



MANITOBA PUBLIC UTILITIES BOARD

Re:

MANITOBA HYDRO  
NEEDS FOR AND ALTERNATIVES TO  
REVIEW OF MANITOBA HYDRO'S  
PREFERRED DEVELOPMENT PLAN

Regis Gosselin	- Chairperson
Marilyn Kapitany	- Board Member
Larry Soldier	- Board Member
Richard Bel	- Board Member
Hugh Grant	- Board Member

HELD AT:

Public Utilities Board  
400, 330 Portage Avenue  
Winnipeg, Manitoba  
March 6, 2014  
Pages 989 to 1254

1 APPEARANCES

2 Bob Peters (np) ) Board Counsel

3 Sven Hombach

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5 Patti Ramage ) Manitoba Hydro

6 Marla Boyd

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8 Byron Williams ) CAC

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10 William Gange ) GAC

11 Peter Miller (np) )

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13 Antoine Hacault ) MIPUG

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15 George Orle ) MKO

16 Michael Anderson )

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18 Jessica Saunders (np) ) MMF

19 Corey Shefman )

20

21 Christian Monnin ) IEC

22 Michael Weinstein )

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8	LLOYD KUCZEK, Previously Sworn	
9	LOIS MORRISON, Previously Sworn	
10	IAN PAGE, Previously Sworn	
11	INGRID ROHMUND, Previously Sworn	
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5	MKO-2	MKO draft budget for NFAT	
6		Date: June 28, 2013	
7	MKO-3	MKO letter to PUB re Participation in	
8		NFAT Date: October 1, 2013	
9	MKO-4	MKO letter to PUB re withdrawal of	
10		counsel Date: January 27, 2014	
11	MKO-5	MKO letter to PUB re Request to expand	
12		scope Date: January 29, 2014	
13	MKO-6	MKO Letter to PUB re additional	
14		questions Date: February 2, 2014	
15	MKO-7	MKO letter to PUB re opinion on socio-	
16		economic impacts Date: February 4,	
17		2014	
18	MKO-8	MKO Desiderata Chymko Cvs	
19		Date: February 6, 2014	
20	MKO-9	MKO letter to PUB re Intervener budget	
21		(Pimicikamak Coalition)	
22		Date: February 6, 2014	
23	MKO-10	MKO/Typlan Information Requests	
24		Date: February 20, 2014	
25		-1 Sustainability criteria	

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5		Public
6		-3 Consideration of World Bank docs
7		-4 Socio-economic impact review
8		-5 Socio-economic impact review
9		-6 Socio-economic impact review
10		-7 Socio-economic impact review
11		-8 Socio-economic impact review
12		-9 Definition of "rate shock"
13		-10 Socio-economic impact review
14		-11 Socio-economic impact review
15	MMF-1	MMF intervener request form
16		Date: May 16, 2013
17	MMF-2	MMF letter to PUB response Order 67/13
18		Date: July 2, 2013
19	MMF-3	MMF letter to PUB application to R&V
20		Order 67/13 Date: July 10, 2013
21	MMF-4	MMF letter to PUB re new counsel
22		Date: August 27, 2013
23	MMF-5	MMF letter to PUB SOW and budget
24		Date: August 30, 2013
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4		conference Date: September 13, 2013	
5	MMF-7	MMF letter to PUB re Manitoba Hydro	
6		motion Date: September 27, 2013	
7	MMF-8	MMF/Manitoba Hydro Round 1 Information	
8		Requests Date: November 2013	
9		-1 Socio-Economic	
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16		Whitfield Russell Date: Nov. 12, 2013
17	MMF-10	Schedule A to 11/12/2013 letter
18		qualificaitons of Whitfield Russell
19		Date: November 12, 2013
20	MMF-11	MMF/Manitoba Hydro Round 2 Information
21		Requests Date: January 2014
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24		Whitfield Russel, with schedules "A"	
25		and "B" Date: January 30, 2014	

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4		Socio-economic wind report Date:	
5		February 2014	
6	MMF-14	Report by Whitfield Russell Associates	
7		Date: February 12, 2014	
8	MMF-15	CV of Whitfield Russell	
9		Date: February 12, 2014	
10	MMF-16	CV of Thomas Besich Date: Feb. 12, 2014	
11	MMF-17	CV of Harrison Clark Date: Feb. 12,	
12		2014	
13	MMF-18	CV of Geneva Looker Date: Feb. 12, 2014	
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9	MMF-22	MMF/MNP Information Requests
10		Date: February 20, 2014
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25	-1 Economic Risk	

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10	MMF-26	MMF report Hendriks macro environmental	
11		Date: February 20, 2014	
12	MMF-27	MMF letter to PUB re Manitoba Hydro	
13		motion Date: February 21, 2014	
14	MMF-28	MMF Book of Documents - vol 1	
15		Date: March 3, 2014	
16	HILL-1	Hill letter to PUB re NFAT Round 1 IRs	
17		motion day Date: September 24, 2013	
18	HILL-2	Hill letter to PUB re Round 1 IR motion	
19		day Date: September 27, 2013	
20	HILL-3	Hill letter to PUB re motion day IRs	
21		Date: October 1, 2013	
22	HILL-4	Hill letter to PUB re IEC status update	
23		with schedules A to D Date: Nov 1, 2013	
24	HILL-5	Hill letter to PUB re status of IEC	
25		Round 1 IRs Date: December 13, 2013	

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4		examine Date: February 21, 2014
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6		Information Requests Date: Nov. 2013
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10	LCA-1	La Capra/Manitoba Hydro Round 1	
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10	LCD-43	TA1 Resource Planning Figures
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11	MNP-5	MNP report re Macro-environmental
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18		-2 NPV
19		-3 NPV
20		-4 NPV
21		-5 NPV
22		-6 Customers
23		-7 Capital Plans
24		-8 Debt guarantee
25		-9 Debt guarantee

1	LIST OF EXHIBITS (Con't)	
2	EXHIBIT NO.	DESCRIPTION PAGE
3	MPA-1	-10 Drought
4		-11 Debt Ratio
5		-12 Decision conditions
6		-13 Export Agreements
7		-14 Relative weight of decision factors
8		-15 US transmission asset ownership
9		-16 IRRs
10		-17 Distribution of Burden of Risk
11	MPA-2	Morrison Park Advisors/Manitoba Hydro
12		Round 2 Information Requests
13		Date: January 2014
14	MPA-3	Morrison Park Advisors Commercial
15		evaluation of Manitoba Hydro PDP
16		business case Date: January 2014
17	PE-1	Power Engineers/Manitoba Hydro Round 1
18		Information Requests Date: Nov 2013
19		-1 Trans. line
20		-2 Trans. line
21		-3 Trans. line
22		-4 Trans. line
23		-5 Trans. line
24		-6 Transmission Reliability
25		-7 Transmission Reliability

1	LIST OF EXHIBITS (Con't)	
2	EXHIBIT NO.	DESCRIPTION PAGE
3	PE-1	-8 Transmission Reliability
4		-9 Economics of Change (Risk)
5		-10 Transmission Reliability
6		-11 Transmission Reliability
7		-12 Transmission Reliability
8		-13 Economics of change (Risk)
9		-14 Economics of change (Risk)
10	PE-2	Power Engineers/Manitoba Hydro Round 2
11		Information Requests Date: January 2014
12		-15 Trans. line
13		-16 Trans. line
14		-17 Transmission Reliability
15		-18 Transmission Reliability
16		-19 Transmission Reliability
17		-20 Economics of change (Risk)
18	PE-3	Power Engineers Transmission Line
19		Construction and Management Report
20		Date: January 24, 2014
21	POT-1	Potomac Economics/Manitoba HydroRound 1
22		Information Requests Date: Nov 2014
23		-1 MISO; MISO Price Forecast; Export
24		Price Forecast
25		

1	LIST OF EXHIBITS (Con't)		
2	EXHIBIT NO.	DESCRIPTION	PAGE
3	POT-1	-2 MISO; MISO Price Forecast; Export	
4		Price Forecast	
5		-3 MISO; MISO Price Forecast; Export	
6		Price Forecast	
7		-4 MISO; MISO Price Forecast; Export	
8		Price Forecast	
9		-5 MISO; MISO Price Forecast; Export	
10		Price Forecast	
11	POT-2	Potomac Economics Report on export	
12		prices and revenues Date: Jan. 15, 2014	
13	TyP-1	Typlan Independent Review of Socio-	
14		economic Benefits Date: January 6, 2014	
15	MH-91	Response to Undertakings 5 and 6	1143
16	MH-92	CVs for MH panel 4	1144
17	MH-93	Response to Undertaking 13	1187
18	HILLCO-7	Book of documents	1244
19	MH-94	Response to Undertaking 16	1245
20			
21			
22			
23			
24			
25			

1	LIST OF UNDERTAKINGS	
2	NO.	PAGE
3	19	Manitoba Hydro to provide a
4		revised Table 33 shown at page 16
5		of the MIPUG book of documents but
6		with respect to the 5 percent and
7		95 percent probability metric, as
8		well as the 2.5 and 97.5 percent
9		and at the 0.1 percent and the
10		99.9 percent 1086
11	20	Manitoba Hydro to provide an update
12		on the number of First Nations homes
13		insulated along with the measures
14		that have been installed 1165
15	21	Manitoba Hydro to provide a brief
16		description of the methodology used
17		to select or to canvass candidates
18		to participate in focus group
19		testing, and provide a summary of
20		the demographics 1223
21		
22		
23		
24		
25		

1 --- Upon commencing at 9:05 a.m.

2

3 THE CHAIRPERSON: Good morning. I  
4 believe that we're ready to commence today's  
5 proceedings. I will turn over the microphone to Mr.  
6 Hombach. Good morning, Mr. Hombach.

7 MR. SVEN HOMBACH: Good morning, Mr.  
8 Chairman and members of the Board. I'm advised that  
9 there aren't any administrative matters from counsel.  
10 Before we do get started and continue the public  
11 cross-examination of Manitoba Hydro's load forecast  
12 and DSM panel, I would like to remind everyone that  
13 this afternoon there will be an in-camera session for  
14 the Board where commercially sensitive information  
15 will be discussed.

16 At that point, the audio feeds to the  
17 other rooms will be cut and the doors will be locked.  
18 I anticipate at this point that that session will take  
19 place after lunch, but that depends on how long  
20 Intervenor counsel need this morning.

21 My Friend, Ms. Boyd, has advised me  
22 that there currently aren't any undertakings by  
23 Manitoba Hydro to address, so I would suggest that the  
24 panel call upon M. Hacault to continue the examination.  
25 Thank you.

1 THE CHAIRPERSON: Bonjour, M. Hacault.

2

3

4 MANITOBA HYDRO PANEL 3 CONTINUED:

5 DALE FRIESEN, Previously Affirmed

6 LLOYD KUCZEK, Previously Sworn

7 LOIS MORRISON, Previously Sworn

8 IAN PAGE, Previously Sworn

9 INGRID ROHMUND, Previously Sworn

10 ED WOJCZYNSKI, Previously Sworn

11

12 CONTINUED CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

13 MR. ANTOINE HACAULT: Bonjour, good

14 member -- good morning, members of the panel.

15 Perhaps, if appropriate, I'll just start with where

16 I'm intending on going today. I'm going to be asking

17 some questions -- further questions with respect to

18 DSM. I will also be asking some questions with

19 respect to the parameters of, let me see, the stress

20 tests that was touched upon in the presentation, and

21 some short issues, such as the curtailable program

22 which affects part of the MIPUG group.

23 So those are the general subject areas.

24 And I'll be notifying the panel of Hydro and of this

25 Board as and when I get into these different issues.

1                   As a recap for yesterday, I'd ask --  
2 and it hasn't been -- I think it's being brought upon  
3 the screen, it's at Tab 1. For some reason, that --  
4 it's -- it should be up a couple pages. It's the  
5 beginning of the Power Smart section of Tab 1. That's  
6 where all the metrics were. And there's a summary --  
7 at least it's -- it's page 5, sorry. I misstated the  
8 page for the person who's doing this.

9                   So am I correct, Mr. Wojczynski, that  
10 this is from your document, Manitoba Hydro's document,  
11 what I'm putting up on the screen, firstly?

12                  MS. MARLA BOYD:    Sorry, Mr. Hacaault,  
13 I'm having a bit of trouble locating it. Was it --  
14 were you referring to pa -- page 5 in your book of  
15 documents?

16                  MR. ANTOINE HACAULT:   Page 5, Volume  
17 II of our book of documents.

18                  MS. MARLA BOYD:    I have the wrong  
19 volume. Do you have the volume?

20                  MS. LOIS MORRISON:   Yes, this is a  
21 section from our Power Smart plan.

22

23 CONTINUED BY MR. ANTOINE HACAULT:

24                  MR. ANTOINE HACAULT:   Okay. And  
25 yesterday I was making a valiant attempt, I don't know



1 if I managed to, to compare some of the metrics that  
2 Hydro has listed in its Power Smart Program.

3 Do you recall my valiant attempt?

4 MR. LLOYD KUCZEK: Yes.

5 MR. ANTOINE HACAULT: So for the  
6 integrated metric, am I right in understanding that  
7 this takes into account, if we look at our example,  
8 not only the cost to the Utility, but the cost to the  
9 customer?

10 MR. LLOYD KUCZEK: That's correct.

11 MR. ANTOINE HACAULT: Okay. So when  
12 we're looking at that metric, we've got to be careful  
13 because if we're focussing on the cost to the Utility,  
14 any of the ones listed under 'integrated metrics'  
15 includes costs in addition to those incurred by the  
16 Utility, correct?

17 MR. LLOYD KUCZEK: Correct. And as I  
18 mentioned -- I -- I am repeating myself, but I think  
19 it's always important to keep in mind that it's --  
20 it's that cost, that's the most important because  
21 customers pay that cost --

22 MR. ANTOINE HACAULT: Okay.

23 MR. LLOYD KUCZEK: -- at the end of  
24 the day.

25 MR. ANTOINE HACAULT: And in effect to

1 a certain extent, if you're using that metric, you're  
2 making a decision as to what the customer might or  
3 might not want to do with respect to that extra cost,  
4 correct?

5 MR. LLOYD KUCZEK: It's more to do  
6 with it's a relevant cost to look at from the  
7 perspective of a resource option. So when you're  
8 looking at a generation option, the customers pay the  
9 whole cost; an alternative is DSM options, so the  
10 relevant cost is the total cost.

11 MR. ANTOINE HACAULT: Correct. And in  
12 the example that we went over, we went through a  
13 second category of metrics which you've categorized as  
14 'utility metrics', correct?

15 MR. LLOYD KUCZEK: Correct.

16 MR. ANTOINE HACAULT: And two (2) of  
17 those were firstly the -- the first one listed under  
18 that heading is a rate impact measure cost, correct?

19 MR. LLOYD KUCZEK: Correct.

20 MR. ANTOINE HACAULT: And we had also,  
21 I believe, looked at the levelized utility cost.

22 MR. LLOYD KUCZEK: Correct.

23 MR. ANTOINE HACAULT: And then finally  
24 you list another metric. It's at the bottom of the  
25 page. It's on the screen. It's the one that focusses

1 on the effect of the particular program on the  
2 consumer, the consumer metrics.

3 MR. LLOYD KUCZEK: Correct.

4 MR. ANTOINE HACAULT: So your initial  
5 slide had shown a base case of seven (7) cents as a  
6 rate. When -- this was part of the presentation,  
7 correct?

8 MR. LLOYD KUCZEK: Correct.

9 MR. ANTOINE HACAULT: And what you  
10 were trying to illustrate is if we had a hundred  
11 gigawatts of generation built at ten (10) cents, that  
12 would bring our cost to the Utility and ratepayers at  
13 seven point two seven (7.27) so -- compared to the  
14 base case, correct?

15 MR. LLOYD KUCZEK: Correct. As a rate  
16 impact, you do it on new generation.

17 MR. ANTOINE HACAULT: But the math you  
18 wanted to illustrate didn't automatically follow that  
19 if you -- if DSM cost you ten (10) cents, that  
20 wouldn't lead you to a rate of seven point two seven  
21 (7.27).

22 MR. LLOYD KUCZEK: That's correct.

23 MR. ANTOINE HACAULT: So do I take it  
24 that we have to be careful -- if we're talking about  
25 spending ten (10) cents on new generation and ten (10)

1 cents on DSM for the same gigawatt hours, we don't  
2 necessarily get the same results mathematically?

3 MR. LLOYD KUCZEK: You don't, but  
4 that's where the fairness issue comes into play. If  
5 you didn't care about the fairness issue, you could  
6 spend up to that because the total customer bills in  
7 aggregate are the same as measured by the cust -- or  
8 the Utility's revenues.

9 But as I pointed out, the fairness  
10 issue deals with -- or -- or the point being not all  
11 customers are impacted the same way. Now, you create  
12 an argument about all customers have access to  
13 programs but, you know, you get into all sorts of  
14 issues about customers have already participated in  
15 the Power Smart Programs. And, so it's -- it's a  
16 consideration that we think is important to take into  
17 account in designing programs.

18 MR. ANTOINE HACAULT: Yes. So if you  
19 had 5 percent of the population that was benefiting  
20 from a program that costs ten (10) cents, it would be  
21 the remaining portion of the population that would be  
22 subsidizing, in effect, the people who are benefiting  
23 from the higher-cost DSM?

24 MR. LLOYD KUCZEK: Yes.

25 MR. ANTOINE HACAULT: And the last

1 alternative was actually spending less on DSM with an  
2 effect that nobody would be paying a higher rate than  
3 the generation option.

4 MR. LLOYD KUCZEK: That's correct.

5 MR. ANTOINE HACAULT: But to achieve  
6 that we had to downscale the DSM mathematically to --  
7 from ten (10) cents down to two point seven (2.7)  
8 cents, correct.

9 MR. LLOYD KUCZEK: From a utility  
10 perspective. But from an -- an integrated perspective  
11 the customer -- the DSM still costs the same as -- as  
12 the example in my mind that I was contemplating when I  
13 drafted that example. So the DSM cost didn't change.  
14 It was just the -- the question of sharing.

15 And so when I talk about program  
16 designs, that's one (1) of the -- one (1) of the  
17 considerations you need to think about, is how to  
18 share that cost. And at the same time you've got to  
19 think about the program being effective, in terms of  
20 achieving the results, so.

21 MR. ANTOINE HACAULT: Understood.

22 MR. LLOYD KUCZEK: And -- and so when  
23 I -- I do want to point out when you -- when I  
24 provided that example it wasn't to suggest that that's  
25 how we do things. We still take each program and

1 assess it individually and --

2 MR. ANTOINE HACAULT: Just --

3 MR. LLOYD KUCZEK: -- we're willing to  
4 go above that line, and have customers subsidize other  
5 customers to a reasonable degree.

6 MR. ANTOINE HACAULT: Thank you very  
7 much. Again, when I'm asking questions, I'll repeat  
8 the same caveat that coun -- Board counsel said. If I  
9 get anywhere close to CSI, just let me know. I don't  
10 think any questions will. And whoever deems it  
11 appropriate to answer my question most certainly can -  
12 - can answer it.

13 The -- I'm going to be getting into the  
14 stress test area with respect to how we're approaching  
15 evaluating some of the alternatives. Let me start  
16 with a little bit of introduction to that.

17 It's my understand that if we took  
18 simply a needs-based approach, that we wouldn't be  
19 building Keeyask as early as we're now proposing based  
20 on the opportunity that's being created as a result of  
21 certain circumstances for export and other reasons,  
22 correct?

23 MR. ED WOJCZYNSKI: Correct.

24 MR. ANTOINE HACAULT: So that -- I  
25 would suggest that with respect to the needs

1 perspective, if we were just looking at that, we'd be  
2 looking at, from what I understood, more a 2023  
3 perspective than a 2019 perspective.

4 MR. ED WOJCZYNSKI: With the 2013 load  
5 forecast and 2013 IFF assumptions, the -- the date  
6 would be 2023. As I indicated in -- in some -- in --  
7 in Exhibit 90 yesterday, that date would vary  
8 depending on -- on the -- in the future on diff --  
9 other assumptions. But the -- the 2013 IFF  
10 information is 2023, yes.

11 MR. ANTOINE HACAULT: And there's some  
12 information as proceeding suggesting that if you're  
13 ramping up the DSM, it might actually push out that  
14 date further for Keeyask, correct?

15 MR. ED WOJCZYNSKI: It would push it  
16 out later than 2023, yes.

17 MR. ANTOINE HACAULT: And I would  
18 suggest that this puts some pressure from -- if you're  
19 looking at a needs perspective, to make sure that if  
20 we're advancing something that we've got our stress  
21 tests right to take into account what might happen if  
22 we took a needs approach as opposed to an opportunity  
23 approach.

24 MR. ED WOJCZYNSKI: Yes. Yes.

25 MR. ANTOINE HACAULT: At Tab 3 of our

1 book of documents we've got certain load forecasts.  
2 And I'm going to take whoever is appropriate through  
3 some of these documents to best understand how the  
4 NFAT material is being presented now, how it relates  
5 to the experience that you've put in your slides, and  
6 how it relates to previous approaches by Manitoba  
7 Hydro. That's where I'm going.

8                   So if I look at Tab 5 of our book of  
9 documents, which is page 23, I believe, you had taken  
10 us through the forecast accuracy of Manitoba Hydro  
11 using this table.

12                   Was I correct in understanding that?

13                   MS. LOIS MORRISON: That is correct.

14                   MR. ANTOINE HACAULT: Okay. Now, I  
15 just want to understand how this slide works. I think  
16 I know, but I'm not too sure. If I look in 1992, I  
17 see a darker bar which goes somewhat over the 5  
18 percent.

19                   Do you see that?

20                   MS. LOIS MORRISON: Yes.

21                   MR. ANTOINE HACAULT: Okay. And am I  
22 correct in understanding that the forecast for that  
23 bar would have been made in 1982, ten (10) years  
24 before?

25                   MS. LOIS MORRISON: That is correct.



1 MR. ANTOINE HACAULT: Okay. And  
2 there's a practically imperceptible bar. So that  
3 time, you were bang on for the five (5) year accuracy.  
4 So that would have been a forecast that would have  
5 made -- been made five (5) prior to that.

6 And that would have been, I think,  
7 1987?

8 MS. LOIS MORRISON: That is correct.

9 MR. ANTOINE HACAULT: Okay. So we've  
10 got two (2) metrics here that we're looking at over a  
11 twenty (20) year time period. Did Hydro believe that  
12 this sampling was something that was representative of  
13 what it -- what might happen with the forecasting? Is  
14 that why it put this twenty (20) year graph? Because  
15 you could have chosen ten (10) years. You could have  
16 chosen fifteen (15). You could have chosen thirty  
17 (30). 2 50

18 Why did you choose twenty (20)?

19 MS. LOIS MORRISON: We -- you're  
20 correct. We could have used ten (10) years. We could  
21 have used fifteen (15) years. We could have used five  
22 (5) years. What we do is we're -- we're showing back  
23 twenty (20) years only to demonstrate that, as with  
24 all forecasting, you're looking at a longer period of  
25 time.

1                   And if we did look at the five (5)  
2 years we would probably be limiting our -- the -- the  
3 -- it would be limiting your view of how the economy  
4 cycles when you're -- and it would pro -- it would --  
5 it may disproportionately show the influence of past  
6 economic changes on a shorter period of time.

7                   So we look at the twenty (20) year  
8 horizon so that we can better demonstrate the cycles  
9 that occur within over time and to show that  
10 forecasting can -- will vary over time due to cycles.  
11 And so what we're trying to demonstrate is how  
12 accurate our -- or how well our -- our forecasts have  
13 performed compared to what's actually occurring in the  
14 marketplace over a longer period of time.

15                   MR. ANTOINE HACAULT:   Now, did the  
16 forecasting methodology change significantly, or was  
17 it sufficiently the same, to use this example,  
18 throughout the twenty (20) year time period?

19                   MS. LOIS MORRISON:   There have been  
20 adjustments to the forecast over this time period.  
21 We're looking at more than twenty (20) years of data,  
22 given that, as you -- as you mentioned, in 19 -- the --  
23 -- the information presented for 1992 would have been  
24 ten (10) years prior to that.

25                   So now we're looking at -- sorry, it is

1 a twenty (20) year horizon. So there has been some  
2 adjustments to our forecasting over that period of  
3 time where we've made improvements and adjustments.  
4 But the adjustments, we feel, have added to the value  
5 of the forecasting and have not, I believe, materially  
6 impacted the performance of our forecasting.

7 MR. ANTOINE HACAULT: Okay. Do you  
8 know about when you put those enhancements that you're  
9 talking about? Although they don't materially impact  
10 the forecasting, when did they occur?

11 Just, like, when did you start making  
12 these enhancements?

13 MR. LLOYD KUCZEK: If -- if you go  
14 back to the '70s, there was quite a difference back  
15 then. So this only includes from 1982 and -- and  
16 onwards. And that's going back to when employees were  
17 in place thirty (30) years ago, and I honestly, as  
18 well as Ms. Morrison, don't -- don't recall what  
19 methodologies were employed.

20 But I do know in that time frame in the  
21 early '80s we did start undertaking more sophisticated  
22 forecasting methodologies. And I don't recall, and  
23 I'm not familiar with, how those changed over time.  
24 But I know those refinements always -- continuously  
25 being made as we moved into the future

1 MR. ANTOINE HACAULT: Thank you. I  
2 just wanted to get some sense as to whether we're  
3 talking apples and oranges. Sometimes you've  
4 introduced certain computer models or certain metrics  
5 that change significantly.

6 But based on what I've understood right  
7 now, there hasn't been any significant changes in the  
8 metrics for forecasting -- this forecasting, correct?

9 MR. LLOYD KUCZEK: I would suggest  
10 nothing significant. The significant change occurred  
11 from the '70s to somewhere -- either late '70s or  
12 early '80s. And prior to that, my understanding was  
13 it was a pretty crude forecasting methodology that was  
14 used.

15 MR. ANTOINE HACAULT: Thank you. Now,  
16 the one thing I'm not absolutely sure I understand is  
17 if we go back to the 1992 bar, the dark blue one,  
18 which was the ten (10) year forecast, the bar goes  
19 above the 5 percent. Is that an indication that the  
20 forecast was too optimistic?

21 In other words, you talk -- thought in  
22 1982 that your load was going to be higher than it  
23 actually was in 1992.

24 MS. LOIS MORRISON: Yes. It means in  
25 1992 our forecast was five (5) -- was -- was that

1 degree higher than the actual.

2 MR. ANTOINE HACAULT: Okay. So  
3 conversely if we go in the range of 2007, the forecast  
4 was too low. You thought that the load was going to  
5 grow at a certain rate, but in fact it didn't grow  
6 that quickly. It was at a lower load.

7 MS. LOIS MORRISON: Yes. During that  
8 period of time the actual consumption was greater than  
9 what we had forecast.

10 MR. ANTOINE HACAULT: Okay. Now, it  
11 was explained, and it's in the rebuttal also, that if  
12 Manitoba's -- Hydro's goal, as I understand it, for  
13 the ten (10) year metric is to achieve 10 percent  
14 accuracy, and -- and that would be what you can  
15 reasonably expect to achieve for a ten (1) year  
16 forecast.

17 Did I understand that correct?

18 MS. LOIS MORRISON: Yes. We believe  
19 that the forecast is -- is reasonably performing if we  
20 are within 10 percent.

21 MR. ANTOINE HACAULT: So I would  
22 suggest to you that if -- if that's the standard and  
23 your expectation that you can achieve that accuracy,  
24 that an appropriate stress test level going forward  
25 would be whether or not we're, I'm going to call it,

1 in that cone of a 10 percent range in a ten (10) year  
2 time frame.

3 Do you agree with that?

4 MS. LOIS MORRISON: Yes.

5 MR. ANTOINE HACAULT: Okay.

6 THE CHAIRPERSON: Just so I -- just to  
7 make sure I understand. So your fore -- your five (5)  
8 year forecast -- sorry, your forecast five (5) years  
9 out is inaccurate to the percentage that's shown  
10 there, but you're only taking the one (1) year.

11 So for example, if you're looking at  
12 the year that we're talking about, 1994, you were,  
13 say, 7 percent out five (5) years prior to that, for  
14 that one (1) year alone.

15 MS. LOIS MORRISON: Yes, if you -- if  
16 we're looking at the 1994 forecast, what we do is we  
17 go -- if we're looking -- what we look at is the 1994  
18 year. Then we say, What did we forecast five (5)  
19 years ago for that year, and are we within 5 percent  
20 of that? And so we look at each forecast for all  
21 those years. We look back to the forecast for that  
22 year, five (5) years prior, and for ten (10) years  
23 prior.

24 THE CHAIRPERSON: But you can't infer  
25 from that that -- so, for example, looking at the most

1 recent year, the -- the latest year for which there is  
2 9 percent accuracy over -- over estimate, you can't  
3 assume, then, that -- I guess what I'm getting at is  
4 that you would be looking at a -- a range of years in  
5 -- in assessing your forecast. And all this is  
6 telling you is that you're out one (1) year by 8  
7 percent. But it doesn't tell me what the rest of the  
8 time savings is like.

