



“When You Talk - We Listen!”



MANITOBA PUBLIC UTILITIES BOARD

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

Before Board Panel:

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

HELD AT:

Public Utilities Board  
400, 330 Portage Avenue  
Winnipeg, Manitoba  
January 26th, 2018  
Pages 6675 to 6901

1 APPEARANCES

2 Bob Peters ) Board Counsel

3 Dayna Steinfeld )

4

5 Patti Ramage ) Manitoba Hydro

6 Odette Fernandes )

7 Helga Van Iderstine (np) )

8 Doug Bedford (np) )

9 Marla Boyd (np) )

10 Matthew Ghikas (np) )

11

12 Byron Williams ) Consumers Coalition

13 Katrine Dilay )

14

15 William Gange (np) ) GAC

16 Peter Miller )

17 David Cordingley )

18

19 Antoine Hacault ) MIPUG

20

21 George Orle ) MKO

22

23 Senwung Luk ) Assembly of

24 Corey Shefman (np) ) Manitoba Chiefs

25

1 LIST OF APPEARANCES (cont'd)

2

3 Kevin Williams (np) ) Business Council

4 Douglas Finkbeiner (np) ) of Manitoba

5

6 Daryl Ferguson (np) ) City of Winnipeg

7

8 Christian Monnin )General Service

9 )Small, General

10 )Service Medium

11 )Customer Classes

12

13 William Haight (np) )Independent Expert

14 William Gardner (np) )Witnesses

15 Kimberley Gilson (np) )

16

17

18

19

20

21

22

23

24

25

	TABLE OF CONTENTS	
		Page No.
1		
2		
3	List of Exhibits	6679
4	List of Undertakings	6680
5		
6	AMC/MKO PANEL:	
7	PHILIP RAPHALS, Previously Affirmed	
8		
9	Cross-Examination by Mr. David Cordingley	6681
10	Cross-Examination by Ms. Odette Fernandes	6707
11	Cross-Examination by Ms. Dayna Steinfeld	6725
12		
13	GASS/GSM/KAP PANEL:	
14	A.J. GOULDING, Affirmed	
15	JAROME LESLIE, Sworn	
16		
17	Examination-in-Chief by Mr. Christian Monnin	6768
18	Cross-Examination by Dr. Byron Williams	6780
19	Cross-Examination by Mr. Antoine Hacault	6803
20	Cross-Examination by Ms. Patti Ramage	6814
21	Cross-Examination by Mr. Bob Peters	6872
22		
23		
24	Certificate of Transcript	6901
25		

1	LIST OF EXHIBITS		
2	EXHIBIT NO.	DESCRIPTION	PAGE NO.
3	GSS/GSM-9-1	Errata sheet dated November	
4		3rd, 2017 re London Economics	
5		Report.	6767
6	GSS/GSM-9-2	Errata version of the London	
7		Economics Report.	6767
8	GSS/GSM-13	Panel's Presentation.	6767
9	COALITION-50	2014 excerpts from a report of	
10		London Economics empirical	
11		analysis of total factor	
12		productivity trends in the North	
13		American hydroelectric generation	
14		industry	6781
15	MH-166-3:	Manitoba Hydro book of documents	6813
16	MH-128	NFAT terms of reference	6813
17	CC-51	Undertaking Response from	
18		transcript page 4615	68900
19			
20			
21			
22			
23			
24			
25			

1	LIST OF UNDERTAKINGS		
2	NO.	DESCRIPTION	PAGE NO.
3	72	Mr. Goulding to confirm or check whether the value of forty-four dollars and thirty-one cents (\$44.31) included in the calculation should have been twenty-six dollars and fifty-nine cents (\$26.59), and also to confirm what the total value should be	6849
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

1 --- Upon Commencing at 9:02 a.m

2

3 THE CHAIRPERSON: Good morning,  
4 everyone. I don't know if we're going to have more  
5 people coming, it's quite slippery outside but we're  
6 going to start right now.

7 Mr. Cordingley...?

8

9 CROSS-EXAMINATION BY MR. DAVID CORDINGLEY:

10 MR. DAVID CORDINGLEY: Thank you, Mr.  
11 Chair. Mr. Raphals, my name's David Cordingley. I'm  
12 counsel for Green Action Centre, and certainly we  
13 thank you for the -- the -- the presentation you've  
14 given and the comments you've made on Mr. Chernick's  
15 rate design. You'll -- you'll know that that was  
16 evidence that we've -- we sponsored in terms of bring  
17 that rate design forward.

18 I'm -- I'm going to cut right to the  
19 heart of the matter and -- and I -- I -- I want to  
20 question you today on your timing of bringing in the  
21 rate design; that's what I'm most interested in it.  
22 So, perhaps we could bring up your slide of 23,  
23 please, Kristen.

24 Your first bullet point on this slide,  
25 Mr. Raphals, what not to do and not bolded and -- and

1 your first point under that is:

2 "Ask Manitoba Hydro to carry out  
3 further studies and report back in  
4 the next GRA."

5 If I -- if I heard your direct  
6 correctly, you -- you seem to have some familiarity  
7 with the history of rate design in Manitoba in terms  
8 of the issue of rate design being on the table for --  
9 for a extended period of time in Manitoba; is that  
10 correct?

11 MR. PHILLIP RAPHALS: Well, my  
12 knowledge is very limited, but I -- I am aware that  
13 this is a subject that's been discussed from a long  
14 time.

15 MR. DAVID CORDINGLEY: And -- and if I  
16 -- if I'm paraphrasing your evidence correctly, I  
17 believe you said something along the lines of a  
18 direction to -- to do further study and report back is  
19 a recipe for further delay.

20 Am I paraphrasing that?

21 MR. PHILLIP RAPHALS: That -- that  
22 does represent my views, yes.

23 MR. DAVID CORDINGLEY: Yeah. So I  
24 guess -- I guess what -- what -- what I want to ask  
25 you then is -- is -- is your second bullet point down



1 suggests that -- that -- that a rate design should --  
2 the target for a rate design should be implemented in  
3 2019/2020 after Manitoba Hydro has gone out and come  
4 back with a -- with a proposal.

5                   And I guess what I want to try to  
6 reconcile is, is there not a risk that that's going to  
7 lead to the sort of delays that we've seen previously  
8 with this rate design issue; that's one? And then  
9 secondly, how is it given the circumstances of the  
10 energy poor in Manitoba, we can afford to be waiting  
11 til 2019/2020 to -- to implement some sort of  
12 assistance measure?

13                   So -- so are you okay if we parse that  
14 into the two -- the two (2) sections?

15                   MR. PHILLIP RAPHALS:     Sure.

16                   MR. DAVID CORDINGLEY:    Okay.  So -- so  
17 with respect to the -- the first part of that then  
18 suggesting that the -- this way forward is for  
19 Manitoba Hydro to -- to come back in -- in a number of  
20 years with a ready-to-implement rate design, is that  
21 not -- is there not a risk that's going to lead to the  
22 further delays that we've seen on -- on the issue of  
23 rate design?

24                   MR. PHILLIP RAPHALS:    All right, did  
25 you say "in a number of years?"

1 MR. DAVID CORDINGLEY: Well, 2019/  
2 2020 is -- is where your --

3 MR. PHILLIP RAPHALS: Well, 2019/2020  
4 rates I believe start April 1st, 2019 which is a  
5 little more than a year from now. I mean, I am aware  
6 there is -- there's a great deal of work to be done  
7 before there's actually not only a concrete fully  
8 worked out proposal, but also hearing on it and a  
9 decision from the Board.

10 So, I was trying to be ambitious but  
11 also realistic.

12 MR. DAVID CORDINGLEY: Let -- let --  
13 let me then ask you about your comment there that  
14 there's still work to be done.

15 What is it that you -- you see as  
16 needing to be done before -- before this Board would  
17 be in a position to -- to order a new rate design in  
18 terms of what aspects of a new rate design do you see  
19 this working group that you suggest still having to  
20 deal with?

21 MR. PHILLIP RAPHALS: Well, I think I  
22 described this. Let me look a second. Yeah, the next  
23 slide is a good starting place, so slide 24.

24 First of all, the target public.  
25 Exactly how is the target public to be defined and

1 that has two (2) aspects: First, sort of the  
2 intention is -- is the goal to cover everyone that  
3 meets energy poverty with a 6 percent threshold or an  
4 8 percent threshold or a 10 percent threshold?

5                   And the second is, the detailed  
6 question about how exactly are you going to decide if  
7 a given person is or is not in that category? And  
8 what are the systems to be in place to -- to gather  
9 the necessary information and make that decision.

10                   And I -- I doubt that there are very  
11 easy answers to any of those questions and all have to  
12 be sort of thought through and debated and people have  
13 different views and at the end of the day, I -- I  
14 envision a proposal that says, the intent of this  
15 proposal is to provide bill assistance to people that  
16 are defined in the following way.

17                   And the administrative mechanisms that  
18 we have determined that will allow us to circumscribe  
19 that -- that target public as closely as possible are  
20 the following, and for instance, they may look  
21 something like what we saw in the BC regulation  
22 yesterday, which has a checklist that says, if you  
23 have one or the other of the following list of -- of  
24 programs that you already receive, we would -- that  
25 would be a -- a good measure that you fall into this

1 target, but -- but maybe not. I don't know if there  
2 are indicators like that that matchup closely enough  
3 to the desired target.

4 MR. DAVID CORDINGLEY: Is -- I'll --  
5 I'll -- I don't mean to interrupt you. Thank you --  
6 thank you for that, sir.

7 If I hear you then do you -- do you  
8 dispute that there's already sufficient options for  
9 rate designs on the table? I know you've looked at  
10 the repo -- the working group. I know you've looked  
11 at Mr. Chernick's rate design. I know you've made  
12 some proposals as to the target public and eligibility  
13 criteria in your presentation.

14 Are -- are you taking issue with the  
15 fact that there's -- there's insufficient options that  
16 have been explored on the table? Are you taking issue  
17 with the fact that time needs to be made to make a  
18 decision as to which way to choose, which path to  
19 choose?

20 MR. PHILLIP RAPHALS: Well, I think  
21 your question was about rate design and I'm not even  
22 talking yet about rate design, but about the  
23 administrative issues of who is eligible and who isn't  
24 for it. And I don't think -- maybe I've missed it,  
25 but I haven't seen a very specific, here's how one

1 could do that. Here's how who we will know who is  
2 who. May be that exists. Maybe it's easy. Maybe  
3 it's not. I'm unfortunately not in a position --

4 MR. DAVID CORDINGLEY: Are you -- you  
5 referring then to administrative aspects of a rate  
6 design; is that where you're -- you're seeing further  
7 --

8 MR. PHILLIP RAPHALS: I'm talking  
9 about the administrative aspects of determining  
10 eligibility for whatever rate is designed, alternative  
11 or affordability rate is ultimately determined.

12 MR. DAVID CORDINGLEY: Right. And so  
13 you -- you have, yourself, considered several  
14 thresholds for eligibility as I see it in your report.  
15 You -- you looked at LIC0125, and you've applied the 6  
16 and 10 percent thresholds.

17 MR. PHILLIP RAPHALS: Actually, I've --  
18 - I really haven't -- I've simply relied on the  
19 information from PRA which, as I understand it, is  
20 based always on those two (2) thresholds, 6 and 10  
21 percent and especially given the correction in the --  
22 that was made in the undertaking, LIC0125 is really  
23 not a criterion. It's an input into determining  
24 energy -- the energy poverty level. I don't think  
25 that they have actually told us exactly how they

1 define or what the input elements are to determine  
2 energy poverty for a given household. It's -- if I  
3 recall correctly, the description is fairly  
4 qualitative. But, they no doubt have a risk specific  
5 calculation in mind.

6 MR. DAVID CORDINGLEY: You -- so  
7 you've relied on the LICO 6 and 10 percent, based on  
8 the energy working group --

9 MR. PHILLIP RAPHALS: Not LICO 6 and  
10 10, the --

11 MR. DAVID CORDINGLEY: LICO125 --

12 MR. PHILLIP RAPHALS: -- the 6 and 10  
13 percent energy poverty threshold, yeah.

14 MR. DAVID CORDINGLEY: -- threshold,  
15 right. From LICO125, from the working group.

16 Have you presented an alternative or do  
17 you have an alternative in mind if you're -- if you're  
18 -- you're going to suggest that might not be the  
19 appropriate --

20 MR. PHILLIP RAPHALS: Sorry, I have to  
21 disagree with the formulation. It's not 6 or 10  
22 percent threshold of LICO125. It's 6 -- as I  
23 understand it, it's -- it's a poverty threshold where  
24 6 or 10 percent of available resources are devoted to  
25 energy bills, which is really -- as I understand it

1 it's really not related to LICO125. When I -- my  
2 understanding when I read the report was that it was a  
3 percent of the LICO125 population, but they've now  
4 explained that that's not the case.

