7 'functionalized' to mean functionalized in the PCOSS,  
8 and that is not necessarily -- because there are non-  
9 tariffable transmission in the PCOSS.

10 MR. BYRON WILLIAMS: Let's -- let's  
11 functionalize it in the tariff as transmission, sir.

12 THE CHAIRPERSON: Okay. So the  
13 tariff, I -- I'm worried that we're -- we're implying  
14 that -- that the -- the -- playing -- playing between  
15 the link between the two (2) -- two (2) documents.

16 The tariff -- Manitoba Hydro's Open  
17 Access Transmission Tariff is a very long document.  
18 It's publically available. It's on their web site.  
19 It has an attachment. I think it's 'H' or something  
20 of that nature which is -- sets out the revenue  
21 requirement they're seeking to collect and the units  
22 in which they're collected. That revenue requirement  
23 is made out by a list of costs that are shown in that  
24 attachment, and in there is -- is the transmission  
25 assets that Hydro has determined consistent with a set

1 of rules that -- that they -- they discussed can be  
2 charged under the transmission tariff.

3 I -- I hope it --

4 MR. BYRON WILLIAMS: Yeah. And -- and  
5 --

6 MR. PATRICK BOWMAN: -- if that's what  
7 you meant then, yeah.

8 MR. BYRON WILLIAMS: Yeah, it was a  
9 round about way. And so once they're functionalized  
10 as transmission, that tariff can be charged.

11 MR. PATRICK BOWMAN: Right. But when  
12 I just say func -- it doesn't mean functionalized in a  
13 PCOSS process. It means functionalized in that OATT  
14 development process.

15 MR. BYRON WILLIAMS: Okay. Thank you.  
16 Madam Chair, I have no further questions.

17 THE CHAIRPERSON: Thank you, Mr.  
18 Williams. Mr. Gange, please...?

19 MR. BILL GANGE: I have no questions.

20 THE CHAIRPERSON: Me. Monnin...?

21 MR. CHRISTIAN MONNIN: I can be the  
22 voice behind the pillar here.

23

24 (BRIEF PAUSE)

25

1                           MR. CHRISTIAN MONNIN: Thank you, Mr.  
2 Williams, that's very kind of you.

3

4                           (BRIEF PAUSE)

5

6 CROSS-EXAMINATION BY MR. CHRISTIAN MONNIN:

7                           MR. CHRISTIAN MONNIN: I feel all  
8 grown up being in the front row. I don't have many  
9 questions. I'll start with Mr. Bowman.

10                          Mr. Bowman, on page 2 of your pre-filed  
11 evidence you state that:

12                          "Manitoba Hydro's current approach  
13 under classifies cost to demand."

14                          And then:

15                          "An appropriate classification of  
16 generation costs demand should be  
17 established in a range of 21 to 23  
18 percent at this time."

19                          MR. PATRICK BOWMAN: Yes.

20                          MR. CHRISTIAN MONNIN: With that in  
21 mind, just a general question. Do you agree that the  
22 weighted energy allocators use of seasonal, peak,  
23 shoulder, and off-peak prices incorporates the demand  
24 influence value of energy?

25                          MR. PATRICK BOWMAN: I think the

1 record on that is unclear. The weightings are derived  
2 from the market prices that were as set out in the --  
3 in the evidence. The -- the surplus energy prices,  
4 which are almost always set by the -- the market, and  
5 those market prices would reflect some degree of -- of  
6 the underlying -- underlying resources being used in  
7 the market, and it's in certain hours.

8                   They -- they may reflect a scarcity  
9 premium in a capacity type of component but -- and I  
10 only say certain hours because it's a long data set.  
11 It's about eight (8) years. It has different --  
12 different periods in there in regards to the capacity  
13 scarcity. And also I say it -- it would affect in  
14 certain hours. When we actually turn the -- that data  
15 set into something used in the PCOSS we simply average  
16 across seven hundred (700) hours. And so any -- any  
17 of those fine marginal price signals that you're  
18 talking about would be -- would be effectively  
19 averaged out to -- to an entity and point level if  
20 they were included at all.

21                   MR. CHRISTIAN MONNIN: And -- and  
22 other general question your way. Do you view the use  
23 of an energy demand split in combination with Manitoba  
24 Hydro's weighted energy allocator as a form of double  
25 counting of capacity?

1                   MR. PATRICK BOWMAN: No -- no, and  
2 that's for the reasons I set out when I did the -- the  
3 presentation. I think the -- the marginal cost  
4 allocator Hydro is using reflects that energy can have  
5 a different value in different periods without  
6 necessarily addressing -- and when I say, "capacity"  
7 in this regard, I mean the costs incurred by Hydro to  
8 have peak resources, peak capacity resources available  
9 at acute times.

10                  And I gave the example of the -- you  
11 could have a diesel community where you have two (2)  
12 different prices of diesel at different times of the  
13 year. Those would lead to different marginal values,  
14 different -- different weightings of energy. But they  
15 still don't address the -- the capacity that the  
16 diesel engine's built to meet the peak load.

17                  MR. CHRISTIAN MONNIN: And since I'm  
18 coming to the end of my questions and I think I have  
19 some more bandwidth with regards to time, is there  
20 anyone on the panel who would like to comment on that  
21 last question? Mr. Harper...?

22                  MR. WILLIAM HARPER: Sorry, could you  
23 go back and just -- I apologize -- repeat the question  
24 again so --

25                  MR. CHRISTIAN MONNIN: Sure. The

1 question I put to Mr. Bowman was: Do -- do you view -  
2 - view the use of an energy demand split in  
3 combination with Manitoba Hydro's weighted energy  
4 allocator as a form of double counting of capacity?

5 MR. WILLIAM HARPER: Yes, I think  
6 there would be some double counting going on in there.

7 MR. CHRISTIAN MONNIN: Mr.  
8 Chernick...?

9 MR. PAUL CHERNICK: Well, certainly in  
10 terms of Manitoba Hydro's proposal which explicitly  
11 adds a capacity value in, it would be double counting  
12 for -- for any system. For the -- for the Manitoba  
13 Hydro system where there essentially is no capacity-  
14 related generation cost, it would be -- maybe it's  
15 triple counting.

16 MR. BOB PETERS: Thank you. Those are  
17 my questions.

18 THE CHAIRPERSON: Thank you.

19 Mr. Orle...?

20 MR. GEORGE ORLE: No questions, Madam  
21 Chair, thanks.

22 THE CHAIRPERSON: Thank you.

23 Me. Hacault...?

24 MR. ANTOINE HACAULT: Mr. Simonsen's  
25 reminding me of time limits. And I'll indicate for

1 the record that I told Mr. Simonsen I have no DSM  
2 questions, so we'll hopefully get through this.

3

4 CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

5                   MR. ANTOINE HACAULT: I just want to  
6 clear up a couple of things, and the first one is  
7 going to be to Mr. O'Sheasy. It relates to generation  
8 services weighted energy at slide 22 of his  
9 presentation which was marked as Manitoba Hydro 76.  
10 Oh, it may have changed again because he cut out one  
11 (1) slide. Mine starts with generation services  
12 weighted energy. Thank you very much.

13                   At the bottom, there's a recommendation  
14 capacity cost internal to Manitoba Hydro used for  
15 determining the worth of interruptible services.

16                   My question to you is: Are you aware,  
17 sir, of how Manitoba Hydro calculates the pricing for  
18 that capacity cost?

19                   MR. MICHAEL O'SHEASY: I'm not trying  
20 to dodge your question, but my colleague, Mr.  
21 Camfield, put that slide together. So if you don't  
22 mind, I'd rather that --

23                   MR. ANTOINE HACAULT: Absolutely.

24                   MR. MICHAEL O'SHEASY: -- that be  
25 directed to him.

1                           MR. ANTOINE HACAULT:    Absolutely.

2   Thank you for helping me in that regard.

3                           MR. ROBERT CAMFIELD:    Yes. I have  
4   reviewed that methodology, though it was some time  
5   ago.

6                           MR. ANTOINE HACAULT:    Do you have any  
7   recollection of it? Just like my belief is that it's  
8   based on a combustion turbine.

9                           MR. ROBERT CAMFIELD:    It is. It  
10   includes the -- the economic carrying charge applied  
11   to the capital associated with a combustion turbine  
12   stated on a dollars-per-kw year basis plus fixed O&M  
13   as well.

14                          MR. ANTOINE HACAULT:    Sounds like a  
15   good description, but I'm probably deer in the  
16   headlights. I don't know if the Board could use kind  
17   of a description --

18                          MR. ROBERT CAMFIELD:    It's a  
19   combustion turbine.

20                          MR. ANTOINE HACAULT:    Sorry?

21                          MR. ROBERT CAMFIELD:    It's a simple-  
22   cycle compbusstion turbine proxy.

23                          MR. ANTOINE HACAULT:    Okay. So all  
24   the types of things that you were describing is  
25   they're saying for the commerc -- this curtailable

1 rate program, just to provide at least one (1) of the  
2 new members a little bit of background, Manitoba Hydro  
3 has this program which allows it to request some big  
4 industrial users to immediately shut off their power  
5 so it frees up power for other people.

6 Is that one (1) of the instances in  
7 which this program can be used, sir?

8 MR. ROBERT CAMFIELD: Yes. It -- it  
9 is a program where interruptible services customers  
10 receive credit in their bills for the value of the  
11 service that's foregone as the result of being  
12 interrupted, yeah.

13 MR. ANTOINE HACAUT: So in past  
14 hearings, and I've gone through, at least one (1) of  
15 the industrial users is big enough that when Hydro  
16 calls upon that user, it's the equivalent of  
17 Wuskwatim, except for Wuskwatim has capacity ene --  
18 energy, I understand that, but it's like turning off  
19 and turning on at Wuskwatim?

20 MR. ROBERT CAMFIELD: I'm afraid that  
21 I don't see quite that connection.

22 MR. ANTOINE HACAUT: Yeah.

23 MR. ROBERT CAMFIELD: In other words,  
24 we're getting at what is the worst of capacity. And  
25 we can look at capacity in a couple different ways. I

1 mean, we can say, Well, capacity can be gauged in  
2 terms of its value as -- as its internal cost, the  
3 cost of providing it, which is behind the CRP.

4 On the other hand, you could look at it  
5 in terms of the value to the system in terms of the  
6 reliability gained as a result of a curtailed load.

7 MR. ANTOINE HACAULT: My point --

8 MR. ROBERT CAMFIELD: I don't see the  
9 -- I don't see the tie to Wuskwatim, per se.

10 MR. ANTOINE HACAULT: Okay. My point  
11 in that was just the level of interruptability for one  
12 (1) particular con -- customer was approximately 200  
13 megawatts, I think. So it was the -- the level of  
14 interruptability that was given to the system as part  
15 of its portfolio with having access to calling a  
16 customer and saying, Shut your plant down.

17 MR. ROBERT CAMFIELD: I -- I see the  
18 similarity that you -- you mentioned, yes.

19 MR. ANTOINE HACAULT: Now, at page 23,  
20 and it's probably your slide again, there's a bullet  
21 at the bottom that says:

22 "Outstanding issue, how to best  
23 assign capacity cost across loads  
24 and hours."

25 My first question is: What hasn't been

1 done?

2 MR. ROBERT CAMFIELD: I have not had  
3 the opportunity to review in sufficient detail to say  
4 much about it, how Manitoba han -- Manitoba --  
5 Manitoba Hydro has handled this issue, the  
6 distribution of the annual capacity cross -- cost to  
7 cross loads in hours.

8 So I just haven't had a chance to  
9 assess how they've done it in the context of their  
10 system, so it's an open question, in my mind.

11 MR. ANTOINE HACAULT: So in the  
12 workshop, Mr. Bowman had asked some question of Mr.  
13 O'Sheasy. Hopefully I'm pronouncing your name  
14 correctly.

15 MR. MICHAEL O'SHEASY: Close enough.

16 MR. ANTOINE HACAULT: I apologize.

17 MR. MICHAEL O'SHEASY: Close enough  
18 for government work.

19 MR. ANTOINE HACAULT: Okay. He had  
20 gone to a Georgia example to try and describe some of  
21 the capacity issues and when peaks could occur. And I  
22 think he had described that it was mostly usually a  
23 winter or summer peak, depending on the jurisdiction.

24 Does that make sense?

25 MR. MICHAEL O'SHEASY: Yeah. And I

1 was probably referring to Georgia Power, and that  
2 would have been summer peaks.

3                           MR. ANTOINE HACAULT: Yeah. And with  
4 respect to the Manitoba Hydro utility, if you exclude  
5 the exports, what kind of peak does the domestic  
6 market cause on the hydro system in Manitoba?

7                           MR. ROBERT CAMFIELD: Absent export  
8 sales, it's common knowledge that it is a winter  
9 peaking system.

10                          MR. ANTOINE HACAULT: Okay. And when  
11 we do this -- these allocations, and we've got all  
12 these different things that we talk about, CP, what's  
13 a CP?

14                          MR. ROBERT CAMFIELD: A coincident  
15 peak.

16                          MR. ANTOINE HACAULT: And is there  
17 some kind of a usual application of that? Is that  
18 just like five (5) hours, fifty (50) peak hours, or?

19                          MR. ROBERT CAMFIELD: Oh, it's a very  
20 mixed bag. And -- and to deal with the issue of how  
21 best to -- to assign capacity cost to hours, you have  
22 to look at the statistical distribution of -- of the  
23 loads. You can include, as well, some planning  
24 criteria, and certainly consider the risk and  
25 variation of loads with respect to -- with respect to

1 weather, for example, insofar as loads drive weather  
2 substantially.

3                           And in addition, just how the system  
4 behaves, supply that's available with respect to time.  
5 So you have to put these two (2) things in time domain  
6 together, supply availability and -- and load demand,  
7 and then gauge how best to do it.

8                           MR. ANTOINE HACAULT: And your  
9 instructions from Manitoba Hydro were not to look at  
10 that prior to this hearing and then come -- in fact,  
11 come up with an, I'm going to call it an independent  
12 opinion to provide assistance to this Board?

13                          MR. ROBERT CAMFIELD: I -- I certainly  
14 haven't went into that issue as far as my assessment  
15 and analysis is concerned so far.

16                          MR. ANTOINE HACAULT: So you're unable  
17 to help this Board at this time to say, for example,  
18 if using the four (4) seasons with some kind of a  
19 weighting helps us understand whether you're correctly  
20 reflecting this capacity aspect into your allocation?

21                          MR. ROBERT CAMFIELD: There's both the  
22 issue of -- of how broadly or narrowly one wishes to  
23 assign capacity cost to hours. And then given the --  
24 the distribution of -- of the loads and supply  
25 availability, how much of the annual capacity costs,

1 dollars per kW year, you might assign to any one (1)  
2 hour, or any group of hours.