9 In other words, when you do your  
10 forecast you don't -- you don't just do five (5) years  
11 out. You're doing twenty (20) years out. And what  
12 I'm trying to understand is this tells me that you're  
13 ten (10) -- your 8 percent out five (5) years forward.  
14 How much are you out for the rest of the years?

15 Because, I mean, you're -- you're now  
16 saying to us: We're going to build a dam. We're  
17 projecting fifteen (15) years from now, we're -- we're  
18 projecting a need.

19 Not fifteen (15) years, but say eleven  
20 (11) years out. And all this is telling me is that  
21 five (5) years from now you're going to be anywhere  
22 from minus ten (10) to minus -- plus ten (10) out.

23 How -- you know, how much out are you  
24 going to be eleven (11) years from now, which is  
25 probably a more germane figure?

1 MS. LOIS MORRISON: In our work with  
2 Elenchus we did provide them with detail about the  
3 forecast accuracy for fifteen (15) and twenty (20)  
4 years also. It -- it's more so we present -- we could  
5 present that also. It's just for the purposes of  
6 discussion we generally present the five (5) and ten  
7 (10) year, because we can provide more in -- more  
8 information. If we go to fifteen (15) years,  
9 obviously, there'll be less bars. If we go to twenty  
10 (20) years there's, again, less bars.

11 So this was more so to demonstrate the  
12 impact of cycling and -- and to show that there's  
13 going to be periods of what appears to be over-  
14 forecasting and under-forecasting. That's the --  
15 that's the purpose of this -- this chart and that it's  
16 not necessarily that the -- that the forecast is  
17 consistently over forecasting or consistently under  
18 forecasting. It was more so to demonstrate that  
19 perspective. But we -- we do have the data to look  
20 at, the fifteen (15) year and the twenty (20) year  
21 performance also.

22 MR. LLOYD KUCZEK: I -- I should add  
23 that we -- we don't just provide this for external  
24 parties, too. We -- it's an -- it's an internal tool  
25 as well for us just to have some sense of what -- how



1 the load forecasting has been performing, in terms of  
2 accuracy in the past. We do know that -- and -- and  
3 it's understood that the forecast will always be  
4 wrong. So it's just -- it's the only metric that we  
5 could come up with for looking back and just how is it  
6 doing.

7

8 CONTINUED BY MR. ANTOINE HACAULT:

9 MR. ANTOINE HACAULT: Hopefully some  
10 of my subsequent questions will help clarify the  
11 question of the Board Chair. Now, there's two (2)  
12 things that I understand are being done with the load  
13 forecasts.

14 The first is you readjust your load  
15 forecast each year, correct?

16 MS. LOIS MORRISON: That is correct.

17 MR. ANTOINE HACAULT: Okay. The  
18 second thing is that you weather adjust your load  
19 forecast.

20 So if you've had an unusually high flow  
21 or an unusually -- sorry, unusually cold weather, you  
22 would weather adjust the load forecast, correct?

23 MS. LOIS MORRISON: That is correct.

24 We weather adjust the year to ensure that we're  
25 working from a normal weather point.

1 MR. ANTOINE HACAULT: Okay. So if we  
2 look at the last three (3) years of the five (5) year  
3 accuracy, in each of those years, if I've understood  
4 correctly, the forecast was too high?

5 MS. LOIS MORRISON: For the last four  
6 (4) years, the five (5) year accuracy would  
7 demonstrate that we forecast greater energy use than  
8 what was consumed. But that's also a period that  
9 reflects the economic downturn, and it reflects a  
10 forecast that would have been prepared at a time just  
11 before the beginning of the economic downturn.

12 MR. ANTOINE HACAULT: Thank you. And  
13 that's why it was useful, because we see how the  
14 effect of economic cycles and that uncertainty in  
15 economic cycles -- and we'll be talking about that in  
16 the hearing, with respect to a number of other factors  
17 -- can affect the load forecast accuracy, correct?

18 MS. LOIS MORRISON: Yes, that is  
19 correct.

20 MR. ANTOINE HACAULT: Okay. Now, I'll  
21 want to next go to one of the -- I'm going to call  
22 graphs that are used in the NFAT proceeding to kind of  
23 see how the stress testing is comparing to the metric  
24 of your forecast accuracy.

25 So if we could turn to page 16 of the

1 book of documents. That's Tab 3, page 16.

2

3 (BRIEF PAUSE)

4

5 MR. ANTOINE HACAULT: As I understand  
6 this graph, we've got the dark blue line that we see  
7 being actuals.

8 Is that correct?

9 MS. LOIS MORRISON: The dark blue line  
10 represents our weather-adjusted actuals.

11 MR. ANTOINE HACAULT: Okay.

12 MS. LOIS MORRISON: The blue dots  
13 represent the actual consumption.

14 MR. ANTOINE HACAULT: Okay. And if  
15 we're going out ten (10) years, so that's the ten (10)  
16 year metric, and it should be highlighted on  
17 everybody's screen and in the document, we would go  
18 out to 2022 and 2023.

19 Do you see that?

20 MS. LOIS MORRISON: Yes, I do. Thank  
21 you.

22 MR. ANTOINE HACAULT: Okay. And I  
23 believe we've established that would be about the date  
24 if we approach this on a needs basis that we would  
25 anticipate, at least for the time being, requiring

1 Keeyask, correct?

2 MS. LOIS MORRISON: As Mr. Wojczynski  
3 said, based upon the filing of the '13 Resource Plan  
4 and the '13 IFF.

5 MR. ANTOINE HACAULT: Okay. And what  
6 I've also included, it's a couple pages in, it's page  
7 19, is taking those figures. And you'll see it's  
8 Table 1.

9 Has anybody at Hydro had the  
10 opportunity to check to see whether we've properly  
11 transcribed numbers and made the calculations  
12 correctly?

13 MS. LOIS MORRISON: Yes, they appear  
14 to be correct.

15 MR. ANTOINE HACAULT: Okay. So midway  
16 through the table there's a heading, "2013-2014  
17 Forecast." And we had just looked at the table for  
18 2022/2023, which was the tenth year out, correct?

19 MS. LOIS MORRISON: That is correct.

20 MR. ANTOINE HACAULT: And if we do the  
21 mathematical calculation, Manitoba Hydro, in its NFAT  
22 stress test, is suggesting a 5 percent bandwidth for  
23 the stress test, correct?

24 MS. LOIS MORRISON: That is correct,  
25 based upon the information provided in the 2013

1 forecast.

2 MR. ANTOINE HACAULT: Yes. And if we  
3 flipped back we would see that if we go twenty (20)  
4 years out, the stress test being suggested by Hydro is  
5 a margin of 7.6 percent either to the positive or the  
6 negative, correct?

7 MS. LOIS MORRISON: That is correct.

8 MR. ANTOINE HACAULT: So the  
9 Chairperson had asked a question. And this is the way  
10 the information is being presented as far as what  
11 might be the best outcome or the worst outcome with  
12 respect to forecasting in Hydro's filing for this  
13 proceeding as of those time periods?

14 MS. LOIS MORRISON: Yes, that is  
15 correct.

16 MR. ANTOINE HACAULT: Okay. And the  
17 calculation for the ten (10) year time period that --  
18 I didn't put the number which was mathematically  
19 derived by -- in the column 2022 to 2023, the base  
20 year is twenty-eight thousand six-o-five (28,605), and  
21 Hydro is saying, Well it might go on the probabilities  
22 to 10 percent down to twenty-seven (27) -- or only  
23 increase to twenty-seven thousand sixty-five (27,065),  
24 correct?

25 MS. LOIS MORRISON: That is correct.

1 MR. ANTOINE HACAULT: So that's a  
2 little bit over 1,500 gigawatts, and if we had  
3 increased that to the 10 percent metric for ten (10)  
4 years as we've just reviewed, the bandwidth would  
5 actually be over -- about 3,000 gigawatts?

6 MS. LOIS MORRISON: That is correct.

7 MR. ANTOINE HACAULT: Okay. And 3,000  
8 gigawatts is approximately a Keeyask?

9 MS. LOIS MORRISON: That is correct.

10 MR. ANTOINE HACAULT: So for the NFAT  
11 material, we're showing about half a Keeyask stress  
12 test at the ten (10) year time period, but if we use  
13 the 10 percent metric we actually end up having a full  
14 Keeyask of variability at the ten (10) year time  
15 period, correct?

16 MS. LOIS MORRISON: That is correct.

17 MR. ANTOINE HACAULT: Now, if we could  
18 go back to the actual experience of Manitoba Hydro  
19 over a ten (10) year time period -- and that was at  
20 Tab 5, I believe, page 23.

21

22 (BRIEF PAUSE)

23

24 MR. ANTOINE HACAULT: If we go and  
25 look at actuals, and we were just looking at a ten

1 (10) year metric, and the stress test being proposed  
2 by Manitoba is 5.4 percent, would 1992 for example  
3 meet the stress test which Hydro is proposing?

4 MS. LOIS MORRISON: It would be just  
5 slightly higher.

6 MR. ANTOINE HACAULT: Okay. And we  
7 see one (1) bar about the fourth year in which is over  
8 10 percent, so that clearly wouldn't meet the stress  
9 test that Manitoba Hydro is proposing for the ten (10)  
10 year metric?

11 MS. LOIS MORRISON: That is correct.

12 MR. ANTOINE HACAULT: And the same  
13 thing for the next year; it seems not too far off, but  
14 probably doesn't meet that metric either?

15 MS. LOIS MORRISON: That is correct.

16 MR. ANTOINE HACAULT: And if we  
17 continue down the next one might be pretty close.  
18 That -- I don't know if that ends up being 1998 or  
19 1999, correct?

20 MS. LOIS MORRISON: That is correct.

21 MR. ANTOINE HACAULT: And then we've  
22 got two (2) that don't meet that metric that follow,  
23 correct?

24 MS. LOIS MORRISON: That is correct.

25 MR. ANTOINE HACAULT: They're at 10

1 percent approximately, correct?

2 MS. LOIS MORRISON: That is correct.

3 MR. ANTOINE HACAULT: And then if we  
4 go further on into the graph we see also, I would  
5 suggest, probably another five (5) years where the  
6 metric's not met, the five point four (5.4) metric?

7 MS. LOIS MORRISON: After the two (2)  
8 that don't meet that are --

9 MR. ANTOINE HACAULT: After the two  
10 (2) --

11 MS. LOIS MORRISON: -- 10 percent?

12 MR. ANTOINE HACAULT: -- year 2002.

13 MS. LOIS MORRISON: Oh, after the  
14 2002. Yes.

15 MR. ANTOINE HACAULT: And going  
16 forward to 2012, there appears to be at least five (5)  
17 clear indications there that the stress test would not  
18 be met at five point four (5.4).

19 MS. LOIS MORRISON: That is correct.

20 MR. ANTOINE HACAULT: Yeah. Okay. So  
21 that it appears that, for the first sector, where  
22 we're too optimistic, there may be -- although I don't  
23 have the exact data points, one (1), two (2), three  
24 (3), four (4), five (5), six (6), probably, that don't  
25 meet the 5.4 percent stress test. And then another



1 five (5) in the years that follow for approximately  
2 eleven (11) times out of this twenty (20) year time  
3 period where the stress test is not met, correct?

4 MS. LOIS MORRISON: I -- I don't think  
5 we would necessarily characterize this as a stress  
6 test, as more so a feedback metric as to how well  
7 we've been performing.

8 MR. ANTOINE HACAULT: Okay. Thank you  
9 for that clarification, but at one (1) point in time  
10 going forward, and even today somebody's making some  
11 estimates on which to base the NFAT decisions,  
12 correct?

13 MS. LOIS MORRISON: That is correct.

14 MR. ANTOINE HACAULT: And it appears  
15 that, at least based on the five point four (5.4)  
16 metric that's shown in that cone that we looked at, if  
17 we use that as a reference point approximately half  
18 the time Manitoba Hydro might be meeting that, and the  
19 other half of the time it might not be meeting it  
20 based on actual experience shown on this graph.

21 MS. LOIS MORRISON: If you're using  
22 the 5.4 percent that you included, yes.

23 MR. ANTOINE HACAULT: Yes. Thank you.  
24 Now, the other thing that I wanted to compare, I  
25 indicated that I would compare, is Manitoba Hydro's

1 approach to stress test metrics prior to its adopting  
2 the 90 percent and 10 percent approach for this  
3 filing. And that was found at page 18 of our  
4 materials. It doesn't have a title, but in the index  
5 we'll see that it's a -- oh, sorry, 2004/2005 load  
6 forecast.

7 Do you see that?

8 MS. LOIS MORRISON: Yes. Thank you.

9 MR. ANTOINE HACAULT: Okay. And if we  
10 go down that particular slide there should be, again,  
11 the 10 percent and the 20 percent years as far as  
12 time-frames.

13 Do you see those highlighted?

14 MS. LOIS MORRISON: Yes. Thank you.

15 MR. ANTOINE HACAULT: Okay. And if we  
16 go back to -- a little bit higher on this page, we see  
17 the cone widens quicker when compared to the NFAT  
18 filing cone, correct?

19 MS. LOIS MORRISON: That is correct.

20 MR. ANTOINE HACAULT: And, again, I  
21 would take you to the mathematical calculations which  
22 follow this at page 19. I think it's the next page.  
23 And with respect to the ten (10) year metric, Hydro in  
24 its previous forecasting metrics, at least on this  
25 particular year, was varying from a 9 percent to

1 approximately 13 percent variation depending on what  
2 kind of metrics we used; whether it was a 95 percent  
3 lower confidence, or we did the medium-low scenario at  
4 10 percent probability, correct?

5 MS. LOIS MORRISON: That is correct.

6 MR. ANTOINE HACAULT: And for the  
7 twenty (20) years out, the metrics that were used by  
8 Manitoba Hydro depending on whether it was 95 percent  
9 approach or a 10 percent to 90 percent approach,  
10 varied from approximately 11.9 percent up to 15.8  
11 percent.

12 That was the variation, correct?

13 MS. LOIS MORRISON: That is correct.

14

15 (BRIEF PAUSE)

16

17 MR. ANTOINE HACAULT: Just to clarify  
18 the table, if we look at the actual forecasts, when we  
19 have the title, looking at the top, there's 95 percent  
20 lower confidence interval. We'll see that in the 2004  
21 and 2005 forecast and we will also see something  
22 that's called 'medium-low scenario.' That relates to  
23 the 2004/2005 forecast.

24 The next metric that's shown, 10  
25 percent probability point, relates to the new

1 forecast. And you'll see that in the new forecast,  
2 2013/2014. Correct?

3 MS. LOIS MORRISON: That is correct.

4

5 (BRIEF PAUSE)

6

7 MR. ANTOINE HACAULT: Now, did I  
8 understand -- and this was the discussion I think Mr.  
9 Wojczynski had -- if we show a higher load  
10 directionally, this makes Hydro projects look better?

11 MR. ED WOJCZYNSKI: Generally, yes.

12 MR. ANTOINE HACAULT: Okay. And is  
13 the reverse true? Because it doesn't always follow.

14 MR. ED WOJCZYNSKI: Generally, yes,  
15 but not to the same degree as the -- the high  
16 benefits. And this may be an appropriate time to  
17 comment on resource planning for new generation,  
18 whether it's in Manitoba or any other jurisdiction in  
19 North America, or elsewhere, for that matter, that no  
20 one is ever going to get a perfect forecast, a load  
21 forecast, and there's always, always going to be  
22 uncertainty on what was that -- what would have been  
23 the perfect date when you would exactly meet your  
24 criteria. No one ever claims they can get that  
25 perfect. And so one (1) of the considerations

1 planners always have, and -- and decision makers, when  
2 deciding on putting in additional resources is to  
3 recognize that uncertainty.

4                   We have in our 12 percent reserve  
5 criteria a little bit of space for a load which is  
6 higher than you forecast, 'cause you could have higher  
7 -- a very cold winter that takes us out of the normal  
8 range. You might have a spurt of load growth tha --  
9 that year some -- that wasn't expected, but there  
10 isn't a lot of room for that.

11                   And if you have these cycles in the --  
12 in the economy that are fundamental that are always  
13 going to be there and you have -- you can have larger  
14 industrial type of loads come in in relatively short  
15 notice, there's al -- there's always a significant  
16 risk. Your load can be higher than you were  
17 forecasting. Conversely, it can be lower.

18                   It's easier, generally, in planning,  
19 again, whether it's Manitoba or somewhere else, to  
20 have over-planned than under-planned. The concept is  
21 the -- the risk on having the load higher than lower  
22 is -- is worse than the risk that your load is -- is  
23 lower than you forecast.

24                   Or to put it differently, if you -- if  
25 you try and get it perfectly right, you have a bigger

1 risk that the load is -- is too high and you have to  
2 play catchup. That's a bigger risk than you tried to  
3 get it perfectly, and then the load was too low and  
4 you have surpluses.

5                   And there had been studies years ago.  
6 It's a fundamental done by EPRI on that; it's called  
7 'Over/Under Capacity Planning.' It doesn't -- the  
8 exact name, but it's -- it's a general concept that  
9 resource planners have been aware of and -- and are  
10 very conscious of when we do our planning. And I  
11 think that's part of perhaps the context when we're  
12 looking at these things.

13                   They're -- we can have significantly  
14 higher load forecast than the ones we're using in our  
15 sensitivities. We -- we recognize that, and we're  
16 aware of that. And that's one of the reasons we talk  
17 about one of the criteria we apply, and I talked about  
18 the first day in the -- in the evening or the end of  
19 the day, that there's this energy security and capa --  
20 and reliability benefit going above the criteria  
21 because of those kind of uncertainties.

22                   And so certain plans are better able to  
23 withstand errors in load growth than other plans. And  
24 we argue that the plans for the 750 megawatt tie-line  
25 and advanced hydro are better able to deal with that

1 uncertainty than -- than some of the other plans.

2 MR. ANTOINE HACAULT: Thank you very  
3 much for that explanation, Mr. Wojczynski. I think  
4 the focus of my questions were: Did we go high  
5 enough, and did we go low enough. And -- and it's  
6 just trying to understand what metrics, as far as did  
7 we go high enough and did we go low enough, that I'm  
8 exploring.

9 So we've explored the 10 percent desire  
10 on accuracy, and we've explored how the metrics used  
11 to be wider, and how for this filing the metrics  
12 perhaps don't give that flexibility that you talked  
13 about to handle the higher loads that might be coming  
14 with either a big industrial or unforeseen  
15 circumstances to properly test.

16 But we'll get into the alternatives. I  
17 just wanted to set out the metrics that were being  
18 used; and I think you're going to have a separate  
19 panel on the alternatives, correct?

20 MR. ED WOJCZYNSKI: Yes. And you just  
21 laid out a certain kind of conclusion about the  
22 metrics. And I would, as a resource planner, agree  
23 with what you said.

24 MR. ANTOINE HACAULT: The one thing  
25 that hasn't been filed, and I don't know if it's -- it

1 exists and is readily filed, we saw in -- in the  
2 previous forecasts that there was actually the wider  
3 metric of 95 percent confidence level up and down.  
4 For this filing, it's been narrowed to 90 and -- 90  
5 percent and 10 percent.

6 Does Hydro maintain the 95 percent  
7 confidence level data with respect to, for example,  
8 what's being presented now?

9 MS. LOIS MORRISON: It's not that we  
10 don't include it. It's in the -- the way we've  
11 presented it within the load forecast, I believe on  
12 page -- it's actually in your book of documents, page  
13 15 of your book of documents.

14 What we've -- we've done is we have  
15 basically outlined -- there's -- you can calculate the  
16 95 percent based on the information that's provided  
17 there, and what we present is the 90/10. So if -- if  
18 an individual or an organza -- if we wanted to look at  
19 beyond -- if we wanted to look at 20 percent/80  
20 percent probability projections, or if we wanted to  
21 look at the 95 -- 95/5 percent, we could -- oh, I  
22 apologize, we're missing the 95/90 (sic). We could  
23 provide that.

24 MR. ANTOINE HACAULT: Okay. Well,  
25 then if you could provide the table that is set out on



1 the following page, I'd like an undertaking to provide  
2 that table, but with the 95 percent metric as opposed  
3 to the -- sorry. Well, firstly we'll deal with that  
4 one.

5                   Would it be possible to provide that  
6 same table that's found on the next page of our book  
7 of documents with the 95 percent metric?

8                   MS. LOIS MORRISON: Yes, we can  
9 provide that.

10                  MS. MARLA BOYD: I believe it's Table  
11 33 from page 16 of the MIPUG book of documents, is  
12 that correct?

13                  MR. ANTOINE HACAULT: Okay. So the  
14 undertaking is to provide a revised Table 33 shown at  
15 page 16 of our book of documents but with respect to  
16 the 5 percent and 95 percent probability metric.

17                  Is that correct?

18                  MS. LOIS MORRISON: Yes, that is  
19 correct.

20

21                               (BRIEF PAUSE)

22

23                  MR. ANTOINE HACAULT: Would it be very  
24 difficult to also provide the same table, but with the  
25 other two (2) metrics at the other ranges shown on

1 page 15 of our book of documents, the 1 percent and  
2 the 2.5 percent? Because I don't know exactly what  
3 the 5 percent metric will give us at a ten (10) year  
4 range, whether it -- it will lead to a 10 percent  
5 bandwidth in the ten (10) year time frame or not.

6 MS. LOIS MORRISON: So you would like  
7 us, just so I'm clear, to provide you with the table -  
8 - a repeat of that same Table 33 at the 2.5 and 97.5  
9 percent and at the 0.1 percent and the 99.9 percent?

10 MR. ANTOINE HACAULT: Correct.

11 MS. LOIS MORRISON: Okay. Yes, we can  
12 do that.

13 MR. ANTOINE HACAULT: Does the court  
14 reporter need that repeated for an undertaking? It  
15 can be dealt with as one (1) undertaking, if that's  
16 okay.

17

18 --- UNDERTAKING NO. 19: Manitoba Hydro to provide  
19 a revised Table 33 shown  
20 at page 16 of the MIPUG  
21 book of documents but with  
22 respect to the 5 percent  
23 and 95 percent probability  
24 metric, as well as the 2.5  
25 and 97.5 percent and at

1 the 0.1 percent and the  
2 99.9 percent  
3

4 CONTINUED BY MR. ANTOINE HACAULT:

5 MR. ANTOINE HACAULT: The next subject  
6 matter I'm getting into will be a very short item, and  
7 it still deals with load forecast. But we've  
8 discussed getting load forecast information from top  
9 consumers. I don't know who might be best to an --  
10 answer this, but I would suggest that these top  
11 consumers are very concerned about the confidentiality  
12 of their load forecasts.

13 Is that fair?

14 MR. DANIEL FRIESEN: That would be  
15 fair.

16 MR. ANTOINE HACAULT: Okay. And to  
17 date, has Hydro been able to secure on a voluntary --  
18 or -- basis some load forecast information from its  
19 top consumers?

20 MR. DANIEL FRIESEN: Yes, we have.

21 MR. ANTOINE HACAULT: And can you  
22 indicate the level of, I'm going to say, concern that  
23 top consumers might have with respect to keeping that  
24 information private?

25 For example, would you have situations

1 where the companies would insist that it not be the  
2 same Manitoba Hydro representative that gets the  
3 information?

4 MR. DANIEL FRIESEN: I can speak to  
5 that in -- in a couple of different ways. I think,  
6 first of all, we have to recognize that the top  
7 consumer group, like Manitoba Hydro, make substantial  
8 investments in infrastructure. And those investments  
9 are recovered over long periods of time. And they're  
10 very dependent on market conditions, market  
11 opportunities, et cetera.

12 They're not competing in a local  
13 market. They're completing (sic) in a national,  
14 interna -- gl -- continental, and international  
15 market. So there's a certain degree of positioning  
16 that needs to occur for them to take the best  
17 advantages of the opportunities that they see. So  
18 confidentiality is extremely important to them, and I  
19 think all of us can easily recognize that.

20 So the -- the challenge sometimes  
21 arises in situations where we have two (2) large  
22 players in the same industry located within Manitoba.  
23 And they're in a competitive business. And so we have  
24 had instances where we have had companies in the same  
25 industry sector request from us specifically that not

1 only do we have their representative be different,  
2 they also be in different departments reporting  
3 through different managers. And they have relied on  
4 us to respect those lines and relied on us not to  
5 share information back and forth between those  
6 individuals. And we have, to the best of our ability,  
7 always respected that request.

8 MR. ANTOINE HACAULT: Thank you. The  
9 next subject matter which I'll deal with relates to  
10 some of the information Ms. Rohmund -- hopefully I've  
11 pronounced that correctly -- provided to us.

12 You had -- in one (1) of your slides,  
13 we don't need to go to it, but it was Slide 42, you  
14 had sourced something from the American Council for an  
15 Energy-Efficient Economy. And we've extracted what we  
16 understand to be that document at Tab 6, starting at  
17 page 38; so Tab 6, page 38.

18

19 (BRIEF PAUSE)

20

21 MR. ANTOINE HACAULT: First, is this  
22 document so -- or something similar to it -- have you  
23 had a chance to review it?

24 MS. INGRID ROHMUND: Yes.

25 MR. ANTOINE HACAULT: Okay. And it --

1 could you explain your understanding of this document?

2 What does it outline?

3 MS. INGRID ROHMUND: This document, to  
4 the best of my knowledge, describes the status of the  
5 individual states in the United States with respect to  
6 whether or not they have energy efficiency standards  
7 and renewable energy standards.

8 MR. ANTOINE HACAULT: Okay. And am I  
9 correct in understanding -- or is it your  
10 understanding that several of these states have  
11 targets imposed by elected bodies?

12 MS. INGRID ROHMUND: That is correct.

13 MR. ANTOINE HACAULT: Okay. I would  
14 suggest then that these policy decisions made by  
15 elected bodies are things that these utilities have to  
16 follow to the extent that they can?

17 MS. INGRID ROHMUND: Yes.

18 MR. ANTOINE HACAULT: So that -- would  
19 it be fair to say that it wouldn't always be  
20 appropriate to just apply to Manitoba policy decisions  
21 that are made by elected bodies in other states?  
22 There may be, in Manitoba, a different policy  
23 decision. We haven't seen one yet through the  
24 legislature.

25 But there may be different policy

1 considerations by this government?

2 MS. INGRID ROHMUND: I -- I should  
3 comment on that. I don't feel that I have the -- that  
4 I should do that.

5 MR. LLOYD KUCZEK: But -- but just to  
6 point something out. We do have legislation that  
7 requires us to consult with the Minister responsible  
8 for Manitoba Hydro. So that's the process that we're  
9 going to use in Manitoba, and we have to now.

10 MR. ANTOINE HACAULT: Yeah,  
11 understood. So if there's a new policy that might be  
12 discussed or implemented by this government through  
13 that consultation process, and being mindful of your  
14 counsel's comments not to get into those, but that  
15 might be something that Manitoba Hydro is required to  
16 follow if there is such a directive by this  
17 government?

18 MR. LLOYD KUCZEK: In the end, the  
19 Power Smart energy efficiency plans will be developed  
20 in consultations with the government. And -- and if  
21 they have policies, that'll be part of the  
22 considerations, I'm sure, as -- as part of those  
23 consultations.

24 MR. ANTOINE HACAULT: Thank you.

25

1 (BRIEF PAUSE)

2

3 MR. ANTOINE HACAULT: The next area  
4 which I want to understand with respect to stress  
5 tests is for DSM, have we chosen the appropriate outer  
6 boundaries. And to understand that a bit better, I  
7 think we've put it at Tab 2, page 14.

8

9 (BRIEF PAUSE)

10

11 MR. ANTOINE HACAULT: Some of the DSM  
12 options. And I'm not going to get into the debate as  
13 to whether it should be a separate alternative or it  
14 should be integrated.

15 But, as I understand it, these options  
16 represent Manitoba Hydro's effort to try and, much the  
17 same as the load forecast, set out might be an outer  
18 limit for a stress test on the new projects that are  
19 being considered?

20 MR. LLOYD KUCZEK: I -- I wouldn't  
21 consider this a stress test. We develop these options  
22 to undertake some sensitivity analysis, that Mr.  
23 Wojczynski could talk about, but the -- the options  
24 themselves were, as I mentioned before, developed at a  
25 high level. They won't necessarily be options that we



1 have to follow as outlined within each particular  
2 option. We will be assessing the -- the individual  
3 components within each option to develop an overall  
4 energy efficiency or demand-side management plan going  
5 forward.

6 MR. ED WOJCZYNSKI: Yeah. And -- and,  
7 as Mr. Kuczek was just saying, we're -- these were  
8 high-level concepts for the DSM to do an evaluation,  
9 preliminary evaluation, of what kind of level of DSM  
10 on -- on the -- on the spectrum of possibilities would  
11 -- would make sense. And then more refined work would  
12 happen to land on the specific programs and the exact  
13 specific level.

14 But it's also meant, this exercise with  
15 these evaluations and levels of DSM, to -- to test  
16 what the impact would be on the Alternative  
17 Development Plans. So it's -- it's -- this is serving  
18 two (2) purposes at the same time.