5                   So I -- I think at this point, LICO125  
6 is sort of a red herring. I'm not sure that it is  
7 really relevant to the -- the criteria that -- that  
8 PRA was working with, the working group, and frankly,  
9 because they never actually said if they think that 6  
10 percent or 10 percent is the right answer or if it's  
11 something else. I don't know if anyone has actually  
12 taken a position on that so far.

13                   And -- what we clearly see that the --  
14 that the target, the number of people involved changes  
15 very dramatically between those two (2) levels,  
16 between, you know, 5 percent approximately for the 10  
17 percent cut off and 15 -- a peak of 15 percent on  
18 their scenario for the 6 percent cutoff.

19                   So the -- the total number of people to  
20 which the rate would apply and, therefore, the total  
21 cost for the ratepayers will vary quite dramatically  
22 with the precise definition and cutoffs that is used  
23 to set the target public.

24                   MR. DAVID CORDINGLEY:     Okay, and  
25 we've seen -- we've seen different definitions and

1 cutoffs as options and -- and your point now is that  
2 depending on which one you choose, it could change --  
3 it could change how the benefits -- who receives the  
4 benefit and the cost of that benefit.

5 MR. PHILLIP RAPHALS: Right. And it  
6 could also be that -- excuse me if I may, that --  
7 again, going back to the -- the checklist on -- in the  
8 BC regulation, it may be that they're easily available  
9 parameters, you know, based on whether you receive a  
10 GST refund or whether -- some Manitoba program, which  
11 line up fairly closely with one or the other of those  
12 thresholds.

13 And if it is concluded that is the  
14 threshold that we want, then it becomes easy. But if,  
15 in fact, just totally hypothetically, if eligibility  
16 for these programs lines up with a 4 percent  
17 threshold, which would admit a gigantic number of  
18 people and the -- the view of the people that are  
19 looking still said that that's too broad, that's going  
20 to be too expensive and it's too broad. We need to  
21 focus on a smaller subset of people and we don't have  
22 an easy administrative mechanical way to define them,  
23 that creates a problem for which a solution will have  
24 to be found.

25 MR. DAVID CORDINGLEY: So, sir, if --



1 if I -- you've reviewed the working group measures as  
2 well, I take it --

3 MR. PHILLIP RAPHALS: Yes.

4 MR. DAVID CORDINGLEY: -- including  
5 the -- the options of the working group in terms of  
6 programs looked at and you've reviewed a view in your  
7 -- in your presentation.

8 Is the decision as to which option to  
9 implement or to direct to be implemented, is that not  
10 for this Board to make? Is that something that a  
11 working group should be doing or -- or is that not the  
12 jurisdiction of this Board to look at the options that  
13 are on the table and -- and, ultimately, make a  
14 direction as to which way to go?

15 MR. PHILLIP RAPHALS: So now we're not  
16 talking about the target but about the actual rate  
17 design?

18 MR. DAVID CORDINGLEY: Well,  
19 presumably they're -- they're interrelated in so far  
20 as you're going to -- you create a rate design based  
21 on the -- some of the criteria including target  
22 public.

23 But -- but are those not decisions for  
24 this Board to make once there's -- once the options  
25 are on the table and are the options not already on

1 the table?

2 MR. PHILLIP RAPHALS: Well, I -- I do  
3 think it's -- it's the decisions for the Board to  
4 make. But I'm not sure that the detailed aspects are  
5 really ripe for decision. And -- and again I -- in my  
6 mind I would distinguish between rate design which is  
7 something of the order of the Chernick proposal about  
8 numbers of kilowatt hours and -- and -- and rates  
9 attached to them, and the administrative aspect of who  
10 is eligible for that rate.

11 So, I -- I -- I just want to keep --  
12 for me, those are very separate elements, both of  
13 which have to be resolved.

14 MR. DAVID CORDINGLEY: And -- and let  
15 me -- let me just make sure I'm clear on this. When  
16 you say "administrative aspect of who's eligible for  
17 this rate," you're not suggesting it's necessarily who  
18 on the ground is going to be contacting people and  
19 helping fill out paperwork; that's not -- when you say  
20 "administrative aspect," that's not the administration  
21 that you're -- you're -- you're discussing?

22 MR. PHILLIP RAPHALS: I'm saying that  
23 by --

24 MR. DAVID CORDINGLEY: You're talking  
25 about the target threshold.

1                   MR. PHILLIP RAPHALS:   Well, I'm saying  
2 that by the time this is published, there will have to  
3 be some very clear instruction -- information that  
4 says, here is a new rate, are you eligible? They'll  
5 be a website that says Are you eligible? It will say,  
6 you're eligible if and there will be a series of  
7 criteria that explain what it takes to be eligible for  
8 this. And -- and how you would need to demonstrate  
9 that and, hopefully, that will be as simple as  
10 possible.

11                   But at the same time, it needs to line  
12 up with the -- the basin of people that you're trying  
13 to -- to reach. So these -- they go together. You  
14 can't -- you can't solve one without -- without  
15 knowing the other.

16                   MR. DAVID CORDINGLEY:   And I guess my  
17 point is this, sir, and I won't belabour it any  
18 further but has -- has the working group already not  
19 done that with respect to rate afford -- the rate  
20 affordability working group not already covered this  
21 ground in -- in terms of considering these sorts of  
22 considerations?

23                   Has -- has -- has the -- has the  
24 evidence of Paul Chernick not covered some of this  
25 ground? In fact, some of your -- your evidence speaks

1 to you recommend a target public. You recommend some  
2 eligibility criteria on your slide 24.

3 Have we not -- have we not covered this  
4 ground and -- and what can a further -- what can a  
5 further working group, as you recommend, do that has  
6 not already been done to date?

7 MR. PHILLIP RAPHALS: Well, as I said,  
8 I'm sorry to repeat myself. But I don't think that  
9 the working group ever made a choice between the 6  
10 percent and 10 percent threshold. I suppose it's  
11 implied by the way they went about it. They think  
12 this is the right way to think about it and -- and I  
13 don't disagree with that.

14 But I don't recall seeing a decision  
15 that, we've looked at both of these and we think that  
16 the affordability rate should be offered to everyone  
17 that meets a 6 percent threshold or -- or not. So --

18 MR. DAVID CORDINGLEY: On that point,  
19 though, is that not -- is that not something within  
20 this Board's jurisdiction to make a determination  
21 based on what they've seen?

22 MR. PHILLIP RAPHALS: Well, it is  
23 certainly up for there -- for them to make a  
24 jurisdiction -- sorry, a determination, absolutely.

25 But, I think to make that determination

1 they would ideally want to also have before them the  
2 implications of that choice. And one (1) of the  
3 implications of that choice is the rate impact on the  
4 nonparticipants or the rest of the -- whoever's going  
5 to -- is going to pay for it.

6                   And the numbers around the table today,  
7 I don't see any numbers on which you could make a  
8 decision because -- well, if they were to choose one  
9 (1) of the three (3) rate designs that were studied by  
10 PRA, then -- and if they were to choose the 6 percent  
11 or 10 percent threshold then, yes, there are numbers.

12                   But as I said, I think that -- that  
13 your witness Mr. Chernick's approach is really  
14 superior to each of those three (3), and there may be  
15 others that are superior. And -- and since we don't  
16 know whether the Board -- now, I do think that -- that  
17 it -- the Board could, at this stage, make a clear  
18 determination as to whether the -- the costs of this -  
19 - the cost in lost revenues would be made up within  
20 the residential class or by all consumers or by  
21 perhaps by -- by some other.

22                   I think that is -- is an important  
23 point to be resolved now because it will make possible  
24 to -- to move forwards in determining the -- the  
25 details. And that will be a key -- a key element in

1 determining what that rate -- what that residual rate  
2 or -- the rate -- the rate impacts on others will be.

3           So I think there are very important  
4 elements that need to be decided now, but I -- I don't  
5 see that there is a -- a proposal that could simply be  
6 approved for immediate implementation.

7           MR. DAVID CORDINGLEY:   And so, sir,  
8 where -- where Mr. Chernick, then, in -- in response  
9 to some IRs did do some rate impact calculations.  
10 Your -- your views, those are not -- those are not  
11 sufficient for -- for the purposes of making a  
12 decision?

13           MR. PHILLIP RAPHALS:   Are you  
14 referring to the ones that are on the table, the --  
15 the --

16           MR. DAVID CORDINGLEY:   Yes and there  
17 were -- and there were several tables that Mr.  
18 Chernick produced.

19           MR. PHILLIP RAPHALS:   Well, I -- I --  
20 I'm not certain that I've seen everything.   The  
21 recovery rates that I've seen are the ones that are on  
22 my slide 12 --

23           MR. DAVID CORDINGLEY:   And you would be  
24 looking for --

25           MR. PHILLIP RAPHALS:   -- is that what

1 you're referring to?

2 MR. DAVID CORDINGLEY: -- more than --  
3 more than those recovery -- those sorts of  
4 calculations of recovery rates?

5 MR. SENWUNG LUK: If I could  
6 interject. Mr. Cordingley, I -- I believe you  
7 referred to some IRs that -- where this information is  
8 available? Maybe -- maybe you could direct Mr.  
9 Raphals to -- to those.

10

11 (BRIEF PAUSE)

12

13 MR. DAVID CORDINGLEY: Mr. Luk, I -- I  
14 -- I don't have the reference with me right now and  
15 for the second time, but I -- I -- I won't -- I won't  
16 take my time to look it up at this point, but I'll  
17 short-circuit my question this way.

18

19 CONTINUED BY MR. DAVID CORDINGLEY:

20 MR. DAVID CORDINGLEY: Is the kind of  
21 rate recovery calculation that you see on your table  
22 6, sir, at your slide 12, is that the sort of  
23 information that you would be looking for -- is that  
24 the information that you're saying is -- you're saying  
25 is missing or -- or -- or what is it that you're

1 saying is missing in addition to that sort of  
2 calculation?

3                   So -- so that if this Board had other  
4 tables before it with similar rate recovery  
5 cancellations, would that not be sufficient to make a  
6 decision?

7                   MR. PHILLIP RAPHALS:   Well -- okay, as  
8 I understand Mr. Chernick's calculations, they were  
9 based -- and I don't think I ever saw -- I don't  
10 recall seeing the detail of -- of how we handled this.

11                   So that if you look at the -- for the  
12 low impact rate, the LIC0125, I assume that his -- and  
13 -- his calculations were based on assuming eligibility  
14 for everyone who meets the LIC0125 criterion.

15                   And I believe we saw -- if you go back  
16 to my slide number 4, which is from -- the second to  
17 last chevron, that the 6 percent energy poverty  
18 threshold covers about 60.5 percent of LIC0125  
19 households. So -- so that's a much smaller basin than  
20 LIC0125, and obviously the 10 percent is an even  
21 smaller basin.

22                   So, I mean, I think that -- that Mr.  
23 Chernick's work is -- is -- is really exemplary as  
24 showing a path forwards, but -- I mean, of course,  
25 it's not impossible to say, well, let's do this now



1 and fix it later and get it better later.

2 MR. DAVID CORDINGLEY: Sure and -- and  
3 that -- and that's a point I think you made -- that  
4 Mr. Chernick made in his testimony and you made in  
5 your direct that it may not be the perfect solution,  
6 but if it's an incremental step of betterment --

7 MR. PHILLIP RAPHALS: Well, that's  
8 right.

9 MR. DAVID CORDINGLEY: -- there's --  
10 there's some value in implementing now and -- and  
11 revising it as you learn lessons and you move  
12 forwards; is that -- is that not fair?

13 MR. PHILLIP RAPHALS: It is. But --  
14 but I see my suggestion as -- as a friendly amendment  
15 to that, in the sense that if the only alternatives  
16 were study for ten (10) more years, or do it right  
17 now. Yes, I would go to it right now, but I think one  
18 (1) year is -- is -- is not excessive. It's -- I  
19 think it's actually a fairly accelerated timetable to  
20 really get it right and make all of the determinations  
21 that have to be made to have a -- to have a fully  
22 implementable program. And that it would be better to  
23 -- to -- to take that time, push hard and still have  
24 something that can be perfected over time, but have  
25 really done the homework than to just say, sure, let's

1 go, let's give it a try and see where it goes.