3 MR. ANTOINE HACAULT: Okay. Now,  
4 there's been some discussion is -- in this hearing of  
5 the evidence that some classes have a characteristic  
6 of bearing a greater portion of driving the key peak  
7 times in winter.

8 Did you look at that at all?

9 MR. ROBERT CAMFIELD: I am familiar  
10 with Manitoba's load and energy forecast in a fair  
11 amount of detail. And so we understand, of course,  
12 that as I mentioned earlier, it's a winter peaking  
13 system. And if you're getting at how the class  
14 participates in those winter peak periods -- I think  
15 that's where you're going here --

16 MR. ANTOINE HACAULT: Yes.

17 MR. ROBERT CAMFIELD: -- we can  
18 certainly anticipate and the data show -- shows this  
19 that the residential and smaller commercial customers  
20 participate to a greater degree in the high load hours  
21 than all loads, which inherently is an energy  
22 dimension across the year.

23 MR. ANTOINE HACAULT: Okay.

24

25 (BRIEF PAUSE)

1                   MR. ANTOINE HACAULT: And part of a  
2 cost-of-service exercise when we choose allocators is  
3 using some subjective judgment and method to capture  
4 the extra expense that's being put on by what you call  
5 the residential and the small service -- general  
6 small service.

7                   That would be part of the exercise,  
8 wouldn't it?

9                   MR. ROBERT CAMFIELD: It would.

10                  MR. ANTOINE HACAULT: And, Ms.

11 Villegas, could you go to the NARUC manual, which  
12 we've now marked as Exhibit 28, I believe, and to the  
13 bottom of page 13.

14                  Firstly, there was some discussion  
15 about Bonbright, and then this man -- manual. Do you  
16 know how old Bonbright is?

17                  MR. ROBERT CAMFIELD: Well, there's  
18 been several editions. The most recent, I believe --  
19 Michael, help me out on this, Kamerschen's and  
20 Daniel's -- Danielsen's edition, 1987, '88?

21                  MR. MICHAEL O'SHEASY: It was either  
22 the late '80s or early '90s. That would be the latest  
23 edition that I recall.

24                  MR. ANTOINE HACAULT: So this one's  
25 1992, so it's kind of same vintage. Is that fair?

1 Now, at the bottom, this is, as I understand it, kind  
2 of the area where we talk about general theories and  
3 methodologies. And there's -- I can appreciate every  
4 jurisdiction and every utility is unique. But I'm  
5 looking at the bottom paragraph, second sentence. And  
6 it says:

7                   "Generating units and transmission  
8                   lines are sized according to peak  
9                   demand consumed. Individual  
10                  contribution to peak demand became  
11                  (sic) to be considered an  
12                  appropriate factor for the  
13                  allocation of costs to those  
14                  goes to the next page] facilities."

15                 Are we in agreement so far with that  
16 statement?

17                 MR. ROBERT CAMFIELD: We are.

18                 MR. ANTOINE HACAUT: Okay. And then  
19 we've been discussing another thing that you've  
20 mentioned also, energy. And the next sentence at the  
21 top of four (4) -- page 14 reads:

22                 "Costs incurred to supply energy  
23                 such as fuel were rationalized to be  
24                 allocatable by usage."

25                 Are you in agreement with that

1 principle?

2 MR. ROBERT CAMFIELD: Yes. Common  
3 practice.

4 MR. ANTOINE HACAULT: So when Mr.  
5 Bowman was trying to explain that principle to an  
6 unsophisticated lawyer like me, he said, Well, it's  
7 like you use a diesel example. The fuel -- if  
8 somebody puts that lightbulb on for a long time,  
9 you're going to have to burn more fuel, more energy.  
10 So because he's put the light on longer, we should  
11 charge him energy.

12 MR. ROBERT CAMFIELD: I recall  
13 something like that.

14 MR. ANTOINE HACAULT: Yeah. And then  
15 there's another category of costs that we've been  
16 discussing, and that's the next sentence:

17 "Costs that vary by the number of  
18 consumers and not their consumption  
19 were allocated by customer."

20 Is that still a valid principle?

21 MR. ROBERT CAMFIELD: Absolutely.

22 MR. ANTOINE HACAULT: Now, I'd like,  
23 Ms. Villegas, to go to page 22 of that manual, and it  
24 has the heading "Allocation of Costs Among Customer  
25 Classes."

1                   Do you see that, sir?

2                   MR. ROBERT CAMFIELD: I do.

3                   MR. ANTOINE HACAULT: And it's telling  
4 us a little bit about what we've been doing all this  
5 time. After costs have been functionalized and  
6 classified, the next step is to allocate among  
7 customer classes. And we break them into several  
8 groups, which we've done.

9                   Are we in agreement so far?

10                  MR. ROBERT CAMFIELD: We are.

11                  MR. ANTOINE HACAULT: Yeah. And they  
12 identify it in this text, three (3) principle customer  
13 classes, and we see them in this hearing, being  
14 residential, commercial, and industrial, although we  
15 do it according to GS large, small, and the -- the  
16 bigger users, correct?

17                  MR. ROBERT CAMFIELD: Correct.

18                  MR. ANTOINE HACAULT: And then there's  
19 three (3) general classes that are talked about again.  
20 There's three (3) bullets there:

21                    "Demand-related costs -- allocated  
22                    among the customer classes on the  
23                    basis of the demands  
24                    kilowatt hours] imposed on the  
25                    system during -- specific kilowatt

1                   hours imposed on the system during  
2                   specific peak hours."

3                   Is that fair?

4                   MR. ROBERT CAMFIELD: Yes, that's what  
5 I see, yes.

6                   MR. ANTOINE HACAUT: But is that  
7 still a valid thing to do with respect to demand-  
8 related costs?

9                   MR. ROBERT CAMFIELD: It is one (1) of  
10 -- methodologies that are commonly applied, whereas in  
11 the case of generation and, to a lesser extent, tran -  
12 - transmission services, costs are allocated according  
13 to demand and energy, as well.

14                  MR. ANTOINE HACAUT: And that's where  
15 I made a whoops when I was talking. I talked about  
16 kilowatt hours. A kilowatt hours is kind of that fuel  
17 concept that's how long you keep your light bulb on,  
18 and those are energy-related costs, which is the next  
19 bullet. Is that right?

20                  MR. ROBERT CAMFIELD: That's correct.

21                  MR. ANTOINE HACAUT: And then at page  
22 34, there's a heading "Classification In General," and  
23 then understanding again, this is only a general  
24 discussion, there's a table under -- at the bottom of  
25 the page entitled "Functionalized Classification of

1 Electric Utility Costs." And in that table, there's  
2 an indication that for thermal and hydro productions,  
3 you'll have a component of demand and a como --  
4 component of energy, and that's a valid applicable  
5 principal for Manitoba Hydro?

6                           MR. ROBERT CAMFIELD: If Manitoba  
7 Hydro were to allocate -- allocate its generation  
8 services costs in terms of physical quantities, a  
9 physical quantity-based allocation, demand in  
10 megawatts, energy in megawatt hours, customers -- the  
11 number of customers served, that sort of basis of --  
12 of billable quantities, then we can anticipate that  
13 certainly, the -- the demand and energy metrics would  
14 enter into it.

15                           They have selected a methodology, as we  
16 all know here, referred to as weighted energy. It is  
17 a marginal cost basis of allocation for generation  
18 services, and it implicitly incorporates both demand  
19 and energy elements in terms -- and the value of them.

20                           MR. ANTOINE HACAULT: And I would  
21 suggest to you, sir, that's why there's some increased  
22 debate in trying to understand that weighted energy  
23 allocator, because you've used the words, "Very  
24 rightly so," it's implicit somewhere in there that  
25 you'll have demand.

1                   But you haven't had a chance to  
2 properly analyze that to see if it properly reflects  
3 the demand component, correct?

4                   MR. ROBERT CAMFIELD: Well, I can tell  
5 you that I've seen enough of it that I'm comfortable  
6 with the path that Manitoba Hydro has taken. And we  
7 see the demand element implicitly in the marginal cost  
8 base prices, namely the MISO prices, used in the  
9 weighting where those prices are differentiated by  
10 peak and off-peak time frames.

11                  As we would anticipate, those prices are  
12 higher during peak loads, as expected, lower during  
13 off-peak loads. And to this, and I described it in my  
14 presentation a couple days ago, as a touch-up, we need  
15 to, in my view, add in some capacity costs during the  
16 peak load hours. The question is just -- at a  
17 technical level, just how you get there. But the path  
18 is correct.

19                  MR. ANTOINE HACAUT: And when I  
20 started this whole discussion, I said, Well, what did  
21 you still need to do.

22                  MR. ROBERT CAMFIELD: Yes.

23                  MR. ANTOINE HACAUT: And there was a  
24 reason for asking that, because if you say we already  
25 have the answer, I was really perplexed that there was

1 still something that we needed to do.

2 MR. ROBERT CAMFIELD: Well, as I said  
3 earlier, this needs to be worked through analytically,  
4 using the -- the appropriate tools that are readily  
5 available to gauge how best to assign to time frames  
6 capacity cost.

7 MR. ANTOINE HACAULT: Would you grant  
8 me this, sir, that if we take six hundred and sixty-  
9 one (661) hours in the fall and are weighting that  
10 with capacity, does it really tell us much about the  
11 winter peaking capacity of this Utility?

12 MR. ROBERT CAMFIELD: Oh, I don't  
13 think it tells you much about the winter peaking  
14 capacity. I also don't think it tells you much about  
15 how you might want to differentiate -- differentiate  
16 the weights for capacity between fall and winter.

17 MR. ANTOINE HACAULT: And is the same  
18 true of the spring, which is not peaking at all? By  
19 adding a peaking capacity item to that, does it tell  
20 us much about what causes the peaks in those cold  
21 winter months?

22 MR. ROBERT CAMFIELD: It does not.  
23 Let me -- let me cite an example. It's really a  
24 matter of two (2) dimensions, not just the level of  
25 demand that's available -- excuse me, demand that we

1 must serve reliably, which, as we agree, is for the  
2 domestic loads highest during the winter months, but  
3 it's also a matter of available supply.

4                   And often, it isn't recognized that  
5 during the load seasons that supply is also at lower  
6 levels, particularly for thermal systems. I could  
7 remember -- and -- and, of course, the -- the  
8 available supply is driven upon expected load levels.  
9 But there's a lot of uncertainty and -- and  
10 statistical variation with respect to the loads.

11                  You can't tell for sure what you're  
12 going to face when you determine perhaps some months  
13 ahead what the maintenance schedule looks like.

14                  So here it was mid-October, and as  
15 perhaps many of you know, Michael and I both are from  
16 southern company, and it was unusually hot with  
17 temperatures running in mid-October through 95  
18 degrees, but we had Vogtle units 1 and 2 off on  
19 maintenance, and some other thermal generators off on  
20 maintenance, as well.

21                  So though on an expected value basis we  
22 thought we had plenty of supply, it was a very close  
23 call because supply was appo -- appropriate attenuated  
24 based upon the expected conditions. And, of course,  
25 we know what both the expected and -- and the

1 statistical distribution surrounding the expected  
2 value happens to be, but we made those decisions based  
3 upon that history. But it just turns out that the  
4 draw was that it was fairly short in supply given the  
5 level of unusual high demand; it was a close call.

6 So during that very short run certainly  
7 some extra capacity would have been helpful.

8 MR. ANTOINE HACAULT: But getting back  
9 to the reason why we choose a capacity adder. It's to  
10 link the causing classes to the extra expense that you  
11 have to incur to ensure that you have enough capacity  
12 at the peaking times to deal with that demand on the  
13 system.

14 Isn't that the fundamental reason why  
15 we try to capture that?

16 MR. ROBERT CAMFIELD: I think there is  
17 implicit causality between costs and loads where costs  
18 are -- are highest and incurred by the service  
19 provider to satisfy, to some degree, not all costs,  
20 peak demands, and so, yes, there's that sort of  
21 causality.

22 But we would suggest it's not just a  
23 matter of recovery of financial costs, however you  
24 elect to do it. But we would assign comparatively  
25 high prices via cost allocation implicitly to the high

1 load hours because it is efficient. It's an efficient  
2 reuse of -- of resources implicit in the cost  
3 allocation that would drive you to the assignment of -  
4 - of capacity costs during high load periods.

5 MR. ANTOINE HACAULT: Thank you very  
6 much, sir, for having gone through that series of  
7 explanations.

8

9 (BRIEF PAUSE)

10

11 MR. ANTOINE HACAULT: Now, am I  
12 correct that in a general way when you choose the size  
13 of a transmission line, whether it be a US  
14 interconnection or otherwise, you choose a certain  
15 size that you expect to be able to handle the peak  
16 demand?

17 MR. ROBERT CAMFIELD: Well, generally,  
18 yes. But we need to understand how just -- just that  
19 is done. That is, it's a matter of satisfying, should  
20 we say, the requirements given loads -- given load  
21 levels, right, that we satisfy that reliably and at  
22 least cost over an extended long period.

23 Because the resources have extended  
24 long period lives, right. And so it's important to  
25 take account of satisfying those requirements,

1 satisfying peak loads in a way that is satisfying or -  
2 - or meeting reliability requirements at least cost  
3 over -- over the long term.

4 That's really important in the case of  
5 large-scale transmission as well as generation,  
6 because of the inherent scale calling these the  
7 resources you may be least -- consistent with the  
8 least cost to invest in a considerable resource  
9 investment that goes -- it may be completely  
10 consistent to do so.

11 To over invest for a near -- beyond  
12 what is necessary in the very near term -- the near  
13 term years ahead, to over invest somewhat such that in  
14 -- on a least cost discounted basis prospectively,  
15 total cost are minimized.

16 And that's, as I say, particularly the  
17 case with large scale transmission facilities as well  
18 as Hydro generation because of the scale economies and  
19 indivisibility of the assets and facilities  
20 themselves.

21 MR. ANTOINE HACAULT: But there is a  
22 distinction between generation where you can make one  
23 (1), two (2), three (3), or four (4), or five (5)  
24 turbines run, and transmission which is just a fixed  
25 asset with a fixed ability to handle the energy that's

1 put through by that generator, correct?

2 MR. ROBERT CAMFIELD: I think it  
3 depends upon the -- the comparison that you're making  
4 to transmission, namely, the generation technology.

5 Oh, let's see, Michael, what was it. It was Green  
6 County (phonetic) for example, a big CT station, some  
7 other generation there.