19 MR. ANTOINE HACAULT: And thank you  
20 for that. I maybe used the wrong word when I said "a  
21 stress test." But it -- I understood it to be a test,  
22 because if we flip to page 28 of our book of  
23 documents, as part of a presentation, we saw where the  
24 baseline was and what the different options on DSM  
25 would do to the energy consumption. Hydro tried to

1 model that, correct?

2

3 (BRIEF PAUSE)

4

5 MS. LOIS MORRISON: The -- the graph  
6 that's being presented there, the -- I think as Ms.  
7 Rohmund pointed out -- the two (2) lines that would be  
8 more so applicable would be the achievable potential  
9 and the market potential.

10 The economic potential and the  
11 technical potential that are presented here for  
12 demonstration purposes are merely theoretical levels  
13 of potential, and are not what would deem to be  
14 achievable in this marketplace, or any marketplace  
15 that's undertaking a DSM potential study. It's --  
16 it's merely setting comparison points, and as part of  
17 the process that Ms. Rohmund outlined, to get to the  
18 point where you can start putting some parameters  
19 around what might be achievable in a marketplace, you  
20 have to have an understanding of what's technically  
21 available, what's economically available, and then  
22 being to talk about what influence you might be able  
23 to have within a marketplace.

24 So that would then be looking at the --  
25 what is denoted here as the achievable potential and

1 the market potential.

2 MR. ANTOINE HACAULT: Thank you. And  
3 that is a nice segue to the line of questioning I was  
4 going to get a little bit of clarification.

5 With respect to what's referenced as  
6 market potential, Mr. Byron Williams yesterday had  
7 taken Ms. Rohmund to -- through some other reports,  
8 and as I understood the evidence -- and perhaps we can  
9 bring up -- could we bring up CAC book of documents  
10 yesterday at page 120 and 121.

11

12 (BRIEF PAUSE)

13

14 MR. ANTOINE HACAULT: Yes, that's --  
15 that's the correct page. So in this particular  
16 analysis, Ms. Rohmund, you had, for this particular  
17 utility, broken down what -- okay, let's break this  
18 down a little bit.

19 The RAP here is equivalent to what in  
20 your Hydro study?

21 MS. INGRID ROHMUND: RAP stands for  
22 realistic achievable potential, and that is the --  
23 analogous to the achievable potential in the Manitoba  
24 Hydro study.

25 MR. ANTOINE HACAULT: Okay. So

1 although Hydro didn't ask you to do this, this other  
2 utility within the achievable category requested three  
3 (3) subsets of that achievable category.

4 Am I understanding that correct?

5 MS. INGRID ROHMUND: Yes, that's  
6 correct. The -- in this study, which was for  
7 Consolidated Edison of New York, we developed -- the  
8 primary metrics we developed were the maximum  
9 achievable potential and the realistic achievable  
10 potential. And at the very end of the study they  
11 said, We want a -- a range around the realistic  
12 achievable. And they gave us the parameters for that.  
13 It was a plus or minus percentage amount that I don't  
14 recall. I think 10 or 15 percent, something like  
15 that.

16 MR. ANTOINE HACAULT: Okay. So I just  
17 want to take it one (1) step at a time. When Hydro  
18 shows its achievable through your study, part of that  
19 achievable would be an upper boundary based on a --  
20 and I'm reading from the number 1 on the screen:

21 "Based on an optimistic assessment  
22 of measure-specific assumptions  
23 about market availability and  
24 access."

25 Now, part of that 'achievable' category

1 would be comprised of that subset, correct?

2

3 (BRIEF PAUSE)

4

5 MS. INGRID ROHMUND: So the -- as I  
6 said, the work that we did in the study was to  
7 estimate the maximum achievable potential and the mid-  
8 level realistic achievable potential. That's where  
9 all of the parameters fed those two (2) forecasts of  
10 potential. So the mid-level realistic achievable  
11 potential here would be analogous to the achievable  
12 potential in the Manitoba Hydro study. And the high  
13 and the low RAP that the client wanted to show was a  
14 fairly arbitrary distinction, along with their  
15 definitions of how they wanted to reflect those.

16 MR. ANTOINE HACAULT: Thank you.  
17 That's what I was trying to clarify. I wasn't too  
18 sure when we -- for the Manitoba Hydro categorization  
19 of achievable, and then there's the next metric, the  
20 market, whether or not the achievable really was a  
21 compilation of numbers 2 and 3 of what we see on this  
22 page.

23 So when we talk about Manitoba Hydro  
24 achievable, does it represent the mid-level estimate  
25 of realistic achievable potential:

1 "Based on reasonable estimates of  
2 future customer acceptance, drawing  
3 on the experience of other utilities  
4 and organizations with existing  
5 energy efficient programs."

6 Is that the upper bound of the  
7 'achievable' category that you've used for Manitoba  
8 Hydro?

9

10 (BRIEF PAUSE)

11

12 MS. INGRID ROHMUND: So the -- the  
13 Manitoba Hydro study uses a different definition of  
14 'achievable potential', slightly different, as is the  
15 case with every study. Every client wants to  
16 characterize the achievable potential in language that  
17 they feel comfortable that they can meet. So the --  
18 the language you see here is Con Edison's language,  
19 and Manitoba Hydro's definition of 'achievable' is  
20 their definition. But the -- reading the words here  
21 and recalling how he did the study, then the -- the  
22 definition of 'mid-level RAP' here is analogous to  
23 Manitoba Hydro's achievable.

24 MR. ANTOINE HACAULT: Thank you. I  
25 wanted to get that clarification because I was

1 starting to get confused when Mr. Williams was asking  
2 questions and -- and were saying his -- this RAP was  
3 the same as the achievable. And I'm saying, well,  
4 does the high RAP really fit in Manitoba Hydro's  
5 definition. Now you've helped clarify that. Thank  
6 you.

7                   So with respect to the market portion,  
8 that would be in Manitoba Hydro definition. And we --  
9 if we can flip back to our graph at page 28, we see  
10 the baseline at the top which hits about 25,000  
11 gigawatt hours.

12                   Is that correct?

13                   MS. INGRID ROHMUND: Correct.

14                   MR. ANTOINE HACAULT: And the  
15 achievable potential, we've just gone through that, is  
16 somewhere down from there; and then, finally, the  
17 market potential. That's the more tenuous, say,  
18 results or objectives.

19                   They're not as sure as the achievable  
20 ones?

21                   MS. INGRID ROHMUND: That's definitely  
22 true, yes. That is the upper bound of ach -- of what  
23 can be achieved.

24                   MR. ANTOINE HACAULT: Okay. And the  
25 economic and technical potentials, those were

1 theoretical, as I understand?

2 MS. INGRID ROHMUND: Correct.

3

4 (BRIEF PAUSE)

5

6 MR. ANTOINE HACAULT: Now, I just want  
7 to get a little bit more clarification. We had looked  
8 at the -- like the max RAP and we read that  
9 definition.

10 Is the market potential even more  
11 tenuous than that definition?

12 MS. INGRID ROHMUND: The market  
13 potential that we estimated for Manitoba Hydro is  
14 analogous to the maximum achievable potential that we  
15 developed in the Con Edison study.

16 So their maximum achievable and market  
17 potential are both theoretical -- theoreticor --  
18 theoretical upper limits on what can be achieved in  
19 the marketplace. You need to have ideal circumstances  
20 in order to achieve that in terms of regulatory  
21 utility programs, perfect information, all the things  
22 that facilitate the adoption of energy efficiency.

23 MR. ANTOINE HACAULT: Thank you.

24

25 (BRIEF PAUSE)



1 MR. ANTOINE HACAULT: So as I recall  
2 your numbers, the market potential more or less  
3 corresponds with -- if we flip back to page 19, and  
4 you can perhaps check your number, page 19 of -- or  
5 sorry, 14 of our book of documents.

6 Can you tell us, if we're looking at  
7 the options that were set out on this table, which  
8 option does your market potential for 2027/2028 energy  
9 levels correspond to?

10

11 (BRIEF PAUSE)

12

13 MR. ANTOINE HACAULT: Actually, I  
14 think if you -- if the document management people go  
15 to the rebuttal evidence at page 29, we did include  
16 that in our book of documents.

17 But page 29 of your rebuttal evidence,  
18 there is some graphing of those numbers?

19 MS. LOIS MORRISON: Yes. Mis -- what  
20 is presented in the table of page 14 of your evidence  
21 and cor -- information that's somewhat similar that's  
22 presented on page 29 of the rebuttal evidence, we have  
23 to recognize that the DSM Potential Study that Ms.  
24 Rohmund assisted us with focussed on energy  
25 conservation initiatives, and did not include items

1 such as load displacement and fuel switching, and did  
2 not specifically speak to conservation rates, although  
3 those are one of the tools that can be used to help --  
4 help us move towards that market achievable, or market  
5 potential.

6 And those are items that are included  
7 within these levels of DSM that are being presented in  
8 -- both on page 14 and in -- on page 29 of the  
9 rebuttal evidence.

10 If you're looking solely just at  
11 gigawatt hours and the equivalency, the Level 3 DSM is  
12 in the range of what was presented as market  
13 potential. But again we didn't model market potential  
14 in our analysis for Level 3. There's -- there's --  
15 Level 3 DSM includes enhanced energy efficiency  
16 programming, plus it also includes the items that I  
17 just mentioned: load displacement, energy conservation  
18 rates, and fuel switching from natural -- from  
19 electricity to natural gas.

20 MR. ANTOINE HACAULT: Thank you  
21 very much. Now, Ms. Rohmund, looking at page 29 of  
22 the rebuttal evidence, is it your opinion then based  
23 on what you've been able to determine that the Level 1  
24 DSM is a little bit higher than what your conclusion  
25 was on what Hydro could reasonably achieve?

1 (BRIEF PAUSE)

2

3 MS. INGRID ROHMUND: So I think I want  
4 to distinguish between what we did in the potential  
5 study and what is shown as the plan options here. So  
6 we did the analysis and identified measures and  
7 sectors and -- and aggregated all that up to get our  
8 achievable potential, which is identified here in  
9 words on the -- on the -- and -- and the lines on the  
10 chart.

11 Manitoba Hydro took that information  
12 and has developed its plan. And it has taken some --  
13 I'm sure taken some elements from the study but also  
14 taken its own history and experience to develop that  
15 plan. So the numbers are comparable but what is  
16 underlying those numbers are -- are different things,  
17 as they -- as they typically are.

18 Our -- our study provides guidance to  
19 the development of the plans.

20 MS. LOIS MORRISON: I believe Mr.  
21 Kuczek, in his introductory statement, did  
22 characterize that the DSM potential study is there to  
23 help us frame our future efforts, and it was a  
24 starting point. It's a high-level projection. And we  
25 took that information to then help better form other

1 initiatives that we may pursue, and it's from there.

2                   And then also as he's mentioned, this  
3 is -- again these are more high-level programming.  
4 The Level 1 will include some detailed program where,  
5 as he's mentioned, we've launched those programs, or  
6 those enhanced initiatives. But there's also some  
7 components within that programming that are a little  
8 bit -- still require some fine tuning and more  
9 detailed analysis.

10                   MR. ANTOINE HACAULT: Thank you. I  
11 was --

12                   MR. LLOYD KUCZEK: Excuse me, just --  
13 just to add some clarity. These are options. They're  
14 not our plan. We developed these options as an  
15 interim step for the purpose of doing sensitivity  
16 analysis. So just -- Ms. Rohmund used the word 'plan'  
17 -- 'our plan'. These aren't our plans. We're  
18 currently finalizing our plans.

19                   MR. ANTOINE HACAULT: Yeah. Thank you  
20 for that. So am I to take from that that I can't just  
21 automatically look at the conclusions of -- of -- I'm  
22 not going to say EnerROC (sic), because I don't want  
23 to take Byron's thunder away, but EnerNOC, I can't  
24 just take those conclusions and say, Well, listen,  
25 Hydro can achieve -- this is a market potential, and -

1 - and we can achieve that. We -- I can't just jump to  
2 that conclusion?

3 MS. INGRID ROHMUND: That is correct.

4 MR. ANTOINE HACAULT: Okay. Now,  
5 there's a lot of material; and I apologize if it's in  
6 the material.

7 Is there something that tells us how  
8 Manitoba Hydro comes up with the Level 2 savings at  
9 twenty-nine sixty-one (2,961)?

10 In other words, what programs are  
11 added, and what is the quantity of additional  
12 cumulative savings attributed to each of those  
13 programs that would meet -- or bring us up to the  
14 Level 2?

15

16 (BRIEF PAUSE)

17

18 MS. MARLA BOYD: We're just getting  
19 things lined up here. Patti and I have had an  
20 exchange with Mr. Williams this morning, trying to  
21 clarify their arm wrestling match. And I'm not sure  
22 it's actually going to come down to arm wrestling, but  
23 we have an undertaking in the works with CAC that I  
24 suspect will address the question that you're asking.  
25 So while we can't provide it to you instantly, we will

1 be able to provide that description in the context of  
2 the response to the undertaking.

3

4 CONTINUED BY MR. ANTOINE HACAULT:

5 MR. ANTOINE HACAULT: Okay. So I'll  
6 just repeat what I'm trying to determine. There must  
7 be some numbers and some calculations and some  
8 programs that bring us from Level 1 at 1,704 gigawatts  
9 up to 2,961 gigawatts.

10 I'd like to know what those programs  
11 and numbers are that back up the graph. So --

12 MR. LLOYD KUCZEK: I -- I could  
13 provide you with that now, because Level 2 involv --  
14 it -- it's composed of three (3) initiatives. One (1)  
15 is the energy conservation rates, one (1) is the load  
16 displacement initiative, and one (1) is the fuel-  
17 switching initiative.

18 So our high-level estimates of what  
19 potentially could be achieved -- and this is very high  
20 level, with each one (1) being somewhat different.  
21 But the conservation rate's approximately 400 gigawatt  
22 hours -- three ninety (390) is on my page here. I'll  
23 give you the specific numbers. Two eighty-five (285)  
24 for fuel choice, and four fifty (450) for the load  
25 displacement.

1 MR. ANTOINE HACAULT: Thank you very  
2 much. And is that as of 2027/2028?

3 MR. LLOYD KUCZEK: '27/'28, and -- and  
4 we'll confirm those numbers. Mr. Friesen's suggesting  
5 one (1) of them might be slightly different. I'm not  
6 -- a work in progress, again, but in that range.

7 MR. ANTOINE HACAULT: And none of  
8 those were specifically in EnerNOC's scope of work.

9 Is that correct?

10 MR. LLOYD KUCZEK: That's correct.

11 MR. ANTOINE HACAULT: Thank you. Now,  
12 I probably have about twenty (20) minutes left,  
13 fifteen (15) to twenty (20) minutes. I don't know  
14 what the Board's wishes is.

15 THE CHAIRPERSON: Let's con -- let's  
16 continue.

17

18 CONTINUED BY MR. ANTOINE HACAULT:

19 MR. ANTOINE HACAULT: Thank you. Now,  
20 could I ask the document manager to go to page 1 of  
21 our book of documents -- or, sorry, page 2. And what  
22 I'd like to have expanded is the very bottom right  
23 corner, the very bottom right corner.

24

25 (BRIEF PAUSE)

1 MR. ANTOINE HACAULT: Now, this column  
2 which leads to the bottom right corner, at the top has  
3 the year 2027. We don't need to go there; for the  
4 document manager. And on the left-hand side at the  
5 very bottom indicates, "total gigawatts at  
6 generation."

7 Do I have that right so far?

8 MS. LOIS MORRISON: That is correct.

9 MS. MARLA BOYD: Are we to be looking  
10 at page 1 or page 2 of your book of documents?

11 MR. ANTOINE HACAULT: Page 2 of the  
12 book of documents.

13 MS. MARLA BOYD: Thank you.

14

15 CONTINUED BY MR. ANTOINE HACAULT:

16 MR. ANTOINE HACAULT: And -- yeah,  
17 that was the same thing, just like -- it's small  
18 numbers. You're testing my eyes for sure.

19 MS. LOIS MORRISON: We actually had  
20 smaller ones.

21 MR. ANTOINE HACAULT: But -- but this  
22 comes from Hydro's 2013 to 2016 Power Smart Plan,  
23 showing the annual energy savings projected in that  
24 plan, correct?

25 MS. LOIS MORRISON: That is correct.



1 MR. ANTOINE HACAULT: And if I look at  
2 the bottom number, we've been talking -- so this would  
3 be at generation, there's about three thousand (3,000)  
4 -- and it says 113 gigawatts total at generation to  
5 2027/'28, correct?

6 MS. LOIS MORRISON: That is correct.

7 MR. ANTOINE HACAULT: So we're  
8 basically saying that the current Power Smart Plan, if  
9 it works out as forecasted, would be generating, is it  
10 annual savings compared to the baseline of about a  
11 Keeyask?

12 MS. LOIS MORRISON: The number you're  
13 referring to includes savings to date. So by the time  
14 we reach '27/'28, including all activity to date, we  
15 will have created a virtual dam the size of  
16 approximately Keeyask.

17 MR. ANTOINE HACAULT: Okay. So I had  
18 done a hearing way long ago in Limestone that's  
19 probably -- nobody fer -- remembers, and DSM was a big  
20 issue. We got Ed shaking his head.

21 DSM was -- was kind of a new subject.  
22 And so from the time these programs have been put into  
23 place, some of them are of shorter duration, but the  
24 total continued expected savings will be roughly a  
25 Keeyask?

1 MS. LOIS MORRISON: Including all of  
2 the efforts undertaken in the area of energy  
3 efficiency, which includes programs that you're more  
4 familiar with, incentive-based programs, and codes and  
5 standards.

6 MR. ANTOINE HACAULT: Okay. Thank you  
7 for that clarification.

8 Now, there was some discussion about  
9 industry DSM, and I'd just like to get a handle on  
10 some of those numbers. So if we go to page 4.

11

12 (BRIEF PAUSE)

13

14 MR. ANTOINE HACAULT: It's even  
15 smaller numbers. But there should be a highlighted  
16 line there that hopefully we can expand. It's under  
17 the heading, "Industrial".

18 So the heading of that sheet, if I can  
19 read the small writing correctly, says:

20 "2013/2016 Power Smart Plan annual  
21 energy savings, gigawatt hours, for  
22 the time period going up to  
23 2012/'13."

24 Do I have that right?

25 MS. LOIS MORRISON: Yes, that would re

1 -- represent the savings to date.

2 MR. ANTOINE HACAULT: So this is not  
3 the projection; this is the historical part of what we  
4 were talking about, correct?

5 MS. LOIS MORRISON: That is correct.

6 MR. ANTOINE HACAULT: So if we move  
7 across the line we see that at the start of this  
8 period under the industrial heading, "Performance  
9 Optimization Program," initially there doesn't appear  
10 to have been a program because we zeros, correct?

11 MS. LOIS MORRISON: That is correct.  
12 This timeline projects is based upon the -- when we  
13 first launched our initiatives. And so we had  
14 initiatives that were launched as early as 1989.

15 MR. ANTOINE HACAULT: Okay. And if  
16 the document person could scroll to the right, we see,  
17 over the years, the various amounts that have been  
18 achieved, and if we continue to the right -- I'd  
19 rather have the numbers, but we'll look at the -- the  
20 headings.

21 There's -- three (3) columns to the  
22 left, there's a number of three hundred and eighty  
23 point zero four (380.04) that's highlighted.

24 Has everybody found that?

25

1 (BRIEF PAUSE)

2

3 MR. ANTOINE HACAULT: There, it's  
4 bigger. Have you found it?

5 MS. LOIS MORRISON: Yes, thank you.

6 MR. ANTOINE HACAULT: Okay. And you -  
7 - can you confirm what heading that is?

8 MS. LOIS MORRISON: That's the interim  
9 estimate of the savings as of 2012/'13 for the  
10 initiative to-date.

11 MR. ANTOINE HACAULT: Okay. And then  
12 there are headings -- or there's another column next  
13 to it which says -- has the number two hundred and  
14 fifty-six-o-six (256.06)

15 What's that number intended to reflect?

16 MS. LOIS MORRISON: That reflects the  
17 savings as of the benchmark year '27/'28.

18 MR. ANTOINE HACAULT: So what is  
19 involved in the thought process in concluding that  
20 this program as of that time-frame would go down in  
21 effectiveness to two hundred and fifty-six (256)?

22 MS. LOIS MORRISON: What's being  
23 presented here is more so -- it -- it's the end of  
24 certain initiatives come -- it's -- certain  
25 initiatives coming to the end of their lives, and it's

1 a persistence of savings going forward. We recognize,  
2 and are making corrections to, how our initiatives are  
3 tracking savings. And so in future initiative --  
4 further reporting you'll see that those savings will  
5 be continuing forward.

6 This is presented solely for the  
7 purposes of economic analysis in our shop, and we  
8 recognize that those savings will be continuing on  
9 into the future.

10 MR. ANTOINE HACAULT: And finally, the  
11 extreme right column at two ninety-nine point eight  
12 five (299.85) still under the heading "Industrial".  
13 Is that just increased to give you added generation  
14 numbers?

15 MS. LOIS MORRISON: Yes, that is  
16 correct.

17 MR. ANTOINE HACAULT: Okay. And if we  
18 go up to the residential analysis -- I don't know --  
19 if you scroll up the page, document management person,  
20 I'll -- where residential total, you just had it in  
21 the middle. Whoa. You're going -- yeah, and if you  
22 bring us to the right again for the last three (3)  
23 numbers.

24 So what we've done, we've brought up on  
25 the screen the residential total, the two forty-six

1 ninety-nine (246.99) is what again?

2 MS. LOIS MORRISON: That's the interim  
3 estimate of savings to-date for all activity to-date.

4 MR. ANTOINE HACAULT: Okay. And if we  
5 go to the next column, that again is the expected,  
6 I'll call it, 'staying power of those programs', it  
7 goes down from two forty-six (246) to one-o-three  
8 (103).

9 Is that correct?

10 MS. LOIS MORRISON: It's recognizing  
11 the end-of-life for certain technologies and, so there  
12 is a diminishing amount. However, we recognize that  
13 those energy savings are continuing into the future  
14 whether or not they're -- they're reinvested on -- by  
15 Manitoba Hydro or by the customer.

16 So there is -- there is a slight  
17 decline that will be corrected -- that has been  
18 corrected in our future programming.

19 MR. ANTOINE HACAULT: Okay. So I know  
20 we're talking generalities, but roughly the staying  
21 power of the industry DSM with respect to the  
22 categories that we've looked at, is roughly two and a  
23 half (2 1/2) times that of the residential total shown  
24 on this particular table.

25 But we exclude codes in that, correct?

1                   MR. DANIEL FRIESEN:    To kind of  
2 address what you're saying there in a -- in a generic  
3 sense, when we look at industrial loads a lot of the  
4 measures that we support result in fundamental changes  
5 to processes. And when that technology reaches the  
6 end of its useful life, it's highly unlikely in most  
7 cases that the customer is going to revert to an older  
8 technology. The process has been changed. So at the  
9 minimum they'll reinvest in the technology that was  
10 present at end-of-life. So, in general, we assume  
11 persistence of most industrial measures to be quite --  
12 quite strong.

13                   Now, as Lois pointed out, we -- you  
14 know, we're examining persistence in quite a bit of  
15 detail in the midst of our current -- developing a  
16 better understanding of what our future savings are  
17 going to be. And that covers all categories from  
18 residential right through to industrial.

19                   And we're -- we're in -- in a big  
20 picture way, we're assuming that those savings will  
21 carry forward into the future. How we record them, I  
22 think is a little bit of an issue right now, and we're  
23 working to clarify that.

24                   MR. ANTOINE HACAULT:   Thank you very  
25 much. But the numbers as you present them today show

1 the staying power of the industrials, for the reasons  
2 that you've explained, to be a bit higher than the  
3 staying power of the residential numbers?

4 MS. LOIS MORRISON: I -- I don't think  
5 we would make that characterization. What this is  
6 more representing is how we looked at it from an  
7 economic perspective. But when we look at it from an  
8 actual impact to our system, we're recognizing that  
9 when -- on the residential sector, when a customer  
10 goes and, say, installs their -- or purchases a new  
11 appliance, when they to repurchase a -- that appliance  
12 when it comes to its end-of-life, they're not going to  
13 go back and replace it with something that is less  
14 efficient than what they've purchased to date.

15 And so -- although this number is  
16 showing a diminishment, it's not what's -- this number  
17 was presented based on an economic analysis of the  
18 program per se for our -- for our investment purposes.  
19 It was not based on recognizing that that savings will  
20 continue on into the future. And it is something that  
21 we have addressed in IRs that we will be -- that is --  
22 that will be adjusted and has been adjusted in the  
23 2000 and -- in the level 1s, 2s, and 3s that we've  
24 investigated, and it is being adjusted in our -- in  
25 our Power Smart planning that is being undertaken



1 right now.

2 And -- but the degree of that influence  
3 is very minor overall. You can see that the drop in  
4 the residential sector, although you are  
5 characterizing it as 2:1 ratio, the -- the drop in  
6 terms of an actual absolute value is quite small.

7 MR. ANTOINE HACAULT: Thank you. And  
8 -- and the chart speaks for itself. But the  
9 industrials were expected, for 2012/2013, to have an  
10 impact of about 380 gigawatt hours, correct?

11 MS. LOIS MORRISON: That is correct.

12 MR. ANTOINE HACAULT: And the  
13 residential sector was ex -- was expected to have an  
14 impact of about 246 gigawatt hours, so some 130 odd  
15 gigawatt hours less impact, correct?

16 MS. LOIS MORRISON: Yes, that is a  
17 correct comparison.

18 MR. ANTOINE HACAULT: If we could go  
19 to page 2 of our book of documents.

20 MS. LOIS MORRISON: I should probably  
21 characterize, before we move on, that -- that drop, or  
22 that -- that change that we were talking about, in  
23 terms of the -- the difference between the interim  
24 estimate and what's presented in the plan. Because  
25 it's savings to date it's actual activity; it does not

1 affect our load forecast. I -- I do want to get that  
2 on the record, because our load forecast takes our  
3 actual consumption to-date and forecasts forward from  
4 there.

5                   So this difference that you're looking  
6 at, in terms of the 2012 year and the comparison at  
7 benchmark, is not -- it has -- has been captured and -  
8 - and is appropriately reflected in our load forecast,  
9 because we don't drop the savings. The savings don't  
10 diminish in our load forecast, they are continued  
11 forward.

12                   MR. ANTOINE HACAULT: Thank you for  
13 that clarification.

14                   Going to page 2, if we could zoom in on  
15 the residential, the right-hand side of the table.  
16 This is part of the 2013/2016 Power Smart Plan,  
17 correct? This is annual energy savings?

18                   MS. LOIS MORRISON: This is correct.

19                   MR. ANTOINE HACAULT: And if we could  
20 go to the extreme right of this table, please,  
21 document manager. With respect to how this has been  
22 categorized, there's two (2) numbers that are  
23 recorded. One (1) is an incentive-based total as of  
24 2027/'28 of 22.1 gigawatt hours, correct?

25                   MS. LOIS MORRISON: That is correct.

1 MR. ANTOINE HACAULT: And we see the  
2 increase that's been previously talked about to give  
3 us at -- an at-generation number as of 2027 to 2028 of  
4 25.2 gigawatt hours, correct?

5 MS. LOIS MORRISON: That is correct.

6 MR. ANTOINE HACAULT: So that's one  
7 (1) component. That's the incentive-based. And then  
8 there's another category called, "Customer Service  
9 Initiatives," and that gives us a different number of  
10 thirty point seven (30.7) as of '27 -- 2027/2028,  
11 correct?

12 MS. LOIS MORRISON: That is correct.

13 MR. ANTOINE HACAULT: And again, that  
14 amount, however, is increased at a slightly higher  
15 rate, 4 percent, to give us at-generation, correct?

16 MS. LOIS MORRISON: No, it's not  
17 multiplied by the 4 percent.

18 MR. ANTOINE HACAULT: Increased?

19 MS. LOIS MORRISON: No, it's -- the 4  
20 -- the 4 percent of what it represents of the overall  
21 total --

22 MR. ANTOINE HACAULT: Ah, okay.

23 MS. LOIS MORRISON: -- energy savings.  
24 It's not a multiplication by.

25 So -- so what we're doing is we're

1 converting the energy projection of '27/'28 to  
2 generation. And that factor is a factor of 14  
3 percent, which represents transmission and  
4 distribution losses that we -- we recognize is the  
5 difference between the -- what the generation is --  
6 the en -- the -- the energy at generation versus the  
7 energy at the meter.

8 MR. ANTOINE HACAULT: Okay. And  
9 there's a fairly big number in this last component,  
10 twenty-two point one (22.1), of the customer service  
11 initiatives.

12 Am I right in understanding that that  
13 would be geothermal?

14 MS. LOIS MORRISON: Yes, that is our  
15 geothermal residential energy earth power loan, which  
16 represents primarily geothermal energy.

17 MR. ANTOINE HACAULT: So it's the hope  
18 of the Corporation that that program will have a fair  
19 amount of success?