2 MR. DAVID CORDINGLEY: So, sir, is  
3 that even in light of the numbers that we see on your  
4 slide 6, where we see this correcting for the -- the --  
5 - the -- your assumptions. So I'm looking at the blue  
6 and the orange lines. Given the dramatic rise in --

7 MR. PHILLIP RAPHALS: Yeah.

8 MR. DAVID CORDINGLEY: -- in the  
9 energy poverty is -- is this something that -- that,  
10 in your view, should still wait for -- for another  
11 year?

12 MR. PHILLIP RAPHALS: No, my view is  
13 it should happen as soon as possible -- as soon as  
14 possible to do it -- to do it right. And -- and from  
15 where I sit and given that -- given the timing. I  
16 mean, here we are in January. I don't know when --  
17 I'm not familiar with how long this Board usually  
18 takes to issue decisions. I don't exp -- the  
19 decisions not going to be published at the beginning  
20 of February, I presume, you know, there will be time  
21 that the Board needs to deliberate, has a vast number  
22 of issues to resolve. It's decision will come out.  
23 And then people have to respond to it.

24 To -- to think that -- well, the only  
25 way that it could happen for this April is simply to

1 say, yes, you know, to -- to just pick some parameters  
2 and say go, but I am -- I am acutely aware of the pr -  
3 - the just -- the administrat -- it's administration.  
4 I know it sounds boring but, you know, you have to  
5 administer a program. You have to have some way to  
6 tell people if they're eligible and how to apply and -  
7 - and --

8 MR. DAVID CORDINGLEY: So, sir, maybe  
9 this is what I was trying to clarify with you earlier.  
10 Part of your -- part of your -- your suggestion now is  
11 in -- in terms of taking some time is that -- is  
12 there's that on the ground -- I'll call on the ground  
13 administrative aspects to it in terms of administering  
14 the program.

15 Is that part of your position then too?

16 MR. PHILLIP RAPHALS: I wouldn't call  
17 it on the ground. I -- I am, again, thinking of it as  
18 -- as a full -- as a full worked out defined program -  
19 - if that's what you mean by "on the ground" then --

20 MR. DAVID CORDINGLEY: Well, you've  
21 said administrative in two (2) different context and  
22 I'm just trying to clarify which context we're talking  
23 about. One (1) is setting -- setting the threshold,  
24 the -- where -- who -- who would be eligible. And  
25 then this other aspect you've talked about just now is

1 -- is with respect to how do you tell people they're e  
2 eligible and how do you -- how do you get them signed  
3 up.

4 Do -- do you take -- which -- which --  
5 when you say administer -- we need time to work out  
6 administration, which of those two (2) aspects of  
7 administration are you -- are you referring to?

8 MR. PHILLIP RAPHALS: I'm focusing  
9 primarily on the first one.

10 MR. DAVID CORDINGLEY: Okay. Sir --

11 MR. PHILLIP RAPHALS: And -- and I'd  
12 also like to mention the -- the idea that I raised --  
13 and I'll tell you on which side -- yes, on -- on slide  
14 22. This idea of -- of a buffer zone because --  
15 especially if you're talking about rolling something  
16 out very fast, it seems clear that you're not going to  
17 get 100 percent of the eligible -- those people who  
18 are actually eligible for it enrolled immediately,  
19 which means that you will then have -- if you don't  
20 have a buffer zone, you'll then have rate increases  
21 for all the people who should have been on the rate  
22 but didn't get on it.

23 And it's maybe not a showstopper but I  
24 think it's an important problem. And if we can find a  
25 solution for it, it would be good to find a solution

1 because -- because people who were supposed to get  
2 help will, in fact, end up getting hurt.

3 MR. DAVID CORDINGLEY: And -- and I  
4 have your point on that, sir. And part of -- part of  
5 the -- the cross-examination you -- you -- you did  
6 yesterday with My Friend Dr. Williams was with respect  
7 to the issue of, if you have -- if you don't 100  
8 percent uptake for the low income rate or the energy  
9 poverty rate, aren't you still going to have the same  
10 uptake issue with respect to getting people signed up  
11 a buffer zone.

12 And so you've been through that with  
13 Dr. Williams.

14 MR. PHILLIP RAPHALS: Okay.

15 MR. DAVID CORDINGLEY: I won't repeat  
16 that territory. I've got -- I've got a few minutes  
17 left with you, sir, and I -- I just have a couple  
18 quick points I want to put to you.

19 Are -- are you familiar with a fellow  
20 Roger Colton?

21 MR. PHILLIP RAPHALS: I've seen his  
22 name in the file but no, I don't know him.

23 MR. DAVID CORDINGLEY: Sir, are you --  
24 are you -- so -- so you wouldn't be familiar with his  
25 -- his -- his experience with rate design?

1 MR. DAVID CORDINGLEY: No, I'm not.

2 MR. DAVID CORDINGLEY: Okay. Sir,  
3 have you reviewed the evidence of Mr. Wayne Simpson  
4 who -- who gave evidence on behalf of the Consumer  
5 Coalition?

6 MR. PHILLIP RAPHALS: On the  
7 affordability report, yes, I have read it.

8 MR. DAVID CORDINGLEY: And -- and if  
9 we could have the Consumer Coalition 44 slide -- evid  
10 -- Exhibit 44, slide 13 brought up.

11 One (1) of the points that Mr. Simpson  
12 makes is -- is that he likes this program from  
13 Colorado.

14 MR. PHILLIP RAPHALS: Can you give me  
15 a moment to read it?

16 MR. DAVID CORDINGLEY: Yep. Nothing  
17 will turn on the details of the program for -- for --  
18 for my point, sir.

19

20 (BRIEF PAUSE)

21

22 MR. PHILLIP RAPHALS: Yes. Okay.

23 MR. DAVID CORDINGLEY: And as I  
24 understood Mr. Simpson's testimony, this was his  
25 preferred program. We -- we may or may not agree with

1 him, but my point is: Would you be aware that Roger  
2 Colton had been the designer of that rate program; had  
3 been hired by Xcel Energy to design that program?

4 MR. PHILLIP RAPHALS: No, I certainly  
5 was not aware of that.

6 MR. DAVID CORDINGLEY: Would you --  
7 would you have known, sir, that at the last GRA Green  
8 Action Centre sponsored testimony from Mr. Roger  
9 Colton to -- to provide some -- some rate design  
10 guidance to this Board?

11 MR. PHILLIP RAPHALS: No, I did not  
12 know that.

13 MR. DAVID CORDINGLEY: And -- and,  
14 sir, so would you be aware that at last GRA although  
15 Mr. Colton's directions weren't directly adopted,  
16 there was the -- there was the direction to create  
17 this affordability group and this -- that process fell  
18 out of that last GRA?

19 MR. PHILLIP RAPHALS: I did not know  
20 that.

21 MR. DAVID CORDINGLEY: So my point is  
22 this, sir: If -- and I won't hold you to -- to -- to  
23 confirm Mr. Colton's expertise, but if -- if we have a  
24 pro -- if we have some evidence brought at a last GRA  
25 by -- by Mr. Colton, whom Mr. Wayne Simpson preferred

1 a similar program in another state, and yet out of  
2 that -- so -- so Hydro's -- this Board and Hydro sort  
3 of given -- what Mr. Simpson might call gold standard  
4 program, out of that we still have no rate design from  
5 Hydro, is there not a risk in -- here's the question  
6 now: Is there not a risk that in telling Hydro to go  
7 away and come back with a rate design, we're just  
8 going -- we're just going to fall back into a -- a --  
9 a cycle of delay?

10 In that case, we had -- we had Mr.  
11 Colton's design. Mr. Colton is -- is we believe is  
12 quite an expert. Mr. Simpson may -- may agree, based  
13 on what he thinks of Colorado and we had that before  
14 the Board.

15 Yet here we are at the next GRA after  
16 particular instructions from the Board and the only --  
17 the only specific rate design proposed is that -- is  
18 brought forward by GRA still not Hydro. What's going  
19 to make your -- your recommendation in terms of the  
20 Board's direction any different?

21 MR. PHILLIP RAPHALS: Well, my  
22 understanding of -- of Hydro's testimony on this  
23 question is that their own opinion is that it's not  
24 their job to solve this problem. And it's not -- it's  
25 not their job to proposed a rate like this. And I



1 understand that to mean unless the Board tells us  
2 otherwise.

3                   And so far as I know the Board has  
4 never instructed Hydro to develop an affordability  
5 rate and implement it. And I assume that if they did  
6 so instruct that Hydro would move diligently to do  
7 that. I have reason to think otherwise.

8                   THE CHAIRPERSON: Mr. Cordingley, I  
9 think your time's up.

10                   MR. DAVID CORDINGLEY: Yeah. That's -  
11 - thank you, Mr. Chair. Thank you, Mr Raphals, those  
12 are my questions.

13                   MR. PHILLIP RAPHALS: Thank you.

14                   THE CHAIRPERSON: Ms. Fernandes?

15

16 CROSS-EXAMINATION BY MS. ODETTE FERNANDES:

17                   MS. ODETTE FERNANDES: Thank you, Mr.  
18 Chair. Good morning, Mr. Raphals.

19                   MR. PHILIP RAPHALS: Good morning.

20                   MS. ODETTE FERNANDES: I want to pick  
21 up a bit on your discussion this morning regarding the  
22 recovery of revenue losses and the rate impact on  
23 nonparticipants.

24                   MR. PHILIP RAPHALS: Yes.

25                   MS. ODETTE FERNANDES: On slide 10 of

1 your report, you have highlighted the range of revenue  
2 losses that would need to be recovered, and the rate  
3 impacts if those revenue losses were recovered by only  
4 the residential class.

5 MR. PHILIP RAPHALS: Yes, and  
6 precisely for the three (3) methods that were studied  
7 by the working group.

8 MS. ODETTE FERNANDES: Yes. And if --  
9 if we look at the 6 percent threshold --

10 MR. PHILIP RAPHALS: M-hm.

11 MS. ODETTE FERNANDES: -- I believe  
12 you indicated yesterday that the cost is higher  
13 because more people meet this threshold?

14 MR. PHILIP RAPHALS: Comparing the 6  
15 to 10 percent? Yes. I believe -- that's my  
16 understanding.

17 MS. ODETTE FERNANDES: Thank you. And  
18 then the range identified here is from point one-five  
19 (.15) cents per kilowatt hour to point seven-zero  
20 (.70) cents per kilowatt hour, depending on which  
21 program you went with, correct?

22 MR. PHILIP RAPHALS: For the 6 percent  
23 threshold, yes, that's correct.

24 MS. ODETTE FERNANDES: Okay. And  
25 would you accept, subject to check, that the current

1 energy charge for residential customers is eight point  
2 one-nine-six (8.196) cents per kilowatt hour, to be  
3 precise?

4 MR. PHILIP RAPHALS: Subject to check,  
5 yes, I would accept that.

6 THE CHAIRPERSON: Sorry, Ms.  
7 Fernandes, can you move the mic just a little bit  
8 closer?

9 MS. ODETTE FERNANDES: Closer? Sure.

10 THE CHAIRPERSON: Thanks.

11

12 CONTINUED BY MS. ODETTE FERNANDES:

13 MS. ODETTE FERNANDES: And if we use  
14 the 6 percent energy burden threshold, as highlighted  
15 in slide 10, if you go on the one (1) end and use --  
16 and add the point one-five (.15) cents per kilowatt  
17 hour to the eight point one-nine-six (8.196) cents per  
18 kilowatt hour, would you agree that that equates to  
19 approximately a 2 percent increase in the energy  
20 charge for just the residential ratepayers?

21 MR. PHILIP RAPHALS: I'll take your  
22 word for it.

23 MS. ODETTE FERNANDES: If you have  
24 issues with my numbers, you can advise Mr. Luk, and --

25 MR. PHILIP RAPHALS: Yeah, we can

1 check them later if necessary.

2 MS. ODETTE FERNANDES: All right.

3 MR. PHILIP RAPHALS: But I'm sure that  
4 won't be necessary.

5 MS. ODETTE FERNANDES: Thank you. And  
6 then if you go to the other extreme and you add the  
7 point seven-zero (.70) cents per kilowatt hour to the  
8 current energy charge of eight point one-nine-six  
9 (8.196) cents per kilowatt hour, that would equate to  
10 approximately an 8.5 percent increase in the energy  
11 charge for residential ratepayers?