8 And so at southern we could add simply  
9 cycle T -- CTs over a series of years where the added  
10 capacity was meeting -- meeting the incremental loads.  
11 So the capacity was following the load closely,  
12 generally speaking, on a planning base, expected value  
13 basis.

14 On the other hand, in the case of a  
15 hydro station, and certainly hydro capacity is -- is  
16 the case at hand here, that's not necessarily the  
17 case, because the -- the civil structure and so forth  
18 for the entire facility need to be put in place all at  
19 one (1) time.

20 MR. ANTOINE HACAULT: Understood. But  
21 the way you use that facility you can run one (1)  
22 turbine, five (5) turbines, or all ten (10) turbines,  
23 correct?

24 MR. ROBERT CAMFIELD: I would think  
25 that would be the case. That really is a question for

1 Manitoba Hydro. There's -- I -- I can't say more than  
2 that.

3 MR. ANTOINE HACAULT: And can you  
4 explain why transmission is normally classified as a  
5 demand product?

6 MR. ROBERT CAMFIELD: Well, there's  
7 some debate about this. And the -- the reason that  
8 it's typically classified as demand is that the  
9 conventional wisdom holds that transmission capability  
10 is sized overall to satisfy peak load conditions as  
11 expected.

12 It's common to find that the demand or  
13 the set of demands used to allocate transmission  
14 include not just a coincident peak load, a very narrow  
15 time frame. But -- but rather a broader range of peak  
16 demands is often used in cost allocation of  
17 transmission facilities.

18 MR. ANTOINE HACAULT: Thank you very  
19 much for those answers.

20

21 (BRIEF PAUSE)

22

23 MR. ANTOINE HACAULT: Now I could go  
24 to Mr. Goulding. If we assigned only variable costs  
25 to the opportunity exports, are we capturing the US

1 interconnections when we're talking about transmission  
2 here as being allocated to -- to those opportunity  
3 sales? Is -- is that being captured in any way,  
4 capacity or otherwise?

5 MR. A.J. GOULDING: So if I understand  
6 your question, it is: Are we capturing transmission  
7 costs in opportunity sales if we are only assigning  
8 variable cost to the opportunity sales.

9 Is that correct?

10 MR. ANTOINE HACAULT: Yeah, whether --  
11 at all or in any way whatsoever, like capacity or  
12 otherwise.

13 MR. A.J. GOULDING: So my  
14 understanding would be, if we are only assigning  
15 variable costs to opportunity exports, that  
16 opportunity exports would largely not be picking up  
17 the costs for transmission.

18 MR. ANTOINE HACAULT: But would that  
19 also include the US interconnections I talked about  
20 yesterday which were built specifically to allow those  
21 transactions to occur?

22 MR. A.J. GOULDING: That is my  
23 understanding.

24 MR. ANTOINE HACAULT: You said the --  
25 there might be some aspect of it is -- I'm failing to

1 understand, if you pick up the variable costs -- and  
2 may we can look at Mr. Peters's last page of the PUB  
3 book of documents as to what variable costs comprise.

4

5 (BRIEF PAUSE)

6

7 MR. ANTOINE HACAULT: So if we go to  
8 the extreme right-hand side of this table under  
9 PCOSS14 amended, unfortunately we have to see the  
10 left-hand side, too, Diana. Can you work your magic?  
11 We need the left column. We see them all now.

12

13 (BRIEF PAUSE)

14

15 MR. ANTOINE HACAULT: I can -- I think  
16 we're -- my eyes are good enough with -- with just the  
17 one, but...

18

19 (BRIEF PAUSE)

20

21 MR. ANTOINE HACAULT: So if we go --  
22 on the table, we see the heading Export Costs  
23 Assignment. You following me so far?

24 MR. A.J. GOULDING: Yes.

25 MR. ANTOINE HACAULT: Left-hand side.

1 So that's when I asked -- I started asking the  
2 question: How are we dealing with this? We see DSM  
3 costs, how it's proposed to be allocated, Affordable  
4 Energy Fund, export direct, trading desk. That's the  
5 -- one of the examples you gave us.

6                   If we go to the extreme right-hand side  
7 under PCOSS14-Amended, that would go to the whole  
8 export pool, correct?

9                   MR. A.J. GOULDING: It says  
10 domestic/export pool in -- in the cell.

11

12                   (BRIEF PAUSE)

13

14                   MR. A.J. GOULDING: My apologies.  
15 That says domestic/export pool in the relevant cell, I  
16 believe.

17                   MR. ANTOINE HACAULT: So that's an  
18 example of a variable cost?

19                   MR. A.J. GOULDING: Yes. Over the  
20 intermediate term. And -- and we have to be careful  
21 about how we discuss variable cost in the sense that  
22 we'll often think about a variable cost as one that  
23 varies directly with the volumes sold.

24                   Your trading desk, of course you're --  
25 you're going to have established it. You'll have had

1 some up front technology costs. You have staffing,  
2 telecommunications, and so forth. And over the short  
3 term, that's not going to vary with the volume sold.  
4 Over the long run, you may add or contract staff,  
5 depending on -- on your volumes.

6                   And so there -- there is a timing  
7 element to that that's not directly correlated with  
8 whether you sell 100 megawatt hours today and 20  
9 megawatt hours tomorrow.

10                  MR. ANTOINE HACAULT: Okay. Now,  
11 there's three (3) other categories that would be put  
12 to the whole export pool, and then we get into wind  
13 purchases. And then all of a sudden we see there's  
14 another adjective added there. It says  
15 domestic/dependable export pool. Do you see that?

16                  MR. A.J. GOULDING: Yes, I do.

17                  MR. ANTOINE HACAULT: Okay. So  
18 anything that has that particular description, in my  
19 understanding, would just go to the dependable class  
20 and not to the opportunity class.

21                  MR. A.J. GOULDING: That's my  
22 understanding, yes.

23                  MR. ANTOINE HACAULT: Okay. And  
24 that's contrasted with the Board order in 2006 and  
25 2008 where they would -- "they" being the exports, all

1 of them would bear all of those additional items which  
2 show dependable export. If we go back into the table  
3 in a left direction, and we'd have to go up to see  
4 where the PCOSS08 line is.

5

6 (BRIEF PAUSE)

7

8 MR. ANTOINE HACAULT: If we go there,  
9 there is none that restrict those subsequent classes  
10 to dependable export pool, as I can determine at  
11 least.

12 MR. A.J. GOULDING: So I believe the  
13 cell here under PCOSS08 says:

14 "Does not recognize cost distinction  
15 between export sales types."

16 That's in the export differentiation  
17 line.

18 MR. ANTOINE HACAULT: Yes. And the  
19 one thing that is not allocated to the opportunity  
20 export pool is any kind of US interconnection because  
21 that's a fixed cost and we're only looking at variable  
22 cost. So I would suggest to you that it's counter-  
23 intuitive to say, Build in US interconnection lines to  
24 allow an opportunity export to be transacted but, in  
25 fact, ignore it in the allocation of costs.

1                           MR. A.J. GOULDING: I -- I apologize.

2 If you could phrase that as a question, it would be  
3 helpful to me.

4                           MR. ANTOINE HACAULT: Okay. Is it  
5 counter-intuitive to build a US interconnection line,  
6 a fixed cost, to opportunity exports into that market,  
7 I've gone through evidence on that, and to say, We  
8 aren't going to allocate even the cost of the US  
9 interconnection that we built to allow that  
10 opportunity sale to occur?

11                          MR. A.J. GOULDING: So zooming out a  
12 bit, and I'm just answering independently, not  
13 necessarily in the -- in the interests of my class,  
14 possibly against the interests of my class, actually,  
15 but with regards to the US interconnections, there's  
16 always going to be some element of demand associated  
17 with that in that the US interconnection in and of  
18 itself provides some reliability benefit.

19                          And so there's -- there's reliability  
20 benefit. There's access to supply, to economic supply  
21 for domestic load. And so, consequently, I believe  
22 that there are arguments for not exclusively  
23 allocating the cost of the US interconnections to --  
24 to exports.

25                          MR. ANTOINE HACAULT: Thank you.

1 (BRIEF PAUSE)

2

3 MR. ANTOINE HACAULT: I'd have to  
4 check my notes. I believe I've gone through the  
5 questions that I wanted to go through. I may have --  
6 and I don't know if I could have the Board's  
7 indulgence if -- if actually do, to have, like, five  
8 (5) or ten (10) minutes when we come back for DSM to  
9 clean up. And then this would allow everybody else to  
10 -- to flow through, if -- if that's acceptable?

11 THE CHAIRPERSON: Yeah, we're fine  
12 with that. Thank you. Ms. Fernandes...?

13

14 CROSS-EXAMINATION BY MS. ODETTE FERNANDES:

15 MS. ODETTE FERNANDES: Thank you,  
16 Madam Chair. Mr. Bowman, with respect to your method  
17 -- method of incorporating capacity, you're  
18 recommending an explicit capacity component, correct?

19 MR. PATRICK BOWMAN: I'm -- I'm  
20 concluding that Hydro under-recognizes capacity. And  
21 I think explicit capacity recognition is the most  
22 practical way to do it at this stage.

23 MS. ODETTE FERNANDES: And at page 23  
24 of your pre-filed evidence, am I correct that you  
25 state that an appropriate approach to generation

1 classification should include a notable portion of  
2 generation cost classified to demand?

3 MR. PATRICK BOWMAN: Yes.

4 MS. ODETTE FERNANDES: And you suggest  
5 that a range of between 21 and 23 percent demand  
6 classification could be considered. Do I have that  
7 right?

8 MR. PATRICK BOWMAN: Yes.

9 MS. ODETTE FERNANDES: And are you  
10 familiar with Mr. Chernick's evidence where he prefers  
11 8 percent based on comparing the cost of a new peaker  
12 with that of Keeyask?

13 MR. PATRICK BOWMAN: I saw his  
14 evidence and saw those numbers. I didn't try to  
15 confirm the values. It -- it seemed -- it seemed odd,  
16 because I -- I understood he was setting out to use  
17 the same approach and method that Hydro used in the --  
18 the earlier workshop, not the PUB workshops, but the -  
19 - the pre-filing workshops that we had discussions  
20 with -- with Hydro.

21 And -- and I -- I understood that they  
22 were attempting to use the same methodology. And my  
23 recollection is Hydro came up closer to 20, so I -- I  
24 didn't -- I didn't bother to pore over the numbers. I  
25 -- I think this is a topic that I'm recommending it's

1 -- I don't think I'm that far -- that far off others,  
2 such as mis -- Mr. Camfield, that the -- the proposals  
3 that are here still need some work.

4 Capacity's an important thing to  
5 recognize. And -- and I think that would be part of  
6 the things that one would work through. That's why  
7 the 21 to 23 isn't a precise number, it's a -- it's  
8 something one could do for today while -- while some  
9 further work goes into this topic.

10

11 (BRIEF PAUSE)

12

13 MS. ODETTE FERNANDES: And your 21  
14 percent referenced in your evidence, is that -- that's  
15 based on system load -- the system load factor  
16 approach. Is that correct?

17 MR. PATRICK BOWMAN: Well, yes, it's  
18 based on the way Hydro used to apply the system load  
19 factor approach, which isn't necessarily how a lot of  
20 other people use that approach. We'll see references  
21 to -- to utilities that use a system load factor like  
22 -- like Newfoundland Hydro. And what they'll do is  
23 they'll take their generating compliment, and they  
24 will look at the system load factor and assign their  
25 generating costs to demand energy based on that system

1 load factor split. And then they'll go on and think  
2 about their transmission.

3                           What Hydro used to do in the system  
4 load factor method that was used for a short while was  
5 to say, We'll apply the system load factor to all of  
6 our generation and transmission, and come up with a  
7 number that's about, you know, 40 percent demand, 60  
8 percent energy, something like that. But then say,  
9 We'll consider the demand component to be -- we'll put  
10 all the transmission into the demand component, and  
11 the residual is the way we'll treat our generation.  
12 And that residual led to this number of -- of 21  
13 percent or something.

14                           This -- Manitoba Hydro's system load  
15 factor is not 80 percent for the purposes of -- of the  
16 way you would do this calculation. I -- it's -- it's  
17 that -- that's why it says the -- the method that had  
18 been previously used led to the -- the twenty-one  
19 (21), and there's a reference there to -- to the old  
20 Board order where that was described.

21

22                           (BRIEF PAUSE)

23

24                           MR. PATRICK BOWMAN: It's -- it's also  
25 part of why I would say that the 20 -- 20 percent, if

1 you were really looking at comparability to some of  
2 these other utilities, you wouldn't be talking in the  
3 range of twenty (20). You'd be talking in the range  
4 of forty (40).

5

6 (BRIEF PAUSE)

7

8 MS. ODETTE FERNANDES: So, Mr.  
9 Chernick, then, if I can turn to you for a second.  
10 Can we clarify with you what your perspective is with  
11 respect to the use of the system load factor approach  
12 in terms of the demand component?

13 MR. PAUL CHERNICK: I'm not a big  
14 enthusiast of the system load factor approach. We're  
15 trying to divide up costs, and the -- the system load  
16 factor approach just says, We'll treat as being  
17 energy-related a portion of the generation cost,  
18 typically equal to the system load factor.

19 So if your system load factor is 65  
20 percent, then 65 percent of the generation costs are  
21 classified as energy-related, and allocated on energy  
22 in some form. And the remaining 35 percent is  
23 allocated on some kind of demand allocator, which may  
24 be one (1) or twelve (12), or more hours.

25 The problem with that is that it gives

1 you the same results regardless of whether you were  
2 doing it for the -- the diesel system or an island  
3 with, like, Puerto Rico with the oil-fired steam  
4 plants, or a largely nuclear system, or a hydro  
5 system. You spend very different amounts of money on  
6 your generation fixed costs, depending upon the  
7 technology that you're using. And in the case of  
8 Manitoba, what's available to you that's not available  
9 to other people.

10                   So I -- I -- it's better than -- than  
11 nothing, and if you have a choice of either allocating  
12 all capacity to demand in -- for some utility because  
13 that's the traditional way of doing it, or using the  
14 system load factor I would say, Okay, use the system  
15 load factor, but I would be holding my nose when I --  
16 I said that.

17                   It's much better to -- to use something  
18 that's based on the cost and the causation. And for  
19 most utilities, a cause of the number of megawatts you  
20 have is largely your load, but the cause of the cost  
21 of most of that capacity is related to being able to  
22 burn less expensive fuel to produce energy, or in the  
23 case of hydro, to burn no fuel at all.

24                   MS. ODETTE FERNANDES: So then do I  
25 understand that you -- that you view Mr. Bowman's

1 results of 21 to 23 percent as over-assigning  
2 generation costs as demand based on Manitoba Hydro's  
3 hydraulic facilities?