20 MS. LOIS MORRISON: Yes.

21 MR. ANTOINE HACAULT: Okay. Fair  
22 enough. So we've seen a total of about 7 percent.  
23 You -- thank you for that explanation.

24 So 3 percent plus the 4 percent relates  
25 to residential, correct?

1 MS. LOIS MORRISON: Represents those  
2 residential initiatives, yes.

3 MR. ANTOINE HACAULT: Yes. But there  
4 would be, in addition to that, code impacts, et  
5 cetera, and those are dealt with later on in the  
6 table, correct?

7 MS. LOIS MORRISON: That is correct.

8 MR. ANTOINE HACAULT: Now if the  
9 document manager could go down there should be some  
10 highlight that pops up. And we see the number of one  
11 ninety-three point five (193.5); that relates to the:  
12 "Industrial Optimization Program;" is the heading.

13 What's that about?

14 MS. LOIS MORRISON: Are you asking us  
15 to explain the Performance Optimization Program?

16 MR. ANTOINE HACAULT: Just so we can  
17 understand. You know, just briefly. I -- I don't --

18 MS. LOIS MORRISON: Yeah.

19 MR. ANTOINE HACAULT: -- need a large  
20 explanation. But really I don't think the Board  
21 understands.

22 MR. DALE FRIESEN: Yeah. So one of  
23 the challenges you are faced with in the industrial  
24 sector is that a lot of the measures -- and individual  
25 measures might be an air compressor, might be an

1 electric motor, might be a particular segment of a  
2 process system -- are very inter -- interrelated.

3                   So when you change one (1) component of  
4 that process or that system, you end up impacting  
5 other components of that system. And there are also  
6 decisions that are made with respect to sizing of  
7 equipment, that it can -- upstream and downstream  
8 implications for the energy performance of that  
9 equipment.

10                   So what the Performance Optimization  
11 Program does is it draws a boundary around a  
12 particular process, and looks at that process within  
13 the context of that boundary, and examines the energy  
14 performance as a system versus an individual measure.  
15 And that allows us -- it's more appropriate for the  
16 industrial sector in the way the industrial sector  
17 plans and operates equipment.

18                   MR. ANTOINE HACAULT:    Thank you --  
19 thank you for that clarification. Now, Mr. Friesen,  
20 would you have an idea of what the load of the  
21 industrial group would be?

22                   MR. DALE FRIESEN:    It's in the range  
23 of about 7,500 gigawatt hours.

24                   MR. ANTOINE HACAULT:    So that  
25 represents approximately what if we do the math on the

1 --

2 MR. DALE FRIESEN: Roughly a third,  
3 give or take a little bit, of the domestic  
4 consumption.

5 MR. ANTOINE HACAULT: Okay. And with  
6 respect to the residential load, is that approximately  
7 what of the...

8 MR. DALE FRIESEN: Yeah, we -- we had  
9 a slide in Mr. Kuczek's presentation that provided  
10 that segmentation. It's not quite in a correct -- if  
11 you look at Slide 2 of Mr. Kuczek's presentation...

12 MR. ANTOINE HACAULT: Yes.

13 MR. DALE FRIESEN: That's not a full  
14 representation of the industrial load. The 22.8  
15 percent you see on that slide is the top consumer  
16 load, which is predominantly industrial load. But the  
17 red portion, the 34.4 percent general service mass  
18 market, also includes a fairly substantial component  
19 of industrial load.

20 So when you -- when you break out  
21 industrial load separately, as you saw in the DSM  
22 Potential Study, that number works out to  
23 approximately one-third (1/3) of the total domestic  
24 load.

25 MR. ANTOINE HACAULT: Okay. Thank

1 you. So we were looking at 28 percent participation  
2 or effectiveness in this Power Smart Program with  
3 respect to that particular heading under the  
4 industrial.

5 And that relates to approximately their  
6 profile as a load profile in Manitoba?

7 MR. DALE FRIESEN: It's reasonably  
8 close.

9 MR. ANTOINE HACAULT: Okay.

10 MR. DALE FRIESEN: One of the  
11 advantages that we do have in the -- in the industrial  
12 sector is that industrial users have a tendency to  
13 make a very conscious decision about their costs and  
14 the measures that will address those costs.

15 They're used to undertaking economic  
16 evaluations. They're used to understanding payback --  
17 they understand paybacks. They understand rates of  
18 return. And therefore, they make more conscious  
19 decisions about energy efficiency. And that's helpful  
20 in -- in penetrating those markets.

21 MR. ANTOINE HACAULT: And thanks.  
22 That leads quite nicely to what I wanted to do, is  
23 have some sense of the residential load and the annual  
24 energy savings of that particular sector.

25 So is it fair to say that the



1 residential, as shown on this graph, is about 30  
2 percent of the load profile of Manitoba?

3 MR. DALE FRIESEN: That's reasonable,  
4 yes.

5 MR. ANTOINE HACAULT: Okay. And when  
6 we looked at the graph and compare that to the  
7 industrial participation, we've got 28 percent for  
8 about a third of the industrials, but if we go up --  
9 back up to the top of the graph on residential there  
10 are challenges to getting the residential group above  
11 -- or at that level on programs?

12 We just have about 7 percent total?

13 MS. LOIS MORRISON: There's a  
14 different approach. I -- I think it would probably be  
15 more appropriate for us to -- to represent how  
16 Manitoba Hydro working with provincial and federal  
17 government is working towards improving efficiency in  
18 the different sectors.

19 Codes and standards are generally much  
20 more effective in the residential market, and much  
21 more influencing the residential. So a substantial  
22 amount of the code impact that we are projecting is in  
23 the residential market. And so -- and codes and  
24 standards are a very effective and cost-effective  
25 mechanism for creating energy efficiency improvements.

1                   And so it's probably not necessarily an  
2 accurate representation to say that we're only  
3 projecting or anticipating getting 7 percent of our  
4 savings through the residential sector. We're  
5 actually anticipating getting a substantial amount,  
6 but a -- a large proportion of that comes through  
7 effective codes and standards.

8                   MR. DANIEL FRIESEN:    Yeah. To give  
9 you just a little bit of understanding how codes and  
10 standards differ from sector to sector, when you look  
11 at the measures and the activities across Canada and  
12 the United States that are related to codes and  
13 standard initiatives, in general, codes and standards  
14 initiatives related to residential and commercial  
15 measures are quite prescriptive in nature. They --  
16 they set minimum energy performance levels for  
17 equipment that are then regulated at some point by a  
18 provincial or federal authority. It impacts the  
19 buying decision that the -- the purchaser makes.

20                   In the industrial sector our codes and  
21 standards are more process based. They're designed to  
22 help the industrial user make a better decision about  
23 how they use their energy. It's very difficult to put  
24 a prescriptive regulation in place for an industrial  
25 process, because they differ. The mining sector uses

1 equipment differently than the pulp and paper sector,  
2 et cetera.

3                   And so the -- the measures are  
4 different. As a result, it's much harder to  
5 physically ascribe codes and standards savings to  
6 industrial measures than it is to residential  
7 measures. So the point Ms. Morris (sic) makes is  
8 very, very important, that when you look at the codes  
9 and standards contribution in -- in -- that's  
10 tabulated towards the bottom of this page, a large  
11 portion of that is residential and commercial use. So  
12 that should always be kept in mind.

13                   MR. ANTOINE HACAULT: Thank you. So  
14 then I -- I think that ties in nicely with some of the  
15 questions I asked of Ms. Rohmund on policy. Because  
16 codes, you would agree with me, are legislated through  
17 the Building and Mo -- well, you might not know that  
18 it's through the Building and Mobile Homes Act. But  
19 it is a legislated requirement which, when a builder  
20 builds, he can't build a house like I have with R12.  
21 He needs to comply with the new standards.

22                   And it's prescriptive and it doesn't  
23 cost Manitoba Hydro any money to make those people  
24 comply with the codes, correct?

25                   MS. LOIS MORRISON: Well, I -- I would

1 -- I would say that Manitoba Hydro, particularly in  
2 regards to Part 9 of the building code requirements,  
3 was instrumental in and -- and invested in getting  
4 those building codes in place. So we did actually  
5 engage and invest in that to -- to achieve that code  
6 change.

7 MR. DANIEL FRIESEN: Manitoba Hydro  
8 invests quite heavily in codes and standards  
9 development. I think if you would speak nationally,  
10 we are considered to be one (1) of the leaders with  
11 NRCan, BC Hydro, the Ontario Ministry of Energy, as  
12 funders of activities to develop new standards that  
13 are implemented in the future within federal and  
14 provincial regulations, energy efficiency regulations.  
15 So Manitoba Hydro does have a considerable investment  
16 in codes and standards. We work closely with  
17 provincial authorities. We work with federal  
18 authorities on many levels to achieve those.

19 MS. LOIS MORRISON: And -- and I might  
20 add to the discussion that it's particularly -- again,  
21 going back to the Part 9 code improvements, it's only  
22 recently that -- it -- it's as a result of Manitoba  
23 Hydro's involvement that we actually have energy  
24 components in the building code. The Part 9 code that  
25 was enacted recently is a representation of what was

1 previously our Power Smart new homes standards.

2                   And it was that program, and our  
3 investment in our program, and working with builders  
4 that we were able to come to a point where the code  
5 community, which is separate from and is -- is  
6 governed by the Office of the Fire Commissioner, was  
7 able to bring that code in place. As we all know, if  
8 we were to simply show up with a new code without  
9 public consultation, without public support, without  
10 support of the builders and -- and the building  
11 industry, it would not be well received and there  
12 would be push back.

13                   And so it's these types of investments  
14 that the Corporation makes working with home builders,  
15 bringing programs out, and moving forward we're --  
16 with the government, that we're able to bring these  
17 codes in and bring them in so that the capacity is in  
18 the marketplace to deliver what the code is requiring.  
19 The builders know how to build to that standard, and  
20 they have the -- the mechanisms in place and their  
21 processes in place to deliver that. So we would --  
22 would -- we do invest heavily in this area.

23                   MR. ANTOINE HACAULT: So is it fair to  
24 suggest that these are viewed by the Corporation as  
25 very good, high return investments with respect to

1 energy savings?

2 MR. LLOYD KUCZEK: Just to give you an  
3 example, we have travel constraints on, but when it  
4 comes to an individual attending one (1) of the code  
5 meetings, I don't have to think too much about it: the  
6 person always attends.

7 MR. ANTOINE HACAULT: Thank you.

8 THE CHAIRPERSON: M. Hacault, are you  
9 getting --

10 MR. GEORGE ORLE: Excuse me, Mr.  
11 Chair, we -- we didn't hear that last answer at all  
12 back here. If it could be repeated either by the  
13 transcriber or the -- the person making the answer.

14 MR. LLOYD KUCZEK: I'll -- I'll repeat  
15 it, and I might not use the same exact words.

16 But I -- I was just trying to provide  
17 an example of how important this is to Manitoba Hydro  
18 in terms of our Power Smart efforts. And I -- what I  
19 stated was that we have travel constraints on within  
20 the company, but when I get travel requests related to  
21 our staff participating in initiatives to try to  
22 influence codes and standards, I -- I don't think too  
23 much about it, those -- those travel requests are  
24 always approved.

25 MR. ANTOINE HACAULT: Mr. Chair, I

1 really apologize, because there's answers that were  
2 quite a bit -- they were very useful, but they were  
3 quite a big lengthier. There's just one (1) page I'd  
4 like to refer to on -- in our book of documents to  
5 complete this illustration or line of questioning.  
6 Page 26, please.

7                   The reason why I took the witnesses  
8 through some of this information was to contrast it  
9 with part of the presentation that was made with  
10 respect to the ind -- industrial potential summary.  
11 You see on this slide that shows that they were not  
12 projecting 28 percent of the baseline projection, but  
13 only 2.7 percent in this particular slide.

14                   There's just one (1) other explanation.  
15 I would suggest that we take a break, because I --  
16 that I want the panel to give a bit of information --  
17 or to the PUB. It's on the Curtailable DSM Program.  
18 I have a couple of questions which would seek to have  
19 this panel explain, because there's some lack of  
20 clarity in the material.

21

22                   (BRIEF PAUSE)

23

24                   THE CHAIRPERSON:     Forge ahead.

25                   MR. ANTOINE HACAULT:    Okay.

1 (BRIEF PAUSE)

2

3 THE CHAIRPERSON: I'll take that back.

4 Let's -- fifteen (15) minutes.

5

6 --- Upon recessing at 11:06 a.m.

7 --- Upon resuming at 11:26 a.m.

8

9 THE CHAIRPERSON: Okay. I believe  
10 that we're ready to resume the proceedings once  
11 everybody is in position.

12 MS. MARLA BOYD: Could I just have a  
13 moment, just to take care of a couple of items? I  
14 have a list from -- so, first off, if I could ask Mr.  
15 Wojczynski, please, to comment with respect to a  
16 undertaking made yesterday and responded to as Exhibit  
17 Number 90. There was one (1) item that needed to be  
18 added. It was discussed at transcript page 986. If  
19 he could just have a moment to add an additional item.

20 MR. ED WOJCZYNSKI: Yes, I -- I think  
21 a -- a clarification to add to what I said in terms of  
22 Undertaking 11 yesterday. Undertaking 11 was asking  
23 about the financials for the five (5) plans, and when  
24 we were going to update them; the five (5) plans being  
25 the five (5) key development plans. And what I said



1 was we were not going to be doing an updated financial  
2 analysis on those. We were -- it was the other ones  
3 that we talked about in the -- in the Undertaking 10.

4 But I think what would probably have  
5 been helpful for me to indicate that probably where  
6 some people might have had the impression we were  
7 going to update the financials for those five (5), is  
8 that I'd indicated, I believe it was in day 1, that we  
9 were going to update the analysis on five (5) of the  
10 key plans. And by -- and I was referring to the  
11 economic analysis, and that would be provided on the  
12 Monday.

13 So where we had -- in Chapter 10 we had  
14 fifteen (15) plans we worked on. We're taking  
15 actually the six (6) most key plans, including the 250  
16 megawatt plan that Mr. Williams was interested in, and  
17 we're going to provide a partial update to what we did  
18 there to account for the higher capital cost, and  
19 we'll be doing that on the -- on the upcoming Monday.  
20 So that's just a bit of extra information.

21 Secondly, when -- there was the  
22 questioning this morning on the possibility of a  
23 higher or a lower load forecast, and I -- and there  
24 was question about the implications of that for  
25 Manitoba Hydro. And this will be dealt with more

1 extensively next week, but as -- given that we've got  
2 the load forecast panel here I thought it would be  
3 appropriate to mention that, as a resource planner and  
4 as the operators, an example of the kind of thing that  
5 we have to deal with is that this year the peak load  
6 forecast -- we all know this is an exceptionally cold  
7 winter, so obviously that drives the load.

8                   In January -- January 6th, I think it  
9 was, and -- that we had a peak load, a net peak load,  
10 which was -- an actual load of -- which was 4,719  
11 megawatts which was a new record peak for us. And the  
12 previous record peak from previous years had been  
13 actually the year before, and as a -- and, sorry, it  
14 was 184 megawatts higher than the previous years peak.  
15 That's almost the size of Wuskwatim. The -- the peak  
16 grew from one (1) year to the next, in terms of -- the  
17 record peak by about almost the size of Wuskwatim.

18                   If you take the peak that happened this  
19 year, and not weather adjusted, just the actual peak,  
20 and compare it to the forecast peak, it was 143  
21 megawatts higher than the forecast peak.

22                   Now, we expect those kind of variations  
23 and -- and we put it in to our reserves, and we put it  
24 into our planning. That's -- that's probably mostly  
25 weather related. But it -- it's the kind of

1 uncertainty we -- we have to provide for with our  
2 criteria, with the reserves, and -- and if you have  
3 underlying load growth that happens faster, then that  
4 becomes even more of a problem. But I just thought  
5 the example this year of how much the peak jumped was  
6 quite pertinent to this discussion of load forecast  
7 uncertainty.

8                   The third issue that Ms. Morrison asked  
9 me to comment on was there was a bit of discussion on  
10 -- we are using 90/10 -- a 90 percent and 10 percent  
11 confidence intervals on the -- on the load forecast,  
12 and -- and we used to use 95/5. And -- and one of the  
13 reasons we did that was that the resource planning  
14 side of things, when we are setting up our scenarios  
15 and setting up the sensitivities we're doing, and the  
16 -- the -- that what we are looking for is values which  
17 were not really extreme but something which had a  
18 medium level of occurrence.

19                   That's why we used for capital costs a  
20 P90 and a P10, 90 percent probability, 10 percent  
21 probability on the -- on the capital costs. And we  
22 are trying to achieve that -- something like that on  
23 the other factors, and that was one of the reasons we  
24 went to a 90/10 on the load forecast.

25                   But the fact you can have a 95 percent

1 or 99 percent, and they hap -- they will happen at  
2 some point, that's obviously still very critical.  
3 It's just for the analyses we were using something  
4 which was a more moderate range.

5 MS. MARLA BOYD: Just to follow up  
6 perhaps with Mr. Wojczynski's comments regarding  
7 uncertainty, Mr. Friesen needs to add an item of  
8 information related to the load forecast, as well.

9 MR. DALE FRIESEN: Over the course of  
10 the last number of days there have been several  
11 discussions about perspective or projected pipeline  
12 load growth put forward in both Mr. Thomson's opening  
13 comments and in subsequent presentations by both Mr.  
14 Wojczynski and Mr. Kuczek.

15 I'd like to place some information on  
16 the public record with respect to what Manitoba Hydro  
17 knows of that load growth. Most of what I will be  
18 speaking to is on the public record. There are some  
19 aspects of that discussion that I would not be  
20 comfortable speaking with outside of the con -- the  
21 CSI sessions that we have planned for later to --  
22 later today.

23 But in -- in summary, we have two (2)  
24 major pipeline companies that operate within Manitoba,  
25 those being Enbridge and TransCanada. And I'll speak

1 to each one individually so that you have a little bit  
2 of an understanding of what we see and what they see  
3 going forward over the course of the next -- about the  
4 next six (6) -- five (5) or six (6) years.

5 I'll start with Enbridge. Enbridge has  
6 seven (7) pumping stations located in Manitoba. Oil  
7 enters the Mani -- enters Manitoba at the Saskatchewan  
8 border, and then exits Mani -- Manitoba near the Cana  
9 -- near Gretna, the get -- the Canada-US border.

10 They have, over the course of the last  
11 number of years, discussed several enhance --  
12 enhancements and upgrades to their pumping  
13 infrastructure, the first of which received NEB  
14 approval. The Alberta Clipper Phase 1 project  
15 received NEB approval in 2013 and is expected to  
16 become -- to go into service sometime in the latter  
17 half of 2014.

18 That involved an upgrade in pumping  
19 capacity, not new pipeline, to increase flows from  
20 about four hundred and fifty thousand (450,000)  
21 barrels per day to five hundred and seventy thousand  
22 (570,000) barrels per day, and that's a matter of  
23 public record.

24 In addition to that Phase 1 improvement  
25 there has -- Enbridge has announced a Phase 2

1 improvement to that same pipeline, the Alberta Clipper  
2 pipeline, that will increase flows from five hundred  
3 and seventy thousand (570,000) barrels per day to  
4 eight hundred thousand (800,000) barrels per day.  
5 That application received NEB approval about a month  
6 ago, on February 10th, and it is now subject to  
7 various provincial approvals on a variety of different  
8 aspects of that project.

9                   The company anticipates that once  
10 they've completed all of their approvals, the in-  
11 service date will be about fifteen (15) months after  
12 that. So we're looking potentially at that load  
13 coming into service sometime in 2015, probably around  
14 the middle of 2015.

15                   In addition, Enbridge announced this  
16 week that they're undertaking a mainline enhancement,  
17 basically, a rehabilitation of Line 3, which is one  
18 (1) of their old -- the older pipelines in their  
19 system. And that enhancement will result in a  
20 capacity increase from the current pumping level of  
21 about three hundred and ninety thousand (390,000)  
22 barrels per day to seven hundred and sixty thousand  
23 (760,000) barrels per day. Again, that will require  
24 some additional pumping stations, and it will require  
25 some additional work in Manitoba, and the projected

1 in-service date of that is in and around 2017.

2                   It's -- in respect to our load  
3 forecast, if you look at the Phase 1 and Phase 2  
4 expansions, or upgrades of the Alberta Clipper line,  
5 some of that load is already represented in the  
6 Manitoba Hydro forecast. I can't give you the  
7 specific amount, but some of that expansion or upgrade  
8 is already included in our 2014 -- or sorry, 2013  
9 forecast as was filed with this proceeding.

10                  And Enbridge is still working through  
11 some of their hydraulics analysis. And they have  
12 provided us with information, but I would not be  
13 prepared to discuss that in this forum, and that was  
14 something we could address in the CSI forum later  
15 today.

16                  The second major pipeline, as I  
17 mentioned, is TransCanada Pipeline. In the instance  
18 of TransCanada, we essentially have three (3) distinct  
19 operating regimes that impact Manitoba Hydro. The --  
20 the longest standing operation of TransCanada in  
21 Manitoba has been their natural gas pipeline which  
22 carries natural gas from Alberta through to eastern  
23 markets in both Canada and the United States.

24                  That operation involves five (5)  
25 compression stations within Manitoba. One (1) of

1 those has the option to use either gas or electric as  
2 a pumping -- a source of energy for pumping. As has  
3 been documented quite publically over the last number  
4 of years. TransCanada has experienced a significant  
5 decline in natural gas volumes in that main line,  
6 primarily due to shale gas development in Eastern --  
7 in Central North America. And that's challenged the  
8 business model of that pipeline significantly. It's  
9 also resulted in some reductions in the amount of  
10 energy that they consume as supplied by Manitoba  
11 Hydro.

12 In and around 2008 and '09, TransCanada  
13 undertook a project to convert a portion of the  
14 natural gas pipeline from Alberta to Manitoba to oil  
15 through a company called TransCanada Energy, and then  
16 build new line into the US. That resulted in the  
17 construction of six (6) oil pumping stations in  
18 Manitoba. It's been referred to as the Keystone  
19 Project. That should not be confused with the  
20 Keystone XL Project in the US that's receiving  
21 considerable public attention. The Keystone Project  
22 has been in operation since 2010 and is recognized in  
23 our 2013 load forecast.

24 The -- the third project, or the third  
25 significant undertaking by TransCanada, is the Energy



1 East Project. TransCanada made a public announcement  
2 in April of 2013 that they would be entering an open  
3 season to establish commitments for use of this  
4 pipeline. And they indicated broadly that the  
5 pipeline would consist of conversion of about 3,000  
6 kilometres of existing natural gas pipeline and the  
7 construction of about 1,400 kilometres of new  
8 construction. They estimated that that pipeline would  
9 carry about eight hundred and fifty thousand (850,000)  
10 barrels per day.

11 In two thou -- August of 2013, they  
12 announced that the results of their open season and  
13 indicated that their estimated increase to 1.1 million  
14 barrels per day and that they were planning to invest  
15 about \$12 billion in the project across Canada.

16 The expansions, in terms of the impacts  
17 to Manitoba, there'll be expansions at four (4)  
18 existing oil pumping stations, and there will be  
19 addition of four (4) new electric pumping stations  
20 within Manitoba.

21 Last week -- sorry, maybe this week  
22 actually, Enbridge filed their initial filing for the  
23 -- the Energy East Project with the National Energy  
24 Board. That filing is publicly available and it  
25 includes a little bit more information about the

1 pumping locations within Manitoba. There will be  
2 eight (8) stations in total. The expected in-service  
3 date is 2019. I can't give you an exact time frame as  
4 to when in 2019, but it will result in expansions to  
5 four (4) existing stations and four (4) new stations,  
6 like I mentioned.

7                   One (1) of the key aspects of projects  
8 like this, and it's not exclusive to the pipeline  
9 industry, is that MIPUG raised the issue of customers  
10 voluntarily sharing load information with us. It is -  
11 - it is really in the best interests of our top  
12 consumers to share that information with us. And that  
13 relates to the whole process of providing them with  
14 service. Energy is a critical component to most of  
15 the -- most of the operations that our top consumers  
16 engage in, and facilitating service can be a rather  
17 time-consuming process.

18                   A new transmission service in Manitoba  
19 presently has a fairly long lead time. We're talking  
20 a process that can take from three (3) to five (5)  
21 years. And that may be well in advance of when a  
22 company is willing to make a public pronouncement  
23 about a particular project, for a variety of reasons:  
24 shareholder reasons, regulatory reasons, et cetera.

25                   So we commonly find that our top

1 consumers are quite willing and eager to share  
2 information with us, but stress the confidentiality of  
3 sharing that information; and are quite concerned that  
4 that information will become public, which is one (1)  
5 of the reasons that Manitoba Hydro has gone to  
6 considerable lengths to establish the confidentiality  
7 of -- of our customers' information. Thank you.

8 MS. MARLA BOYD: Thank you. I also  
9 have available the response to Manitoba Hydro's  
10 Undertakings number 5 and 6, which were taken from  
11 transcript pages 261 and 263. My colleague is  
12 circulating those at the moment. I believe they would  
13 be Manitoba Hydro Exhibit number 91. Am I correct,  
14 Mr. Simonsen?

15

16 --- EXHIBIT NO. MH-91: Response to Undertakings 5  
17 and 6

18

19 MS. MARLA BOYD: I can also advise the  
20 Board that Manitoba Hydro filed electronically this  
21 morning the CVs for the upcoming panel, so I believe  
22 that could be assigned an exhibit number, as well. I  
23 do not have paper copies at the moment, but they were  
24 filed electronically at 10:00 this morning, and we'll  
25 make them available later. And I would suggest that

1 those CVs be marked as Manitoba Hydro Exhibit number  
2 92.

3

4 --- EXHIBIT NO. MH-92: CVs for MH panel 4

5

6 MS. MARLA BOYD: And one final matter.

7 I spoke with my friend, Mr. Monnin, this morning. He  
8 brought to my attention page 7 of Manitoba Hydro's  
9 rebuttal evidence. At line 19 of that evidence in a  
10 description of position in response -- or in respect  
11 of Elenchus's report, Manitoba Hydro has used the  
12 word, "as advocated by Elenchus."

13 I have with Mr. Monnin discussed that,  
14 and we agree that that word should be substituted to  
15 be, "as assumed by Elenchus." So if I could ask the  
16 record just to reflect that, please?

17

18 (BRIEF PAUSE)

19

20 MS. MARLA BOYD: Thank you for your  
21 indulgence. I -- I'm finished.

22

23 CONTINUED BY MR. ANTOINE HACAULT:

24 MR. ANTOINE HACAULT: Thank you very  
25 much. If our document management person could bring

1 up the screen? She's bringing up page 3 of our book  
2 of documents. It's -- perhaps, Ms. Morrison, you can  
3 confirm, this is a different table than what we were  
4 looking at.

5 We were looking at energy tables and  
6 now we've switched to a capacity table?

7 MS. LOIS MORRISON: Yes, that is  
8 correct.

9 MR. ANTOINE HACAULT: And this is  
10 still part of your 2013/2016 Power Smart Plan,  
11 correct?

12 MS. LOIS MORRISON: Yes, that is  
13 correct.

14 MR. ANTOINE HACAULT: And it's for the  
15 time period ending in 2012 to 2013, correct?

16 MS. LOIS MORRISON: Sorry, I thought  
17 you were on the future projections. You're on which  
18 page, could you --

19 MR. ANTOINE HACAULT: Page 3 of our  
20 book of documents.

21 MS. LOIS MORRISON: Yes, that is for  
22 savings to date.

23 MR. ANTOINE HACAULT: Okay. So the  
24 document management person has brought up on our  
25 screens the industrial total, and there should be a

1 highlight on everybody's copy for the Curtailable Rate  
2 Program. So we start with that program being at zero.  
3 And if we could move to the right, it has some  
4 variations in it going forward. Continue, please,  
5 document manager. Not quite that far. That's okay,  
6 we can stop there.

7 A couple years out this program had a  
8 capacity on a DSM perspective of around 180 megawatts,  
9 correct?

10 MR. DALE FRIESEN: That is correct.

11 MR. ANTOINE HACAULT: Okay. And we  
12 just heard Mr. Wojczynski say that a hundred and  
13 eighty-four (184) was practically the size of  
14 Wuskwatim.

15 So this particular program in that  
16 particular year was practically the same size as the  
17 additional peak demand in this current year, correct?

18 MR. DALE FRIESEN: That is correct,  
19 with one (1) slight caveat. We have to recognize that  
20 the dependable energy available from Wuskwatim is very  
21 different than the amount of energy that we would be  
22 able to release through the Curtailable Rates Program.

23 MR. ANTOINE HACAULT: Thank you for  
24 that clarification. Now, this is program -- the  
25 subject matter of possible being -- possibly being

1 capped. Now, we see going further right before we hit  
2 the zero-zero (00), a hundred and forty-six point four  
3 three (146.43).

4 What's that number?

5 MS. LOIS MORRISON: The one forty-six  
6 point forty-three (146.43) represents the interim  
7 estimate of savings as of 2012/'13.