12 MR. PHILIP RAPHALS: Yes, subject to  
13 check.

14 MS. ODETTE FERNANDES: And you  
15 indicated yesterday as well, I believe, that's these  
16 rate impacts do not include the administrative costs  
17 of delivering these programs?

18 MR. PHILIP RAPHALS: That's my  
19 understanding.

20 MS. ODETTE FERNANDES: And this would  
21 also not include any general rate increase that would  
22 arise from any Board decision with respect to Manitoba  
23 Hydro's rate application?

24 MR. PHILIP RAPHALS: I mean, beyond  
25 that which is proposed.

1 MS. ODETTE FERNANDES: Yeah. No.  
2 Like, if these -- this recovery is related to the  
3 revenue losses associated with dividing up, you know,  
4 providing a -- a subsidy to one (1) class, and --  
5 sorry, let me get my thoughts together, here.

6 So these costs highlighted on this page  
7 is specifically with respect to recovering lost  
8 revenue from moving around the cost recovery from one  
9 (1) class to the remainder of the residential class,  
10 and then you would have an additional rate increase  
11 from the General Rate Application, which would also  
12 have to be included?

13 MR. PHILIP RAPHALS: Yes.

14 MS. ODETTE FERNANDES: Thank you. And  
15 you had a discussion this morning with My Friend Mr.  
16 Cordingley regarding Mr. Chernick's proposal at sides  
17 11 through 13.

18 And in terms of Mr. Chernick's  
19 proposal, you would agree that his proposal would also  
20 require other classtomer -- other customer classes to  
21 recover the lost revenue and administrative costs  
22 associated with that proposal?

23 MR. PHILIP RAPHALS: That's my  
24 understanding, yes.

25 MS. ODETTE FERNANDES: And I think you

1 were asked from Mr. Cordingley what's missing in terms  
2 of the information that Mr. Chernick provided. And  
3 can you confirm that you haven't seen a proof of  
4 revenue for Mr. Chernick which shows that Manitoba  
5 Hydro would recover all of its revenue requirement  
6 from his proposal?

7 MR. PHILIP RAPHALS: I have not seen  
8 that. I believe, reading the transcripts, that it has  
9 not been prepared.

10 MS. ODETTE FERNANDES: Thank you. If  
11 we move to slide 18 of your presentation, you've  
12 performed some calculations on the electricity  
13 consumption on reserve based on the billing data?

14 MR. PHILIP RAPHALS: M-hm.

15 MS. ODETTE FERNANDES: Do you have  
16 that in front of you?

17 MR. PHILIP RAPHALS: I -- I'm sorry?

18 MS. ODETTE FERNANDES: Do you have  
19 that in front of you?

20 MR. PHILIP RAPHALS: Yes, I do.

21 MS. ODETTE FERNANDES: Okay. And you  
22 indicated that the data suggests that roughly half of  
23 the difference observed is due to housing types, and  
24 the remainder in part is attributable to housing stock  
25 quality, correct?

1 MR. PHILIP RAPHALS: That's my best  
2 understanding of the numbers that appear, yes.

3 MS. ODETTE FERNANDES: And you would  
4 agree with me that the responsibility for providing  
5 adequate funding for housing is the federal  
6 government?

7 MR. PHILIP RAPHALS: I would think so.  
8 I don't profess to be an expert on --

9 MR. SENWUNG LUK: I'm -- I'm sorry,  
10 Ms. Fernandes, I think that sounds to me like you're  
11 asking for a legal opinion. I mean, I -- or maybe you  
12 can --

13 MS. ODETTE FERNANDES: Let me rephrase  
14 it.

15 MR. SENWUNG LUK: -- specify what kind  
16 of responsibility you're --

17 MS. ODETTE FERNANDES: Okay.

18 MR. SENWUNG LUK: -- referring to.

19

20 CONTINUED BY MS. ODETTE FERNANDES:

21 MS. ODETTE FERNANDES: Okay. Maybe  
22 I'll do this. AMC filed the interim report from the  
23 standing committee yesterday in this hearing. They  
24 have also filed the final report issued by the  
25 standing committee, and you're aware that there was a

1 final report?

2 MR. PHILIP RAPHALS: Yes.

3 MS. ODETTE FERNANDES: Okay. And I  
4 believe that was filed as AMC Exhibit number 13, if we  
5 can get that brought up, please.

6

7 (BRIEF PAUSE)

8

9 MS. ODETTE FERNANDES: And if we go to  
10 page 10, thank you, we'll see -- let me see if I can -  
11 - okay, if we look at the first paragraph, it says:

12 "Similar to -- oops. Similar to  
13 housing, the federal government  
14 maintains that it provides funding  
15 for community infrastructure on  
16 reserve to First Nations as a matter  
17 of social policy. Investment in  
18 infrastructure on reserve is  
19 fundamental to the functioning of  
20 First Nation communities because it  
21 provides the basic necessities of  
22 health and safety for First Nations,  
23 and supports them when they  
24 undertake economic development  
25 activities."



1 Do you see that there?

2 MR. PHILIP RAPHALS: Yes.

3 MS. ODETTE FERNANDES: And you'll see  
4 that the federal government has maintained that it  
5 provides the funding for the community infrastructure?

6 MR. PHILIP RAPHALS: For?

7 MS. ODETTE FERNANDES: For community  
8 infrastructure.

9 MR. PHILIP RAPHALS: Where are those  
10 words? I'm sorry, I don't see them.

11 MS. ODETTE FERNANDES: In the first  
12 two (2) sentences.

13 MR. PHILIP RAPHALS: Yes. M-hm.

14 MS. ODETTE FERNANDES: And so you'd  
15 agree that housing would be included in the term  
16 "infrastructure," would you?

17 MR. PHILIP RAPHALS: I would think so.

18 MS. ODETTE FERNANDES: And so if the  
19 federal government is maintaining that it provides the  
20 funding, would you agree with me that the primary  
21 resource of that funding is Canadian taxation?

22 MR. PHILIP RAPHALS: It seems clear  
23 that funding provided by the federal government comes  
24 from Canadian federal taxation, yes.

25 MS. ODETTE FERNANDES: And so is not

1 the consequence of your proposal -- wouldn't that, in  
2 essence, be ratepayers -- couldn't it be argued that  
3 ratepayers would be subsidizing an issue related to  
4 the Canadian federal government, which would then go  
5 to the taxpayer?

6 MR. PHILIP RAPHALS: I -- I know a  
7 little bit about federal and provincial jurisdictions  
8 with respect to First Nations, but I am certainly not  
9 an expert on it, and I know that this is very complex  
10 terrain. I -- I also know that in some places, there  
11 is a certain aspects of shared jurisdiction. There  
12 are ways in which provincial governments provide some  
13 services to First Nations people, and I would not  
14 presume to opine on what is or should be the -- the  
15 situation in Manitoba.

16 MS. ODETTE FERNANDES: Okay. That's  
17 fine. Thank you. You had a brief -- I'm going to  
18 move topics now. You had a brief discussion yesterday  
19 with Mr. Hacault regarding your reference in your  
20 report to Newfoundland and Labrador?

21 MR. PHILIP RAPHALS: M-hm.

22 MS. ODETTE FERNANDES: And in your  
23 report, you mentioned the Northern Strategic --  
24 Strategic Plan rebate proposed by the provincial  
25 government of Newfoundland?

1 MR. PHILIP RAPHALS: Can you remind me  
2 what page that's on in my report?

3 MS. ODETTE FERNANDES: I believe it's  
4 your report, page 30.

5

6 (BRIEF PAUSE)

7

8 MR. PHILIP RAPHALS: Yes.

9 MS. ODETTE FERNANDES: Yeah, it's at  
10 the bottom of that page.

11 MR. PHILIP RAPHALS: Yes, I see it.

12 MS. ODETTE FERNANDES: Okay. And in  
13 terms of that Strategic Plan rebate, would you be  
14 aware that it included a \$1.6 million annual  
15 electricity rebate for homeowners using diesel-  
16 generated power in rural isolated communities along  
17 the Labrador coast?

18 MR. PHILIP RAPHALS: I couldn't speak  
19 to the global amount, but I am -- but I am -- it is my  
20 understanding that it provides some rate relief, or  
21 some money towards energy costs for the off-grid  
22 communities on the Labrador coast.

23 MS. ODETTE FERNANDES: Okay. And that  
24 rebate is provided by the government?

25 MR. PHILIP RAPHALS: By the provincial

1 government.

2 MS. ODETTE FERNANDES: Provincial  
3 government. Okay. Thank you. And in terms of --  
4 your report continues on, and it refers to the cross-  
5 subsidy that's implicit in the rate structure? Do you  
6 recall that?

7 MR. PHILIP RAPHALS: In which rate  
8 structure?

9 MS. ODETTE FERNANDES: In the  
10 Newfoundland rate structure.

11 MR. PHILIP RAPHALS: Yes, and -- which  
12 the -- the Northern Strategic Plan rebate reduces the  
13 need for that cross-subsidization to a certain extent,  
14 but doesn't eliminate it.

15 MS. ODETTE FERNANDES: Right, and that  
16 cross-subsidization, you would agree with me, arose as  
17 a result of the direction from the government of  
18 Newfoundland in Ord -- in Order in Council 2003, 347.  
19 I believe you were going to file that?

20 MR. PHILIP RAPHALS: No, I would --  
21 that's not quite right. That cross-subsidization is  
22 the result of -- of a complex historical evolution  
23 that's been in place and slowly changing over many  
24 years. The Order in Council specifies, and I assume  
25 modified in -- in a -- in a particular way exactly how

1 that cross-subsidization is paid, who pays. But the  
2 cross-subsidization existed long before that Order in  
3 Council.

4 MS. ODETTE FERNANDES: Okay. Thank  
5 you. And if we turn to slide 24, you had a discussion  
6 with Dr. Williams yesterday, and your recommendation  
7 here was that under eligibility criteria First Nation  
8 residence on reserve, that it would be for those who  
9 pay their own ener -- energy bills as probably  
10 justified?

11 MR. PHILIP RAPHALS: Yes.

12 MS. ODETTE FERNANDES: And Dr.  
13 Williams -- I don't think we need to go there, but Dr.  
14 Williams yesterday took you to Manitoba Hydro Exhibit  
15 97, which showed that for the month of June, 2017,  
16 there was 32 percent of revidence -- residence that  
17 had their bills paid a hundred percent by social  
18 assistance. Do you recall that?

19 MR. PHILIP RAPHALS: Yes. And I also  
20 recall that I mentioned something somewhat confusing  
21 about that response, but --

22 MS. ODETTE FERNANDES: Yeah.

23 MR. PHILIP RAPHALS: -- yes, can you -  
24 - go ahead.

25 MS. ODETTE FERNANDES: And I believe

1 your response, when Mr. Williams took you there, was  
2 that if individuals are having their bills paid by  
3 someone else, they don't need assistance? Well, they  
4 don't need ratepayer assistance?

5 MR. PHILIP RAPHALS: Yes, if the bills  
6 are explicitly paid by -- by someone else.

7 MS. ODETTE FERNANDES: Okay. And  
8 would that comment apply if an individual is receiving  
9 provincial assistance for their energy bill as well?

10 MR. PHILIP RAPHALS: Again, I'm not  
11 really familiar with how provincial assistance works,  
12 but if the -- if they receive provincial assistance  
13 and also a supplement to cover their energy bill, then  
14 yes, I would agree there is no -- no need for  
15 ratepayers to -- to replace that contribution.

16 MS. ODETTE FERNANDES: Okay. Thank  
17 you. And if we could turn to AMC/MH Second Round 15  
18 (a) through (c).

19

20 (BRIEF PAUSE)

21

22 MS. ODETTE FERNANDES: And if we go to  
23 page 2 -- thank you, Kristen. So about in the middle  
24 of the paragraph, there, you'll see in June of 2017,  
25 which is the same month that was referenced in

1 Manitoba Hydro's --

2 MR. PHILIP RAPHALS: Could I just take  
3 a moment to -- to read the response --

4 MS. ODETTE FERNANDES: Yeah.

5 MR. PHILIP RAPHALS: -- and just  
6 remind myself.

7

8 (BRIEF PAUSE)

9

10 MR. PHILIP RAPHALS: Okay.

11 MS. ODETTE FERNANDES: Okay. So about  
12 the middle of the paragraph, it says:

13 "In June of 2017, the last month for  
14 which payments had been applied in  
15 all communities, Manitoba Hydro  
16 applied more than ten thousand  
17 (10,000) payments to accounts of  
18 First Nation customers receiving  
19 social assistance. This represents  
20 more than 58 percent of all First  
21 Nation residential customers who are  
22 being provided with direct  
23 assistance to pay their energy bill.  
24 These payments range from 10 percent  
25 to a hundred percent of the

1 customer's energy bill."