4 MR. PAUL CHERNICK: Yes. As -- as far  
5 as I can see, demand really doesn't drive Hydro's  
6 planning in terms of the amount of capacity installed.  
7 There may be an occasional exception. There's been  
8 some argument that maybe Kelsey rerunnering was an  
9 exception to that. But up until that -- the time that  
10 example was raised, I hadn't seen anything indicating  
11 that Manitoba Hydro was doing what almost every other  
12 utility needs to do, which is first say, How many  
13 megawatts do we need? And then figure out what's the  
14 least-cost way of doing that, which involves, in many  
15 cases, putting lots of money into fixed costs to save  
16 on energy.

17 Manitoba Hydro looks at its needs and  
18 says, Oh, we're going to need energy first. And the  
19 ability to meet peak demand just kind of comes along  
20 with it.

21 MS. ODETTE FERNANDES: Thank you, Mr.  
22 Chernick.

23 Turning back to you, Mr. Bowman, would  
24 you agree that the Dorsey converter station would not  
25 be required in the absence of Bipoles I and II?

1                   MR. PATRICK BOWMAN: Yes.

2                   MS. ODETTE FERNANDES: And am I  
3 correct that your reasons for recommending Riel be  
4 treated as transmission is the same as your reasons  
5 for treating Bipole III as transmission?

6                   MR. PATRICK BOWMAN: Riel has two (2)  
7 components. It has a converter and a AC yard. The AC  
8 yard as transmission is -- is consistent with its role  
9 in the transmission system. The Riel converter was, I  
10 would say, the last -- the last issue that I had  
11 looked at.

12                  And given that you're dealing with  
13 Dorsey as a transmission asset, and you're dealing  
14 with Bipole III, which I would suggest is a  
15 transmission asset, Riel sort of falls out of that, if  
16 you like. I didn't -- I didn't spend a -- a whole lot  
17 of time thinking separately about the Riel converter.

18                  MS. ODETTE FERNANDES: And would you  
19 agree that Bipole III would not have been built  
20 without the northern generation plants?

21                  MR. PATRICK BOWMAN: Yes.

22                  MS. ODETTE FERNANDES: And am I  
23 correct that in your pre-filed evidence on page 32,  
24 you appear to recognize that Bipole III could be  
25 required over an extended number of winter hours in

1 the event of a sustained out -- outage of the other  
2 bipoles? And if you need a reference, I think it's  
3 lines 19 to 21.

4 MR. PATRICK BOWMAN: I -- I don't --  
5 yeah. Yes. Absolutely. I don't -- didn't need the  
6 reference. It's -- it could be required over a -- a  
7 number of different hours.

8 MS. ODETTE FERNANDES: And you  
9 indicate that it may be appropriate to consider a 2CP  
10 classification and allocation for Bipole III?

11 MR. PATRICK BOWMAN: Right. And I --  
12 I further elaborated this on -- in the -- in the  
13 rebuttal, which you may find gives -- answers some of  
14 the questions.

15 MS. ODETTE FERNANDES: Okay. Yeah.  
16 And -- and with respect to rebuttal, you don't mention  
17 an alternative approach to recognizing the number of  
18 hours by using peak and shoulder period energy. So  
19 are you saying that the energy requirements in those  
20 periods are not relevant?

21 MR. PATRICK BOWMAN: No. I was -- I  
22 was trying to deal with the evolving information as it  
23 came at us in that -- that workshop process. I think  
24 it was -- it was interesting to -- to go down this  
25 type of road for the cost-of-service study where we

1 have lots of -- of complicated, and technical, and --  
2 and voluminous information.

3                   And as we went through that workshop, I  
4 think there were some useful points made about --  
5 about Bipole III and its role. I think there were  
6 some important comments about -- about summer.

7                   What I understood from Hydro's rebuttal  
8 is that, as much as the -- the hearing on Bipole III's  
9 Need and Alternatives talked about a winter need, that  
10 that was perhaps an over-simplification, and that in  
11 truth, there's a certain equally valid summer need,  
12 because in summer, you have a -- a different type of  
13 capacity constraint that's linked to -- to your market  
14 participation and your -- your likely ability to  
15 secure capacity from the market in the summer from a  
16 market that -- that is summer peaking south of us.

17                  And I thought it was an -- an  
18 interesting point, and I think, by the time -- by the  
19 time I was through that -- their rebuttal, I think  
20 that my -- my position had evolved, and if anything,  
21 simplified into saying, Bipole III is -- looks more  
22 and more like transmission, the 2CP, the same as any  
23 other transmission.

24                  And in fact, if anything, Bipole III --  
25 the building of Bipole III starts to -- starts to make

1 Bipole I and II look a lot more like part of a  
2 transmission network than some generator lead.

3

4 (BRIEF PAUSE)

5

6 MS. ODETTE FERNANDES: Okay. So just  
7 to be clear, you continue to agree that energy  
8 requirements in those periods are relevant in the  
9 shoulder and -- peak and shoulder period?

10 MR. PATRICK BOWMAN: I -- I'm sorry,  
11 it's actually very hard to hear you.

12 MS. ODETTE FERNANDES: Sorry. I know,  
13 my voice. I'm sorry. So I could I get you to agree  
14 that energy requirements in those periods are also  
15 relevant?

16 MR. PATRICK BOWMAN: Energy  
17 requirements in -- in all periods are -- are relevant  
18 in -- in winter shoulder, winter peak, if that's what  
19 we were disc -- what I think we set off discussing  
20 first. Energy usage, customer usage in those periods  
21 are relevant.

22 MS. ODETTE FERNANDES: If I can turn  
23 you to page 31 of your pre-filed evidence. Thank you.  
24 You reproduced a chart from the Bipole III CEC hearing  
25 that compares the Manitoba peak load to the available

1 power supply in the event of the loss of Bipole I and  
2 II transmission?

3 MR. PATRICK BOWMAN: Yes.

4 MS. ODETTE FERNANDES: And would  
5 accept that, based on this chart, a peak load deficit  
6 has existed as early as 1985?

7 MR. PATRICK BOWMAN: Based on this  
8 chart, I -- I think it's -- it's a bit of an  
9 oversimplification in terms of the -- in terms of  
10 suggesting that Manitoba Hydro's been operating  
11 outside the bounds of reliability or something over  
12 that period.

13 But the -- the green line is higher  
14 than the blue line throughout the entire period. As  
15 the Manitoba load grows, the green line moves further  
16 away from the blue period. And that load growth  
17 eventually drives the need for a Bipole III.

18 MS. ODETTE FERNANDES: And is it also  
19 your understanding that, while the timing of Bipole  
20 III in services is associated with reliability  
21 concerns today, you would agree that the energy from  
22 Keeyask would be stranded without Bipole III?

23 MR. PATRICK BOWMAN: Well, certainly  
24 the -- the capacity output of Keeyask will be  
25 stranded. Energy is a -- is a broader consideration.

1 And -- and I want to be careful because I was -- I was  
2 taken through the previous exhibit which showed how  
3 much energy could Bipoles I and II deliver versus the  
4 capacity.

5 And -- and, you know, their -- their  
6 theoretical energy delivery ability is -- is -- I -- I  
7 recall from that graph, is -- is actually large  
8 enough, but you would have all kinds of -- of shaping  
9 and timing and -- and off-peak issues. But -- but for  
10 sure the capacity would be -- would be bottled up, and  
11 -- and so would a lot of the -- the value of Keeyask  
12 absent Bipole III.

13 MS. ODETTE FERNANDES: But you would  
14 agree that all of the energy from Keeyask could not be  
15 delivered without Bipole III?

16 MR. PATRICK BOWMAN: I would agree  
17 that one (1) could not deliver every kilowatt hour  
18 produced by Keeyask without Bipole III, if that's what  
19 you mean by all.

20 MS. ODETTE FERNANDES: Thank you.

21

22 (BRIEF PAUSE)

23

24 MS. ODETTE FERNANDES: Mr. Chernick,  
25 in your June 10th pre-filed evidence -- I'm looking at

1 page 23. Down. There we go. Thank you. You have  
2 the question on line 9 saying:

3 "Do you agree that essentially all  
4 of hydro and fossil rate-based costs  
5 are driven by energy?"

6 And you respond, "Yes," just to put a  
7 point on that. Is that correct?

8 MR. PAUL CHERNICK: Yes.

9 MS. ODETTE FERNANDES: All right.

10 Now, you go on to state that:

11 "The Manitoba Hydro system is energy  
12 limited, needing firm energy earlier  
13 than it needs additional peak  
14 capacity to meet demand.

15 In the NFAT proceeding, Manitoba  
16 Hydro's forecast showed a need for  
17 additional firm energy supply on top  
18 of firm hydro supply, continuous  
19 maximum thermal output year round  
20 and opportunity imports about four  
21 (4) years before the need for  
22 additional peak capacity."

23 I read that correctly?

24

25 (BRIEF PAUSE)

1                   MR. PAUL CHERNICK: My apologies. If  
2 you'd like me to -- to do the reading, I'd be happy  
3 to, given your -- your vocal conditions.

4                   MS. ODETTE FERNANDES: Thank you, Mr.  
5 Chernick. So am I correct that it appears you don't  
6 believe Manitoba incurs any cost to provide generation  
7 capacity at this point?

8                   MR. PAUL CHERNICK: Well, capacity is  
9 sort of an ambiguous term there. The fact that you've  
10 -- you've got this big hydro turbine in a -- in a dam  
11 means that you -- you've got capacity. The context  
12 we're talking about here is peaking capacity, ability  
13 to meet your peak demand, a demand-driven capacity.

14                  And, in that sense, the costs of -- the  
15 fixed costs of Manitoba Hydro's system are not being  
16 driven by capacity requirements. I -- I hope that's a  
17 helpful answer.

18                  MS. ODETTE FERNANDES: Yes, thank you.

19                  MR. PAUL CHERNICK: I haven't gotten  
20 to speak very much, so I'm aware that I may go on.

21

22                  (BRIEF PAUSE)

23

24                  MS. ODETTE FERNANDES: In terms of  
25 Bipole III, Mr. Chernick, do you agree that Manitoba

1 Hydro is building Bipole III for transmission  
2 reliability? Maybe if I can say it this way, I  
3 believe Mr. Bowman is -- has indicated that Manitoba  
4 Hydro is building Bipole III for transmission  
5 reliability.

6 So do you agree with that?

7 MR. PAUL CHERNICK: Well, I mean, you  
8 can certainly look at it that way, but the reason you  
9 need a Bipole III is that you built three (3) large  
10 generation stations and you're building a fourth in  
11 the north to take advantage of the hydro resource and  
12 save energy costs -- variable costs.

13 And Bipole III is needed to connect  
14 those resources to the load centre. So in that sense  
15 it's -- it's required by the energy resource. It's  
16 driven by the generation need and it -- it makes the  
17 delivery of the generation way off in -- in the  
18 northern part of the province more reliable, but it  
19 wouldn't be needed for reliability if those four (4)  
20 plants were gas combined cycle plants in the outskirts  
21 of Winnipeg.

22

23 (BRIEF PAUSE)

24

25 MS. ODETTE FERNANDES: Thank you, Mr.

1 Chernick. Madam Chair, we're done with this part of  
2 the cross, thank you.

3 THE CHAIRPERSON: Thank you. Mr.  
4 Peters, please.

5

6 CROSS-EXAMINATION BY MR. BOB PETERS:

7 MR. BOB PETERS: Thank you, Madam  
8 Chair. I want to start with the generation cost  
9 classification and whether or not generation costs  
10 should be classified as energy, or as demand, or some  
11 combination of those two (2).

12 And I don't want to repeat the  
13 discussion that Mr. Hacault had, as well as others.

14 But Mr. Camfield, Christensen Associates agreed with  
15 Hydro's classification of generation of 100 percent  
16 energy because of the weighted energy allocator that  
17 Manitoba Hydro inserted.

18 Is that correct?

19 MR. ROBERT CAMFIELD: That is correct.

20 MR. BOB PETERS: And that insertion of  
21 the weighted energy allocator implicitly classifies  
22 and allocates some costs by demand?

23 MR. ROBERT CAMFIELD: Yes.

24 MR. BOB PETERS: And had -- rather  
25 than implicit, are you able to put a number on that,

1 what percentage it is?

2                   MR. ROBERT CAMFIELD: Well, presuming  
3 that the scarcity rent content is vanishingly small,  
4 you might say it is at least bounded by the  
5 differential between the peak and off-peak prices,  
6 MISO prices used to weight the energy.

7                   MR. BOB PETERS: Where does that get  
8 us as a percentage as to how much is demand con --  
9 considered demand and how much would be energy?

10                  MR. ROBERT CAMFIELD: Oh, gosh, I'd  
11 have to look at the -- the price differentials  
12 themselves, perhaps...

13

14                  (BRIEF PAUSE)

15

16                  MR. BOB PETERS: I take it that answer  
17 is not readily available. And not to discourage --

18                  MR. ROBERT CAMFIELD: Order of  
19 magnitude, I would suggest two (2) to two point five  
20 (2.5) times. That might be a little high. Yeah, we  
21 should -- I'll need a little time to give you an  
22 answer.

23                  MR. BOB PETERS: All right. Then why  
24 don't you undertake to consider that with your  
25 colleague and come back and indicate to the panel what

1 Christensen Associates calculates or estimates, if  
2 that's the case, what the weighted energy allocator is  
3 actually doing in terms of classifying and allocating  
4 some costs by demand?

5                   Would you do that?

6                   MR. ROBERT CAMFIELD: We will do that.

7                   MR. BOB PETERS: All right. Thank  
8 you.

9

10 --- UNDERTAKING NO. 2: Christensen Associates to  
11                   advise the panel what it  
12                   calculates or estimates  
13                   the weighted energy  
14                   allocator is actually  
15                   doing in terms of  
16                   classifying and allocating  
17                   some costs by demand

18

19                   MR. BOB PETERS: Mr. Chernick, thought  
20 you were back in high school. You were leaning over  
21 to help -- help your colleague.

22                   You disagreed with Mr. Bowman earlier  
23 about his 21 to 23 percent demand classification,  
24 correct?

25                   MR. PAUL CHERNICK: Yes.

1                   MR. BOB PETERS: And you felt that was  
2 too high?

3                   MR. PAUL CHERNICK: For Manitoba  
4 Hydro, yes.

5                   MR. BOB PETERS: And so what -- what  
6 is not too high according to your views?

7                   MR. PAUL CHERNICK: Zero.

8                   MR. BOB PETERS: So you're not --  
9 you're saying there should be zero generation costs  
10 considered demand. And I think you told that to Ms.  
11 Fernandes because Hydro's planning criteria really  
12 starts and ends with energy, from your perspective?