8 MR. ANTOINE HACAULT: Now, if we can  
9 perhaps go to Tab 4, pages 20 to 21, could someone  
10 from the panel please help us understand this DSM  
11 program and what it does for Hydro operations?

12 MR. DALE FRIESEN: I can address that.  
13 The -- the intent and the purpose behind the Curtailab  
14 -- Curtailable Rates Program has been the subject of  
15 some confusion in some of the evidence that was  
16 presented to this -- to this proceeding. And we  
17 attempt to clarify that on page 46 of the Manitoba  
18 Hydro rebuttal evidence under their Section 3.9,  
19 'Curtailable Rates Program'.

20 And I'll just read through that  
21 paragraph to bring it into the public record, but --

22 MR. ANTOINE HACAULT: Sorry, just to  
23 interrupt. So our document manager can go to page 20  
24 of our --

25 MR. DALE FRIESEN: Sorry.

1 MR. ANTOINE HACAULT: -- book of  
2 documents, please.

3 MR. DALE FRIESEN: So --

4 MR. ANTOINE HACAULT: This is from  
5 your rebuttal, sir?

6 MR. DALE FRIESEN: Yeah. So I won't  
7 read it. As my legal counsel informs me, I don't need  
8 to be wordy. But the -- the purpose -- the intent and  
9 the purpose of the -- of the Curtailable Rates Program  
10 is articulated, I believe, quite well in our rebuttal.

11 MR. ANTOINE HACAULT: So if --

12 MR. DALE FRIESEN: Sorry. I'll --  
13 I'll take a step backwards. And we'll excuse my  
14 inexperience on this, hopefully. The -- the intent is  
15 really to support our generation operations. So we  
16 use the Curtailable Rates Program to minimize  
17 disruptions to our firm customers in the event that we  
18 have a loss -- unexpected loss of transmission or  
19 generation or an unexpected increase -- and by,  
20 "increase," I mean a very short duration increase --  
21 in firm load.

22 And it also enables us to fill our --  
23 fulfill our specific level of planning reserves and  
24 operating reserves that re -- required as part of our  
25 ob -- reliability obligations --



1 MR. ANTOINE HACAULT: Can I stop you  
2 right there? Could you --

3 MR. DALE FRIESEN: -- within the power  
4 pool.

5 MR. ANTOINE HACAULT: Could you give  
6 us an example of a short-term unexpected increase in  
7 firm load where you would use that -- am I right in  
8 saying resource or capacity?

9 MR. DALE FRIESEN: That's correct. A  
10 good example this past summer occurred when we lost  
11 one (1) of our bipoles for a short period of time.  
12 And so it was, I believe, a fairly warm period of time  
13 or a very fairly high temperatures. We have fairly  
14 high peak loading in our system at that time. And we  
15 used the curtailable load to manage our system peak  
16 load within the province while we rectified the  
17 situation with the bipole.

18 So that would be a typical example;  
19 unexpected, and it provided us with a very rapid  
20 short-term response. And by, "rapid," I mean about a  
21 five (5) minute response.

22 MR. ANTOINE HACAULT: Thank you.  
23 Please continue.

24 MR. DALE FRIESEN: So the -- an  
25 important aspect of the Curtailable Rates Program is

1 that we have a series of options which customers can  
2 subscribe to, and those options dictate response time.  
3 They dictate the frequency of the interruptions that  
4 we can impose upon the customer and the duration of  
5 those interruptions.

6 So they're clearly laid out in a  
7 contractual document that's been filed with the Public  
8 Utilities Board previously at various GRAs.

9 MR. ANTOINE HACAULT: Thank you very  
10 much. And I won't make the witness go through the  
11 particular part, but there's some parts that are  
12 highlighted in this. And if the panel has any  
13 questions to clarify --

14 THE CHAIRPERSON: Mr. Friesen, I would  
15 if you couldn't take us through the basics of  
16 describing the Curtailable Rate Program for the new  
17 members of the panel, please.

18 MR. DALE FRIESEN: Sorry, could you  
19 repeat that?

20 THE CHAIRPERSON: Could you give us a  
21 more -- a more basic explanation of the Curtailable  
22 Rate Program, defining it a little bit more granular?

23 MR. DALE FRIESEN: Yeah, I'll give you  
24 a little bit of a practical example. So what the  
25 Curtailable Rate Program does is it allows customers

1 to subscribe blocks of load that they are willing to  
2 interrupt in exchange for some type of compensation.  
3 And the value of that compensation is determined by  
4 the value to Manitoba Hydro of that response  
5 mechanism.

6                   So we have different options for  
7 responding to different types of events. We could  
8 build a peaking plant. We could build -- we could  
9 have energy in storage. We could build more firm  
10 capacity. We -- there are many different options that  
11 are available to respond to events within the system  
12 that may cause sudden increases in load or may result  
13 as a result of equipment failing or equipment going  
14 out of service suddenly.

15                   Our program requires customers to  
16 subscribe a minimum of a 5 megawatt block, so that  
17 precludes, at this point, smaller customers from  
18 participating in that program. It's primarily our  
19 larger customers that can participate in this program.

20                   And they -- what they have done, it --  
21 particular customers that have processes that can be  
22 shut down very quickly with minimal disruption and  
23 restarted quite quickly with minimal dis --  
24 disruption. There are many industries where you  
25 cannot do this. An interruption of this type would

1 result in an eight (8) -- six (6) to eight (8), ten  
2 (10), twelve (12) hour recovery period. But in  
3 certain in -- industries, it's possible to very  
4 rapidly turn down load and then very rapidly turn up  
5 load when the event has -- has passed.

6                   So at present we have four (4)  
7 customers enrolled in this program, all in our top  
8 consumer group. And they provide us with these  
9 services in exchange for both a standby payment,  
10 depending on the option they choose, and a -- in some  
11 cases it's a -- a payment that occurs when we actually  
12 physically curtail them.

13                   MR. ANTOINE HACAULT: Thank you very  
14 much. Those are all my questions in the areas that I  
15 intended to canvass with this panel.

16                   MR. DANIEL FRIESEN: Thank you.

17                   MR. SVEN HOMBACH: Mr. Chairman, I was  
18 advised by Mr. Orle earlier that he expected to be  
19 about half an hour with his cross-examination.  
20 Considering that it's currently about ten (10) minutes  
21 to noon, it would help if the panel could let me know  
22 if we should continue with one (1) more presenter or  
23 break for lunch right now.

24                   THE CHAIRPERSON: Yes, let's continue,  
25 please. Mr. Orle...?

1 CROSS-EXAMINATION BY MR. GEORGE ORLE:

2 MR. GEORGE ORLE: Thank you, Mr.  
3 Chair, members of the panel, and members of the Hydro  
4 panel. I don't have the familiarity that my  
5 colleagues here have with the Manitoba Hydro. I may  
6 get your names mixed up. I'm sorry. I may even  
7 forget what your name is.

8 So some of these questions will be sent  
9 out as a lob. Whichever one of you wants to hit it  
10 back, I'll accept that answer.

11 My questions are going to be limited to  
12 the demand-side management. It won't be dealing with  
13 the forecast whatsoever. And my first question will  
14 be to the EnerNOC representative.

15 And I'm just going to repeat what I  
16 believe was your evidence on March the 3rd, and that  
17 was that in speaking of the residential sector, Maniti  
18 -- Manitoba Hydro had recently done a saturation  
19 survey and had extensive information about its  
20 customer segments.

21 Do you recall saying that?

22 MS. INGRID ROHMUND: Yes, that's  
23 correct.

24 MR. GEORGE ORLE: Okay. Can you  
25 please confirm that the demand-side management

1 assessment for the residential sector began with and  
2 is essentially based on the Manitoba Hydro saturation  
3 survey?

4 MS. INGRID ROHMUND: The saturation  
5 survey was a very important input into the analysis  
6 and we used it extensively. It was all -- it was,  
7 however, supplemented with other sources of  
8 information.

9 MR. GEORGE ORLE: Okay. And what  
10 other sources of information would that be?

11 MS. INGRID ROHMUND: Manitoba Hydro  
12 billing data, secondary sources -- other projects that  
13 we've done, other Canada-specific sources. I'd have  
14 to go into the report to read off the specifics. It's  
15 in Chapter 2.

16 MR. GEORGE ORLE: Okay. But the  
17 saturation survey would have been the primary tool  
18 that you used?

19 MS. INGRID ROHMUND: For some of the  
20 data elements, yes.

21 MR. GEORGE ORLE: Okay. And do you  
22 have a copy of that Hydro saturation survey available?

23

24 And -- and, forgive me, I'm -- I'm new  
25 here. I don't know if it's been filed before. I came

1 in after the requests were available.

2 MS. LOIS MORRISON: Perhaps I can  
3 help. The -- a copy of the 2009 Residential Energy  
4 Use Survey was filed by Elenchus in response to one  
5 (1) of the Public Utility Board interrogatories. If  
6 you give me one (1) brief minute, I can find it.

7 MR. GEORGE ORLE: Thank you.

8

9 (BRIEF PAUSE)

10

11 MS. LOIS MORRISON: The interrogatory  
12 I'm referring to is the response by Elenchus to  
13 PUB/Elenchus-1 -- oh, sorry, PUB-Elenchus -- sorry,  
14 PUB/Elenchus-2. I apologize.

15 MR. GEORGE ORLE: Okay.

16 MS. LOIS MORRISON: That's where --  
17 there includes a copy of the 2009 Residential Energy  
18 Use Survey.

19 MR. GEORGE ORLE: Thank you. Ms.  
20 Rohmund, does -- also part of your testimony you  
21 indicated that you analyzed separately twenty-nine  
22 (29) customer segments, and I believe that those are  
23 set out on page 29 of Manitoba Hydro Exhibit, I  
24 believe it's, 87. If the document manager could  
25 please put that -- thank you. It's there already.

1                   The twenty-nine (29) customer segments  
2   that you spoke of in your testimony, those are the  
3   segments shown on the right-hand side of that page?

4                   MS. LOIS MORRISON:   That is correct.

5                   MR. GEORGE ORLE:    Were residential  
6   customers and First Nations communities in general  
7   identified in any of these twenty-nine (29)  
8   categories?

9                   MS. LOIS MORRISON:   Yes, they were.  
10   They would be identified as -- going down the list  
11   here, single family electric non-gas reserve. Then  
12   going down further down the list there was -- which --  
13   which is represented by, MF electric non-gas reserve,  
14   would be the multi-family electric non-gas reserve.

15                   And I believe that was it. We don't --  
16   didn't have apartments for those communities.

17                   MR. GEORGE ORLE:    And those are  
18   specifically to reserves?

19                   MS. LOIS MORRISON:   Yes.

20                   MR. GEORGE ORLE:    Okay. And was there  
21   any differentiation made between southern reserves,  
22   northern reserves?

23                   MS. LOIS MORRISON:   Not within the  
24   study, no.

25



1 (BRIEF PAUSE)

2

3 MR. GEORGE ORLE: In the commercial  
4 sector, I believe you've got eighteen (18) segments.  
5 Are any of those segments commercial buildings on  
6 reserve?

7

8 (BRIEF PAUSE)

9

10 MS. INGRID ROHMUND: The commercial  
11 buildings that were included in the study included  
12 commercial buildings on reserves. However, they were  
13 not isolated as separate segments.

14 MR. GEORGE ORLE: Okay. You have the  
15 segments set out for residential. Do you have a list  
16 of the -- the segments that were used for commercial?

17 MS. INGRID ROHMUND: Yes.

18 MR. GEORGE ORLE: And where would I  
19 find that?

20 MS. INGRID ROHMUND: I'll look it up  
21 for you in the report.

22

23 (BRIEF PAUSE)

24

25 MS. INGRID ROHMUND: Page 312 of the

1 DSM Potential Study Report.

2 MR. GEORGE ORLE: Thank you. And are  
3 you able to segregate southern and northern reserve  
4 commercial institutions?

5 MS. INGRID ROHMUND: No, we were not.

6 MR. GEORGE ORLE: I'm not sure if I  
7 asked this: Are you able to do that for residential;  
8 differentiate between northern and southern reserves?

9 MS. LOIS MORRISON: The study that was  
10 undertaken by EnerNOC we did not differentiate within  
11 that. However, within our residential energy-use  
12 survey we are able to differentiate between northern  
13 areas and southern areas.

14 MR. GEORGE ORLE: Okay. If you refer  
15 to page 31 of the same exhibit.

16

17 (BRIEF PAUSE)

18

19 MR. GEORGE ORLE: Pardon me. When we  
20 take a look at page 31 there's a sample of -- of  
21 twenty (20) key residential measures and a comparison  
22 of a levelized cost of eighteen (18) residential and  
23 commercial measures on page 69.

24 Where would I find a complete list in  
25 the exhibit or in the filings of all residential and

1 commercial measures that were considered in Manitoba  
2 Hydro's assessment of DSM potential for residential  
3 and commercial sectors?

4 MS. INGRID ROHMUND: In Chapter 5 of  
5 the DSM potential study report we identify the  
6 measures that we considered in the study.

7 MR. GEORGE ORLE: Looking at the list  
8 of twenty (20) key residential measures on page 31,  
9 which of those measures are presently available to all  
10 First Nation communities?

11 MS. LOIS MORRISON: I -- I think we  
12 need -- could you please clarify your question. These  
13 measures are not specifically aligned with programs  
14 being offered now, although a number of these measures  
15 are covered by existing programs.

16 So I guess I'm -- I -- I would like to  
17 know, are you asking program specific or are you  
18 asking in terms of this particular study? In this  
19 particular study, the majority of these init -- these  
20 measures may be present within any of the First Nation  
21 homes. It was focussed around insulation, interior  
22 lighting, housing construction, geothermal heat pumps,  
23 infiltration control, which is air sealing, low-flow  
24 showerhead, refrigerators, appliances, electronics.

25 The majority of these, I would expect,

1 are very -- are consistently available in most of the  
2 housing across the province.

3 MR. GEORGE ORLE: Okay. And that  
4 includes housing on reserves. The programs that you  
5 have, these measures included in all of those programs  
6 would be available and householders on reserves would  
7 be eligible to apply for those programs?

8 MS. LOIS MORRISON: Yes, they are.

9 MR. GEORGE ORLE: Okay. Has Manitoba  
10 Hydro or EnerNOC made an assessment of the actual  
11 penetration of these key residential measures in the  
12 programs in the First Nation communities?

13

14 (BRIEF PAUSE)

15

16 MS. LOIS MORRISON: Are you asking  
17 about whether we keep track of the actual penetration  
18 of our existing programs in First Nation communities?

19 MR. GEORGE ORLE: Yes.

20 MS. LOIS MORRISON: Yes, we do.

21 MR. GEORGE ORLE: Okay. And where  
22 would I find that information?

23 MS. LOIS MORRISON: We have quite a  
24 bit of information on the record to date regarding  
25 participation by individuals and working in the First

1 Nation programs. We -- as part of this filing  
2 specifically, we did not file specific information  
3 about participation in specific programs unless it was  
4 requested under an interrogatory.

5                   If you would like information, Mr.  
6 Kuczek and I both have quite a bit of information  
7 related to those programs. But as I mentioned, that  
8 has been provided under the past electric GRAs. We've  
9 given statuses or updates as to the -- the uptake of  
10 the pro -- of the initiatives that we work with in  
11 those communities.

12                   MR. GEORGE ORLE: And could I ask you  
13 as an undertaking to provide that information?

14                   MS. LOIS MORRISON: Could you be a  
15 little more specific about what particular information  
16 you're looking for? That's a very broad request.

17                   MR. GEORGE ORLE: Well, the -- the --  
18 I gather the programs that are available to First  
19 Nations are the ones that they're actually taking an  
20 active part in as to what amount or -- or how much of  
21 the community actually takes it up.

22                   And -- and what I'm looking for is,  
23 essentially, a comparison as to -- to how well these  
24 programs are being delivered to the First Nations  
25 communities as opposed to the outside or reserve

1 communities.

2 MS. LOIS MORRISON: Well, we do have a  
3 ver -- we have a program that is specifically targeted  
4 to First Nation communities, working with the bands  
5 and the councillors specifically, where we actually  
6 help -- work with them to identify -- they identify  
7 housing which requires insulation upgrades. And we  
8 work with the community to install those insulation  
9 upgrades at no cost to the community. We provide the  
10 materials and pay for the labour and shipping of those  
11 materials.

12 We have worked with, I believe, the  
13 vast majority -- and Mr. Kuczek can give a better  
14 update on the specifics of those details, because that  
15 program actually reports directly to his office  
16 because of the priority of that program.

17 In addition to that, we have  
18 initiatives where we are working with, or attempting  
19 to contact, the band offices to provide walkthrough  
20 audits or walkthrough energy assessments for the  
21 commercial facilities in those communities. So it's -  
22 - it's an area that we've got quite a few undertakings  
23 with.

24 And so if you'd like a status update on  
25 our First Nations Energy Efficiency Program, in terms

1 of the number of houses that we have improved the  
2 energy efficiency of, the types of measures that we've  
3 included in those upgrades, we could provide that.

4 MR. GEORGE ORLE: Thank you. I -- I'd  
5 like that.

6 MR. LLOYD KUCZEK: I can just add a  
7 little bit more information. We've taken a different  
8 approach with the First Nation communities. And --  
9 and the pace of progress is really dependent on each  
10 community or First Nation that we're working with.  
11 But our approach is to work with each one, and as Ms.  
12 Morrison pointed out, work with the individual  
13 communities. And it's usually the housing manager  
14 that we work with.

15 And we're -- we're trying to clean up,  
16 certainly, all of the residential homes that re --  
17 that can use additional insulation. So we've  
18 retrofitted over a thousand in over -- I believe it's  
19 about thirty-seven (37) First Nation communities.  
20 Some First Nation communities still haven't  
21 participated yet, but that's their choice. We're  
22 certainly willing to work with any First Nation  
23 community that's willing to participate with us.

24 And on the geothermal side, I mentioned  
25 earlier in the hearing that we're working with two (2)

1 First Nation communities, and we have installed over a  
2 hundred geothermal systems in -- we haven't, they have  
3 actually, have installed over a hundred geothermal  
4 systems in those communities. And there's discussions  
5 with four (4) additional First Nation communities to  
6 potentially do the same thing there.

7                   So the approach is somewhat different  
8 with the First Nation communities, and -- and in some  
9 -- in some ways much more successful when they're  
10 willing to participate and work with us on  
11 implementing these measures. Because if they're on  
12 board in terms of doing it, certainly with the  
13 residential side there's no cost to them. The  
14 geothermal side we're -- would be homes that are  
15 eligible in terms of being economic. There's no cost  
16 as well. So it's -- it's turned out to be successful  
17 to that degree.

18                   MR. GEORGE ORLE: Are these delivered  
19 under a...

20

21                   (BRIEF PAUSE)

22

23                   MR. GEORGE ORLE: Okay. I believe  
24 that the undertaking was for you to provide us with a  
25 -- either the results or the -- the success of the



1 programs that you've -- you've had so far with -- with  
2 the First Nations communities.

3 Am I right in that?

4 MS. LOIS MORRISON: Yes, we have  
5 committed to provide you with an update as to the  
6 number of homes that we've insulated, along with the  
7 measures that have been installed.

8

9 --- UNDERTAKING NO. 20: Manitoba Hydro to provide  
10 an update on the number of  
11 First Nations homes  
12 insulated along with the  
13 measures that have been  
14 installed

15

16 CONTINUED BY MR. GEORGE ORLE:

17 MR. GEORGE ORLE: And would I be able  
18 to tell from -- from those figures the -- the ratio of  
19 how well these programs are being delivered to the  
20 general population as opposed to the reserve  
21 communities?

22 MR. LLOYD KUCZEK: That's difficult to  
23 answer. So it depends on each First Nation community.  
24 So there's three (3) communities that we've totally  
25 retrofitted all the homes that fall into the category

1 of being eligible. In other words, they -- they  
2 require insulation.

3                   So we've done all the homes in those  
4 communities, so if we compared those communities to  
5 the general population of Manitoba, we're doing much  
6 better. If you compare it to communities that have  
7 been signed up or are working with us -- 'signed up'  
8 is the wrong term for it, but that currently are not  
9 participating in the programs, it -- clearly not as  
10 good as the general population in Manitoba. So it  
11 varies by community.

12                   MR. GEORGE ORLE: Okay. So what  
13 you're saying is that if a community wants to bring  
14 these programs in, they can have as much penetration  
15 as they want or as much as the program allows.

16                   And this is the basis of who asks as  
17 opposed to where it's being delivered to?

18                   MR. LLOYD KUCZEK: It's actually -- we  
19 -- we are approaching the communities, so it's a  
20 question of them responding. And -- and sometimes  
21 that takes time for them to understand what's all  
22 involved. But there's -- there's no limitations of  
23 participation. It's -- it's more to do with, as I  
24 mentioned earlier, the pace of the First Nations  
25 community -- communities' willingness to participate.

1 MR. GEORGE ORLE: Okay. If you'd  
2 refer to -- to page 69, and I'm just going to ask --  
3 this is a general question again.

4 The -- the programs that are shown on  
5 page 69, again, are all of those available to the  
6 First Nations communities?

7 MS. LOIS MORRISON: Yes.

8 MR. GEORGE ORLE: Okay.

9

10 (BRIEF PAUSE)

11

12 MR. GEORGE ORLE: And on page 83 of  
13 that same exhibit, the new programs that are being  
14 proposed, again, and just a general question: Are --  
15 are these new programs all -- all three (3) available  
16 to First Nations communities?

17 MS. LOIS MORRISON: Yes.

18 MR. GEORGE ORLE: Okay.

19

20 (BRIEF PAUSE)

21

22 MS. LOIS MORRISON: We should state  
23 though that as Mr. Kuczek noted, one of the programs  
24 has not yet been approved. It's potentially going to  
25 be -- it's still under review, and subject to approval

1 --

2 MR. GEORGE ORLE: Okay.

3 MS. LOIS MORRISON: -- and that was  
4 the LED lighting program.

5 MR. GEORGE ORLE: And as you go into  
6 consideration of new programs or enhancing programs,  
7 do you have any -- any policy in terms of consultation  
8 with First Nations communities in regards to what new  
9 programs might be available, or what programs might be  
10 available that the First Nations would -- would  
11 appreciate receiving, as opposed to the ones that  
12 you're already delivering?

13

14 (BRIEF PAUSE)

15

16 MS. LOIS MORRISON: In terms of our  
17 program design, we -- all of the opportunities that we  
18 pursue where -- particularly where it's geared to a  
19 market that's served by electric heat -- electric  
20 space and water heating, is to the benefit of, we  
21 would assume, First Nation communities also.

22 It's more so on the lines of the  
23 delivery of how do we get that measure or that  
24 opportunity to the First Nation communities, or the  
25 members of the First Nation community. And we get

1 information through our interactions with the  
2 communities, so we take their thoughts.

3 And the ones that we're working with,  
4 they provide us with insight as the best way to  
5 deliver those types of programs to -- to their  
6 members.

7 MR. GEORGE ORLE: Okay, is there a  
8 specific policy in how you deal with that? You -- you  
9 talk about talking to the communities. Is it -- is it  
10 a matter of a formal consultation? Is it just word of  
11 mouth, things that you may hear from -- from the  
12 communities?

13 I'm just wondering whether you have a  
14 process in place to -- to have these consultations.

15 MR. LLOYD KUCZEK: There isn't formal  
16 consultations, per se. The opportunities within a  
17 First Nation community are generally the same  
18 opportunities that are available to outside the  
19 communities.

20 What we have in place is we have an  
21 individual that's dedicated just to working with the  
22 communities. And so that individual works with the  
23 housing manager and explores opportunities.

24 Right now, the focus is primarily on  
25 the residential sector, but discussions are ongoing as

1 far as expanding that to the commercial, as well. And  
2 -- and this is something that has evolved over time.  
3 I'm not sure if we put it in place four (4) years ago  
4 or thereabouts, but prior to that, participation  
5 wasn't as good in the First Nation communities.

6 And so we're -- we've found that this  
7 is working quite well for us, actually, as well as the  
8 First Nation community, so it's a big improvement.

9 MR. GEORGE ORLE: Does Manitoba Hydro  
10 have a First Nation Power Smart program?

11 MR. LLOYD KUCZEK: We -- we call it  
12 that, but it's essentially the same program as the  
13 Affordable Energy Program. It -- it -- the only  
14 difference would be the delivery, where we have the  
15 individual working with the First Nation community,  
16 and usually he's working directly with the housing  
17 manager --

18 MR. GEORGE ORLE: Okay.

19 MR. LLOYD KUCZEK: -- in the  
20 community.

21 MR. GEORGE ORLE: I didn't see it  
22 mentioned in any one of the -- the programs available  
23 here. So is it just a title that's given to the  
24 manner of delivery as opposed to a program of its own?

25 MR. LLOYD KUCZEK: That's correct.

1

2

(BRIEF PAUSE)

3

4

MR. LLOYD KUCZEK: And just to add a  
5 bit more to that, we -- we track progress separately  
6 with -- but it's a subset of the overall Affordable  
7 Energy Program.

8

9

(BRIEF PAUSE)

10

11

MR. GEORGE ORLE: Are any of the  
12 programs specifically designated under the First  
13 Nations Smart Program?

14

I had earlier asked you whether it was  
15 just a name for the delivery of the services there,  
16 but are there any programs within that that are -- are  
17 different than the programs available under the  
18 general programs you've set out already?

19

MR. LLOYD KUCZEK: They -- they are  
20 different from the sense that they're a community --  
21 they're -- they're the same programs, but they're a  
22 community approach. So the geothermal community  
23 initiative that we have in place, the only two (2)  
24 participants currently are two (2) First Nation  
25 communities.

1                   And again, it works very well when the  
2 communities are interested and -- in participating  
3 because the delivery -- or the effort on our part is -  
4 - is minimized and the -- the participation is  
5 substantial given our effort because the First Nation  
6 community ends up delivering the program within their  
7 community. And we provide resources as well as --  
8 well, technical and financial support to implement  
9 those opportunities.

10                   So that fall -- that -- that is the  
11 case both with the community Geothermal Program as  
12 well as our Affordable Energy Program, which is  
13 primarily focussed on insulation, but it includes some  
14 low -- lower cost opportunities as well.

15                   MR. GEORGE ORLE:    Thank you.

16                   MS. LOIS MORRISON:   Maybe a way to --  
17 to characterize it would be that, as you know, we have  
18 a Home Insulation Program. We have a Water and Energy  
19 Saver Program specifically noted here. They ha --  
20 they -- they address certain measures.

21                   We also have, as Mr. Kuczek mentioned,  
22 the Affordable Energy Program of which we are  
23 specifically targeting. There are components that  
24 have different program mechanisms that help us target  
25 specific sectors of the marketplace and -- and



1 increase our reach and increase our penetration.

2 But they're, essentially, taking the  
3 Home Insulation Program and measures from the Water  
4 and Energy Saver Program, rebundling them, repackaging  
5 them and offering additional services, such as the --  
6 as paying for the labour in the Affordable Energy  
7 Program. And in the First Nations sector,  
8 specifically targeting the First Nations sector, we  
9 work with the -- the community -- with the Band, the  
10 housing manager, to actually pay for the labour to --  
11 we pay them to have them install the measures.

12 It's -- it's a different repackaging to  
13 specifically get those measures that we see as  
14 benefiting the individuals into those homes. So when  
15 we were talking about being a special program, or a  
16 specific program, it's -- it's taken -- it's  
17 repackaging things that are offered in other areas  
18 and, specifically, developing a program delivery  
19 mechanism that helps us get greater reach in those  
20 communities.

21 MR. GEORGE ORLE: Thank you. I -- I  
22 appreciate those answers. And it gives me a better  
23 understanding of -- of what the delivery and the  
24 models are that are being used here. And, again, I  
25 apologize if this is material that's already been

1 presented. There's been a -- a lot of material to try  
2 to go through. Thank you. I appreciate.

3 Ms. Rohmund, I'll direct another  
4 question to you. In -- in the process of determining  
5 the segments for the residential customers, are  
6 demographics of these customers, such as income,  
7 household age, household preferences, developed as  
8 part of that?

9

10 (BRIEF PAUSE)

11

12 MS. INGRID ROHMUND: The  
13 characteristics that we used to segment the  
14 residential sector were the heating fuel, gas or  
15 electric, whether gas is available or not; and -- and  
16 geographic region, where we could, north and south;  
17 and reserve; and the age of the home, so built before  
18 2000, or from 2000 forward; and then income level were  
19 the variables that we used.

20 MS. LOIS MORRISON: And this is all  
21 detailed on page -- on -- in Table 3-1 of the report,  
22 how we identified or broke out the segments and  
23 characterized them.

24 MS. INGRID ROHMUND: As well as the  
25 number of customers in each segment and their energy -

1 - their electricity use in 2010/'11.

2 MR. GEORGE ORLE: Okay. Thank you. I  
3 won't refer specifically to the document. I think you  
4 may remember it. It -- it was your Ameren Illinois  
5 study. And in that you included a development of  
6 residential attitudinal segment distribution.