2 So in terms of the customers who are  
3 receiving between 10 percent and 99 percent of their  
4 energy bill, how would your rate proposal apply to  
5 those First Nation customers?

6 MR. PHILIP RAPHALS: Well, I have to  
7 say, this response, now that I re-read it, seems to  
8 complicate the -- the picture to a certain extent.  
9 The second sentence:

10 "In the case of First Nation  
11 customers, Manitoba Hydro works with  
12 First Nation Bands each month to  
13 ensure that customers who are  
14 eligible for social assistance  
15 payments have those payments applied  
16 to their accounts."

17 That sounds -- I'm not sure, but that  
18 sounds to me like it's saying that, We're going to  
19 receive -- receive your social assistance pay --  
20 social assistance payment, and we're first going to  
21 pay your Hydro bill, and then we'll give you what's  
22 left over. Those who were eligible for payments had  
23 those payments applied to their account. So it --  
24 it's no longer clear to me that this is actually  
25 additional to social assistance. It -- it sounds a



1 bit as if it's just saying that, We're going to --  
2 we're going to take it out of your social assistance  
3 before we give to you, which is a different picture  
4 than what I thought I understood from MH-97.

5 MS. ODETTE FERNANDES: I'm going to  
6 suggest to you that that sentence refers to money  
7 that's related to -- specifically to the energy bill,  
8 and it's not the entire social assistance amount.

9 MR. PHILIP RAPHALS: No, I didn't -- I  
10 didn't -- I wasn't suggesting it was the entire  
11 amount, but again, I -- hypothetically, if the -- if  
12 the monthly social assistance payment is nine hundred  
13 dollars (\$900), and the Band Council receives that  
14 nine hundred dollars (\$900) and normally would  
15 transfer it to the individual, this seems to be saying  
16 that, We're first going to pay your electricity bill  
17 out of it, and then we'll give you the six hundred  
18 (600) or seven hundred dollars (\$700) that's left. If  
19 that is the case, then we're not talking about an  
20 additional payment to cover the electricity bill over  
21 and above social assistance.

22

23 (BRIEF PAUSE)

24

25 MS. ODETTE FERNANDES: All right. I

1 think the example I'm going to try and provide you,  
2 this relates to, for example, if there's ten (10)  
3 people living in a home, some are receiving  
4 assistance, some are -- are not. There is -- the  
5 money that's being allocated is directly allocated  
6 based on their proportion of the bill?

7 MR. PHILIP RAPHALS: I am vaguely  
8 familiar with that approach, but I -- I would repeat  
9 that, given that -- that second sentence of AMC/MH-2-  
10 15, (a) to -- (a) -- 15(c) on page 2, I -- I am no  
11 longer certain that what we're talking about here are  
12 additional amounts provided by social assistance for  
13 energy bills as opposed to simply garnishing the  
14 amount in order to pay the energy bill first. And  
15 it's a very big difference, and I want to be clear  
16 that my comments yesterday were based on the  
17 assumption that this was an additional amount to cover  
18 your energy bill over and above what you would  
19 otherwise obtain from social assistance.

20 So until that question is clarified,  
21 I'm not very comfortable exploring -- I mean, it's --  
22 it's a -- for me, now, it's -- it's -- the question is  
23 an uncertainty that would colour all of these matters.

24 MS. ODETTE FERNANDES: Okay. Thank  
25 you very much -- much, Mr. Raphals. That concludes

1 our cross-examination.

2 THE CHAIRPERSON: Thank you. Ms.  
3 Steinfeld...?

4 MR. PHILIP RAPHALS: If I could just  
5 take a moment.

6

7 (BRIEF PAUSE)

8

9 CROSS-EXAMINATION BY MS. DAYNA STEINFELD:

10 MS. DAYNA STEINFELD: Good morning,  
11 Mr. Raphals.

12 MR. PHILIP RAPHALS: Good morning.

13 MS. DAYNA STEINFELD: I am Dayna  
14 Steinfeld. I am Board counsel, along with my  
15 colleague Bob Peters. Thank you for attending today.  
16 I have a few questions for you.

17 Perhaps, Ms. Schubert, if we could  
18 start by turning to slide 3 of Mr. Raphals's  
19 presentation, AMC Exhibit 14.

20 And generally, Mr. Raphals, we don't  
21 need to go to each slide, but on this slide and -- and  
22 the few -- following, you present your evidence that  
23 under Manitoba Hydro's rate proposal, there will be  
24 substantial impacts on energy poverty in Manitoba. Is  
25 -- is that a fair summary?

1 MR. PHILIP RAPHALS: That's my  
2 understanding from the PRA report, yes.

3 MS. DAYNA STEINFELD: And as you  
4 discussed with Ms. Fernandes this morning, Manitoba  
5 Hydro customers on First Nations reserves have  
6 particular energy poverty issues that relate to things  
7 like quality of -- of housing stock. Is -- is that  
8 correct?

9 MR. PHILIP RAPHALS: Yes.

10 MS. DAYNA STEINFELD: And if we turn -  
11 - I think it's shown on your slide 4, please.

12 Mr. Raphals, this is looking at  
13 Manitoba households as a whole, and the projected  
14 increases in energy poverty under Manitoba Hydro's  
15 Indicative Rate Plan, correct? Is it your conclusion  
16 that these numbers would be different if they were  
17 isolated to First Nations on reserve energy poverty?

18 MR. PHILIP RAPHALS: I would certainly  
19 expect them to be, yes.

20 MS. DAYNA STEINFELD: And is there a  
21 reason why that issue hasn't been specifically  
22 addressed in your evidence? Is it -- is it lack of  
23 data on --

24 MR. PHILIP RAPHALS: I don't -- I  
25 don't have -- I mean, essentially all the data I'm

1 working with come from the PRA report and its  
2 responses, and I don't recall seeing anything that  
3 would allow any conclusions specifically on that  
4 question.

5 MS. DAYNA STEINFELD: And we had  
6 evidence, and you -- and you may have seen this in the  
7 transcript from Dr. Mason around some of the  
8 shortcomings in the data that Prairie Research  
9 Associates was working with in terms of First Nations  
10 and on-reserve First Nations. Were -- were you  
11 familiar with that evidence?

12 MR. PHILIP RAPHALS: Yes, I read that  
13 as well, as well as their explanations that they  
14 focused specifically on households in arrears,  
15 thinking that that was where they would learn the  
16 most, and then realized afterwards that they had  
17 perhaps deployed their -- their efforts in -- not in  
18 the best place.

19 MS. DAYNA STEINFELD: And so if -- if  
20 there was further study or -- or more data become  
21 available that related more specifically to First  
22 Nations, or taking it a step further, First Nations on  
23 reserve, then we might be able to have a more accurate  
24 picture of the specific energy poverty impacts?

25 MR. PHILIP RAPHALS: Yes, exactly, and

1 I do think that's very important.

2 MS. DAYNA STEINFELD: If we turn,  
3 please, Ms. Schubert, to slide 14 I believe, and  
4 generally in your evidence, Mr. Raphals, your  
5 recommendation to the Board is that the costs of an  
6 affordability program could be mitigated if they  
7 weren't limited just to non-eligible residential  
8 ratepayers, but instead spread across the system as a  
9 whole. Is that correct?

10 MR. PHILIP RAPHALS: Yes.

11 MS. DAYNA STEINFELD: And going  
12 forward one (1) slide please, Ms. Schubert, to slide  
13 15 --

14 MR. PHILIP RAPHALS: Well, actually,  
15 let me say, I'm not sure that mitigates the costs. I  
16 mean, the cost remains the same, but -- but I do think  
17 that that is probably a -- a preferable approach.

18 MS. DAYNA STEINFELD: Thank you for  
19 that clarification. I -- I did misspeak -- misspeak,  
20 I believe.

21 It -- it would be more accurate to say  
22 that it would mitigate the bill impacts? Thank you,  
23 Mr. Raphals. And on -- on this slide, you discuss  
24 that very issue of allocating the costs of an  
25 affordability mechanism. And you discuss both your

1 direct testimony as well as in your report that it  
2 would be reasonable to consider the application of  
3 export revenues to support affordability programs,  
4 correct?

5 MR. PHILIP RAPHALS: Yes.

6 MS. DAYNA STEINFELD: And Ms.

7 Schubert, if we could please turn to PUB 42-5, which  
8 is Board counsel book of documents, Volume V, at page  
9 55, please.

10 Mr. Raphals, this is an excerpt from  
11 the Board's cost of service study methodology review  
12 order, Order 164 of '16. And I believe you indicated  
13 in your testimony yesterday you're familiar with this  
14 Order? And you see here, just the first sentence of  
15 the second paragraph, the Board concludes that export  
16 revenues are not a dividend that can be assigned or  
17 based on considerations other than cost causation.

18 Do you see that there?

19 MR. PHILIP RAPHALS: Yes. Yes.

20 Sorry, the -- the cord doesn't go farther.

21

22 (BRIEF PAUSE)

23

24 MS. DAYNA STEINFELD: So just taking  
25 this section of the Board Order, Mr. Raphals, is it

1 your view that your position on using the export  
2 revenues to support affordability programs, is that  
3 view consistent with the Board's findings in Order 164  
4 of '16?

5 MR. PHILIP RAPHALS: Well, as I tried  
6 to explain yesterday, I think it's -- it's a judgment  
7 call. One could think of it is as -- as a grey zone.  
8 I think that it could be viewed that way, and the  
9 reasons are -- the reasons are two (2). One (1) is  
10 that the -- the investments that are driving the rate  
11 increases that are creating this affordability problem  
12 are in, to a certain extent, in whole or in part, I  
13 think is the language I used in -- in my report,  
14 export -- related to export investments, or related to  
15 exports.

16 And so there is a nexus; whether it's  
17 strong enough that the Board would consider it to fall  
18 within the -- the view -- the tight scope of cost  
19 causation that's described in the Order I think is  
20 entirely up to the Board to -- to determine. But --  
21 that -- that's one (1) point.

22 The second point is that -- and -- and  
23 as I think I said yesterday it's -- it's a somewhat  
24 confusing aspect. But if you can go back to my slide  
25 15, the second -- the quote in the second bullet



1 point, I think, means that -- that what the Board was  
2 saying is they were setting out what they wanted to  
3 see in a cost of service study. And they want to see  
4 a cost of service study that's very clean, without any  
5 implicit or explicit subsidies. But I don't see  
6 anything in the order that forecloses their own  
7 freedom in the -- in the GRA to apply any implicit or  
8 explicit subsidies they may choose to.

9           So you all understand your order far  
10 better than I do, you know. I'm -- I -- I don't know  
11 what preceded that order. I don't really know its  
12 context. I can just read the words on the page. And  
13 really, my point is that there are -- that's one (1)  
14 way to explain or to -- to -- that's one (1) way to  
15 express a choice to spread the costs over, to not  
16 limit them to the residential class, but there are  
17 others as well.

18           And what I was trying to say yesterday  
19 is that I think the Board's fundamental choice is  
20 really who should pay for this. And that the question  
21 about exactly how to fit that into the regulatory  
22 process and -- and in the most coherent way is  
23 entirely at their discretion.

24           MS. DAYNA STEINFELD: I'd like to stay  
25 on -- on this option that you've identified for a

1 moment, Mr. Raphals, and -- and perhaps unpack some of  
2 that helpful answer you just provided, starting with  
3 what I think was your first point, which is that the  
4 investments that are driving the rate increases are  
5 related to exports.

6                   That's a fair summary of the first  
7 point you made?

8                   MR. PHILIP RAPHALS: Yes.

9                   MS. DAYNA STEINFELD: And would you  
10 accept, subject to check, that the discussion about  
11 affordability programs in this province dates back to  
12 at least 2008 if not before?