13                  MR. PAUL CHERNICK: Well, it's not  
14 their planning criteria -- I mean, their criteria also  
15 look at -- at demand -- but just the facts at this --  
16 this time. Fifteen (15) years from now, it may be  
17 different, but right now the -- and -- and for many  
18 years in the past, as -- as far as I can determine,  
19 Hydro has added plants to meet energy, and then has  
20 had enough capacity meet peak demand.

21                  MR. BOB PETERS: Mr. Chernick, are --  
22 are you aware then that Hydro does have two (2) main  
23 generation planning criteria which includes winter  
24 peak capacity as well as dependable energy?

25                  MR. PAUL CHERNICK: Yes. That's what

1 I was referring to. And -- and we've -- we've looked  
2 at some of those tables. I think you put them in your  
3 cross materials.

4

5 (BRIEF PAUSE)

6

7 MR. BOB PETERS: Mr. Camfield,  
8 Christensen Associates did not use marginal cost  
9 weighting in its energy allocator.

10 And do you agree that some portion of  
11 the general costs should be classified as demand?

12 MR. ROBERT CAMFIELD: May I heard the  
13 question again, please?

14 MR. BOB PETERS: Well, I wanted to --  
15 back in 2012, the Christensen report suggested that  
16 Hydro should explicitly try to capture the cost of  
17 marginal reserve costs and capacity costs within its  
18 allocator.

19 Do you remember that?

20 MR. ROBERT CAMFIELD: Yes.

21 MR. BOB PETERS: And -- and if -- if  
22 Manitoba Hydro followed your advice, they would  
23 explicitly classify some generation cost as demand.

24 MR. ROBERT CAMFIELD: Well, we -- we  
25 want to be careful about that because the approach

1 taken by Manitoba Hydro which we concur with strongly  
2 is an opportunity cost basis where the value of the  
3 resources used to serve demand is based upon a  
4 comparatively competitive wholesale market, MISO.

5                   So the resources are being valued by  
6 those -- by those prices. And that -- that would, in  
7 our view, include certainly energy and operating  
8 reserves and some -- some measure of capacity value as  
9 well, however determined, and -- and certainly  
10 dependent upon market conditions and -- and market  
11 design.

12                  MR. BOB PETERS: So, Mr. Camfield, if  
13 Manitoba Hydro did not use marginal cost weighting in  
14 its energy allocator, do you believe that some portion  
15 of generation costs should be classified as demand?

16                  MR. ROBERT CAMFIELD: Yes.

17                  MR. BOB PETERS: And you gave Manitoba  
18 Hydro some options to consider, and one of them was  
19 using the equivalent peaker method, correct?

20                  MR. ROBERT CAMFIELD: That is correct.

21                  MR. BOB PETERS: And Manitoba Hydro  
22 didn't choose that method, did they?

23                  MR. ROBERT CAMFIELD: They did not.

24                  MR. BOB PETERS: You didn't recommend  
25 that again in your 2015 report.

1                   MR. ROBERT CAMFIELD: We did not.  
2                   MR. BOB PETERS: Why is that?  
3                   MR. ROBERT CAMFIELD: Well, it first  
4 of all was supplemental in so far as it was dealing  
5 with supplemental topics that we did not address in  
6 2012.

7                   MR. BOB PETERS: Okay. And if you --  
8 if you looked at the options, did you consider system  
9 load factor as another method?

10                  MR. ROBERT CAMFIELD: I did not.  
11 System load factor is an approach that I view  
12 unfavourably.

13                  MR. BOB PETERS: Mr. Bowman, Hydro  
14 takes issue with your recommendation to classify  
15 generation in part as demand but suggests that the use  
16 of the weighted energy allocator to allocate the  
17 energy portion, correct?

18                  MR. ROBERT CAMFIELD: May I hear the  
19 question again, please?

20                  MR. BOB PETERS: That was to Mr.  
21 Bowman, sorry. Excuse me.

22                  MR. PATRICK BOWMAN: That -- that's  
23 right. I may -- may I hear it again, please?

24                  MR. BOB PETERS: All right. I just  
25 wanted confirmation, Mr. Bowman, that Hydro takes

1 issue with your recommendation to classify generation  
2 in part as demand but suggests that the use of the  
3 weighted energy allocator is appropriate to allocate  
4 the -- the energy portion?

5 MR. PATRICK BOWMAN: Hy -- yes, hy --  
6 my -- my understanding of Hydro's evidence in -- in  
7 the rebuttal is that one does not need to explicitly  
8 recognize demand because the weighted energy allocator  
9 already surely implicitly recognizes demand. And if  
10 it doesn't, we'll -- we'll double down on the -- on  
11 the method and -- and add some weighting to the on-  
12 peak periods.

13 MR. BOB PETERS: All right. Well,  
14 your recommendation, Mr. Bowman, for recommending a  
15 portion be classified as demand is that the marginal  
16 cost weighting used by Hydro applies to too many peak  
17 hours over the year?

18 MR. PATRICK BOWMAN: Well, yes,  
19 there's that. There's also the concern that the --  
20 the marginal cost weighting inherently is looking at  
21 variations in energy cost from a market where there's  
22 considerable evidence and literature comes out  
23 monthly, if you like, about failings of that market to  
24 be able to -- to accurately deal with capacity issues  
25 and -- and some skepticism amongst some that it will

1 ever be able to deal with capacity issues in a way  
2 that -- that would -- would be -- I would say, would  
3 be useful for a cost of service perspective.

4                   If there's a market for capacity, it's  
5 going to be a market that you're -- you're telling to  
6 sell on a short-term basis assets that are long-term  
7 investments, and it's a very, very hard mismatch.  
8 It's why -- why Mr. Camfield explained how they -- the  
9 markets, when capacity's long, the price could almost  
10 zero. When capacity's short, the price could go  
11 through the roof until people make investment, if they  
12 make investment.

13                  So the market -- capacity to market is  
14 -- is a very challenging concept. But on top of that,  
15 I don't think -- I mean when you think about why we're  
16 using market and marginal weighting anyway in the cost  
17 of service study. We're using it because we're trying  
18 to come up with some sort of proxy for the idea that  
19 using energy during the day is a bit more important  
20 than using it during the night.

21                  Using the energy on a Tuesday is a bit  
22 more important than using it on a Sunday. And using  
23 energy in the winter is a bit more important than  
24 using it in the fall. And this gives us a directional  
25 way of doing that.

1                   We're not sending a marginal cost  
2 signal. At the end of the day, we're designing rates  
3 that are the same throughout the year, for goodness  
4 sakes. People pay -- pay their six and a half (6 1/2)  
5 cents or three and a half (3 1/2) cents every hour  
6 they use power, so it's not a marginal cost signal.  
7 It's -- it's some way of tracking the -- the  
8 importance of these different kilowatt hours.

9                   And -- and so it's not -- it's not a  
10 mixing and matching to then say, but for a capacity  
11 component, the market -- this -- this market signal is  
12 not going to give us a way of looking at -- at  
13 capacity and the basis for making capacity  
14 investments.

15                  Capacity investments are these -- are  
16 these big commitments that utilities make in order to  
17 provide reliable service to their customers. This is  
18 one (1) of their -- their most solemn obligations, is  
19 to try to provide electricity as many hours of the  
20 year as they can.

21                  And to say that -- that somehow they  
22 make investments in these megawatts because -- because  
23 you might be able to sell a few or buy a few is -- is  
24 sort of nonsense. The -- the capacity investments are  
25 about -- about this -- this solemn obligation. They

1 ta -- utilities take it very seriously. Capacity  
2 planning criteria is -- is, I would say, critical to  
3 the way Hydro plans and operates its system.

4                         And -- and we saw some examples of  
5 investments that -- that were made on that basis or --  
6 or new -- new projects that were planned with an eye  
7 to that -- to that type of criteria. And I just think  
8 of a market type signal. Or somehow this margin cost  
9 weighting is -- is naturally going to miss -- miss the  
10 point even if it was as fine as every hour of the  
11 year. It's going to miss the point that -- that these  
12 capacity investments are something different than the  
13 market captures easily.

14                         MR. BOB PETERS: And -- and your  
15 remedy to that long answer, complaining about the  
16 Hydro methodology, is to expressly classify a portion  
17 of generation costs as demand?

18                         MR. PATRICK BOWMAN: Yes.

19                         MR. BOB PETERS: And while you told  
20 Ms. Fernandes 21 to 23 percent, I think in your slides  
21 you even negotiated against yourself and came down and  
22 said the Board should use 20 percent now, and study it  
23 for further cost of service studies.

24                         MR. PATRICK BOWMAN: I -- I'm not  
25 negotiating a specific number, Mr. Peters. I'm saying

1 that there are at least two (2) methods referenced in  
2 the different materials that have been -- have been  
3 given to us. One is what Hydro used up until 2003.  
4 One is what -- what was done using a peaker method as  
5 -- as you discussed with Mr. Camfield. You could come  
6 up with some others. System load factor would come  
7 out higher than that, but I said Hydro -- I think as I  
8 said not -- not a lot different as -- from Mr.  
9 Camfield.

10 There is some outstanding questions on  
11 these matters. Hydro could go do some homework on it.  
12 But for now, twenty (20), twenty-one (21), twenty-  
13 three (23), I'm not saying that I know the exact  
14 number but somewhere in that order is -- is probably a  
15 reasonable thing to put into PCOSS14 re-revised, and -  
16 - and we move forward and have it looked at over time.

17 MR. BOB PETERS: Mr. Harper, in your  
18 evidence you stated that classifying generation costs  
19 as 100 percent energy is preferable to the equivalent  
20 peaker method, or any other method, to determine the  
21 demand energy split. Would that be a good summary?

22 MR. WILLIAM HARPER: I think with the  
23 qualifier, and I think it was maybe the same one  
24 Christensen Associates added, that I don't -- I don't  
25 view it as 100 percent energy. It's 100 percent

1 weighted energy where -- where the weights take into  
2 account both capacity and energy considerations. But  
3 with that qualifier that -- that would be my answer,  
4 yes.

5

6 (BRIEF PAUSE)

7

8 MR. BOB PETERS: Let's turn to the  
9 functionalization and classification of Dorsey and  
10 Riel. Mr. O'Sheasy or Mr. Camfield, you're aware that  
11 for PCOSS14 and prior studies Manitoba Hydro  
12 functionalised Dorsey as transmission?

13 MR. ROBERT CAMFIELD: That is our  
14 understanding.

15 MR. BOB PETERS: And did they change  
16 it based on advice from your -- your company?

17 MR. ROBERT CAMFIELD: I certainly hope  
18 so.

19 MR. BOB PETERS: And so now Hydro is  
20 choosing to functionalize the HVDC portion of Dorsey  
21 as 100 percent generation in the PCOSS14-Amended?

22 MR. ROBERT CAMFIELD: Yes.

23 MR. BOB PETERS: Your recommendation  
24 was not to go to 100 percent, was it?

25 MR. ROBERT CAMFIELD: Possibly.

1 Running should we say the entire cost of the -- of the  
2 HVDC equipment at those stations, including the  
3 inverters -- the inverter facilities as a -- as a  
4 package, not running all that to generation  
5 necessarily, and so our recommendation is to assign to  
6 transmission between -- between 25 percent and zero,  
7 wherein the case of zero generation then would assume  
8 all responsibility for those facilities.

9 MR. BOB PETERS: Does the math mean  
10 that 75 percent of the generation costs should be  
11 functionalized -- I'm sorry, the Dorsey HVDC costs  
12 should be functionalized as generation?

13 MR. ROBERT CAMFIELD: Yes, that is  
14 correct. Within that range, yeah. That would be at  
15 one end of that range.

16 MR. BOB PETERS: That was --  
17 Christensen Associates's low end of the range is  
18 75:25.

19 MR. ROBERT CAMFIELD: Yes, sir, that's  
20 correct.

21 MR. BOB PETERS: In your earlier  
22 report, that was the 2012 report, Christensen  
23 Associates indicated that the Dorsey HVDC facilities  
24 provides benefits to the transmis -- transmission  
25 system through such things as system reliability and

1 series compensation.

2 MR. ROBERT CAMFIELD: Yes.

3 MR. BOB PETERS: Correct? And --

4 MR. ROBERT CAMFIELD: Yes.

5 MR. BOB PETERS: -- absent Dorsey,

6 Hydro would need to invest in significant other  
7 transmission assets?

8 MR. ROBERT CAMFIELD: Yes. At -- at  
9 least if it wishes to have full utilization of -- of  
10 the system. In other words, without -- without the  
11 converter stations at Dorsey and without other --  
12 other investment in the transmission system, Manitoba  
13 Hydro would lose a significant capability in the  
14 utilization of the system, at least without breaching  
15 reliability standards.

16 MR. BOB PETERS: Thank you. I've got  
17 your point. Mr. Bowman, you took a contrarian view  
18 from some of the other parties. And in your view,  
19 Dorsey is not linked to transmission, and I'm  
20 referring to the referring to the HVDC portion of  
21 Dorsey.

22 Have I got that right?

23 MR. PATRICK BOWMAN: There may have  
24 been one (1) too many 'nots' in there.

25 MR. BOB PETERS: Sorry. Is it your

1 view that Dorsey is not generation-linked  
2 transmission?

3 MR. PATRICK BOWMAN: The Dorsey --  
4 yes, that's correct.

5 MR. BOB PETERS: So if Bipoles I and  
6 II are functionalized as generation, and they are  
7 under your proposal as well, correct?

8 MR. PATRICK BOWMAN: I -- I've  
9 accepted that Bipoles I and II should remain as -- as  
10 generation-related transmission. I -- I think there's  
11 an -- an argument that you build out the system and  
12 the more that you add Bipole IIIIs, it starts to  
13 undermine whether they're really generation-related  
14 transmission anymore, or whether they're simply parts  
15 of a network as well.

16 But for the purposes of this, we'll  
17 accept that -- I -- I haven't seen a -- a reason to  
18 change what was there before.

19 MR. BOB PETERS: All right. If -- if  
20 Bipoles I and II are functionalized as generation, and  
21 if the Bipoles are not operable without convertors,  
22 why wouldn't the termin of -- terminus of those  
23 facilities also be considered generation?

24 MR. PATRICK BOWMAN: Well, that's the  
25 -- that's the million dollar question, as they say.

1 And in fact, it's the same question that was asked  
2 over about fifteen (15) years before this Board, and  
3 the Board actually gave Hydro a specific directive on  
4 it.