7 Was that something that was asked of  
8 you in -- in this particular study by Manitoba Hydro?  
9 Did you develop any of that?

10 MS. INGRID ROHMUND: No, we did not.  
11 I should add that -- that Ameren -- unt -- until this  
12 year, Ameren is the only client that we've worked with  
13 that has taken that approach. They are -- there's one  
14 (1) person at Ameren who is responsible for all three  
15 (3) studies that we did who believes strongly in that  
16 approach and is able to get the funding to support  
17 that level of research as well. The other utilities,  
18 the other thirty (30) plus studies that we've done,  
19 use a similar approach to what we used with Manitoba  
20 Hydro.

21 MR. GEORGE ORLE: Okay. I hate to say  
22 anything is a given when I start a question, because  
23 so often it turns out that I'm the one that's wrong on  
24 it.

25 But would it be fair to say that a unit

1 of electricity saved, whether it comes from the north  
2 or whether it comes from the south, has the same  
3 value?

4 MR. ED WOJCZYNSKI: Nearly. The --  
5 the difference is --

6 MR. GEORGE ORLE: Well, that's  
7 halfway. I'm happy with that. Thank you.

8 Maybe you could just explain to me what  
9 -- what the difference might be.

10 MR. ED WOJCZYNSKI: Load in the south  
11 requires transmission from the north to the south,  
12 which has its capital cost, but including things like  
13 Bipole III, which -- and -- and any other similar  
14 north-south. So to the degree reductions in load in  
15 the south can prevent or defer those north-south  
16 enhancements, the northern load doesn't tend to  
17 provide quite the same big deferrals. On the other  
18 hand, the northern loads, some of them tend to be in  
19 more remote areas where there are smaller amounts of  
20 load for a significant amount of -- of transmission  
21 investment. So it -- it would actually depend a  
22 little bit on where that northern load is and what  
23 type it is.

24 If you're referring to the type that  
25 are in some of the First Nations, some of them would

1 have fairly high transmission upgrade costs down the  
2 road if load were to grow, so you'd have to do a very  
3 specific study to really get a good answer on that.

4 MR. GEORGE ORLE: Okay.

5 MR. ED WOJCZYNSKI: So I -- I guess  
6 it's nearly, and it depends.

7 MR. GEORGE ORLE: Then in -- in terms  
8 of the value of the programs that you put together,  
9 there would be -- I think if you were looking at it on  
10 a -- on a cost-effective basis, a program delivered to  
11 the south would probably be of -- of more value to  
12 Manitoba Hydro than -- than ones delivered to the  
13 north?

14 MS. LOIS MORRISON: We don't  
15 characterize it that way when we're developing our  
16 programs. Our programs, we -- we develop them based  
17 on one (1) overall value assigned to the -- to -- to  
18 the province, is how we assess our investment in  
19 programming.

20 MR. GEORGE ORLE: Okay. And I'd just  
21 like to ask another question related to -- to an aside  
22 made on -- on Monday, and that's in regards to: When  
23 putting these plans together you -- you take a look at  
24 whether or not they make economic sense. And ,I  
25 believe, Mr. Kuczek, you were talking about that in

1 terms of sending your people back when they brought  
2 you a program that made no sense. But that's not the  
3 case in every one of your programs.

4                   When I -- I recall that you were  
5 talking about a program, a lower-income program, where  
6 essentially the -- the benefits to the customer were  
7 being given to them for, I believe you said, almost  
8 free.

9                   MR. LLOYD KUCZEK:    So -- so that's the  
10 Affordable Energy Program. And so that's the same  
11 program that the First Nation communities are  
12 participating in as well, and so there's no cost to  
13 the First Nation communities.

14                   And you mentioned income before, so it  
15 might be of interest to you, a well, to know that what  
16 we do with the First Nation communities is we don't --  
17 with the Affordable Energy Fund -- Program, not fund,  
18 but the Energy Affordable Program throughout Manitoba,  
19 there is a income eligibility component to that that  
20 customers have to meet to be eligible for that program  
21 and participate. With First Nation communities we  
22 don't look at income. If there's a residential  
23 building within that community, First Nation  
24 community, they're eligible.

25                   MR. GEORGE ORLE:    Okay. And I would

1 assume that the -- the basis for that is that you  
2 don't always look at cost. There's a -- there's an  
3 equitable factor that comes into play occasionally in  
4 dealing with these programs?

5 MR. LLOYD KUCZEK: That -- that is  
6 true. With -- with the First Nation communities, we  
7 realized that there is a number of -- there'd be  
8 challenges getting income levels, and we talked about  
9 it outside the First Nation communities as well, one  
10 (1) neighbourhood in Winnipeg, whether we should take  
11 the same approach and not worry about the income of  
12 those individuals. And the reason you do that I  
13 because it just may be a more effective way of  
14 achieving what you're -- you're attempting to achieve  
15 through the Power Smart programs, and that's capture  
16 cost-effective energy efficient opportunities. And  
17 some of those sometimes are not, as I mentioned when  
18 we talked about our different options. Embedded in a  
19 package could be some stuff that on the increment is  
20 not cost-effective.

21 But we do not require through the  
22 Affordable -- or the Affordable Energy Fund Program  
23 which includes the First Nations program, it does not  
24 have to meet those cost-effective tests. This program  
25 is supported through the affordable energy fund, and

1 the -- that fund is established through legislation as  
2 well. And it's directed -- or part of the -- one of  
3 the primary objectives is to ensure that those in a  
4 lower income and those that live in Northern Manitoba  
5 have access to the same programs as other Manitobans.

6 MR. GEORGE ORLE: Okay. Has there  
7 ever been any thought of -- of enhancing the programs  
8 that are available to -- to low income or -- or  
9 northern communities to -- to offset what -- what I  
10 would characterize as -- as a better ability on the  
11 part of consumers in the southern part of the province  
12 to -- to take the benefit of -- of certain savings?

13

14 (BRIEF PAUSE)

15

16 MR. LLOYD KUCZEK: We -- we  
17 effectively think we're achieving that through that  
18 Affordable Energy Program, and the First Nations  
19 component within that program.

20 MR. GEORGE ORLE: Okay. Maybe I might  
21 do this better as an example. I find that my mind  
22 works better with practical examples rather than  
23 philosophical questions. But I'm going to refer to  
24 the -- the brochure that -- that we talked about.  
25 That's Exhibit Number 88.



1                   And -- and I'm going to use, as an  
2 example, the difference between someone in the south  
3 part of the province, and -- and someone living in,  
4 say, an area like Island Lakes. I used to use just an  
5 ordinary citizen from River Heights, but I kept  
6 getting badgered about the fact that I shouldn't use  
7 people from River Heights, as every one (1) of my  
8 examples. So I now just use myself, and it makes it a  
9 lot easier.

10                   In my home, I have an electric water  
11 heater. When I saw this brochure, I realized that  
12 that's probably not the best decision for me to make.  
13 I can switch over and, in effect, I get myself a  
14 fifteen hundred dollar (\$1,500) benefit. That's worth  
15 a considerable amount of money to me.

16                   I have a neighbour that's just a few  
17 doors down, and his house is heated with gas and also  
18 has a gas water heater. When I go to the second side  
19 of the brochure, there's a -- a fifteen thousand  
20 dollar (\$15,000) saving that my neighbour could get.  
21 That's a -- a significant saving, and I believe that  
22 we were told that this is based upon current rates,  
23 not if -- if the proposal is accepted in the rates  
24 that we've been talking about. Those aren't even  
25 included in these savings.

1 Am I -- am I right on that?

2 MS. LOIS MORRISON: You are correct.

3 These are based upon current rates.

4 MR. GEORGE ORLE: Okay. So I'll --

5 I'll take, as an example, one (1) of my friends, and I

6 -- I do have friends in Island Lake so I can use this

7 and I -- I'll make a composite name, a common first

8 name, a common last name in several of the

9 communities, Steven Harper.

10 My friend Steven Harper has a house

11 heated by gas -- I'm sorry, by electricity. Water is

12 heated by electricity. He pays the current Hydro

13 rates. He does not have an option to switch over to

14 natural gas. He foregoes a significant saving in

15 rates. More importantly, he'll be paying the new

16 rates that are going to come in, if this is approved,

17 for the next twenty (20) years.

18 On the other hand, myself, who has now

19 divested myself of anything running on electricity to

20 heat my home, or to heat my water, will not have to

21 pay those high rates for the next twenty (20) years.

22 There seems to be a -- a level of inequity in that, in

23 terms of if programs are set up and a benefit is -- or

24 the programs are all equally available, that if one

25 (1) area of the province can obtain a significant

1 benefit from a program that perhaps there should be  
2 resources put into the other areas that would match  
3 that or would be equivalent.

4 I don't know how much goes into the --  
5 the low income programs, but would it be close to the  
6 types of savings that would be available to just a  
7 regular, middle-class homeowner in -- in Winnipeg?

8 MR. LLOYD KUCZEK: The savings that  
9 you achieve through participating in the Affordable  
10 Energy Fund Program vary by each -- each customer that  
11 participates, because it's dependent on the measures  
12 that are implemented. So it's the starting level of  
13 the insulation, for example, to the finishing level.

14 You could easily save five hundred  
15 dollars (\$500) if your -- if your -- your base home  
16 didn't have the basement insulated, for example, and  
17 the attic insulated very well. So you -- you could  
18 save in the range of five hundred dollars (\$500). So  
19 you're not going to get the savings that customers  
20 have -- to the same degree as customers have in terms  
21 of fuel choice. But fuel choice and the access to  
22 natural gas is not something that influence us as --  
23 influences us in terms of what we offer customers on  
24 an individual measure basis. We assess those based on  
25 the economics.

1                   So those measures which you're bringing  
2 into the discussion is the issue of whether or not  
3 there's -- or -- and how you deal with this -- the --  
4 the economics of bringing -- bringing natural gas to -  
5 -

6                   MR. GEORGE ORLE:     Yeah.

7                   MR. LLOYD KUCZEK:    -- areas that  
8 currently don't have access to it.

9                   MR. GEORGE ORLE:    And I'm sure we'll  
10 get into this later on in the -- in the hearing, but  
11 the -- the other corollary of that example that I used  
12 is that, after I've avoided the twenty (20) years of  
13 increased rates, I'm still eligible for the dividend  
14 if it's going to come at the end of those twenty (20)  
15 years.

16                   When I say "dividend," I'm talking  
17 about what we're talking about as a benefit to -- to  
18 all Manitobans at the end of that year from the  
19 payment of the rates and delivery of the new -- new  
20 dams. We're all going to be benefiting from that.  
21 And even though I haven't paid anything towards the  
22 increased rates, I'll be entitled to that -- that as I  
23 call dividend the same as anyone else would be.

24                   I -- I think that's more of an aside.  
25 I -- I'm not asking for --

1 MR. LLOYD KUCZEK: You lost me there.

2 I'm sorry.

3 MR. GEORGE ORLE: All right. Thank

4 you.

5 THE CHAIRPERSON: Mr. Orle, are you --

6 are you done? Are you -- I'm sorry to interrupt.

7 MR. GEORGE ORLE: Yeah.

8 THE CHAIRPERSON: Thank you.

9 MR. GEORGE ORLE: Those are all my  
10 questions. Thank you very much to the panel. Thank  
11 you to the Board.

12 THE CHAIRPERSON: I wonder if --  
13 before we break for -- for lunch, I wonder if I could  
14 ask the Manitoba Hydro to undertake to explain to the  
15 panel the rates that are actually paid by First  
16 Nations communities in Northern Manitoba.

17 And the reason I'm asking you this is  
18 because we heard from some presenters on Thursday last  
19 that First Nations people living in the shadow of some  
20 of those dams were paying far more for their  
21 electricity than somebody located in -- in southern  
22 Manitoba.

23 So I wonder if you could undertake to  
24 inform the -- the panel just how rates for First  
25 Nations communities in northern Manitoba are

1 calculated and paid. So we want an understanding of -  
2 - we want to understand if there was any -- if the  
3 statements that we heard were -- were factual or not.

4 MS. LOIS MORRISON: I -- I think we  
5 can address that right now. Manitoba has uniform rate  
6 legislation which requires us to, essentially, charge  
7 everyone the same set of rates, with the exception of  
8 those individuals in the diesel-served communities.

9 But for residential customers, everyone  
10 is charged the same rate, even those individuals  
11 leaving -- living in the diesel-served communities.  
12 They are paying the same basic monthly charge, they  
13 pay the same uniform rate per kilowatt hour.

14 And I -- I -- the individuals who were  
15 here and presented from the community were -- are  
16 being paid -- are being charged the same rate per  
17 kilowatt hour and the same basic monthly charge across  
18 Manitoba.

19 THE CHAIRPERSON: Thank you. Let's --  
20 let's adjourn for lunch. And I would suggest that we  
21 return here at 1:15.

22 MS. LOIS MORRISON: I could offer you  
23 one (1) more item, Mr. Chair --

24 THE CHAIRPERSON: Okay.

25 MS. MARLA BOYD: -- for your lunchtime

1 reading pleasure, if you -- if you like. Manitoba  
2 Hydro is in a position to file its response to  
3 Undertaking Number 13, which included any late 2013  
4 external population forecasts and the 2014 economic  
5 outlook. It's available here, and we have copies  
6 being circulated.

7 I believe it would be Exhibit Number  
8 93. Thank you.

9  
10 --- EXHIBIT NO. MH-93: Response to Undertaking 13

11  
12 THE CHAIRPERSON: Ms. Boyd, does that  
13 give you enough time for your team to have lunch if we  
14 resume at 1:15?

15 MS. MARLA BOYD: Could we perhaps go  
16 to 1:30? Thank you.

17 THE CHAIRPERSON: Let's do 1:30.  
18 Thank you.

19  
20 --- Upon recessing at 12:42 p.m.  
21 --- Upon resuming at 1:37 p.m.

22  
23 THE CHAIRPERSON: Good afternoon. The  
24 -- we'll restart the proceedings.

25 MR. SVEN HOMBACH: Yes. Thank you,

1 Mr. Chairman. Before we proceed, just a few  
2 administrative matters.

3 First of all there are three (3)  
4 sessions left this afternoon. The lawyer for MMF will  
5 be examining next followed by counsel for the  
6 Independent -- Independent Expert Consultants. I  
7 anticipate that this will take about an hour.

8 After that, as I advised this morning  
9 and yesterday, there will be a closed in camera  
10 session where members of the public will be included,  
11 where commercially sensitive information will be  
12 discussed. At that point, the audio and video feed  
13 out of this room will be disconnected, as well. I  
14 would likely call for a ten (10) minute break before  
15 that session so that the necessary technical  
16 arrangements can be made.

17 I've also been advised by My Friend Ms.  
18 Ramage that Manitoba Hydro has a few administrative  
19 matters to address, so perhaps I can turn it over to  
20 Ms. Ramage.

21 MS. PATTI RAMAGE: Thank you. My  
22 administrative matters actually don't deal with this  
23 panel so much as the next panel. Next week we'll be  
24 putting up a different panel. It's a fairly large  
25 panel and it's a complex subject matter.



1                   It'll be -- that's when we're going to  
2 be dealing with the economic analysis, and -- and  
3 uncertainty. And included in those materials are --  
4 when we review is discount rates, and I don't know  
5 about the rest of the room but I find it really,  
6 really hard to understand.

7                   And so what I asked our people to do  
8 was put together a package of recommending reading,  
9 and we've done this for the room, so everyone can have  
10 it. We've picked out what we thought were some of the  
11 key IRs on discount rates, and some of the academic  
12 articles that were referenced in our IR responses.

13                  And we have to admit when we looked at  
14 them one (1) of the things we found was a couple of  
15 them, when you clicked on the link, you found that you  
16 had to pay to get to read it. So Manitoba Hydro has  
17 gone in and we have bought those articles for people  
18 in the room and we have a package.

19                  So that when we get to our tough  
20 sledding next week I think it'll really help if people  
21 will have read these materials ahead of time, so that  
22 we're hopefully a little further down the path in  
23 terms of getting there. So our folks upstairs are  
24 just putting the final touches on making sure there's  
25 copies.

1 (BRIEF PAUSE)

2

3 MS. PATTI RAMAGE: Oh, they're  
4 amazing. Ms. Fernandes has them and they're  
5 available. We will be distributing them throughout  
6 the room. So it's your recommended reading. It's  
7 already all on the record, but we thought it would  
8 help move things along next week.

9 THE CHAIRPERSON: So the day of recess  
10 tomorrow is we have homework assigned, is what you're  
11 saying?

12 MS. PATTI RAMAGE: That is exactly  
13 correct.

14 MR. KURT SIMONSEN: Is that going to  
15 be an exhibit, Patti?

16 MS. PATTI RAMAGE: I wasn't planning  
17 on making it an exhibit, simply because it's all  
18 material on the record. We've com -- we've -- we've  
19 just compiled it for reading. If that's something we  
20 decide we want to do, I -- maybe after parties have  
21 addressed it, and if they would like it to be made as  
22 an exhibit, we can do that then, but...

23 MR. SVEN HOMBACH: Ms. Ramage, I would  
24 expect that probably at least one (1) of the parties  
25 will refer to those articles. If they're going to

1 refer them on the record, it might be a benefit to  
2 have them as exhibits. Now, would the copyright  
3 restrictions allow that to have them made exhibits, or  
4 does Manitoba Hydro have any concerns?

5 MS. PATTI RAMAGE: That's a good  
6 point, Mr. Hombach. What we did with the articles  
7 that had to be paid for, we only have permission to  
8 make twenty-five (25) copies. And so those articles  
9 cannot go on the record of the proceeding per se, in  
10 terms of on the website. They have to be limited to  
11 what we produce in the room. That is the permissions  
12 we were able to -- to purchase.

13 THE CHAIRPERSON: So could I suggest  
14 that maybe on Monday we have a document which can go  
15 on the record and that becomes the exhibit.

16 MS. PATTI RAMAGE: We can do that, but  
17 that would be the actual -- the IR response that's  
18 already there, and that's why I was thinking --

19 THE CHAIRPERSON: Oh, I see. Okay.

20 MS. PATTI RAMAGE: -- it didn't  
21 necessarily have to be an exhibit, because if you look  
22 it could be -- and it's not the first one in this  
23 package -- but it could be IR PUB/Manitoba Hydro First  
24 Round 151c. That's when the article is referred to  
25 and it's footnoted. We've just attached the actual

1 article now.

2                   So if people wanted to refer to it,  
3 they already have that reference. That's why I was  
4 thinking it didn't need an exhibit number 'cause  
5 there's nothing new here. It's already on the record.

6

7                   (BRIEF PAUSE)

8

9                   MS. PATTI RAMAGE: Ms. Boyd just  
10 suggested maybe we could provide a list of what's  
11 there that could go on the record just in one (1)  
12 document to show what the -- the package was.

13                  MR. SVEN HOMBACH: That might be  
14 helpful. Thank you.

15                  MS. PATTI RAMAGE: Okay. And I'm  
16 going to turn the chair back over to Ms. Boyd now.

17                  THE CHAIRPERSON: I will turn the  
18 microphone over to Mr. Corey Shefman, acting on behalf  
19 of the Manitoba Metis Federation. Mr. Shefman,  
20 please.

21                  MR. BYRON WILLIAMS: Mr. Chair, if --  
22 it's Byron Williams here, if I might. Sorry, Mr.  
23 Shefman.

24                  I think I -- I will not suggest that  
25 any arm wrestling took place, but I think we have an

1 agreement with the help of Mr. Kuczek, Wojczynski,  
2 Boyd, and Ramage in terms of the undertaking about  
3 DSM. And I'll -- I'll try and state it accurately.  
4 And then Hydro will correct me.

5 Manitoba Hydro is undertaking to  
6 provide the projected savings per program aggregate  
7 over fifteen (15) years as represented in the Power  
8 Smart program, the 2013 program, as well as scenario  
9 1, scenario 2, and scenario 3. In addition to that,  
10 they will provide the levelized utility cost for each  
11 program for each scenario.

12 As long as Hydro confirms that, I think  
13 that's what we've got. And the levelized utility cost  
14 was by program.

15 MS. MARLA BOYD: In the benchmark  
16 year, correct?

17 MR. LLOYD KUCZEK: Correct. And the  
18 scenarios being the DSM option 1, 2, and 3, as we  
19 referred to earlier.

20 MR. BYRON WILLIAMS: In the benchmark  
21 year.

22 MR. LLOYD KUCZEK: Correct.

23 THE CHAIRPERSON: Could I suggest to  
24 Mr. Kuczek and Mr. Wojczynski, please, if you could  
25 move your microphone over to the -- to the other side

1 of your -- where you're sitting so that you're facing  
2 immediately -- you're facing the microphone when  
3 you're answering questions in that direction. I think  
4 it would be more helpful for me, at least.

5

6 CROSS-EXAMINATION BY MR. COREY SHEFMAN:

7 MR. COREY SHEFMAN: Thank you, Mr.  
8 Chair. Most of my questions today are going to be for  
9 -- I believe for Mr. Kuczek, but you're welcome to  
10 pass it on, as the case may be.

11 I'm going to start by looking at this  
12 slide from your presentation the other day. It's  
13 slide 83. In discussing the levelized resource cost  
14 comparison from your presentation you discussed, in  
15 particular, the success of the Community Geothermal  
16 Program. And that's come up a number of times  
17 throughout this panel.

18 Can you confirm that this is the  
19 program you were referring to when you made mention of  
20 the programs that Manitoba Hydro is working on with  
21 Fisher River and Peguis?

22 MR. LLOYD KUCZEK: That's correct.

23 MR. COREY SHEFMAN: And although we --  
24 I know we've gone over the fact that these numbers,  
25 for 2014 in particular, aren't finalized.

1                   Is the level of funding or price per  
2 kilowatt hour generally in the range of where it  
3 should be, that -- in that it's higher than most of  
4 the other programs on this chart?

5                   MR. LLOYD KUCZEK:    The levelized  
6 resource cost is -- is higher than most of the  
7 programs for geothermal, generally speaking, and that  
8 it would be the case with this opportunity, as well.

9                   MR. COREY SHEFMAN:   Thank you.  When  
10 you spoke of this program, in particular, and when we  
11 were having that discussion about Peguis and Fisher  
12 River, you indicated that Manitoba Hydro would be  
13 looking to pursue similar opportunities in other  
14 communities.

15                   Is that correct?

16                   MR. LLOYD KUCZEK:    That's correct.

17                   MR. COREY SHEFMAN:   Is that desire  
18 specific to the Community Geothermal Program or does  
19 it include other programs that engage in -- engage  
20 communities in DSM-related power generation?

21                   MR. LLOYD KUCZEK:    It goes beyond the  
22 geothermal.  The other -- the other program is -- the  
23 Affordable Energy Fund Program is certainly something  
24 that we've discussed and we were exploring and  
25 interested in working with other communities to

1 achieve more energy savings on a more cost-effective  
2 basis through that program where it makes sense, and  
3 so we're interested in that.

4 MR. COREY SHEFMAN: Can you describe  
5 in a little bit more detail what kind of power  
6 generation is -- comes out of the program?

7 MR. LLOYD KUCZEK: The -- it's the  
8 energy savings and the measures. The -- the big  
9 measures in that program -- well, there's two (2) big  
10 measures: One (1) is natural gas furnaces if they're  
11 standard efficient furnaces, so there's significant  
12 savings there. But that would only apply to those  
13 that have natural gas, of course.

14 The other measures are the -- that's  
15 significant is the insulation. And then we offer a  
16 number of little things like a -- six (6) CFLs usually  
17 goes with the package -- some pipe wrap, and -- and so  
18 those opportunities as well. But the energy savings  
19 associated with those aren't as significant.

20 MR. COREY SHEFMAN: I'm sorry, to  
21 clarify when I was talking about the geothermal -- geo  
22 -- geothermal, and correct me if I'm wrong, but my  
23 understanding is that the Geothermal Program is  
24 actually generating new power for these communities?

25 MR. LLOYD KUCZEK: No.



1 MR. COREY SHEFMAN: Okay.

2 MR. LLOYD KUCZEK: It's -- a  
3 geothermal is a -- a replacement for a heating system  
4 which is -- it's still an electric -- it uses  
5 electricity for a heat source, but it also uses --  
6 captures the heat from either the ground, it could be  
7 the water, but another heat sink, and supplements  
8 that. So you end up, effectively, heating a home for  
9 about a third of the -- the amount that you would  
10 require otherwise with an electric furnace.

11 But an elect -- a geothermal system has  
12 an electric furnace, effectively, in it. If -- if you  
13 just visualize a box that looks like a furnace in your  
14 house, you still have that box. If you open it up,  
15 you'll see an electric heater, actually, as a  
16 component of that. That only comes on when the  
17 geothermal system that's drawing the heat out of the  
18 ground, for example, can't -- can't maintain the heat  
19 within the home.

20 So I have a geothermal system. So on  
21 my second box already, and the first one (1) used --  
22 it was a -- a larger unit, so it used to not -- the  
23 backup didn't kick in until it was about minus twenty-  
24 seven (27). So this time I put a smaller system in,  
25 but it kicks in at minus seventeen (17), roughly.

1 MR. COREY SHEFMAN: Right. So you  
2 don't appear to have mentioned biomass programs in --  
3 when we're -- when you're talking about these  
4 community DSM programs, efforts to reduce to -- to  
5 encourage generation of other sorts.

6 Can you tell us why you haven't  
7 discussed them?

8 MR. LLOYD KUCZEK: We actually are  
9 discussing that opportunity right now. What we're  
10 looking at doing as doing a feasibility study to see  
11 if it makes sense to do something like that. The --  
12 the obvious and -- and the most simplest way of doing  
13 that would just be a -- have a wood stove in your  
14 house. But we're looking at something a little  
15 broader than that right now. But we're -- we're going  
16 to start with a feasibility study.

17 MR. COREY SHEFMAN: And you'll have to  
18 excuse me, I'm new to this process, but is the  
19 feasibility study just a -- an in-office thing, or are  
20 -- are you actually taking it out into communities?  
21 And if so, where -- where is the study taking place?

22 MR. LLOYD KUCZEK: It would be an  
23 academic study. It wouldn't be a practical study  
24 where you're actually doing a pilot or a demonstration  
25 project.

1 MR. COREY SHEFMAN: Do you have a  
2 timeline for moving on to a pilot project for biomass  
3 generally, or for wood stoves in particular?

4 MR. LLOYD KUCZEK: No, the -- that  
5 decision is usually made after you do a feasibility  
6 study. So the reason for doing a feasibility study is  
7 to assess whether or not it makes any sense to go to  
8 the next stage.

9 MR. COREY SHEFMAN: Okay. We're going  
10 to return to this a little bit later in my questions,  
11 but one (1) of the other things you mentioned in your  
12 presentation in or around this chart, was that fuel  
13 switching generally was a topic of discussion at  
14 Hydro, more perhaps than it has been in the past. And  
15 that some discussions were being contemplated with the  
16 government to put more emphasis on fuel switching.

17 Can you indicate to us what programs or  
18 what type of fuel switching might be on the table for  
19 discussion between Hydro and the government?

20 MR. LLOYD KUCZEK: Well, maybe I'll  
21 break that into two (2) components. One (1) is we --  
22 we effectively have a fuel switching initiative  
23 through our Affordable Energy Fund Program currently.  
24 So if a customer is -- comes to us and they have  
25 propane and oil we will -- we have a program to help

1   them convert to electricity, or natural gas, or  
2   geothermal if -- if that made sense.

3                   But, generally speaking, if they have  
4   access to natural gas we would look at that  
5   opportunity first and help them out. If they were in  
6   an Affordable Energy Fund Program, they're just  
7   eligible for the program just as if they had a  
8   standard efficient furnace. And they can convert to  
9   an electric furnace if they propane or oil as well.

10                   With the -- the fuel switching that  
11   generally was spoken about earlier, that's all related  
12   to space heating and the choice between natural gas  
13   and electricity at this point.

14                   MR. COREY SHEFMAN:    So in Hydro's  
15   opinion, there isn't any real alternative to natural  
16   gas on the one (1) hand or electricity on the other  
17   for space heating or water heating at this point?

18                   MR. LLOYD KUCZEK:    Geothermal's an  
19   option, as well.

20                   MR. COREY SHEFMAN:    Okay. So we've  
21   established through the -- through your testimony over  
22   the last few days that gas -- and again, correct me if  
23   I'm wrong -- that ga -- natural gas is the preferred  
24   method in terms of -- from the consumers' end for  
25   water and space heating.

1                   Is that correct? Is that a fair  
2 assessment?

3                   MR. LLOYD KUCZEK: With space heating,  
4 if you have your choice, it makes -- it makes sense to  
5 do that. For water heating, it depends on the  
6 particular situation. So when you -- from -- and from  
7 which perspective.

8                   And Ms. Morrison is actually more  
9 familiar with the different scenarios, but it's more  
10 costly to install a natural gas furnace -- or a hot  
11 water tank than it is an electric hot water tank.

12                  MR. COREY SHEFMAN: So let's talk then  
13 just -- for the sake of this discussion, just about  
14 space heating. We've established as well that natural  
15 gas isn't available or isn't a viable option in  
16 northern Manitoba.