13                   MR. PHILIP RAPHALS: I don't know  
14 that, but I'm -- subject to check it's probably  
15 correct.

16                   MS. DAYNA STEINFELD: And -- and  
17 similarly, and you can take that subject to check, the  
18 investments that we're now discussing came before this  
19 Board for review, at least with respect to the  
20 generating side and the interconnections with the  
21 States, in the needs for and alternatives review in --  
22 in 2014.

23                   Is that fair?

24                   MR. PHILIP RAPHALS: That's my  
25 understanding.

1 MS. DAYNA STEINFELD: So, Mr. Raphals,  
2 would it be a more direct cost causal connection to  
3 say that the costs driving an affordability program is  
4 the fact that there are ratepayers who require  
5 assistance paying their Hydro bills, and not  
6 necessarily the investments that are now under  
7 construction?

8 MR. PHILIP RAPHALS: Well, I mean,  
9 clearly the problem exists for many ratepayers today  
10 and has asked for some time. But whether we would be  
11 talking about it in the same way without the current  
12 proposal of 40 percent rate increases over the next  
13 six (6) years, I don't know. I think -- I think that  
14 the current context makes it a much more acute  
15 question, but I take your point that -- that the  
16 problem isn't brand-new and existed before Keeyask --  
17 the Keeyask project was on table. And so that would  
18 be -- that would soften the -- the cost causation  
19 aspect with respect to exports.

20 MS. DAYNA STEINFELD: And, Mr.  
21 Raphals, taking the second part of your previous  
22 answer to me, which related to the second bullet on  
23 the slide in front of us where you quote the Board's  
24 words about not muddying or muddling the cost of  
25 service study methodology.

1                   Would I be right in understanding that  
2 once the export revenues are shared across all of the  
3 classes as they are through the cost of service study,  
4 the revenues have already been allocated fully and  
5 there aren't any revenues left over that could be used  
6 to pay for or support other things?

7                   MR. PHILIP RAPHALS:   Well, indeed.  
8 But I -- I think that if one were to choose the export  
9 related cost of service study approach, the -- the  
10 mechanism would be to treat these costs as export  
11 related costs and deduct them from gross export  
12 revenues, so that the -- that amount which gets spread  
13 -- spread among all classes would be somewhat smaller.

14                  MS. DAYNA STEINFELD:   And thank you  
15 for that, Mr. Raphals. I think that's a -- a good  
16 segue into where I wanted to take you. You spoke  
17 yesterday about how the Board has already done that  
18 through Order 164/'16, and you gave the example of the  
19 affordable energy fund as well as a few other things.

20                  Do you -- do you recall that?

21                  MR. PHILIP RAPHALS:   Yes. Yes.

22                  MS. DAYNA STEINFELD:   So maybe just to  
23 help us illustrate that testimony you gave, Ms.  
24 Schubert, if we could turn to Order 164/'16, page 41,  
25 please. And starting -- well, at the top of the page

1 here, Mr. Raphals, I think this is what you were  
2 referencing in your testimony yesterday.

3                   And you'll agree with me that the top  
4 of the page discusses the water rentals and variable  
5 hydraulic operating and maintenance costs directly  
6 attributable to energy that is exported; correct?

7                   MR. PHILIP RAPHALS:    Yes.  Yeah.

8                   MS. DAYNA STEINFELD:    And the Board  
9 finds in that paragraph that there is a cost causation  
10 basis -- oh, sorry, Ms. Schubert, if we could just  
11 stay on that first paragraph -- is a cost causation  
12 basis for deducting those costs from export revenues.

13                   MR. PHILIP RAPHALS:    M-hm.  Yes.

14                   MS. DAYNA STEINFELD:    And the next  
15 paragraph is, I think, what you more specifically  
16 referenced yesterday.  The costs related to the AEF,  
17 which is the Affordable Energy Fund being deducted  
18 from export revenues.

19                   You see that there?

20                   MR. PHILIP RAPHALS:    Yes.

21                   MS. DAYNA STEINFELD:    And if we  
22 continue in that paragraph, I'll read it in for the  
23 record, the third full sentence says:

24                   "While the legislation requires the  
25                   AEF, Affordable Energy Fund, to be

1 established from export revenues,  
2 the Board notes that export revenues  
3 do not in actuality pay for those  
4 costs, as export prices are  
5 determined by the MISO market and  
6 bilateral contract negotiations.  
7 Therefore, the cost of the  
8 Affordable Energy Fund are borne by  
9 the domestic customer classes as the  
10 amount of the export revenues shared  
11 with these classes is reduced."

12 Do you see that there?

13 MR. PHILIP RAPHALS: Yes.

14 MS. DAYNA STEINFELD: And I'll -- I'll  
15 come back to that, but if we continue on to the next  
16 paragraph. I don't believe this was one (1) that you  
17 mentioned yesterday in your testimony, so we'll  
18 briefly look at it now. This is the paragraph where  
19 the Board discusses the uniform rate adjustment, which  
20 is short formed here to URA.

21 Do you see that there?

22 MR. PHILIP RAPHALS: Yes.

23 MS. DAYNA STEINFELD: And here, you'll  
24 agree with me, and I -- I can give you a moment to  
25 read the full paragraph. But about halfway through

1 the paragraph it says:

2 "The Board's view is that URA,  
3 uniform rate adjustment, is a matter  
4 of policy and that the costs of the  
5 URA are caused by policy rather than  
6 energy demand or the number of  
7 customers. The URA is a revenue  
8 responsibility transfer primarily  
9 from the residential class to other  
10 classes. There is no cost causation  
11 basis for deducting the URA from  
12 export revenue, nor does the  
13 legislation require such an  
14 approach."

15 And the last paragraph goes on to  
16 discuss the diesel zone.

17 Do you see that there, Mr. Raphals?

18 MR. PHILIP RAPHALS: Yes. Yes.

19 MS. DAYNA STEINFELD: And so when --  
20 when we look at this, Mr. Raphals, I'm just trying to  
21 understand your point about how the costs of an  
22 affordability program should be netted out from gross  
23 export revenue before those revenues are allocated to  
24 the domestic customer classes.

25 Is there -- is there a cost causal

1 basis for doing so?

2 MR. PHILIP RAPHALS: Well, first of  
3 all I'm going to -- I would -- I would say "could be,"  
4 and not -- not "should be." I -- I must say I'm a  
5 little bit perplexed by the sentence you read --

6

7 (BRIEF PAUSE)

8

9 MR. PHILIP RAPHALS: -- at the middle  
10 of the second paragraph:

11 "The Board notes that export  
12 revenues do not in actuality pay for  
13 those costs as export prices are  
14 determined by the MISO market and  
15 bilateral contract negotiations."

16 I'm not sure how to -- how to interpret  
17 that, because, yes, the export revenues are determined  
18 by the market price and by the volume. I would think  
19 the same thing is sort of true for the water rentals.  
20 You know, it -- it doesn't actually pay for it.

21 The question is, is this a cost that is  
22 directly attributable to -- I think -- I think that's  
23 the -- the point that's trying to be made. And so for  
24 the URA there's a clear determination that the URA  
25 really has nothing to do with exports. And so there



1 is no nexus. There is no reason to attribute it.

2                   The AEF, it doesn't quite say so. But  
3 the AEF costs are deducted from export revenues. I  
4 think I said yesterday that, reading between the  
5 lines, I thought I gleaned from this that the Board  
6 really would have rather not deduct the AEF, but it  
7 didn't have any choice. But -- but it is still  
8 deducted.

9                   So the question about whether these  
10 costs should be treated in the same way is really a  
11 question of to what extent the Board sees that it is  
12 within the COSS, is to what extent the Board sees that  
13 nexus between exports and these costs. And I see  
14 arguments in both directions frankly. The fact that  
15 this question was discussed before those investments  
16 does militate for, well, you know, it's -- it's not  
17 really export related.

18                   On the other hand, the fact that if --  
19 and again, there is -- I know there's a question here  
20 to what extent the projects currently under  
21 construction are export related. It seems clear to me  
22 from reading the record and other documents that they  
23 are in -- in large part or in part, depending on which  
24 one (1) we're talking about, export related. But I'm  
25 not in a position to precisely say, Yes, I think they

1 are 80 percent or whatever, you know.

2 I think that's -- again, you are all  
3 far more familiar with those matters than I am, and --  
4 and I would not presume to tell you what the right  
5 answer is. But insofar as you conclude that they are  
6 export related, I think there would be a logical path  
7 to saying they should be treated within the COSS on  
8 that same basis.

9 MS. DAYNA STEINFELD: Thank you, Mr.  
10 Raphals. I -- I need to switch gears a little bit.  
11 You had a -- a conversation yesterday with Dr.  
12 Williams, and I -- I think it also relates to your  
13 slide 23, related to what the next steps are in your  
14 view. And that's the -- the area I'm going to explore  
15 a little bit with you now. You acknowledged to Ms.  
16 Fernandes this morning that the federal government has  
17 a jurisdictional role on reserve.

18 And I'm not asking you to give me a  
19 legal opinion about that, but generally factually  
20 understand that to be true; correct?

21 MR. PHILIP RAPHALS: Yeah.

22 MS. DAYNA STEINFELD: And in terms of  
23 the next steps that you've identified on this slide  
24 for the way forward for affordability mechanisms, your  
25 recommendation to this Board is that after Manitoba

1 Hydro presents a ready to implement affordability  
2 rate, a working group should be convened; correct?

3 MR. PHILIP RAPHALS: No, that's a  
4 misunderstanding, perhaps my fault. No, I did not  
5 intend these to be sequential.

6 MS. DAYNA STEINFELD: Oh.

7 MR. PHILIP RAPHALS: My understanding  
8 is it is the working group that will help Manitoba  
9 Hydro develop the details of that ready to implement  
10 affordability rate.

11 MS. DAYNA STEINFELD: Okay.

12 MR. PHILIP RAPHALS: Thank you for the  
13 opportunity to clarify that.

14 MS. DAYNA STEINFELD: Yeah, that's --  
15 that's a helpful clarification for myself as well. So  
16 these things would be --

17 MR. PHILIP RAPHALS: Yeah --

18 MS. DAYNA STEINFELD: -- they support  
19 the -- the recommendations today.

20 MR. PHILIP RAPHALS: It's a good -- I  
21 hadn't realized that it -- that it could be read that  
22 way. But, no, it was sort of a -- maybe if the second  
23 bullet had been indented it would've been clearer.  
24 But the -- precisely because all the things that I  
25 discussed this morning that are all these very nasty

1 details that have to be worked out, I think it's  
2 important to do that in -- in cooperation with a  
3 variety of other participants in a working group. But  
4 that at the end of the day that will result in a full  
5 -- a full rate proposal.

6 MS. DAYNA STEINFELD: Would an --  
7 another option to be -- to do it the way I had  
8 understood you to be saying, which would be for the  
9 Board to say Manitoba Hydro should take the  
10 information that's come out of the Bill Affordability  
11 Working Group that's already happened, and the  
12 evidence in this hearing from witnesses like Mr.  
13 Chernick, and come back with their affordability rate  
14 that would then go to a working group for study in  
15 terms of some of the eligibility and administrative  
16 issues that you were discussing your testimony?

17 MR. PHILIP RAPHALS: Frankly, I think  
18 that would not be the best way to go about it.  
19 Precisely because of the -- the interactions between  
20 the two (2). You know, if it -- you know, if in the  
21 abstract one were to decide that we think 8 percent  
22 energy poverty should be the threshold, but then you  
23 look at the tools that are available and it's actually  
24 -- would be very easy to determine 7 percent or 9  
25 percent, but very hard to determine 8 percent, then --

1 then maybe -- you know, there's -- there's a lot of  
2 compromise with reality that -- that will get brought  
3 out.

4           And, I mean, I do think it would be  
5 appropriate for the Board at this stage to indicate a  
6 preference, how it sees that the different approaches,  
7 one (1) or perhaps two (2). I mean, yesterday I  
8 expressed a lot of interest in Mr. Chernick's  
9 proposal. This morning in the cross-examination, I  
10 was reminded of the fixed -- the -- a fixed credit  
11 approach that used in Colorado, which was -- you know,  
12 also looked at by the working group, which also is --  
13 is quite interesting.

14           So I think that with as much guidance  
15 as possible from the Board about to -- to narrow the  
16 approaches, that a solution has to developed and the  
17 details of the threshold and the adminis -- and the  
18 eligibility choices will affect very much the quantum  
19 of the lost revenues. So again, if there's direction  
20 from the Board as to how that cost should be spread,  
21 whether it's within one (1) class or whatever, I think  
22 that's important to know in advance.