5                   And this -- I think Hydro is quoted, I  
6 think from 2003, if I'm not mistaken. And it's --  
7 it's one (1) of those more challenging issues. It's  
8 not entirely clear-cut. But when Hydro reviewed that  
9 question in preparing its transmission tariff, going  
10 back to the 2001 or 2002 era, it concluded that it  
11 should consider these convertors to be of a sufficient  
12 value to the transmission system.

13                  That it can -- it can charge an admin  
14 transmission tariff, and it should consider them part  
15 of the transmission system. I -- I still think that  
16 it is -- it is -- is coming down on a side of a -- of  
17 an area that has some greyness to it and -- and that -  
18 - that same greyness existed through the next fourteen  
19 (14) years to today.

20                  And it -- it always come down on one  
21 (1) side of that issue, including in PCOSS studies  
22 approved by this Board, and I -- I fail to see the --  
23 the change in -- in facts or circumstances that --  
24 that today would be one (1) to -- to come to a -- a  
25 different conclusion.

1                   MR. BOB PETERS: All right. Thank you  
2 for that. Let's turn to the functionalization and  
3 classification of Bipole III.

4                   Perhaps Mr. O'Sheasy or Mr. Camfield,  
5 you can tell the Board whether it's appropriate in the  
6 cost-of-service methodology to determine  
7 classification based on what causes the cost to vary?

8

9                   (BRIEF PAUSE)

10

11                  MR. ROBERT CAMFIELD: The -- the  
12 question, as I understand it, is: What causes the  
13 costs to vary. Did -- did I hear you correctly?

14                  MR. BOB PETERS: Yes.

15                  MR. ROBERT CAMFIELD: Okay. Well,  
16 that would -- that would take us, it would seem to me,  
17 into -- into a world of change in load, change in  
18 cost, correct, or any other reason that you might...

19                  MR. BOB PETERS: All right. Well,  
20 let's -- let's come at it this way. What factors  
21 drive the cost of a Bipole III?

22                  MR. ROBERT CAMFIELD: Reliability.

23                  MR. BOB PETERS: And that reliability,  
24 is that generation reliability or transmission  
25 reliability?

1                   MR. ROBERT CAMFIELD: It -- it is  
2 generation predominantly, but not exclusively.

3                   MR. BOB PETERS: And what's the split?

4                   MR. ROBERT CAMFIELD: The -- the  
5 distinction is that the facilities, as we just  
6 discussed, the inverter facilities associated with --  
7 with, in this case, Bipole III, situated at Riel,  
8 provide to a small extent, transmission reliability  
9 and use of the system.

10

11                   (BRIEF PAUSE)

12

13                   MR. BOB PETERS: Mr. Bowman, in light  
14 of the questions of My Friends earlier, you disagreed  
15 with Hydro's functionalization of Bipole III as  
16 generation, and you've given your reasons for that,  
17 correct?

18                   MR. PATRICK BOWMAN: Yes.

19                   MR. BOB PETERS: And one (1) of the  
20 corrections that you made, I think you told Ms.  
21 Fernandes, was in the rebuttal evidence, that you  
22 adjusted your evidence and you now are prepared to  
23 accept that Bipole III costs could be allocated  
24 according a 2CP methodology as -- as proposed by  
25 Hydro?

1                   MR. PATRICK BOWMAN: No, that's not  
2 correct.

3                   MR. BOB PETERS: Sorry. I was -- you  
4 initially started off by indicating Bipole should be  
5 allocated by a winter-coincident peak, correct?

6                   MR. PATRICK BOWMAN: I suggested that  
7 Bipole should have a -- a -- should be a transmission  
8 asset, but different than other transmission assets,  
9 it should have more weighting on winter. And there  
10 are some different methods you could think about for  
11 doing that.

12                  MR. BOB PETERS: All right. And then  
13 in -- in your rebuttal evidence, you changed that  
14 position, I think, as you told Mr. Fernandes, that you  
15 now recommended that Bipole III be allocated on a 2CP  
16 basis.

17                  MR. PATRICK BOWMAN: I -- I think  
18 Hydro provided some compelling evidence that -- of the  
19 summer function of Bipole III. And as a result, I  
20 think it simplifies anything that -- that I was  
21 dealing with considerably, because, as a result,  
22 Bipole III would not need a different classification  
23 method than any other transmission. It could be 2CP.

24                  MR. BOB PETERS: Mr. Bowman, is Bipole  
25 III a backup to Bipoles I and II?

1                   MR. PATRICK BOWMAN: It's a -- it's a  
2 complement. It's -- yeah. I'd -- I think "backup"  
3 implies things that may not be factually correct.

4                   MR. BOB PETERS: So why would the  
5 backup of a generation function asset not also be  
6 functionalized as a generation function?

7                   MR. PATRICK BOWMAN: Well, first of  
8 all, a -- a caveat that whether it's a -- it's a  
9 backup, it's not an -- an asset held in reserve if  
10 needed. It will be fully loaded and -- and being used  
11 as much as any other asset on Hydro's system by the  
12 time it's in service. It doesn't -- it doesn't sit  
13 there waiting to be used if Bipoles I and II go down.

14                  In that regard, the -- the role of a --  
15 of a Bipole III starts to bring in more of the -- the  
16 image and the characteristics of a -- of an -- an  
17 overall network. There's -- there's plants up north  
18 that can only come down the Bipoles. There's some  
19 plants that can be put on the DC system or can go  
20 through the AC system. There's loads up north.

21                  When we looked at the -- at the graph  
22 of the BC example of their generation-related  
23 transmission assets, their GRTAs go from the main  
24 northern plant to the first major substation, the  
25 first -- the first point where the power's integrated.

1                   We're trying to say, No, no, don't stop  
2 at that first substation. Go all -- go all the way  
3 down and -- and bring it all the way to Dorsey. And I  
4 -- I think that's an -- that's an -- not necessarily  
5 an overreach when you're dealing with -- with Bipoles  
6 I and II and the economics of -- of the decision to  
7 proceed north.

8                   But it starts to -- it starts to be an  
9 -- an overreach of the concept when you start to apply  
10 it as you've -- as you've built out the system and  
11 added multiple -- multiple assets with multiple routes  
12 and uses.

13                  MR. BOB PETERS: Let's turn to the  
14 classification of the US interconnections. And in the  
15 2012 Christensen report, there was no position taken,  
16 was there, on Manitoba Hydro's classification of the  
17 US interconnections?

18                  MR. ROBERT CAMFIELD: That is correct.  
19 We took no position -- position.

20                  MR. BOB PETERS: In that report,  
21 Christensen Associates concluded that Hydro's approach  
22 to classify transmission system costs 100 percent of -  
23 - as demand was common practice in the industry?

24                  MR. PATRICK BOWMAN: That's correct.  
25                  MR. BOB PETERS: And can you now

1 explain to the Board how Christensen Associates comes  
2 to the view that Hydro's US interconnections should  
3 now be classified as energy and allocated by weighted  
4 energy?

5 MR. ROBERT CAMFIELD: The transmission  
6 interface facilities of Manitoba Hydro are  
7 transmission. And we would recommend that they be  
8 classified and allocated according to weighted energy  
9 because that -- that approach captures the foregone  
10 value in outage costs incurred by customers in the  
11 absence of those -- those facilities.

12

13 (BRIEF PAUSE)

14

15 MR. ROBERT CAMFIELD: I can elaborate,  
16 if you'd like, on that.

17

18 (BRIEF PAUSE)

19

20 MR. BOB PETERS: Mr. Camfield, one (1)  
21 of the reasons Manitoba Hydro takes their position is  
22 that, for the purpose of these interconnections, that  
23 the purpose is to exchange energy at all times of the  
24 day and at all seasons.

25 Do you understand that be one (1) of

1 the -- Manitoba Hydro's rationale for how they treated  
2 these interconnections?

3 MR. ROBERT CAMFIELD: Is it -- is it  
4 rationale or utilization?

5 MR. BOB PETERS: Well, you'll accept  
6 that that is the -- that's -- that's what they say is  
7 their utilization?

8 MR. ROBERT CAMFIELD: Yes.

9 MR. BOB PETERS: And you'd agree that  
10 domestic customers use the domestic AC transmission  
11 grid to consume energy at all times of the day, and in  
12 all seasons, as well?

13 MR. ROBERT CAMFIELD: Yes.

14 MR. BOB PETERS: And yet those AC  
15 assets are classified as demand and allocated by 2CP?

16 MR. ROBERT CAMFIELD: Yes.

17 MR. BOB PETERS: So, conceptually, how  
18 is that different than US customers using this  
19 interconnection to import electricity year round?

20 MR. ROBERT CAMFIELD: In the case of  
21 the AC system, the reason we classify those  
22 facilities, and this is referring to the AC meshed  
23 network, is because the reliability issues, given  
24 Manitoba Hydro's planning criteria and the way they  
25 operate their system, the reliability benefits

1 associated with -- with transmission are predominantly  
2 associated with the peak loads.

3                   In the interface, it's a different  
4 story. There, the reliability benefits. That is,  
5 should we need that -- that interface for reliability  
6 purposes, it is not related explicitly or -- or  
7 specifically to fully narrow periods, such as  
8 exceptionally cold, high -- high load days in the  
9 winter in isolation.

10                  Rather, the reliability benefits are  
11 more broadly spread. And that's because the  
12 reliability benefits of the interface are -- are a  
13 form of guarantee insurance for supply -side  
14 reliability issues, and those can be for extended  
15 periods of time.

16                  And the value of the reliability,  
17 therefore, provided by those facilities is  
18 comparatively broad, accurately captured, should I  
19 say, that's too strong a word, but reasonably well-  
20 captured by weighted energy in terms of, naturally,  
21 the -- the peak load hours are more valuable than the  
22 off-peak hours.

23                  MR. BOB PETERS: All right. Thank  
24 you. Mr. Chernick, is it your position that the US  
25 interconnection is to exchange energy and to provide

1 backup energy in the event of a drought?

2 MR. PAUL CHERNICK: Yes. The -- the  
3 justification for the -- the lines are primary for  
4 energy exchange, that Manitoba Hydro doesn't count on  
5 them for -- for meeting peak demand. And Hydro would  
6 be making the -- the large sales it's making only  
7 because it's got the -- the ener -- energy to sell  
8 and, particularly, clean energy.

9 MR. BOB PETERS: Ms. Villegas, if we  
10 could turn up Board counsel's book of documents, maybe  
11 page 22, please. Mr. Chernick, maybe you can take it  
12 subject to check in this site at some other point, but  
13 would you accept that Manitoba Hydro explains that the  
14 primary purpose of several of their interconnections  
15 is to facilitate capacity exchanges?

16 MR. PAUL CHERNICK: Let me take a  
17 look. There's -- I believe that those are basically  
18 motivated by energy. They may have been described as  
19 capacity in the sense that we have a contract for a 50  
20 megawatt pipeline basically of -- of power but it was  
21 to get the energy, at least in -- in recent years I  
22 don't believe Manitoba Hydro has been concerned about  
23 meeting its peak load. And these diversity exchanges  
24 I believe are primarily energy related, although some  
25 of them may have firm capacity components for -- for

1 the US.

2 MR. BOB PETERS: Ms. Villegas, while I  
3 think Mr. Chernick may be incorrect on that, could we  
4 turn back to page 21 of the book of documents and look  
5 at the second last sentence of the answer on that  
6 page. Here, Mr. Chernick:

7 "The interconnections facilitate the  
8 exchange of power between Hydro, a  
9 winter peaking unit, and the US  
10 which is summer peaking."

11 You see that portion of it?

12 MR. PAUL CHERNICK: Yes. It says  
13 "winter peaking utility," right.

14 MR. BOB PETERS: And doesn't that  
15 suggest that -- and if we go to page 24 of the book of  
16 documents we'll see included -- near the -- the bottom  
17 half of the page that Manitoba Hydro has about 550  
18 megawatts of capacity exchange agreements with Great  
19 River and also with NSP?

20

21 (BRIEF PAUSE)

22

23 MR. BOB PETERS: We'll check it on  
24 page 12, Ms. Villegas, in the capacity chart that  
25 we've used.

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: And, Mr. Chernick, if  
4 we look down under the base supply power resource box  
5 down to the contracted imports, we'll see the capacity  
6 that is contracted there -- or winter capacity?

7 MR. PAUL CHERNICK: Yes, I see that.

8 MR. BOB PETERS: So if we assume that  
9 Manitoba Hydro has made these investments to satisfy  
10 this capacity issue, does that cause you to reconsider  
11 whether or not the US interchange should be classified  
12 as demand or energy?

13 MR. PAUL CHERNICK: Well, if in fact  
14 the issue was capacity and there were no contracts for  
15 energy, it was simply an arrangement for power to be  
16 supplied in emergency conditions, I think you would  
17 have a point. But I believe the fact is regardless of  
18 whether there is capacity available because the lines  
19 exist and because US entities are willing to commit to  
20 providing energy in the winter, which brings capacity  
21 along with it, that the lines as far as I'm aware, and  
22 again I wasn't here in 1970, but as far back as I'm  
23 aware the -- the justification was based on energy  
24 exchanges, energy sales, and the ability to make  
25 energy purchases in droughts.

1                           MR. BOB PETERS: Mr. Harper, to you,  
2 sir. Does Manitoba Hydro's winter peak capacity  
3 reliability criteria also rely on imports to meet that  
4 peak demand?

5                           MR. WILLIAM HARPER: What I'm saying,  
6 it does not rely -- it relies on contracted imports  
7 but I don't believe -- I'm sorry, what  
8 I'm trying to struggle with is there -- there are two  
9 (2) criteria as you talked about earlier. And on the  
10 energy side there is a very explicit recognition that  
11 you can rely on interconnections for energy.

12                         There is not the same explicit  
13 recognition in the energy criteria itself, but to the  
14 extent that you -- that you have a firm contract like  
15 they're showing, you -- you would rely on it and put -  
16 - put it in your -- in -- put -- put it in your supply  
17 demand tables.

18                         MR. BOB PETERS: All right. Thank  
19 you. Madam Chair, I appreciate the indulgence of the  
20 panel, and I also thank the witnesses. Those are my  
21 questions related to the third of the four key issues  
22 that the Board has put before us.

23                         THE CHAIRPERSON: Thank you, Mr.  
24 Peters. And again because we're somewhat ahead, we  
25 can maybe have a more generous break than contemplated

1 by our schedule, and come back at twenty-five (25) to.

2

3 --- Upon recessing at 2:19 p.m.

4 --- Upon resuming at 2:39 p.m.

5

6                   THE CHAIRPERSON: All right. Thank  
7 you everybody. We're ready to reconvene. Me.  
8 Hacault, you had mentioned you may want a bit of extra  
9 time at the end of this -- before we start the next  
10 session?