17                  Is that correct?

18                  MR. LLOYD KUCZEK: And other areas in  
19 southern Mani -- certain areas in southern Manitoba as  
20 well.

21                  MR. COREY SHEFMAN: Right. And in  
22 previous testimony, the panel spoke about how  
23 geothermal isn't a real -- at this point, isn't a  
24 realistic, broadly implementable alternative; mainly  
25 due to costs, but I'm sure there are other issues as

1 well.

2 Is that correct?

3 MR. LLOYD KUCZEK: Cost is the big  
4 issue. Usual -- usually you can -- if -- if you  
5 didn't care about costs, usually you can install a  
6 geothermal system. It's just much more costly if you  
7 have to drill into bedrock, for example.

8 MR. COREY SHEFMAN: Sure. And in the  
9 panel's response to MKO's questions a short time ago,  
10 the panel acknowledged that individuals in the North,  
11 generally speaking, in addition to not being able to  
12 benefit from fuel switching, are more reliant on  
13 electri -- or because they can't be -- benefit from  
14 natural gas fuel switching, they are more reliant on  
15 electricity.

16 So my question is: Why isn't Hydro  
17 putting more emphasis or paying more attention to  
18 other and more diverse fuel-switching initiatives that  
19 might give those in the North more options when it  
20 comes to this arm of DSM?

21

22 (BRIEF PAUSE)

23

24 MR. DALE FRIESEN: Sorry. Could you  
25 repeat the question?

1 MR. COREY SHEFMAN: Absolutely. Given  
2 what we've established, in -- in particular that  
3 individuals in the North can't at present benefit from  
4 fuel switching in the same way that those in Winnipeg  
5 and other parts of southern Manitoba can benefit, why  
6 isn't Hydro paying -- or spending more effort and  
7 energy to promote other alternatives in the North or  
8 to -- to provide fuel-switching alternatives to  
9 northern Manitobans?

10 MR. DALE FRIESEN: I think in many  
11 instances the base case for switching to other forms  
12 of fuel such as biomass, for instance, or solar or  
13 small wind, et cetera, hasn't been established to our  
14 satisfaction, so that we feel comfortable that the  
15 technology is suitable for the installation. We're  
16 currently doing a fair amount of work in a few areas,  
17 bio-energy being one (1) of them, where we're  
18 examining biomass-to-energy pathways. We're  
19 undertaking a series of five (5) demonstrations with  
20 funding from the -- from the Canadian Federal  
21 Government through the Clean Energy Fund.

22 We're taking the lessons learned from  
23 those five (5) demonstration projects and we're  
24 examining each of those technologies as a possible  
25 solution for remote communities, and northern

1 communities in general. And from that, we're  
2 establishing a sixth demonstration possibility that,  
3 if we aren't able to physically locate it in the  
4 North, it will at least give us the ability to  
5 simulate the conditions of the North in a southern  
6 demonstration that we can keep our hands on a little  
7 better and maintain a little better control of.

8                   And we're hoping the outcome of those  
9 demonstrations will be one (1) or two (2), potentially  
10 three (3) options, that we can pursue in on-site  
11 demonstrations in the North that will hopefully  
12 eventually lead to -- to an option that provides for a  
13 more carbon-neutral and lower cost solution, and  
14 potentially one that's better suited to the resource -  
15 - energy resource availability in the -- in the area,  
16 such as biomass, for instance.

17                   MR. CORY SHEFMAN: Thank you.  
18 Following up on your answer, you mentioned solar and  
19 small wind. What work is Hydro currently doing to  
20 make these alternatives more viable for those in the  
21 North?

22                   MR. DALE FRIESEN: I'll speak to solar  
23 specifically. We've undertaken a demonstration with  
24 the -- with Red River College here in Winnipeg to  
25 examine the feasibility of solar parabolic technology.



1 Instead of going the PB route where you take the sun's  
2 energy and convert it to electricity, we're looking at  
3 redu -- improving the efficiency by going directly  
4 from the sun's energy to thermal -- to thermal -- let  
5 me rephrase that.

6                   We want to direct the -- the sun's  
7 energy in a way that focusses it -- allows us to  
8 collect it as thermal energy which we can then use to  
9 directly heat. So that -- that project has got a  
10 little bit more than a year under it's belt right now.  
11 We're continuing to examine different ways. The first  
12 stage was just looking at the collection technology  
13 itself. The next stage will actually be using that  
14 energy to physically heat a building. But that's a  
15 technology that has some promise. It still wouldn't  
16 be cost effective in the North, given the  
17 intermittency of the sun's hours, but it's a  
18 technology we're looking at in the solar world.

19                   There's plenty of experience, I  
20 believe, with small wind. The challenge we have with  
21 small wind is that when you combine the intermittency  
22 and the very high cost of small wind, it's --  
23 generally doesn't -- the economics doesn't work out  
24 favourably for it.

25                   MR. CORY SHEFMAN: Moving to a kind of

1 related area, it's just -- in particular Hydro's  
2 efforts to promote DSM and promote its adoption, in  
3 Mr. Hombach's examination or cross-examination  
4 yesterday, or earlier anyways, on the matter of  
5 Hydro's fuel-switching initiative you indicated that  
6 Hydro has an extensive advertising and education  
7 campaign.

8                   In your explanation of Hydro's efforts  
9 in this regard it was suggested that the campaign was  
10 targeted specifically to the southern areas of  
11 Manitoba where gas is available, where natural gas is  
12 available; that the customers who are receiving this  
13 education and promotion are generally homeowners or  
14 home builders; and that involved a particular focus on  
15 the actual building of the homes.

16                   Do we recall that -- that discussion?

17                   MS. LOIS MORRISON: Yes, we do.

18                   MR. CORY SHEFMAN: Perfect. The flyer  
19 that was distributed yesterday, is that part of that  
20 strategy?

21                   MS. LOIS MORRISON: That's part of the  
22 heating education campaign. That's not part of our  
23 overriding Power Smart campaign.

24                   MR. CORY SHEFMAN: Okay. What is  
25 Hydro's strategy to educate customers in northern

1 areas who rely more heavily on electric heat?

2                   What kind of material has been made  
3 available, or what promotion has been done to educate  
4 northern consumers as to all of their options like we  
5 see on the screen?

6                   MS. LOIS MORRISON: Well, first off,  
7 Manitoba Hydro has had a long-standing overriding  
8 initiative to promote Power Smart itself. We've been  
9 -- we've been promoting the Power Smart brand since  
10 1992 across the province. And so we -- what we do is  
11 we -- we've created an overriding strategy to just  
12 generally promote brand awareness of Power Smart.

13                   Then individually for each program we  
14 have individual promotion strategies to educate and  
15 encourage customers to participate that's targeted to  
16 each of those different sectors.

17                   Now, to bring it to -- to your area of  
18 concern specifically, and I -- and I understand -- I'm  
19 -- and I'm -- I'm taking from your -- your question  
20 that you're interested in our efforts to promote  
21 energy conservation in the North to residential  
22 customers.

23                   MR. CORY SHEFMAN: M-hm.

24                   MS. LOIS MORRISON: And so building on  
25 that, we've actually in the past -- since we launched

1 our home insulation program, to use that as an  
2 example, what we've done is we specifically target  
3 those areas that have a high penetration of electric  
4 heat. And so we will do specific advertising and  
5 radio communication in -- in those areas.

6                   So we've done specific advertising in  
7 the Northern newspapers, in community newspapers, and  
8 in the -- the community radio stations. We've done,  
9 in addition to that, specifically in the North -- we  
10 did an oil and propane conversion program to offer up  
11 assistance through the Affordable Energy Fund that Mr.  
12 Kuczek referred to earlier to help customers, if they  
13 were heating with oil and propane, to convert to --  
14 either to electricity, which is more economic than  
15 heating with oil or propane; or, if they chose to, to  
16 convert to at least a high-efficiency propane.

17                   In addition to that, for each of our  
18 programs we -- we set out a strategy to try and target  
19 areas that we can get greater penetration. We also  
20 look at our markets and say, If we're not getting the  
21 penetration we expected to in that region, we'll do  
22 additional concerted efforts to -- to promote in those  
23 regions.

24                   So that's kind of broadly what we do.  
25 And we've been doing that approach since the early

1 '90s.

2 MR. COREY SHEFMAN: Does Hydro track  
3 penetration data in Aboriginal communities, in terms  
4 of adoption of these programs?

5 MS. LOIS MORRISON: As Mr. Kuczek  
6 alluded to earlier, we have -- we have specific data  
7 on our efforts in the First Nation communities that  
8 are targeted under the Afford -- under our First  
9 Nation community program. We also have tracked  
10 specifically uptake -- program uptake, in terms of  
11 what was previously our Power Smart New Home Program.  
12 And we also track the number of projects undertaken in  
13 our commercial buildings in First Nation communities.

14 And as I mentioned earlier, we have  
15 been approaching First Nation communities to offer up  
16 the services of -- for -- for their band buildings,  
17 the band-owned buildings or the band-operated  
18 buildings, to have energy assessments.

19 And basically what we do at the end of  
20 that is we provide a report that explains what  
21 opportunities -- energy-efficient opportunities there  
22 might be and what incentives might be there to support  
23 the implementation of those energy efficiency oppor --  
24 opportunities in those buildings.

25 MR. COREY SHEFMAN: Thank you. Moving

1 on a little bit to load shifting. In your previous  
2 presentation it was explained that one (1) of the  
3 challenges of load shifting, especially given that 50  
4 percent of our -- and correct me if that statistic is  
5 wrong -- of Manitoba's energy is consumed for heat.

6 One (1) of the challenges of load  
7 shifting is that curtailing the use of electricity for  
8 heat for one (1) period has to be -- has to be made up  
9 at another time.

10 And so was that -- is that correct,  
11 generally speaking?

12 MS. LOIS MORRISON: That is correct.

13 MR. COREY SHEFMAN: So then programs  
14 in -- into reducing the use of electric heat, period,  
15 would -- are important to pursue?

16 MS. LOIS MORRISON: At this point, we  
17 focus -- and I believe Mr. Friesen referred to that  
18 earlier in our testimony. That our pro -- programs  
19 are primarily focussed on saving energy. And with  
20 that saving energy is a corresponding reduction to  
21 demand or peak.

22 But, yes, what we -- what we look at is  
23 there's additional benefit -- or we focus, obviously,  
24 on elec -- reducing the electric heat consumption  
25 because that has added benefit to our system of

1 reducing both energy because we're ver -- we're  
2 concerned about energy constraints, and peak.

3 MR. COREY SHEFMAN: And I acce -- I --  
4 I understand now and that you have a study ongoing on  
5 these wood stoves.

6 No feasibility study?

7 MR. LLOYD KUCZEK: No, there's no  
8 feasibility study on wood stoves. Per -- the  
9 feasibility study is -- that we're looking at  
10 undertaking is whether or not -- on a community-based  
11 initiative, whether or not they're -- it makes sense  
12 to have a bioenergy system in place --

13 MR. COREY SHEFMAN: Okay.

14 MR. LLOYD KUCZEK: -- which might be a  
15 district system --

16 MR. COREY SHEFMAN: Okay.

17 MR. LLOYD KUCZEK: -- as opposed to  
18 the stoves. But the stoves that exist today, there's  
19 high-efficient stoves -- high-efficient stoves that  
20 are combined with electric heat. And Dale's probably  
21 more familiar with those, but...

22 MR. DALE FRIESEN: So to sort of build  
23 on what Mr. Kuczek said, we are looking at district  
24 heating systems as being one (1) option. The -- the  
25 advantage you gain with district heating systems is

1 that your energy source, whatever you're using for  
2 heating, can be managed in a more economical fashion,  
3 and it creates better economics for alternative fuels.

4                   So that's -- that's one (1) of the  
5 driving factors behind that. And those -- those off  
6 set some of those costs that go along with  
7 distributing that energy throughout a community. It  
8 also makes implementation and maintenance of the  
9 systems over the long-term easier because you have  
10 that more centrally located. There are challenges  
11 though.

12                   And currently probably one (1) of the  
13 biggest challenges we face in Manitoba with bioenergy  
14 is a lack of refined biomass fuel. We have a lot of  
15 raw biomass fuel in Manitoba, but we don't have  
16 sufficient refining capacity to produce it into a form  
17 that we can use effectively. And that's -- that's one  
18 (1) of our challenges, and one (1) of the areas we're  
19 looking at, is how do we refine biomass into a usable  
20 fuel?

21                   MR. COREY SHEFMAN: But is it not the  
22 case -- I -- I take your points, but is it not the  
23 case that when consumers use wood stoves and  
24 potentially only use wood stoves to heat their homes -  
25 - and I'm just using wood stoves as an example here --



1 that the reduced load would contribute positively to  
2 the -- the goal that we've been discussing of reducing  
3 load from the infrastructure?

4 MR. DANIEL FRIESEN: Yes, it would  
5 reduce -- it would reduce the -- the infrastructure  
6 requirement for electricity, for instance, if electric  
7 heat was the option -- other option, yes.

8 MR. COREY SHEFMAN: Thank you. And  
9 you're aware that there are a number of communities  
10 currently in northern Manitoba -- currently in  
11 northern Manitoba that utilize wood stoves for heat  
12 during the winter?

13 MR. DANIEL FRIESEN: Yes.

14 MR. COREY SHEFMAN: Now, you may be  
15 aware that a number of my client's community members  
16 use wood stoves as a matter of preference, because  
17 it's something they've done for many years.

18 Am I correct in my understanding that  
19 this sort of program is accomplishing exactly the sort  
20 of thing that Manitoba Hydro is trying to do in the  
21 south by freeing up load?

22 MR. DANIEL FRIESEN: In a -- in a big  
23 picture way, yes. It -- it is displacing electric --  
24 it -- you know, it is displacing heat that might  
25 otherwise come from an electric source. So in that

1 sense, you're correct.

2 MR. COREY SHEFMAN: Thank you.

3 MR. DANIEL FRIESEN: It's not an  
4 initiative that is being driven per se by Manitoba  
5 Hydro in the -- in the same manner, but I understand  
6 what you're saying, yes.

7 MR. COREY SHEFMAN: So Manitoba Hydro  
8 is not providing the people that are using wood stoves  
9 -- as, again, as an example -- with information as to  
10 what the benefits are of them doing so, or to  
11 continuing to do so?

12 MR. DANIEL FRIESEN: Yeah, we -- we  
13 don't have any information.

14 MS. LOIS MORRISON: At this time I  
15 don't believe we traditionally produce that  
16 information. It's not publicly available on our  
17 website, the benefits of heating with wood stove  
18 versus natural gas, or biomass, or any of the other  
19 options. You are correct, we don't have that on our  
20 website at this point --

21 MR. DANIEL FRIESEN: And -- and sort  
22 of to -- to build on that a little bit: We aren't  
23 offering incentives per se for people to use wood  
24 stoves in southern Manitoba either. What our -- the  
25 way our program is -- the Bio-Energy Program is

1 designed is, we look at -- we're looking for carbon-  
2 neutral, or low cost, or no cost fuel sources to use  
3 in biomass to energy pathways. And that energy may be  
4 thermal for heat, or it may be electricity.

5                   And we're looking at the resource cost  
6 of that pathway, and then addressing appropriately if  
7 there's a situation where that makes economic sense.  
8 So we're not per se paying -- like, our -- our  
9 objective isn't purely to look at using wood in wood  
10 stoves. That's the -- that's not a primary focus of -  
11 - of that Bio-Energy Program. It is -- it isn't  
12 intended to subsidize heating with wood. That --  
13 that's not -- not the intention of the program.

14                   MR. COREY SHEFMAN: And my purpose for  
15 asking this question is because it is an example of a  
16 -- let's call it a 'made in the North' solution -- to  
17 these sorts of issues.

18                   Has Hydro -- or does Hydro see a place  
19 for these sorts of community solutions, or made in the  
20 North solutions, to the problems that we're discussing  
21 here?

22                   MR. LLOYD KUCZEK: We -- we've  
23 actually had some discussions about that, but would be  
24 similar to natural gas and us offering incentives to  
25 use natural gas. And so we don't offer customers to

1 use -- an incentive to use natural gas right now, too.  
2 But in the broader context of a fuel- switching  
3 program, one would have to think about it from the  
4 provincial perspective in the North, for those that  
5 don't have natural gas, and it doesn't make sense.  
6 And you get into the free ridership issue and what  
7 not. But that -- from the overall fuel-switching  
8 persp -- perspective, you really should assess that.

9 MR. COREY SHEFMAN: Okay. Ms.  
10 Morrison, I believe it was you who said during the  
11 initial evidence that it's best to ask the customer  
12 what's important to them, and provide them with the  
13 information that they need to make decisions which  
14 meet their needs when we're talking about moving away  
15 from reliance on electric heat.

16 Has Manitoba Hydro done this  
17 specifically in the North, and specifically with the  
18 Metis community?

19 MS. LOIS MORRISON: I believe my -- my  
20 analogy was that if someone were to ask me --

21 MR. COREY SHEFMAN: M-hm.

22 MS. LOIS MORRISON: -- what the prefer  
23 -- preference would be for hea -- their fuel source,  
24 that I would ask them what was important to them at  
25 that time. That was more in line with the question

1 that was asked of Mr. Thomson as to whether he would  
2 recommend natural gas over electric -- electricity for  
3 heat.

4                   We have not specifically gone out and  
5 asked anyone in the province what their specific  
6 preferences are and what they want in terms of heat.  
7 So to say, Have I specifically excluded anyone in the  
8 -- in the Metis communities? No. We've -- we've  
9 generally asked through our broad-based customer  
10 residential energy survey, through our general surveys  
11 across the province, what people are interested in and  
12 what their thoughts are and what their preferences  
13 are.

14                   So the surveying that we've done, or  
15 the information gathering that we've done, has been at  
16 the provincial level and not specifically isolating  
17 any one (1) particular community.

18                   MR. COREY SHEFMAN: Thank you. I just  
19 have one (1) more area I'd like to discuss with the  
20 panel. In your -- in the panel's answer -- and I'm  
21 not -- I'm sorry, I'm not sure who it was specifically  
22 that gave the answer -- on the subject of the benefits  
23 of DSM programs -- and I believe it was panel member  
24 Grant that asked the question -- it was indicated that  
25 customers -- even customers who are well informed of

1 the programs weren't taking them up. There was not as  
2 much use of Hydro's DSM programs as we perhaps would  
3 like there to be. And a mention was made of a focus  
4 group that was convened on the subject, and I'd like  
5 to talk a little bit about that focus group.

6 My first question is: What was the --  
7 what was the purpose of the focus group? What  
8 question -- what was the broad theme or question that  
9 was asked?

10 MR. LLOYD KUCZEK: We don't have a --  
11 we just undertook that focus group session, and I -- I  
12 sat through a couple of them, but we didn't -- I don't  
13 recall the specific question, per se. But it was  
14 along the lines of, you know, What would it take for  
15 cus -- you to implement a measure in terms of payback?

16 And so there was a question asked along  
17 those regards. And the -- the moderator was trying to  
18 get some sort of sense of whether they would willing -  
19 - be willing to invest if it was a 5 percent return,  
20 10 percent return. But the general just -- just the  
21 message that I got back -- and again, I'd have to see  
22 the report and what the report's going to say -- was  
23 that a lot of the participants at the sessions that I  
24 was at were more concerned about the waste element of  
25 it, of just disposing of something that was still

1 useful yet.

2 And certainly a payback of -- it was  
3 either five (5)-- I think it was 10 percent, it just  
4 wasn't enough. Like, you know, 10 percent investment  
5 might be okay when you're investing in a financial  
6 instrument, but it didn't seem to work with them in  
7 terms of the Power Smart initiatives. And -- and they  
8 drew on the fact that they're disposing of something  
9 that was still useful.

10 MR. COREY SHEFMAN: Sure.

11 MR. LLOYD KUCZEK: And just to add to  
12 that, we were doing focus group sessions in Winnipeg,  
13 Brandon, and as well as the North, so we recognize  
14 that there's differences throughout Manitoba.

15 MR. COREY SHEFMAN: Perfect. And that  
16 was going to be -- my next question is: Where were  
17 they held? And so thank you for -- for anticipating  
18 that.

19 In addition to where they were held,  
20 I'm also interested in some of the demographics of the  
21 focus groups. Can you tell me whether there was any  
22 First Nation representation in the focus groups?

23 MS. LOIS MORRISON: There was  
24 Aboriginal representation in the focus groups.

25 MR. COREY SHEFMAN: Can you tell me

1 whether there was any First Nations and whether there  
2 was any Metis representation?

3 MS. LOIS MORRISON: They didn't  
4 delineate it specifically based on status versus non-  
5 status Aboriginals. We classified them simply  
6 Aboriginal background. Either they self-identified as  
7 Aboriginal or they did not self-identify as  
8 Aboriginal.

9 MR. COREY SHEFMAN: Okay. Sorry, can  
10 I have a moment? Thank you.

11

12 (BRIEF PAUSE)

13

14 MR. COREY SHEFMAN: All right. My  
15 last question then would be the -- with respect to the  
16 focus groups that were held, and I guess I'm  
17 particularly interested in the one that was held in  
18 the North, or ones I suppose if there were more than  
19 one (1), how is that data -- where is that data being  
20 fed into? How is that data being used to help Hydro  
21 improve its outcomes when we're talking about adoption  
22 of DSM programming?

23 MS. LOIS MORRISON: The purpose of the  
24 focus groups was to help us better brand Power Smart.  
25 We had initiated them to get a better understanding as



1 to what messaging would resonate with people and  
2 actually get them to adopt or -- or think that, This  
3 is something that I should be interested in.

4                   It's -- it's -- what messaging would  
5 drive them to -- to take that call to action to  
6 contact Manitoba Hydro, find out more about what they  
7 need to do to make their homes more energy efficient.

8                   And so the purpose of the -- the focus  
9 group testing was to test a number of different  
10 messages around Power Smart and about ener -- around  
11 energy efficiency, and which ones resonated. So, as  
12 Mr. Kuczek mentioned, there was a return on investment  
13 message. Is that what you need to hear in order to  
14 get you to -- to motivate you to -- to take action?

15                   So all of the messaging -- so -- so the  
16 purpose of the focus groups was to test messaging, and  
17 that's why we wanted to test in different  
18 jurisdictions, because we recognize that people in  
19 Winnipeg are different from people in rural southern  
20 Manitoba, and from northern Manitoba. And, so that  
21 information that was test -- collected through those  
22 focus groups is going to feedback to help us in -- in  
23 determining how do we structure our next advertising  
24 campaign. What messages are really going to resonate  
25 with our customers best?

1 MR. CORY SHEFMAN: I'm wondering if we  
2 could have Hydro take an undertaking on the question  
3 of the makeup of those focus groups? Who was  
4 participating? How those people were selected? And -  
5 - and unfortunately it doesn't appear that you've  
6 broken down the demographics quite as clearly as we'd  
7 like, but as far -- as broken down as we can get them?

8

9 (BRIEF PAUSE)

10

11 MS. LOIS MORRISON: Okay. The -- we  
12 don't have the report yet, as Mr. Kuczek mentioned.  
13 What we -- and -- and working within what the ad  
14 agency and the -- the research firm is allowed to  
15 provide us with, in terms of the breakdown of the  
16 groups, but we -- yes, we can provide -- once we have  
17 the information, we can provide a identification of,  
18 say, the demographic of the individuals that were at -  
19 - were selected for the focus group.

20 MR. CORY SHEFMAN: And as well as how  
21 they were selected?

22 MS. LOIS MORRISON: Yes, we can  
23 provide the -- a brief description of the methodology  
24 for which they were selected by.

25 MR. CORY SHEFMAN: Thank you.

1 MS. LOIS MORRISON: The undertaking is  
2 that Manitoba Hydro will provide a brief description  
3 of the methodology used to select or to canvass can --  
4 candidates to participate in a -- in a focus group  
5 test -- in our focus group testing, and we will also  
6 provide a summary of the demographics.

7  
8 --- UNDERTAKING NO. 21: Manitoba Hydro to provide  
9 a brief description of the  
10 methodology used to select  
11 or to canvass candidates  
12 to participate in focus  
13 group testing, and provide  
14 a summary of the  
15 demographics

16  
17 MR. CORY SHEFMAN: And with that, Mr.  
18 Chair, I am finished with our questions.

19 THE CHAIRPERSON: Thank you, Mr.  
20 Shefman. I now turn over the microphone to Me.  
21 Monnin.

22 MR. SVEN HOMBACH: Mr. Chairman, I  
23 wonder if Ms. -- if Mr. Monnin would prefer to sit in  
24 the front, if we should take a one (1) minute break,  
25 to allow parties to switch so that his face can be

1 seen?

2 MR. CHRISTIAN MONNIN: I will accept  
3 the complimentary Air Canada bump up to first class.

4

5 (BRIEF PAUSE)

6

7 CROSS-EXAMINATION BY MR. CHRISTIAN MONNIN:

8 MR. CHRISTIAN MONNIN: Merci, Mr.

9 President. And just to be clear, my earlier comment  
10 wasn't a critique of the -- what I've been referring  
11 to as the Statler and -- and Waldorf section of the --  
12 of the PUB. A bit more context on that. Those are  
13 the two curmudgeons and Muppets who were back on the -  
14 - the balcony. It's quite comfortable back there. I  
15 look forward to going back.

16 The questions that I'll be asking today  
17 are not levelled at anyone in particular, and so, to  
18 the extent that anyone on the Board or in this panel,  
19 rather, is in a position to answer, please do so. And  
20 as most of My Learned Friends have said, if the  
21 questions that I ask to elicit CSI, please advise, and  
22 we'll -- we'll deal with that accordingly.

23 For the purposes of this cross-  
24 examination, which will be a short one, I assure you,  
25 we've prepared a book of documents with nine (9) tabs

1 in -- in that book of documents. There's an index in  
2 the book of documents just to -- to -- if -- if you  
3 can pull that up, please, to just indicate that there  
4 is method to our madness.

5                   You'll see, for example, Tab 1, page 3,  
6 is page 3 of the book of documents, and then MH-85 is  
7 the exhibit; it refers to Manitoba Hydro rebuttal  
8 evidence page 14. In reality, that's -- that's she --  
9 7 of the rebuttal, but because MH-85 has some  
10 introductory documents, it's the 14th page of that  
11 exhibit. So when I'm referring to page 7 of -- which  
12 we referred to earlier with Madam Boyd, it comes up as  
13 14 in the exhibit. And that's just to explain how --  
14 how this index works.

15                   If we can turn to Tab number 2, page 5,  
16 of our book of documents. And I just want to ask you  
17 a few questions on -- on load forecast at this point  
18 in time, and specifically line 10 and 11 of that page.  
19 The purpose of load forecast is to present the best  
20 estimate of long-term future energy requirements for  
21 Manitoba. And -- and I just want to ask some  
22 questions of this panel with respect to -- to that.

23                   And do I understand correctly that the  
24 long-term -- or the load forecast for NFAT is not the  
25 same as one that would be prepared for a GRA?

1 MS. LOIS MORRISON: The load forecast  
2 used in the NFAT is the same load forecast that  
3 Manitoba Hydro uses for all forecasting purposes.

4 MR. CHRISTIAN MONNIN: And as my wife  
5 would say, I never miss an opportunity to demonstrate  
6 how ill-informed I am. Are -- so are there no  
7 distinctions between the methodology used for the NFAT  
8 load forecast and GRA load forecast?

9 Do I have that correct?

10 MS. LOIS MORRISON: No, I don't  
11 believe there are any differences --

12 MR. CHRISTIAN MONNIN: Okay.

13 MS. LOIS MORRISON: -- subject to  
14 check, but...

15 MR. CHRISTIAN MONNIN: In -- in that  
16 regard, still along the same lines, but a broader  
17 question and broader scope, would -- would you agree  
18 with the statement that a longer-term view, for  
19 example, here the NFAT, which I understand is seventy-  
20 eight (78) years, implies a greater uncertainty and,  
21 therefore, must concern long-term risks that ought --  
22 that need not to be considered in short-term?

23 Would you agree with the statement --  
24 that statement?

25 MR. ED WOJCZYNSKI: Sorry, could you

1 repeat the question.

2 MR. CHRISTIAN MONNIN: Absolutely. A  
3 longer-term view, for example, here we're using  
4 obviously the NFAT, implies a greater uncertainty and,  
5 therefore, must concern long-term risks that need not  
6 be considered in the short term?

7 MR. ED WOJCZYNSKI: Yeah.

8 MR. CHRISTIAN MONNIN: Okay. And then  
9 going back to it, a view from another angle, for  
10 example, in the GRA context, a load forecast is used  
11 to set rates until the next GRA.

12 Do I understand that correctly?

13 MR. LLOYD KUCZEK: We don't have a --  
14 we -- we don't undertake a GRA every year, but we do  
15 produce a load forecast every year for planning  
16 purposes. So if there is a GRA, we will use the most  
17 current load forecast, which is produced every year,  
18 so. And it was the same thing with the NFAT process.  
19 Whatever the most current forecast was at the time,  
20 that's what's used.