23           And juggling all these things together,  
24 I think these -- these are all elements. And by the  
25 way, also with the additional information that

1 hopefully will be developed very rapidly about First  
2 Nations, in particular on reserve, which is missing  
3 and -- and a really critical piece. All these things  
4 together can allow a fully worked out proposal to be  
5 birthed.

6 MS. DAYNA STEINFELD: And staying on  
7 the working group for a moment, for any on reserve  
8 aspect of the affordability program should the federal  
9 government have involvement in the workings of that  
10 working group?

11 MR. PHILIP RAPHALS: I think it would  
12 be extremely desirable for the federal government to  
13 participate. From what I've seen elsewhere, I'm not  
14 practically optimistic that they will. But I  
15 certainly hope that they would.

16 MS. DAYNA STEINFELD: And that's  
17 exactly what I was hoping to explore with you, Mr.  
18 Raphals, knowing that you've had experience in Quebec,  
19 as well as in other provinces.

20 So you seen an example in -- in another  
21 jurisdiction where the -- let's call it three (3)  
22 different levels of government have come to the table?  
23 So the federal government, the provincial government,  
24 as well as First Nations political governance? Has --  
25 has that happened in your experience?

1                   MR. PHILIP RAPHALS:    I'd have to say I  
2 -- I don't really have relative -- relevant experience  
3 in that specifically.  I mean, I can't really speak to  
4 that.  In Quebec the situation is quite different,  
5 because the James Bay and Northern Agree -- Agreement  
6 essentially replaces federal jurisdiction about -- on  
7 a large number of these issues.

8                   And in reality, Hydro Quebec's  
9 administration of the off grid communities which are  
10 in those territories have some communication, but I  
11 don't think it's a very intimate relationship.  Mr.  
12 Witt (phonetic) could probably speak better to this  
13 than I can.  But from -- from what I saw of the issues  
14 in Newfoundland and Labrador the federal government  
15 seemed to not be very interested in it.

16                   MS. DAYNA STEINFELD:   And -- and fair  
17 enough.  And -- and if you don't have more information  
18 than that then we -- we won't go beyond that.

19                   But staying on -- on this general  
20 question, how would you approach the broader issue of  
21 ratepayer engagement in that pro -- in that process?  
22 Is there a -- a lesson learned in terms of how to  
23 bring in the potentially affected ratepayers as well  
24 as maybe non-eligible ratepayers who might have to  
25 absorb some of the -- the cost?

1 MR. PHILIP RAPHALS: You -- you mean  
2 with respect to this working group?

3 MS. DAYNA STEINFELD: Yes.

4 MR. PHILIP RAPHALS: You know your  
5 communities better than I do. I know there are a lot  
6 of Intervenors here who represent these different  
7 participants, and I assume that they would -- would  
8 want to be involved. But, you know, a lot of the work  
9 is done -- that needs to be done, I think, is very  
10 nitty gritty and boring and detail oriented, and --  
11 and not policy.

12 But -- but how to apply -- and I think  
13 it would -- given especially the timing issues that  
14 were raised this morning, I would hope that a process  
15 could be developed that -- that is efficient, it can  
16 move forward and consults but doesn't -- I'll just  
17 leave it at that, is efficient and -- and moves  
18 forward quickly and consults as necessary.

19

20 (BRIEF PAUSE)

21

22 MS. DAYNA STEINFELD: I'm going to  
23 maybe back up a little bit. And I apologize for  
24 jumping around. But I was dealing with next steps,  
25 but I'd like to take a step back and talk about some



1 of the specifics around eligibility. If -- Ms.  
2 Schubert, if you could please turn one (1) slide  
3 forward to the slide 24. And perhaps just for  
4 vacation purposes from some of the testimony that you  
5 gave yesterday, Mr. Raphals, on this slide you discuss  
6 the eligibility criteria that you would suggest be  
7 explored or you would recommend.

8                   And one (1) of the things that you have  
9 talked about is that at this time should be limited to  
10 energy poor who use electric space heating; correct?

11                   MR. PHILIP RAPHALS:   Based on my  
12 understanding of the situation, I think that's  
13 probably a fair choice.

14                   MS. DAYNA STEINFELD:   And that your  
15 understanding of the situation is, in part, that there  
16 would be considerably more people who are energy poor  
17 who heat -- who heat with electric space heating than  
18 otherwise?

19                   MR. PHILIP RAPHALS:   I suspect, but  
20 unfortunately the data wasn't presented, that a very  
21 large percentage of the energy poor do have electric  
22 space heating is one (1) component. And the other is  
23 that, assuming that -- that some percentage heat with  
24 -- with another fuel, that the solution to their  
25 energy poverty probably lies with help with respect to

1 that other fuel and not with respect to their  
2 electricity bill.

3 MS. DAYNA STEINFELD: And -- and --

4 MR. PHILIP RAPHALS: And, therefore,  
5 excluding them from the electricity rate would not be  
6 unfair.

7 MS. DAYNA STEINFELD: And purely just  
8 to try to put some data to that first concept, if --  
9 if we could please bring up Information Request  
10 PUB/MH-Round 1-125(a) attachment. And it's page 188  
11 of 250. And, Mr. Raphals, what we see here is from  
12 2014 residential survey demographics. And I'll  
13 suggest to you that in the first column on the -- in  
14 the first row what we see is a total of the  
15 residential consumers at that point in time in the  
16 nature of four hundred and sixty-six thousand  
17 (466,000).

18 MR. PHILIP RAPHALS: Okay.

19 MS. DAYNA STEINFELD: Do you accept  
20 that?

21 MR. PHILIP RAPHALS: Yes. Oh, sorry.  
22 Yes.

23 MS. DAYNA STEINFELD: And then if we  
24 look down to the middle of this chart you'll see a  
25 heading titled "space heat fuel."

1 Do you see that there?

2 MR. PHILIP RAPHALS: Yes.

3 MS. DAYNA STEINFELD: And I'll suggest  
4 to you, and you can double check this and -- and  
5 advise your counsel whether you're comfortable with  
6 this after the fact, that the numbers that are in kind  
7 of a burgundy colour give the breakdown of the total  
8 numbers of residential customers who heat with  
9 electric heat, natural gas heat, other fuel, and  
10 shared.

11 Do you accept that?

12 MR. PHILIP RAPHALS: Yes. Could you  
13 just scroll down the page a little bit further so I can  
14 see the title? No, up. Excuse me. Up. Okay. Thank  
15 you.

16 MS. DAYNA STEINFELD: and it's perfect  
17 to just leave it right there, Ms. Schubert.

18 MR. PHILIP RAPHALS: Yeah.

19 MS. DAYNA STEINFELD: And so what I  
20 understand this chart to be showing, Mr. Raphals, is  
21 that if you stay on that space heat fuel section and -  
22 - and carry it over, for example, to the last column,  
23 we have the percentage of electric heat customers who  
24 are energy poor over the 10 percent threshold listed  
25 at 8.9 percent.

1 Do you see that?

2 MR. PHILIP RAPHALS: I'm sorry. Would  
3 you repeat the question?

4 MS. DAYNA STEINFELD: So if you are in  
5 the space heat fuel section of the chart --

6 MR. PHILIP RAPHALS: Yes.

7 MS. DAYNA STEINFELD: -- and you go  
8 down a row to where it says "electric heat" --

9 MR. PHILIP RAPHALS: Yes.

10 MS. DAYNA STEINFELD: -- you have the  
11 total number of residential customers who heat with  
12 electric heat.

13 MR. PHILIP RAPHALS: M-hm.

14 MS. DAYNA STEINFELD: And then if you  
15 follow that row through to the end you have a  
16 percentage of that total number that is the percentage  
17 of --

18 MR. PHILIP RAPHALS: Yes.

19 MS. DAYNA STEINFELD: -- residential  
20 electric heat customers who are energy poor over 10  
21 percent.

22 MR. PHILIP RAPHALS: Yes.

23 MS. DAYNA STEINFELD: And I'm going to  
24 give this to you, subject to check, but I will tell  
25 you that an engineer did this math for me, so it

1 should be fine. But what I'm going to suggest to you  
2 is that what this chart shows in terms of numbers is  
3 the number of electric heat customers who are energy  
4 poor in the 6 percent to 8 percent threshold is  
5 sixteen thousand four hundred and seventeen (16,417)  
6 based on this data. And the number of natural gas  
7 heat who are in the 6 to 8 percent category is fifteen  
8 thousand three hundred and forty-seven (15,347).

9 Will you accept that subject to check?

10 MR. PHILIP RAPHALS: Sorry. Could you  
11 repeat those two (2) numbers for me?

12 MS. DAYNA STEINFELD: Yeah. So the  
13 first number for electric heat in the 6 to 8 percent  
14 energy poor or energy income burden as it's listed  
15 here works out to sixteen thousand four hundred and  
16 seventeen (16,417).

17 MR. PHILIP RAPHALS: Okay.

18 MS. DAYNA STEINFELD: And for natural  
19 gas heat in the 6 to -- 6 percent to 8 percent  
20 category it works out to fifteen thousand three  
21 hundred and forty-seven (15,347).

22 MR. PHILIP RAPHALS: Okay.

23 MS. DAYNA STEINFELD: And similarly,  
24 for the over 10 percent, the number of people in --  
25 that are energy poor over 10 percent in the electric

1 heat category is sixteen thousand and fifty-six  
2 (16,056).

3 MR. PHILIP RAPHALS: Yes.

4 MS. DAYNA STEINFELD: And the natural  
5 gas heat who are over 10 percent is three thousand  
6 four hundred and eleven (3,411).

7 MR. PHILIP RAPHALS: Okay.

8 MS. DAYNA STEINFELD: I don't have a  
9 question for you on that, but just that -- because it  
10 came out of the testimony yesterday I thought it might  
11 be helpful to put data --

12 MR. PHILIP RAPHALS: Well, I  
13 appreciate you bringing it to my attention. I had not  
14 seen this page, and I wasn't aware these -- these data  
15 were present. I would observe, if one were to add  
16 together the columns 6 to 8, 8 to 10, and over 10 --  
17 in other words, all of the percentage which is over 6  
18 percent for the electric heat side, it adds up to  
19 around 18 -- 22.4 percent. And for the natural gas it  
20 adds up to around 10 percent.

21 MS. DAYNA STEINFELD: I'll take that,  
22 subject to check, with --

23 MR. PHILIP RAPHALS: Please do, yes.

24 MS. DAYNA STEINFELD: -- my  
25 engineering friends. But your -- to put it in a

1 summary that doesn't rely so heavily on numbers, what  
2 you're suggesting to the Board is that if you look at  
3 the energy poor as a bigger group of sort of a 6 to  
4 over 10 percent --

5 MR. PHILIP RAPHALS: Over 6.

6 MS. DAYNA STEINFELD: -- over 6, that  
7 the electric heat members would be where you would  
8 expect them to be, which would be higher than the  
9 natural gas.

10 MR. PHILIP RAPHALS: Yeah, they seem  
11 to be around twice as high. And then -- but it's a  
12 smaller -- we'd have to -- we'd have to do the math to  
13 -- to -- which I haven't done -- to -- to really get  
14 it right. So it does confirm what I thought, but it  
15 doesn't actually answer the question -- doesn't  
16 precisely answer the question of what percentage of  
17 the -- well, I guess it gets very close to answering  
18 the question of what percentage of the over 6 percent  
19 or over 10 percent numbers are electric heating  
20 customers.

21 But the other data point that I think  
22 would be important to know is --

23

24 (BRIEF PAUSE)

25

1 MR. PHILIP RAPHALS: -- so the -- the  
2 natural gas consumers also consume electricity. And  
3 so their energy burden is not just their natural gas  
4 heating, but it's a combination of their natural gas  
5 bill and their electric bill and maybe the gasoline  
6 bill. I don't know how the study addressed that. So  
7 there -- there's a lot to -- to know, to really  
8 understand what these numbers mean, but I'm very glad  
9 to see that they -- that it's the same.

10 MS. DAYNA STEINFELD: Thank you, Mr.  
11 Raphals. And -- and one (1) more thing, just while  
12 we're talking about data and the study. The evidence  
13 in this proceeding -- and -- and I can take you to the  
14 transcript if you're not familiar with it, but is that  
15 Manitoba Hydro recently performed Indigenous Voices  
16 Omnibus survey, and is now conducting another  
17 residential energy use survey, and with that survey is  
18 seeking to increase the response rates from on reserve  
19 First Nation customers.