11                  MR. ANTOINE HACAULT: The only extra  
12 time I wish to have is to thank all the expert  
13 witnesses for having very -- been very patient in all  
14 my questioning and thank you a lot for your input and  
15 valuable insight for this Board.

16                  THE CHAIRPERSON: Okay. Thank you.

17 Then we'll move on to our next key issue, which is the  
18 classification and allocation of demand-side  
19 management. Mr. Williams, please.

20                  MR. BYRON WILLIAMS: As I indicated  
21 this morning, Mr. Orle and Board member Grant did most  
22 of my heavy lifting, so I'm passing -- passing the --  
23 the mic along.

24                  THE CHAIRPERSON: Mr. Gange, please?

25                  MR. BILL GANGE: GAC has no questions.

1                   THE CHAIRPERSON:   Thank you.  Me.

2 Monnin?

3                   MR. CHRISTIAN MONNIN:   Merci, Madam  
4 President.

5

6 CONCURRENT EVIDENCE PANEL RE THE CLASSIFICATION AND  
7 ALLOCATION OF DEMAND-SIDE MANAGEMENT

8

9                   MICHAEL O'SHEASY, Previously Sworn  
10                  ROBERT CAMFIELD, Previously Sworn  
11                  WILLIAM HARPER, Previously Sworn  
12                  A.J. GOULDING, Previously Sworn  
13                  PATRICK BOWMAN, Previously Sworn  
14                  PAUL CHERNICK, Previously Sworn

15

16 CROSS-EXAMINATION BY MR. CHRISTIAN MONNIN:

17                  MR. CHRISTIAN MONNIN:   I have three  
18 (3) questions and hopefully that won't take much time.  
19 General question and -- and really aimed towards the  
20 panel in a general sense.

21                  And I'll start with Mr. Harper.  Do you  
22 agree that DSM costs defer the need for future  
23 generation investment?

24                  MR. WILLIAM HARPER:   Yes, I do.  As  
25 well, to some extent, transmission and distribution

1 investment as well.

2 MR. CHRISTIAN MONNIN: And again, Mr.  
3 Harper, do you agree with the view that a direct cost  
4 DSM provides a system benefit to the system as a  
5 whole?

6 MR. WILLIAM HARPER: The DSM savings  
7 provide benefits to the system as a whole, yes.

8 MR. CHRISTIAN MONNIN: And some of you  
9 may recall that Manitoba Hydro's workshop  
10 presentation, I think it was page 47, I -- we don't  
11 need to go there, but I will read it out for the  
12 record, stated:

13 "NER is viewed as a system dividend  
14 to be shared in a fair and equitable  
15 manner and is allocated based on  
16 total allocated cost."

17 Given that DSM provides benefits to the  
18 system, do you agree, Mr. Harper, that it makes sense  
19 for these direct costs to be included in the  
20 allocation of net export revenue?

21 MR. WILLIAM HARPER: Well, I think if  
22 you were to adopt my particular recommendation it  
23 would not be directly assigned cost. It would be  
24 functionalized as generation, transmission, and  
25 distribution, including the allocated costs and

1 including the allocation base for NER.

2 MR. CHRISTIAN MONNIN: Thank you. Mr.  
3 Bowman, I'll go with the same three (3) questions to  
4 you. If -- if you need me to repeat them I can.

5 MR. PATRICK BOWMAN: I -- I think that  
6 would be good.

7 MR. CHRISTIAN MONNIN: The first  
8 question is whether you agree that the view that a  
9 direct cost DFM -- DSM provides a system benefit to  
10 the system as a whole?

11 MR. PATRICK BOWMAN: Do I agree that  
12 the DSM cost provides a benefit to the system as a  
13 whole? Is that your --

14 MR. CHRISTIAN MONNIN: That's correct.

15 MR. PATRICK BOWMAN: It -- it provides  
16 a -- a benefit in the form of lower loads, yes.

17 MR. CHRISTIAN MONNIN: To the system  
18 as a whole?

19 MR. PATRICK BOWMAN: Yes.

20 MR. CHRISTIAN MONNIN: And would you  
21 agree that DSM costs defer the need for future  
22 generation investments?

23 MR. PATRICK BOWMAN: I would say that  
24 in a -- as a general statement that proposition is --  
25 is used to support DSM. I think it's often valid. I

1 -- I don't think one can necessarily say that about  
2 Manitoba Hydro at this point in time. I -- I think  
3 the next generation, if anyone was to look at the --  
4 the Hydro supply and demand tables is, the last I  
5 heard, pushing '20/'40 -- in the '20/'30s era.

6                   If you're doing DSM that is being  
7 undertaken today, whether -- whether the equipment you  
8 put in, whether the program runs that long, I -- I  
9 think it's -- it's very tenuous to say that -- that  
10 projects being undertaken today are necessarily  
11 affecting in -- in any direct line a decision on  
12 whether you build a plant in -- in 2030 -- in the  
13 2030s or 2040.

14                  And -- and I think further to that, I  
15 don't think that I've seen Hydro build a plant on a  
16 schedule where one would say DSM can -- can bump that  
17 plant out a year, because Hydro's tendency is to try  
18 to find -- to advance the plant a few years and -- and  
19 get some contracts to do it sooner.

20                  We -- we don't -- we don't have --  
21 intended to have time sitting around in Manitoba  
22 saying, How can we avoid having to build something?  
23 We tend to say, How can we find the opportunity to get  
24 on with building something. So, you know, that's  
25 premise. That's the value of DSM. I -- I just don't

1 think it necessarily applies in -- at this point in  
2 time in Manitoba.

3 MR. CHRISTIAN MONNIN: Thank you for  
4 that. And I think that -- that response might be  
5 responsive to my third question, but I'll put it out  
6 there anyways in case you want to add anything more.

7 As I said earlier, Manitoba Hydro's  
8 workshop presentation on page 47 stated:

9 "NER is viewed as a system dividend  
10 to be shared in a fair and equitable  
11 manner, and is allocated based on  
12 total allocated costs."

13 And given that DSM provides benefits to  
14 the system as a whole, do you agree that it makes  
15 sense for these direct costs to be included in the  
16 allocation of net export revenue?

17 MR. PATRICK BOWMAN: I -- I think that  
18 it's probably best to just refer to the testimony I  
19 gave on net -- net export -- net export revenue and  
20 decisions about the best way to use it.

21 MR. CHRISTIAN MONNIN: Mr. Chernick,  
22 same three (3) questions for you. Do you need me to  
23 repeat them?

24 MR. PAUL CHERNICK: That would  
25 probably be efficient, yes.

1                           MR. CHRISTIAN MONNIN: Okay. First  
2 question is: Do you agree with the view that the  
3 direct costs DSM provides a system benefit to the  
4 system as a whole?

5                           MR. PAUL CHERNICK: That DSM pro --  
6 provides a benefit to the system as a whole? Yes.

7                           MR. CHRISTIAN MONNIN: And do you  
8 agree that DSM costs defer the need for future  
9 generation investment?

10                          MR. PAUL CHERNICK: It may defer  
11 generation investment, or it may allow Manitoba Hydro  
12 to sell generation services off to -- off system,  
13 reducing the cost of that generation to domestic load.

14                          MR. CHRISTIAN MONNIN: And last,  
15 Manitoba Hydro's workshop presentation at slide 47  
16 stated:

17                          "NER is viewed as a system dividend  
18                          to be shared in a fair and equitable  
19                          manner, and is allocated based on  
20                          total allocated costs."

21                          And the question, given that -- that  
22 DSM provides benefits to the system as a whole, do you  
23 agree that it makes sense for these direct costs to be  
24 included in the allocation of net export revenue?

25                          MR. PAUL CHERNICK: I don't think the

1 -- the -- I quite follow the -- that reasoning. It  
2 provides benefits to the system as a whole. It makes  
3 sense in that -- for that reason for the system as a  
4 whole to pay for DSM, although there's another  
5 consideration with DSM cost recovery that requires a  
6 more careful look, as we've described earlier.

7                   But the fact that it provides benefits  
8 to the system as a whole does -- doesn't, to me, mean  
9 anything one way or the other about how you ought to  
10 allocate the net energy revenues -- net export  
11 revenues.

12                   MR. CHRISTIAN MONNIN: Thank you.

13 Those are my questions.

14                   THE CHAIRPERSON: Thank you.

15                   Mr. Orle...?

16                   MR. GEORGE ORLE: No questions, thank  
17 you.

18                   THE CHAIRPERSON: Me. Hacault...?

19                   MR. ANTOINE HACAULT: No questions.

20                   THE CHAIRPERSON: Ms. Fernandes...?

21                   MS. ODETTE FERNANDES: Unfortunately I  
22 do have a few, and they will all be to Mr. Chernick.

23                   MR. PAUL CHERNICK: Well, thank you.

24

25 CROSS-EXAMINATION BY MS. ODETTE FERNANDES:

1                   MS . ODETTE FERNANDES: Mr. Chernick,  
2 I'd just like to spend a few minutes reviewing your  
3 evidence with respect to how to determine the best  
4 approach to allocating the cost of DSM to the various  
5 customer classes.

6                   In your pre-filed evidence at -- on  
7 pages 13 and 14, you discuss the relevant  
8 considerations in the allocation of DSM costs.

9                   Now, would you agree that there are two  
10 (2) opposite effects of DSM on non-participating  
11 classes, one (1) as a result of the reduction in  
12 overall cost, and the other as an increase in the non-  
13 participating class share of those costs?

14                  MR. PAUL CHERNICK: Yes.

15                  MS . ODETTE FERNANDES: Yeah.

16                  MR. PAUL CHERNICK: I think I said in  
17 terms of it shrinks the pie, but changes the way the  
18 pie is sliced.

19                  MS . ODETTE FERNANDES: And if the  
20 second effect is greater than the first, the non-  
21 participating class is disadvantaged?

22                  MR. PAUL CHERNICK: Yes, that can  
23 occur.

24                  MS . ODETTE FERNANDES: Now, would you  
25 agree that participants' benefits are greater than

1 non-participant benefits?

2                   MR. PAUL CHERNICK: Are we talking  
3 about -- about a participating class versus non-  
4 participating classes? Yes.

5                   MS. ODETTE FERNANDES: And would it be  
6 fair to say that the chances of a non-participating  
7 class being disadvantaged by the proposal to allocate  
8 across the system are greater if the excess of program  
9 benefits over costs is relatively small?

10                  MR. PAUL CHERNICK: So you're saying  
11 if the system benefits are not worth very much more  
12 than the program is costing the Utility, it's going --  
13 as it flows through rates.

14

15                  (BRIEF PAUSE)

16

17                  MR. PAUL CHERNICK: I think that makes  
18 sense, yes.

19                  MS. ODETTE FERNANDES: Thank you.  
20 Would you agree that, if the program benefits are  
21 substantial relative to cost, this would lessen the  
22 chances of disadvantages to nonparticipants?

23                  MR. PAUL CHERNICK: Yes, everything  
24 else being equal, including the extent to which costs  
25 are reallocated from the participating class to the

1 nonparticipating classes.

2 MS. ODETTE FERNANDES: Now, do you  
3 agree that measures of avoided costs per DSM  
4 programming tend to be leveled over many years in  
5 the future?

6 MR. PAUL CHERNICK: Well, some of  
7 those costs are -- are leveled because they're hard  
8 to deal with in -- in an annual basis, like avoided  
9 transmission distribution costs. There's no  
10 particular need to levelize avoided generation costs.  
11 And I do not remember offhand how Manitoba Hydro deals  
12 with that.

13 Some utilities levelize the cost before  
14 applying them, and others use the annual values which  
15 reflects the difference between the value of a short-  
16 lived measure and -- and one (1) that lasts thirty  
17 (30) or forty (40) years.

18 MS. ODETTE FERNANDES: And would you  
19 agree that the cost of service is done for a  
20 particular year in which the actual benefit of a  
21 particular program may be less than the avoided cost  
22 used in -- in evaluating the program economics?

23 MR. PAUL CHERNICK: Yes.

24 MS. ODETTE FERNANDES: Oh, Diana, I  
25 forgot to give this one to you. It's transcript page

1 618 of the June workshop, and I'm hoping I don't have  
2 to go to it. But I believe you were discussing with  
3 Mr. Harper your awareness that one (1) utility, namely  
4 Nova Scotia, has taken both a system benefit approach  
5 and a direct assignment approach, and I believe it's  
6 25:75. Is that correct?

7 MR. PAUL CHERNICK: Yes, 25 percent  
8 system, 75 percent direct assignment.

9 MS. ODETTE FERNANDES: Right. And can  
10 you advise whether this split was determined on the  
11 basis of a discussion that occurred as part of the  
12 Nova Scotia cost of service workshop?

13 MR. PAUL CHERNICK: I don't believe  
14 so. And my recollection is, and I'm pretty sure about  
15 this, that it was actually in the process of  
16 developing the -- the DSM cost recovery process back  
17 when -- when Nova Scotia was implementing DSM programs  
18 for the first time.

19 It probably came up somewhat in the  
20 last cost of service proceeding, but I don't remember  
21 it having been a major focus of interest.

22 MS. ODETTE FERNANDES: Thank you, Mr.  
23 Chernick. Thank you, panel. And, Ms. Chair, that  
24 concludes my questions. Thank you.

25 THE CHAIRPERSON: Thank you. Mr.

1 Peters, please.

2 MR. BOB PETERS: Yes, thank you.

3 Thank you, Madam Chair.

4

5 CROSS-EXAMINATION BY MR. BOB PETERS:

6 MR. BOB PETERS: Mr. Camfield, Mr.

7 O'Sheasy, are you aware that the prior Board direction  
8 to Manitoba Hydro with respect to demand side  
9 management costs was to directly assign those costs to  
10 the export class?

11 MR. ROBERT CAMFIELD: That was my --  
12 that was my understanding, yes.

13 MR. BOB PETERS: Do you support that  
14 approach?

15 MR. ROBERT CAMFIELD: I do not.

16 MR. BOB PETERS: Why not?

17 MR. ROBERT CAMFIELD: Because the  
18 commercial customers gen -- the generation  
19 transmission -- generation customers, those parties  
20 that are transactions to -- to -- on export sales  
21 transactions and their loads have nothing to do with  
22 the DSM programs.

23 MR. BOB PETERS: Does the export load  
24 vary with DSM costs?

25 MR. ROBERT CAMFIELD: It does.

1                   MR. BOB PETERS: That is, the more  
2 spent by Manitoba Hydro on DSM, the more that may be  
3 available to be exported?

4                   MR. ROBERT CAMFIELD: Agreed.

5                   MR. BOB PETERS: So was freeing up  
6 energy for export the original impetuous for Hydro to  
7 implement DSM programs?