21

22 (BRIEF PAUSE)

23

24 MR. COREY SHEFMAN: And -- and in --  
25 in the context of a -- a longer term -- term forecast

1 like the NFAT, am I correct to -- to -- when I state  
2 that there would be a greater risk of a fundamental  
3 shift in electricity use, so I'll refer to it as a  
4 structural change, for example, due to grid parity  
5 over the seventy-eight (78) year time frame than there  
6 would be in a GRA context?

7 MR. ED WOJCZYNSKI: I'm not going to -  
8 - my part of the answer is going to deal with going  
9 from thirty-five (35) years or the twenty (20) years  
10 at the end of the forecast to seventy-eight (78)  
11 years. My colleagues can comment on the earlier part  
12 of that. That is, the first twenty (20) or thirty-  
13 five (35) years.

14 As we were discussing somewhat earlier  
15 in these proceedings, the analysis that Manitoba Hydro  
16 does to go out to -- from the thirty (30) -- the end  
17 of the thirty-five (35) years to seventy-eight (78)  
18 years is not an economic analysis that -- that is  
19 reliant on having a precise forecast. It is an  
20 estimate of what the residual value is.

21 And as we discussed the other day, we  
22 freeze the -- the load amount -- the load forecast at  
23 the -- the year -- at the end of the thirty-five (35)  
24 year period and fix various assumptions so we get an  
25 estimate of what the value of the residual asset is.



1 And whether the load growth after that is somewhat  
2 higher or somewhat lower, is -- is not -- is not mat -  
3 - particularly material to that estimate.

4 It's simply a way to deal with the fact  
5 that we have an asset life of sixty-seven (67) years,  
6 which is longer than the study period which we're  
7 using the -- the detailed load forecast for. So it --  
8 - so going beyond thirty-five (35) or twenty (20)  
9 years, I think I dealt with that. For your question  
10 for the earlier years, I think I'd have to look --  
11 look to our load forecast people.

12 MR. CHRISTIAN MONNIN: Thank you.

13 MR. DANIEL FRIESEN: The question of  
14 disruptive technologies, as they've been referred to  
15 in some evidence, going forward into the future is  
16 something that we see as being something we would  
17 capture in the technical potential of our studies,  
18 both current and future, that may -- that may occur as  
19 we move forward and move towards those dates when some  
20 of those technologies become economic.

21 That same uncertainty you specify with  
22 respect to glo -- load growth, I think also exists  
23 with respect to those technologies. There's a  
24 considerable degree of uncertainty as to when that  
25 grid parity moment will happen. And as we discussed,

1 grid parity is just an indicator of the start of a  
2 transition. It's not as though we would expect to see  
3 a step change occur at the date of grid -- grid  
4 parity.

5                   And all of these conspire together to  
6 allow Manitoba Hydro, and our process which forecasts  
7 on an annual basis, to adapt, to adjust. And as we've  
8 spoken in various parts in this proceeding, we're not  
9 inflexible to -- to adapting to the future. We -- we  
10 adapt our DSM programs, we have -- adapt our  
11 development plans as information becomes clearer. So  
12 there are some pathways to -- to adapt built into our  
13 structure and our process.

14                   MR. CHRISTIAN MONNIN: Okay. Can you  
15 please go to Tab 3, page 7 of our book of documents,  
16 then? And -- and if I just look at -- for example, I  
17 -- I believe we've included four (4) graphs in our  
18 book of documents. And based on what -- what Mr.  
19 Wojczynski just said, what I think I understand is you  
20 -- you cap it around the thirty (30) year period.

21                   And -- and are these just really linear  
22 extrapolations of what occurred in the past and that's  
23 really the best that we can do, and that's why you  
24 just see a gradual line going through the years?

25                   Do I have that correctly?

1 MS. LOIS MORRISON: Are you referring  
2 to our forecast methodology for the first twenty (20)  
3 years, or are you referring to the thirty (30) -- to  
4 the period after the twenty (20) years?

5 MR. CHRISTIAN MONNIN: Yes, after the  
6 twenty (20) years. And -- and so -- and if you go to  
7 the next frame as well it's just -- I'm not getting  
8 down into the substance of these particulars frames.  
9 It's just they all, from my perspective, seem to show  
10 the same linear extrapolation on a continual basis.

11 And -- and can -- the takeaway that I  
12 get from these graphs is simply that Hydro was saying  
13 that nothing is really going to change on a going-  
14 forward basis as we go through the evolution of this -  
15 - the -- the seventy-eight (78) years of the -- the  
16 NFAT.

17 MS. LOIS MORRISON: I -- I think that  
18 the forecast that you're looking at here is not merely  
19 an extrapolation of the past historical energy  
20 consumption. What the forecast represents,, as we  
21 mentioned before, is the projection of the population  
22 growth, along with the average use of energy for --  
23 per customer.

24 Now, if the population growth is higher  
25 or lower, the slope of that line changes. It may

1 mimic what we've seen in the past, or it may not mimic  
2 what we've seen in the past. It may be higher or  
3 lower. Based upon that, for -- for the majority of  
4 our -- of our population forecasts, as -- as Mr.  
5 Kuczek mentioned in his presentation, we forecast for  
6 the residential sector, the commercial sector, and the  
7 top consumers.

8                   Now, what you see here -- depicted here  
9 is the twenty (20) year horizon going forward. And  
10 that's influenced, as we mentioned, before by a  
11 population forecast which is growing at an average  
12 rate of 1.1 percent in the 2013 forecast, plus we are  
13 seeing an average -- an increase in the average use  
14 per customer, and that's resulting in the 1.5 percent.  
15 This is also prior to adjustments for our DSM  
16 initiatives.

17                   As Mr. Kuczek mentioned earlier, under  
18 the 2013 forecast, that was -- would reduce it to 1.4  
19 percent. As we spoke to, I believe, yesterday in  
20 terms of the Level 1, 2, and 3, that growth can  
21 change. We are awaiting -- we will be publishing the  
22 updated Power Smart Plan and releasing it in -- at the  
23 end of March, as Mr. Kuczek also mentioned.

24                   So there are a number of things that --  
25 to simply state that we are anticipating that to

1 continue at that rate just because it happened in the  
2 past is an inaccurate statement.

3 MR. CHRISTIAN MONNIN: Well, in that -  
4 - that regard, is -- is -- in its forecasting, is  
5 Hydro taken into account the possibility of low  
6 probability, high impact events?

7 And if so, in what nature are they  
8 doing that?

9

10 (BRIEF PAUSE)

11

12 MS. LOIS MORRISON: We do include in  
13 the forecast examples of what the impact of unexpected  
14 high growth or high -- or a load loss, so an  
15 unexpected increase in, say, electric vehicles, or an  
16 unexpected loss of a -- of a large consumer are  
17 reflected as possible events and what those -- what  
18 those events might look like if they were to occur on  
19 our system.

20 We also prepared for -- for analysis we  
21 prepare a projection of high and low load growth for -  
22 - for the analysis of risk for planning. But as -- as  
23 we've outlined on page 50 of our 2013 load forecast,  
24 we do recognize that there are occurrences that can  
25 happen in the marketplace that can have substantial

1 change on our forecasts.

2                   We don't arbi -- we don't arbitrarily  
3 assign a probability of those types of occurrences  
4 coming because we don't know. We don't know if  
5 there's going to be say a 70 -- say -- say we were to  
6 go to the point where 70 percent of our -- our  
7 automobiles and -- and transportation vehicles were to  
8 be electric car -- plug-in electric vehicles. We --  
9 we look at that as to say, Well, what kind of impact  
10 would we see on our system if that were to occur? But  
11 we're not going to arbitrarily put that into our  
12 forecast and say, What would ha -- you know, are we  
13 going to plan for that now? No. But are we -- we  
14 recognize it is something that may happen.

15                   Is that likely to happen? We -- we  
16 can't assign a probability to that event, and so we  
17 don't attempt to.

18                   MR. ED WOJCZYNSKI: I -- I might add  
19 to that, that when you're talking about low  
20 probability, high impact events, do we plan for that,  
21 there's one (1) aspect there in the load forecast  
22 itself. Obviously, it's true in other elements of our  
23 planning, as well. But -- oh, sorry.

24                   The -- I think some -- maybe some of  
25 the events that you're thinking of are what some

1 people term Black Swan events, where they're the  
2 unexpected things that you can't plan for because you  
3 don't know they're going to happen.

4                   And -- and in -- in that, you want --  
5 well, a terms that's also used, anti-fragility, so  
6 that you can respond to uncertain future events like  
7 the ones you're talking about. And our argument is  
8 that one (1) of the best ways for electrical systems  
9 to do that is to be strongly interconnected across all  
10 of North America so that we -- we all are much more  
11 able to respond to changes and -- that we're not  
12 expecting.

13                   MR. CHRISTIAN MONNIN: I think in --

14                   MR. ED WOJCZYNSKI: So that's the  
15 other part, maybe, to your question.

16                   MR. CHRISTIAN MONNIN: Thank you. I  
17 think in the spirit of these -- these proceedings I'll  
18 refer to them as the blackout events. And -- and your  
19 considerations, I -- I think I know the answer, but I  
20 just want to throw these out there.

21                   In some of the -- the risk analysis  
22 that Hydro took upon itself when -- going through this  
23 process, has -- has there been -- have the following  
24 been considered: a risk that an unexpected demand  
25 growth could result in a blackout.

1 Has that been considered in -- in your  
2 deliberations?

3 MR. ED WOJCZYNSKI: Yes, and that's  
4 why we talk about having increased energy security and  
5 increased capacity liability benefits from the  
6 Preferred Plan compared to some of the other plans,  
7 and that -- but that will be dealt with in more detail  
8 next week.

9 MR. CHRISTIAN MONNIN: Okay. And I  
10 suspect maybe the following will be dealt with, as  
11 well. But is there consideration of the risk that the  
12 projected escalation of Hydro rates will -- will  
13 change consumer expectations in the coming years and  
14 the perception of electricity is cheap in Manitoba  
15 will change?

16 Has that been considered?

17 MR. ED WOJCZYNSKI: Yeah, the load  
18 forecasting people, I'm sure, will want to answer as  
19 well, but that's why, right in the submission, we --  
20 there's a whole number of reasons why we might have  
21 low load growth as opposed to high load growth.

22 And -- and so that's why we did a  
23 stress test using low load growth and -- in our -- in  
24 our work as well, as high levels of DSM. But I'm sure  
25 the load forecasting people might want to add to that.



1 MS. LOIS MORRISON: Actually, Mi --  
2 Mr. Wojczynski, you -- you handled that very well. I  
3 was going to mention that, although we -- we did note  
4 that we will be looking at the issue of price  
5 elasticity in more detail as we go forward, there is -  
6 - there is the -- as we mentioned, we do look at a  
7 high/low scenario, and there is the op -- there is the  
8 potential that that could be encapsulated within the  
9 load -- the -- the low scenario.

10 MR. CHRISTIAN MONNIN: And on the  
11 issue of low domestic demand, do I understand  
12 correctly that the primary protection against risk  
13 related to low domestic demand is the fact that power  
14 can be exported instead?

15 Does that statement make sense?

16 MR. ED WOJCZYNSKI: That's one of the  
17 ways. The other is in our plan we have -- as Mr.  
18 Thomson discussed the first day here, that whereas the  
19 plan has Keeyask '19 and Conawapa '26, if we see load  
20 growth dipping or -- or something else happening that  
21 ca -- like higher DSM, then we always have the option  
22 of pushing back Conawapa's in-service date in the next  
23 four (4) years.

24 And even once we've started on  
25 Conawapa, there's a number of years before we have to

1 commit to the general civil contract, so it's longer.  
2 It's probably six (6) years in that order that we have  
3 to -- to start seeing a surprising drop in load  
4 growth. So that would be a very effective way to  
5 respond to it as well.

6 MR. CHRISTIAN MONNIN: Okay. And --  
7 and I think that answer that you've just provided will  
8 apply to this next question that I'm -- I'm going to  
9 put forward is -- is that, in that regard, the real  
10 risk related to the load forecast is the risk that the  
11 export price will be below the price needed to recover  
12 the full cost of Keeyask and Conawapa.

13 MR. ED WOJCZYNSKI: As I just  
14 indicated, in the case of Conawapa, what we would do  
15 is defer it. In the case of Keeyask, that -- if all -  
16 - if we started building Keeyask and all of a sudden  
17 load growth stopped and we had no more load growth,  
18 then -- then Keeyask would be subject to the export --  
19 the economics of Keeyask in that case would be subject  
20 purely what we could obtain on the export market.

21 But as Mr. Thomson indicated, with the  
22 contracts on the opportunity market, we're always  
23 going to be exposed to uncertainty in that price. We  
24 have long-term firm contracts where the price is  
25 already fixed, and that will be just the -- the

1 quantum of that will be discussed in the CSI portion.

2 But those contracts have prices which are quite

3 favourable.

4 I -- I should add as well, as -- as Mr.

5 Thomson indicated, we -- the Keeyask is -- is the

6 majority of the dependable output for Keeyask is being

7 sold under contract -- well, not forever, but

8 certainly for the front end -- with the three (3)

9 sales we have -- that we have signed contracts for.

10 And that's the MP 250, the WPS 308, and the NSP 125.

11 MR. CHRISTIAN MONNIN: I just have a

12 few questions with respect to top consumers. And if

13 we could go to page 17 of our book of documents.

14 Looking firstly at line 3 through 5, which reads as

15 follows:

16 "Give the risks associated with the

17 shortfall of a suitable energy

18 supply, it is in the best interests

19 of consumers -- [sorry] customers to

20 provide Manitoba Hydro with accurate

21 information regarding their future

22 energy needs."

23 Keeping that in mind, I understand that

24 the top consumer would run the risk of Hydro being

25 unable to supply the power that they require if the

1 top consumers were to underestimate future demand.

2 Is that correct?

3 MR. DALE FRIESEN: Sorry. Could you  
4 just repeat your question, please?

5 MR. CHRISTIAN MONNIN: Absolutely. I  
6 understand that the top consumers would run the risk  
7 of Hydro being unable to supply the power they require  
8 if they, the top consumers, were to underestimate the  
9 future demand.

10 Is that correct?

11 MR. DALE FRIESEN: That's correct.

12 And --

13 MR. CHRISTIAN MONNIN: From --

14 MR. DALE FRIESEN: Sorry. And to add  
15 to that, that extends beyond generation. That extends  
16 to transmission and distribution capability as well.

17 MR. CHRISTIAN MONNIN: So keeping that  
18 in mind, there -- there's a strong incentive on top  
19 consumers to avoid underestimating.

20 MR. DALE FRIESEN: Of course.

21 MR. CHRISTIAN MONNIN: Now, keeping  
22 that in mind, if -- if a top consumer is uncertain of  
23 its future demand, wouldn't it be prudent, from a top  
24 consumers' perspective, to provide the highest  
25 potential electricity demand?

1 MR. DALE FRIESEN: It would appear  
2 obvious that that would be a risk that we would face  
3 when customers provide -- provide that information to  
4 us. And that is why, when we go forward and we seek  
5 information from customers, we don't focus purely on  
6 demand.

7 We recognize that their capacity  
8 numbers will be such that they can accommodate future  
9 load growth or future expansion plans that they may  
10 have beyond their initial -- their initial projection.

11 We also press them for information  
12 related to their energy consumption and their load  
13 factor and how they foresee that to change over time.  
14 And we have found that, in general, most of our top  
15 consumers are quite open to discuss that and -- and  
16 share what they see as their future. And when we ask  
17 them to support that, they're generally willing to do  
18 that as well.

19 MR. CHRISTIAN MONNIN: In a scenario  
20 where top consumers have an incentive to overestimate  
21 their -- their demand, would -- would that have any  
22 impact on over-forecasting?

23 MR. DANIEL FRIESEN: Our forecast is  
24 weighted towards energy, in terms of the information  
25 that we provide from the top consumers. The capacity

1 requirement probably intra -- impacts the transmission  
2 and distribution facilities that we provide to a -- to  
3 a greater degree. And since our top consumers fund,  
4 directly, a large portion of the capacity improvements  
5 that are required to serve them, it's really not in  
6 their best interest to wildly exaggerate the capacity  
7 numbers that they give us, because they'll have to pay  
8 for that infrastructure directly.

9 MR. CHRISTIAN MONNIN: I -- I don't  
10 think it's in anyone interest to wildly exaggerate,  
11 but over -- you would agree with me that there's a  
12 distinction between wildly exaggerating and  
13 overestimating?

14 MR. DANIEL FRIESEN: I agree that -- I  
15 agree with your premise, yes.

16 MR. CHRISTIAN MONNIN: Okay. You'll  
17 be pleased to note that I'm -- I'm almost done. If  
18 you could just turn to page 22 of our book of  
19 documents, please. And just a -- a quick question --  
20 a few questions with respect to Section 8.2.2.2,  
21 starting at page 22 -- sorry, line 22. Elenchus, in  
22 their report titled, "NFAT Review":

23 "Review of Manitoba Hydro's Demand-  
24 side Management Plan recommends that  
25 ecological footprint analysis is

1 required to assess all alternatives,  
2 including demand-side management  
3 options."

4 And going further down, line 28 and 29,  
5 it's -- the closed notes version of it is that:

6 "Opting for a -- an ecological  
7 footprint analysis is misguided."

8 And I just have a few questions with  
9 respect to that.

10 MS. LOIS MORRISON: I -- I -- this  
11 section is actually better handled by a subsequent  
12 panel --

13 MR. CHRISTIAN MONNIN: Okay.

14 MS. LOIS MORRISON: -- related to the  
15 GHG components of our filing.

16 MR. CHRISTIAN MONNIN: Very well.

17 MS. LOIS MORRISON: So --

18 MR. CHRISTIAN MONNIN: Well, you've  
19 managed to sort -- short-circuit the remainder of my  
20 cross-examination.

21 MS. LOIS MORRISON: Not intentionally.

22 MR. CHRISTIAN MONNIN: That's fine.

23 That's fine. A la prochaine fois. Thank you, M. --  
24 M. President.

25 MR. SVEN HOMBACH: Thank you, Mr.

1 Monnin. The Board counsel book of document, would you  
2 like that introduced as an exhibit?

3 MR. CHRISTIAN MONNIN: Yes, please.  
4 Number 1, I believe.

5 MR. SVEN HOMBACH: It's, I believe,  
6 Hillco Exhibit Number 7, Mr. Simonsen?

7 MR. KURT SIMONSEN: Correct.

8

9 --- EXHIBIT NO. HILLCO-7: Book of documents

10

11 DISCUSSION:

12 MR. SVEN HOMBACH: Now, Mr. Chairman,  
13 that concludes the public examination of this  
14 particular panel. Next on the agenda is the closed in  
15 camera session with respect to commercially sensitive  
16 information. I would suggest we take a five (5)  
17 minute break to allow the parties to set up. At this  
18 point I would ask anybody that has not signed a non-  
19 disclosure agreement or undertaking to excuse  
20 themselves while they -- from the hearing room. That  
21 would include members of the public, and I believe  
22 that includes, at this point, all Intervenor counsel  
23 as well.

24 MS. MARLA BOYD: Just before we do  
25 that, Mr. Chair -- sorry. Oh, Marla Boyd. I do have



1 one (1) more undertaking that could be filed. It is  
2 Manitoba Hydro's response to Undertaking number 16.  
3 We can circulate copies. I believe it should be  
4 Exhibit number 94.

5

6 --- EXHIBIT NO. MH-94: Response to Undertaking 16

7

8 MS. MARLA BOYD: I would also ask your  
9 permission that not all of our panel is actually  
10 required for the CSI portion of this hearing. So if I  
11 could ask that you would excuse Ms. Rohmund and Mr.  
12 Page from the panel, we'll carry on from there.

13 THE CHAIRPERSON: That's fine. Thank  
14 you. So we will recess for approximately ten (10)  
15 minutes. I'm sorry? Oh, go ahead. M. Hacault, go  
16 ahead.

17 MR. ANTOINE HACAULT: This may be a  
18 little bit more technical, but there's some ongoing  
19 decisions to be made with respect to CSI undertakings  
20 and what's going to happen. And we're just stating  
21 for the record, and we won't repeat it, but that our  
22 clients are reserving their rights with respect to  
23 those issues. So that we -- our silence isn't  
24 interpreted as agreeing to the process proceeding  
25 without those things being dealt with.

1                   And the second part is, and I've spoken  
2 to Board counsel about this, we don't know, because we  
3 won't be there whether there's some questions that are  
4 truly not CSI questions or some responses that go  
5 beyond CSI information.

6                   And we had asked Board counsel to  
7 consider whether or not it might be appropriate to  
8 also consider putting a redacted transcript, to the  
9 extent that that is feasible or necessary, to ensure  
10 that any questions that go beyond specific CSI would  
11 be made available, as far as the questions and  
12 answers, because I could see us just asking general  
13 questions. You may have to sometimes to go further  
14 afield than specific CSI. So we had made that  
15 request, that that be considered as to whether or not  
16 we could have that part of the transcript that's not  
17 truly CSI disclosed to us.

18                   And finally, we just repeat our  
19 previous encouragement to this Board that as much as  
20 possible, and we've seen some correspondence on that,  
21 that we keep the most information available to the  
22 public and to members of the public, including us. So  
23 that if we could continue to be mindful of that.

24                   I know in the past there was some  
25 pretty innovative ways to deal with things. For

1 example, if we didn't want to put specific numbers, we  
2 -- we put ranges, or we had statements like Mr.  
3 Wojczynski just indicated, you know, the prices  
4 generally are favourable.

5                   So if there's ways to deal with it so  
6 that the public has some kind of general sense, that  
7 would also be appreciated. Thank you.

8                   MR. BYRON WILLIAMS: Mr. Chair, I'll  
9 be less technical than My Friend Mr. Hacault. Our  
10 client has been concerned that their ability to make  
11 meaningful representations is materially impaired by  
12 the CSI process in place, particularly with the  
13 undertaking as currently framed.

14                   And so we'll just be registering our  
15 objection to this process. And rather than repeating  
16 my objection every time the panel goes into CSI,  
17 please take this as an ongoing objection to the  
18 process on the basis of our concern that it is  
19 impairing our ability to make meaningful  
20 representations and that the undertaking as currently  
21 framed effectively prevents our client from  
22 participating. Thank you.

23                   THE CHAIRPERSON: Okay. Mr.  
24 Shefman...?

25                   MR. CORY SHEFMAN: Thank you. For the

1 record, my client has the same concerns as just  
2 described by counsel for the CAC, and just for the  
3 record we wanted that to be said.

4 MR. GEORGE ORLE: Mr. Chairman, also I  
5 -- on behalf of my client I -- I repeat the same  
6 concerns raised but I -- I have an additional one.  
7 And that is based upon the opinion that we have  
8 received from the Law Society of Manitoba, counsel is  
9 precluded as a matter of ethics from signing the  
10 confidentiality agreements that have been prepared on  
11 behalf of the Board.

12 So it's not a matter of just indicating  
13 that we can't sign. We will be in breach of our  
14 obligations to the Law Society. And the -- the manner  
15 in which it's been put forward prevents us from  
16 actually even taking any part in -- in signing or  
17 signing anything close to what's been prepared by the  
18 Board.

19 THE CHAIRPERSON: Thank you for your  
20 comments and objections. They've been noted. Some of  
21 the issues that have been raised will be addressed in  
22 due course by the panel. Thank you very much. So  
23 we're recessed --

24 MS. PATTI RAMAGE: Mr. Chair, before  
25 we --

1 THE CHAIRPERSON: I'm sorry.

2 MS. PATTI RAMAGE: -- recess -- and I  
3 don't intend to respond to the various comments that  
4 were made with respect to the -- the objections to  
5 CSI. There are motions on the record, and you have  
6 Manitoba Hydro's position.

7 I would clarify that I don't believe  
8 there's a Law Society opinion that -- there was some  
9 preim -- some preliminary comments. But that wasn't  
10 actually the reason I wanted to get on the mic.

11 I ran down here because the people  
12 upstairs said they've locked the door. So I'm a  
13 little out of breath. I was trying to get in.  
14 Because there is another CSI matter I wanted to deal  
15 with. I thought we'd be dealing with it once the room  
16 had cleared, but it's not necessary to clear -- to  
17 clear the room for this, as it turns out.

18 As -- as the panel will know, last  
19 Friday they issued a letter to Manitoba Hydro  
20 requesting that Manitoba Hydro do two (2) things. One  
21 (1) was to justify the CSI, the -- the -- I -- I  
22 believe it was the Board advisors went through the  
23 redactions Manitoba Hydro had made and put in their  
24 comments, whether they agreed or disagreed.

25 Manitoba wa -- Hydro was to file by

1 tomorrow its response to those redactions. We ran  
2 into a roadblock this week. Our people, as it turned  
3 out, were chasing their tails a bit because they  
4 couldn't figure out the redactions. And it turned out  
5 there was an inadvertent error and the redactions that  
6 had been proposed in some case were not ones that had  
7 been made by Manitoba Hydro and they were working --  
8 the PUB staff, Mr. Hombach can clarify, were -- had  
9 provided redactio -- had comments on redactions that  
10 Manitoba Hydro hadn't asked for.

11                   And it was -- it took our people a  
12 little bit of time to figure out what was going on.  
13 And what it's done is put us behind. And today, PUB  
14 counsel provided us with their comments on the actual  
15 redacted reports according to the redactions that were  
16 in fact made by Manitoba Hydro.

17                   I believe -- and I don't want to speak  
18 for others because I don't know for sure where the  
19 reports... I believe some the IECs had -- had  
20 proposed redactions, and that's what the comments were  
21 made on instead of the actual report. So that's now  
22 been clarified. Mr. Hombach gave us that today, but  
23 it means we will not be able to file our comments  
24 tomorrow. Our goal at this point is to file them on  
25 Wednesday to -- to catch up.

1                   The other thing that the Board had  
2 asked was that we file redacted IRs on any CSI IRs.  
3 That is a real issue for our people, because the same  
4 people who have to deal with the redactions are the  
5 people who are in front of you now and next week.

6                   And so what we've asked our staff to  
7 do, and we want to keep the Board apprised because  
8 we're making our best efforts in doing everything we  
9 can, is to start working on it, but they can't be in  
10 two (2) places at once. And so they're going to  
11 start. And we will file as we -- as we get those  
12 redacted IRs with the goal to be completed by the end  
13 of March, but we simply -- they can't get them done by  
14 the end of the next. And particularly, this hiccup  
15 has really thrown a wrench into things, in terms of  
16 getting those redactions done.

17                   So with all of that, I have to tell you  
18 that the wind just got taken right out of me when I  
19 heard that we're going to be asked to redact  
20 transcripts. I just don't know where the time's going  
21 to come. And that's -- people can't testify and  
22 redact at the same time, and we just don't have the --  
23 the ability to do that.

24                   And I look at my notes and there's one  
25 (1) other comment I have. I said Wednesday for the

1 redactions. There are two (2) reports that deal with  
2 transmission. We're going to need longer to deal with  
3 those transmission reports. That's the power  
4 engineers and the section of LCA. The redactions  
5 there are different from what I think PUB advisors  
6 thought they were. They were looking at them from a  
7 financial point of view.

8                   My understanding is the redactions  
9 there deal with something called, what we would look  
10 at as our criteria, critical infrastructure prote --  
11 protection under NERC standards and critical energy  
12 infrastructure information under US Federal Power Act.

13                   And those are the type of things that  
14 we'd be looking for in a transmission report. And our  
15 transmission people are going to be on the stand on  
16 Monday. So we're going to need more time for them to  
17 go through that because that's not something that our  
18 finance and economics people can help with. It's a  
19 very specialized area where they're looking for -- and  
20 that goes to the physical security of the system.

21                   And that's not what this group deals  
22 with, but that's protecting our system from -- from  
23 acts of terrorism, that sort of thing. And they take  
24 -- they look at -- at the information to see if it  
25 releases any -- any soft points, that sort of thing.



1 And that's required under other legislation. So it  
2 wouldn't be -- have necessarily been redacted under  
3 the terms of reference, per se, although it certainly  
4 has financial consequences if -- if something like  
5 that happened.

6 So we're relying on someone else to do  
7 that, and we run into the same problem. So I just  
8 wanted to keep the Board apprised of what's going on  
9 with that.

10 MR. SVEN HOMBACH: Mr. Chairman,  
11 perhaps I can suggest that during the break I'll have  
12 a fre -- chat with Ms. Ramage and we can see whether  
13 the timing of the issue can be resolved. And we'll  
14 regroup on ten (10) minutes.

15 THE CHAIRPERSON: Okay. So again, all  
16 those comments have been noted and will be considered  
17 in due course. And I must say that we will try to  
18 make this a priority because we understand that we  
19 need to address these promptly. So that will  
20 certainly be a priority of the panel.

21 Thank you very much. So for those of  
22 you who are leaving us, having a good evening. And we  
23 will recess for ten (10) minutes.

24

25 (PANEL STANDS DOWN)

1 --- Upon adjourning at 3:02 p.m.

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6 Certified Correct,

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12 Cheryl Lavigne, Ms.

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