8                   MR. ROBERT CAMFIELD: I don't know. I  
9 -- I just don't know the history, Mr. Peters.

10                  MR. BOB PETERS: Can you tell the  
11 Board whether back in the early 1990s when Hydro began  
12 its DSM programs, were the energy savings from demand-  
13 side management more valuable to Hydro as an export  
14 product, or more valuable in deter -- in deferring the  
15 next generation?

16                  MR. ROBERT CAMFIELD: I have to say I  
17 don't know. I -- I have not reviewed the history --

18                  MR. BOB PETERS: All right. What  
19 about --

20                  MR. ROBERT CAMFIELD: -- the -- the  
21 policy or analysis history with respect to that issue.

22                  MR. BOB PETERS: All right. Thank  
23 you. Let me ask you the same question as to whether  
24 or not when DSM was being carried out in the mid 2000s  
25 let's say, 2005 to pick a year, were the energy

1 savings more valuable than the deferring of new  
2 generation?

3 MR. ROBERT CAMFIELD: Again, I have to  
4 say I don't know but I -- but I suspect that's the  
5 case.

6 MR. BOB PETERS: Would you know the  
7 answer if it was asked of 2016 then, and that's  
8 whether the energy savings from DSM are more valuable  
9 to Hydro as an export product or more valuable in  
10 deferring new generation?

11 MR. ROBERT CAMFIELD: I have to say I  
12 don't know. We -- well, we -- we could -- let --  
13 let's just pursue this a little bit, right. We can  
14 anticipate that in the projections of avoided cost,  
15 i.e., marginal cost, however determined, in the  
16 valuation of programs if -- if that is positive -- say  
17 we have positive net benefits, then we can anticipate  
18 that probably, yes, it contributes to export sales and  
19 thus would align with your -- the premise of your  
20 question.

21 MR. BOB PETERS: Mr. Bowman, for a  
22 change you agree with Hydro in this case, the  
23 treatment of DSM costs, correct?

24 MR. PATRICK BOWMAN: Yes, that's one  
25 of the many issues I agree with Hydro on.

1                           MR. BOB PETERS: You're under oath.

2 I'll -- I'll take that back --

3                           MR. PATRICK BOWMAN: Mr. Peters, there  
4 are probably a thousand methods used in the cost-of-  
5 service study, and most of them -- there is a near  
6 total agreement, I think, in this room.

7                           MR. BOB PETERS: All right. I  
8 understand your point. But can you explain to the  
9 panel succinctly why you support directly assigning  
10 DSM costs to participating classes?

11                          MR. PATRICK BOWMAN: Yes. I think  
12 given the context for DSM at this point in time, and  
13 given the economic profile of those activities the  
14 benefits received -- the benefits that arise due to  
15 the DSM programs are most -- most notably received,  
16 and arise in the -- in the participating classes as a  
17 result of the programs.

18                          And so I think that is a cost/causation  
19 linkage issue that -- that is -- is appealing as a  
20 rationale. And I also think that from a pragmatic  
21 side I think -- and -- and this is from having worked  
22 with -- with customers over the years who have -- who  
23 have been involved in lots of other jurisdictions  
24 where they've been asked to -- to pay amounts towards  
25 common system DSM, and they get very jaded and

1   sceptical and concerned about -- about the DSM  
2   evaluation among other classes.

3                         And then they come to Manitoba and it's  
4   a bit of a breath of fresh air that they don't have to  
5   get quite so -- so worked up because their costs are  
6   being allocated to them directly, and they're not  
7   being -- not -- not getting in the business of the  
8   other classes. And I think that has a practical  
9   benefit that is -- that is also of value.

10                        MR. BOB PETERS: Mr. Harper, perhaps  
11  our last time to chat on the record here, sir. You  
12  take a different approach, and you want DSM to be  
13  recognized as a system resource that should benefit  
14  all customer classes, and that's why you told one of  
15  my colleagues earlier in the questioning this  
16  afternoon that you see it being functionalized as  
17  across GT&D, correct?

18                        MR. WILLIAM HARPER: That's correct.

19                        MR. BOB PETERS: What -- tell the  
20  Board what you see as the benefit to the system that's  
21  different from what Mr. Bowman said was the benefit to  
22  the class.

23                        MR. WILLIAM HARPER: Well, I -- I  
24  think the issue is the primary -- the primary basis on  
25  which the programs are being assessed and which they

1 are being decided which ones to pursue is on -- is on  
2 a system-benefit basis. It's not on a customer-class  
3 basis, or individual customer basis.

4                    You -- you heard Hydro's witnesses on -  
5 - on the first day say that they pursued DSM because  
6 it's the least cost plan for the system. And so --  
7 and so on that basis, it's -- you know, if that's the  
8 primary consideration, then that's the primary cost  
9 driver.

10

11                    (BRIEF PAUSE)

12

13                    MR. BOB PETERS: And your answer, Mr.  
14 Harper, are you looking at the test year or are you  
15 looking at what may happen in the -- in the long term  
16 with respect to the DSM program?

17                    MR. WILLIAM HARPER: Oh, I'm taking  
18 more of a long-term perspective. I mean, as I talked  
19 about in my presentation, I think, you know, in the --  
20 as one (1) of the policy matters, you -- you can look  
21 at cost of service on an individual year basis, but  
22 you have to realize a lot of the spending that's being  
23 made that's being incurred even on a yearly basis is -  
24 - is with a per -- is with a longer-term patient  
25 capital perspective, as I talked about in -- in my

1 presentation.

2                   And -- and to ta -- to try and take an  
3 individual year perspective on costs that, in general,  
4 were approached and approved from an economic  
5 perspective on a long-term basis, I think you're  
6 mixing and matching. And if you try and do that,  
7 you're going to be bouncing around one -- one year to  
8 the next. One year it may be a participant benefit.  
9 The next year it may be a system benefit. Two (2)  
10 years later it's a participant benefit again.

11                  I think it's better to take a long-term  
12 and consistent perspective in looking at this.

13                  MR. BOB PETERS: Mr. Goulding, you  
14 agree in principle with Mr. Harper that DSM is a  
15 system resource, correct?

16                  MR. A.J. GOULDING: Yes.

17                  MR. BOB PETERS: But I think you  
18 disagree with Mr. Harper because you wouldn't allocate  
19 the costs to the customer classes as he suggests, do  
20 you?

21                  MR. A.J. GOULDING: No. That --  
22 that's correct. We have proposed that they be  
23 classified as -- as demand and allocated using the 2CP  
24 allocator.

25                  MR. BOB PETERS: Can you explain to

1 the panel why DSM should be allocated by a demand  
2 allocator and not an energy allocator?

3                           MR. A.J. GOULDING: Well, I think that  
4 we believe that there are many approaches to this that  
5 are sensible. We had looked at a demand allocator  
6 because what our -- when -- when we think about the  
7 various DSM programs, the DSM programs that in theory  
8 should be most valuable are those that are targeted at  
9 peak.

10                          And so, in turn, what we wanted to do  
11 was to allocate to -- to demand to reflect what we  
12 felt was the value of an efficient DSM program.

13                          MR. BOB PETERS: All right. Let me  
14 segue from that answer over to Mr. Bowman. I think  
15 earlier today in an answer you were giving me, a  
16 lengthy answer for which I'll have to look at the  
17 transcript, quite frankly, to get the -- the full just  
18 of it, you included in one (1) of your answers the  
19 mention of efficiency in cost-of-service studies.

20                          And the question I have for you, sir,  
21 is: Is efficiency a factor to be considered in cost-  
22 of-service studies?

23                          MR. PATRICK BOWMAN: Mr. Peters, thank  
24 you for the question. I -- I've been reflecting on  
25 this -- this ex -- exchange. And I -- I'm concerned

1 that the record is left with what would appear to be a  
2 difference of opinion that I believe is probably a  
3 tempest and a teapot between myself and -- and, I  
4 believe, Mr. O'Sheasy in terms of how efficiency comes  
5 into a cost-of-service study and what it -- what it  
6 means when we use the word.

7 I -- I think what you would have heard  
8 was a common problem with -- with using the word  
9 'efficiency', which can have some different  
10 definitions, some very specific and narrow and some  
11 very broad and generic. And we've heard it used in  
12 terms of energy efficiency or hydro unit efficiency or  
13 all these different -- different things, but there's  
14 also a very specific economic efficiency definition.

15 And -- and I think that the question  
16 is, when we use the word 'efficient' in a context of -  
17 - of rate making, people may -- may assume you mean  
18 the very specific economic -- economically efficient  
19 type of definition, or they may -- may mean something  
20 broader.

21 In the common parlance, a lot of people  
22 describe a rate as efficient if it's -- if's it's got  
23 an RCC close to one (1) or rated as efficient if  
24 someone's covering their costs. There are all these  
25 different type of language. But it is not meeting the

1 type of economic efficiency test of marginal revenue  
2 equal to marginal cost.

3                   And I'm -- I'm commenting that cost of  
4 service is not a tool where one would go through and  
5 try to use it to get marginal revenue equal to  
6 marginal cost, because through a cost-of-service study  
7 we don't set the marginal revenue. We don't do the  
8 rate design.

9                   The marginal revenue comes from the way  
10 that you design the rates. You can have a -- a -- any  
11 -- any cost-of-service study you like and design an  
12 efficient rate or you can have any cost-of-service  
13 study you like and design an inefficient rate.

14                   That is a rate des -- a rate design  
15 step. And it's referenced as much when you look at  
16 the Bonbright criteria, which Mr. Harper had at his  
17 page 15. I -- I managed to get it jotted down.

18                   Bonbright had a criteria. Number 6 is  
19 you should meet a cost standard and number 8 is you  
20 should try to think about how -- how marginal  
21 efficiency fits into it. It doesn't say 8 is subsumed  
22 in 6. It says they're two (2) different things that  
23 you want to think about.

24                   So I -- I think the key is that -- is  
25 that don't -- I don't think it's appropriate,

1 possible, necessary, even desirable to go into a cost-  
2 of-service exercise and say that somehow by way of  
3 your cost allocations you're going to come up with a  
4 method that will solve a marginal revenue equals  
5 marginal cost criteria even if you were trying to meet  
6 that criteria.

7                   And if you go down that road -- Mr.  
8 Harper and I were reminiscing this morning about a  
9 hearing that occurred in 19 -- in -- in Ontario, an  
10 old Ontario hydro hearing called ECAPS (phonetic) in  
11 the late 1970s in electric costing and pricing that  
12 was a two (2) year hearing on using marginal cost  
13 rates and -- and efficiency in -- as a broader  
14 consideration in -- in cost of service and rate  
15 setting and ultimately rejected the -- the proposal  
16 from the -- from Ontario Hydro.

17                   So it's a -- it can be a can of worms  
18 and it's not necessarily the most desirable thing when  
19 you balance the criteria. And I think you're --  
20 you're misguided if you try to go too far into a cost-  
21 of-service study and consider it to be the way you're  
22 trying to solve economic efficiency in your rates.

23                   Now, having said that, I don't disagree  
24 with Mr. O'Sheasy that says efficiency is one (1) of  
25 the things you would -- you would think about as

1 you're doing a cost-of-service study, but that's in  
2 that broader definition of -- of efficiency, not that  
3 somehow a cost-of-service study is going to solve  
4 getting your -- your rate design to be economically  
5 efficient.

6 MR. BOB PETERS: All right. Thank  
7 you, Mr. Bowman.

8 Mr. O'Sheasy, make sure you get the  
9 last word on this. Are you in general agreement with  
10 Mr. Bowman that we best not be having a tempest in a  
11 teapot here over the word 'efficiency'?

12 MR. MICHAEL O'SHEASY: Yes, it's too  
13 late in the day to be drinking tea. I -- I do agree.  
14 I think it's a question of semantics. I think my  
15 reference is to what is efficient has to do twofold.  
16 One (1) is, when you do your cost-of-service study and  
17 you get your results, how good are they? How  
18 efficient are they? How well do they reflect the  
19 embedded cost to serve?

20 So, that's a meaning when I say  
21 'efficiency' and 'cost of service'. And also, in rate  
22 design I say, How well does the overall rate collect  
23 the embedded revenue requirements? That's what I mean  
24 by efficiency.

25 The concept that Mr. Bowman's tal --

1 referred to where you look at marginal revenue versus  
2 marginal cost, I don't think you can -- like Mr.  
3 Bowman was saying, I don't think you can look at a  
4 cost-of-service study and evaluate that.

5 MR. BOB PETERS: All right. Thank  
6 you.

7 Madam Chair, I'd like to again thank  
8 the witnesses, and this time for the final time, for  
9 their responses to the questions that we've posed and  
10 the answers that they've given.

11 I'd also like to thank the Board for  
12 its attention and those are the end of my questions,  
13 subject to any questions you would have of me. Thank  
14 you.

15

16 (BRIEF PAUSE)

17

18 THE CHAIRPERSON: The panel has no  
19 questions. So thank you, Mr. Peters. In terms of  
20 next steps, we have three (3) outstanding  
21 undertakings, I believe. Manitoba Hydro you have two  
22 (2), one (1) for Mr. Peters and one (1) for Me.  
23 Hacault.

24 Do you know when you'll be able to  
25 provide those?

1 MS. ODETTE FERNANDES: Our plan is to  
2 provide them next week.

3 THE CHAIRPERSON: And, Mr. Camfield,  
4 you have one (1) undertaking for Mr. Peters.

5 MR. ROBERT CAMFIELD: That's my  
6 understanding, yes. And we will provide that along  
7 with Manitoba Hydro's next week.

8 THE CHAIRPERSON: Next week. Okay.  
9 So then our next step will be Intervenor written  
10 submissions on subjects subject to the concurrent oral  
11 evidence that we've just heard.

12 And, Mr. Williams, the panel considered  
13 your request, but we're not able to give any guidance  
14 beyond that. So that written -- those written  
15 submissions will be due on Wednesday, September 21st.

16 And then Intervenor reply submissions  
17 to the other Intervenors or issues subject to  
18 concurrent evidence on September 26th.

19 Manitoba Hydro reply submissions on  
20 September 28th.

21 And then the Board will consider all of  
22 this material, and if we feel the need for oral  
23 closing submissions we'll advise in -- in good time on  
24 that issue.

25 So beyond that, I echo Mr. Peters'

1   thanks to everyone for their attention and to our --  
2   to our experts, to the Board staff, to the  
3   Intervenors, and to my fellow panel members, to our  
4   advisors, thanks to everybody. And have a wonderful  
5   weekend.

6

7   --- Upon adjourning at 3:10 p.m.

8

9   Certified by,

10

11

12

13

14

15

---

16 Sean Coleman, Mr.

17

18

19

20

21

22

23

24

25