20 Are you familiar with that evidence?

21 MR. PHILIP RAPHALS: I -- I did see  
22 the Indigenous Voices. I wasn't really familiar with  
23 the follow-up that you described.

24 MS. DAYNA STEINFELD: And I -- I think  
25 the -- and I will try to fairly summarize Manitoba



1 Hydro's evidence on this. I think it is a new  
2 residential energy use survey, because the last one  
3 (1) was 2014. But there are increased efforts at  
4 increasing First Nations participation.

5 Would you take that subject to check?

6 MR. PHILIP RAPHALS: Yes, I'd be glad  
7 to hear it.

8 MS. DAYNA STEINFELD: Would those be  
9 the examples of the further types of study or data  
10 collection that we were discussing earlier that might  
11 help fill in some of the gaps in our knowledge on  
12 energy poverty on reserves?

13 MR. PHILIP RAPHALS: Well, it could  
14 be, but you'd have to know really what's being done  
15 and is it -- is it just going to make it a tiny bit or  
16 is it going to make it a lot better. Yeah, you  
17 wouldn't want to get -- get to the same place once  
18 that study is done and say, Well, actually, you know,  
19 it was -- it is a slight improvement over the previous  
20 version, but it still doesn't tell us what we need to  
21 know.

22 It seems to me that given the  
23 importance of the issue and the attention that it's  
24 gotten that it would be desirable to have some -- some  
25 exchange along the way to make sure that the

1 information being gathered is -- is what's really  
2 needed.

3 MS. DAYNA STEINFELD: And if you can't  
4 answer this because -- accepting that you just  
5 explained that you don't have that much familiarity  
6 with what Manitoba Hydro is doing.

7 But are there ways that you would  
8 suggest Manitoba Hydro improve its studies on that  
9 specific area, and including any issue of survey  
10 participation?

11 MR. PHILIP RAPHALS: I -- I'm afraid I  
12 don't really have any recommendations to offer.

13 MS. DAYNA STEINFELD: And -- fair  
14 enough, Mr. Raphals. I have one (1) last area of --  
15 of questions for you. And it relates to your slide  
16 number 14. And looking at the second bullet and the  
17 second sub-bullet of that bullet, which says, "There  
18 are also strong arguments for ratepayer support." And  
19 you say here, "There are no other options in the  
20 absence of government action."

21 Do you see that on the slide?

22 MR. PHILIP RAPHALS: Yes.

23 MS. DAYNA STEINFELD: And, Mr.  
24 Raphals, why is it the case that in the absence of  
25 government action, the appropriate step is to do

1 something at the utility level?

2 MR. PHILIP RAPHALS: Are you -- I  
3 guess I can't ask you a question can I?

4 MS. DAYNA STEINFELD: Well, here, I --  
5 I'll re -- I'll rephrase it.

6 So if -- if a Manitoba Hydro  
7 affordability program or rate is ineffective in, say,  
8 that it isn't able to reach the intended customers,  
9 and at the same time is driving up costs of other  
10 ratepayers, is that in the best interests of  
11 ratepayers, just because there's an absence of  
12 government action?

13 MR. PHILIP RAPHALS: Well, it may be  
14 that a Manitoba Hydro affordability rate would not  
15 reach all of the intended customers. But if it  
16 creates lost revenue then it -- it presumably reached  
17 some of them. I assume the program would be carefully  
18 designed to not include people who don't belong there.  
19 That would clearly be counterproductive.

20 But as long as it is -- and hopefully  
21 doing a -- doing a significant -- going a significant  
22 part of the way in alleviating these -- in mitigating  
23 these affordability problems, that would be doing what  
24 it's supposed to do. I -- I don't -- maybe I'm not  
25 understanding your question properly.

1 MS. DAYNA STEINFELD: No, I think  
2 you've -- I think you've answered my question. If --  
3 if you want to clarify after you've had a chance to --  
4 to think about it you can let us know.

5 MR. PHILIP RAPHALS: I -- I mean, I  
6 don't know of any other party if -- other than  
7 government that could step in to solve -- to solve  
8 this problem. And in the same way that utilities -- I  
9 mean, utility -- the monopoly role of utilities is --  
10 is broad and it brings with it responsibilities that  
11 other kinds of businesses don't have. And so it seems  
12 to me very appropriate that a -- that a monopoly  
13 utility, in particular a Crown utility, should be  
14 asked to step in to -- to fill this kind of a role.

15 MS. DAYNA STEINFELD: So, in essence,  
16 do something is better than do nothing, even if  
17 participation rates are low and there are associated  
18 costs to other groups of ratepayers?

19 MR. PHILIP RAPHALS: If -- if  
20 participation rates really are low than the costs will  
21 be very low as well. I hope that participation rates  
22 will not be low. I hope they will be high with  
23 respect to the target population. And that efforts  
24 will be made to -- to make that possible. So -- but,  
25 yes, I think that the -- if it's -- if it does what

1 it's supposed to do is then that would be a -- a good  
2 thing.

3 MS. DAYNA STEINFELD: And you did have  
4 a discussion yesterday with Dr. Williams about  
5 participation rates, so I don't think we -- we need to  
6 go there. I think we have your testimony on that  
7 point. If you'd just give me one (1) moment. Thank  
8 you, Mr. Raphals. Mr. Chair, those are my questions  
9 for this witness.

10 THE CHAIRPERSON: Thank you. I'll ask  
11 the panel if they have any questions. Any questions?  
12 No?

13

14 (BRIEF PAUSE)

15

16 BOARD MEMBER MCKAY: I think I only  
17 want to make -- well, confirm one (1) item. The PRA  
18 report, you're aware there was only thirty-four (34)  
19 First Nation respondents in that report?

20 MR. PHILIP RAPHALS: Yes.

21 BOARD MEMBER MCKAY: That's all.  
22 Thank you.

23 THE CHAIRPERSON: Mr. Raphals, I have  
24 a few questions. Kristen, can we go to screen 15 of  
25 the presentation. Mr. Raphals, under the first big

1 bullet we have -- the -- the second smaller bullet  
2 says, "All customer classes benefit from export  
3 revenues."

4 Is that correct?

5 MR. PHILIP RAPHALS: That's my  
6 understanding.

7 THE CHAIRPERSON: Okay. If I changed  
8 that both to say, "All customer classes benefit from  
9 revenues from any sources," would that be accurate as  
10 well?

11 MR. PHILIP RAPHALS: Yes.

12 THE CHAIRPERSON: If -- if -- a  
13 hypothetical -- if the -- the future of Keeyask is to  
14 provide for domestic -- not -- if Keeyask is providing  
15 for domestic customers and export revenues decline  
16 because it's -- because the energy is used  
17 domestically, how does that affect the concept of  
18 taking it from export revenues?

19 MR. PHILIP RAPHALS: I'm not really  
20 familiar with the forecast supply demand curves,  
21 either from the NFAT or -- or today's. If -- if the -  
22 - your outlook is that within a relatively short time  
23 that Keeyask will be primarily devoted to serving  
24 domestic needs, then I think this nexus with export  
25 revenues would fade away.

1 THE CHAIRPERSON: Okay. Can we go to  
2 screen 23, Kristen. 23, yeah. As I look into the  
3 second bullet, the sub -- sorry the -- the second  
4 bullet is instead the order state and you clarified  
5 there is a timing to this -- any priority.

6 But as I look at it in -- in terms of  
7 this bullet, essentially what you're saying is this is  
8 a -- Manitoba Hydro should be dealing with the -- with  
9 the energy poverty. This -- this presumes, as I read  
10 it, no role for the provincial government.

11 Am I correct in -- in reading it that  
12 way?

13 MR. PHILIP RAPHALS: Well, as I  
14 explained earlier, I think the provincial government  
15 has done what it has done and will do what it will do.  
16 And it's -- none of us are in a position, unless  
17 perhaps the -- I don't know if the Board has an  
18 opportunity to issue advice and to make  
19 recommendations to the government; that could be an  
20 avenue as well.

21 But -- but in -- in the normal affairs  
22 of regulation, you know, the -- the government doesn't  
23 respond to your -- you're not in a position to tell  
24 the government what to do. And so, as I described  
25 earlier, I think that the -- the where -- the way I'd

1 suggest to look at this is to simply take it as a  
2 given what is there on the government side and ask  
3 what could or should be done in that context.

4 THE CHAIRPERSON: Okay. The programs  
5 that we've been -- that have been put before us  
6 include Ontario. That's -- that's a provincial  
7 government program.

8 MR. PHILIP RAPHALS: Yes.

9 THE CHAIRPERSON: Colorado, which I  
10 understand from the information provided is a -- is a  
11 state run program.

12 MR. PHILIP RAPHALS: I'm not aware of  
13 that.

14 THE CHAIRPERSON: I -- I believe it's  
15 a matter of credit.

16 MR. PHILIP RAPHALS: Isn't -- I mean,  
17 the -- the information I have in front of me says,  
18 "public service company of Colorado," which is a  
19 utility.

20 THE CHAIRPERSON: Yeah --

21 MR. PHILIP RAPHALS: But I don't know.

22 THE CHAIRPERSON: Okay. Okay. In  
23 terms of the eligibility criteria, to your knowledge  
24 would that include personal information?

25 MR. PHILIP RAPHALS: Is that fair to



1 say there is a -- there are complicated trade-offs  
2 between -- I think -- if we go to the -- to the next  
3 slide. The last three (3) small bullets. That  
4 ideally one (1) wants criteria that are strict in  
5 order to avoid over inclusion that are easy to apply  
6 to encourage participation and easily -- easy to  
7 verify.

8                   So if you had criteria that required  
9 filling out complicated forms with a lot of personal  
10 information, I think that would be a significant  
11 barrier to participa -- participation. It would be  
12 very good for the -- on the strict side for really  
13 making sure exactly who is who. But it would make --  
14 make the administrative costs high and the barriers to  
15 participation high as well. So I think if -- if that  
16 can be avoided that would be much preferable.

17                   THE CHAIRPERSON: Okay. If -- if you  
18 fall into the other energy poor households, what  
19 eligibility criteria would you include that would not  
20 be income based?

21                   MR. PHILIP RAPHALS: I'm -- I'm sorry,  
22 I missed the beginning of the -- of the question. If  
23 you are --

24                   THE CHAIRPERSON: If you fell within  
25 the other energy -- other energy poor households --

1 with First Nations, I understand it --

2 MR. PHILIP RAPHALS: Oh, yeah. Okay.

3 Yeah, yeah.

4 THE CHAIRPERSON: -- because there are  
5 defining documentation and things of that nature.

6 MR. PHILIP RAPHALS: Yes.

7 THE CHAIRPERSON: Or you could -- you  
8 -- you know residences.

9 MR. PHILIP RAPHALS: Right.

10 THE CHAIRPERSON: If you do not live  
11 on a First Nation and you fall under other energy poor  
12 households, would not one (1) of the eligibility  
13 criteria be income?

14 MR. PHILIP RAPHALS: Definitely. But  
15 that can be assessed, either directly or indirectly.  
16 And I think the example of the BC DSM regulation that  
17 was put forward yesterday is an inter -- interesting  
18 example of a way to design a program that essentially  
19 addresses income, but without -- without asking  
20 exactly what is your income and prove it.

21 THE CHAIRPERSON: Okay. Thank you  
22 very much, Mr. Raphals. Mr. Luk, do you have any re-  
23 examination?

24 MR. SENWUNG LUK: No, Mr. Chair. I  
25 don't.

1 THE CHAIRPERSON: Okay. So I have a  
2 question before we break, which is I know that you and  
3 Mr. -- Dr. Williams were in discussions yesterday.  
4 I'm just wondering if there's any information that  
5 should be going on the record, so that all the parties  
6 have access to the it. Ms. Dilay...?

7 MS. KATRINE DILAY: So I can advise  
8 that Mr. Luk and Dr. Williams and myself have  
9 discussed, and we've decided, I believe, and Mr. Luk  
10 can correct me, that there will be no further  
11 undertaking on the record.

12 THE CHAIRPERSON: Thank you.

13 MR. SENWUNG LUK: I confirm that.

14 THE CHAIRPERSON: Thank you. Mr.  
15 Raphals, thank you very much for your attendance. It  
16 was -- it was important to hear, and we appreciate the  
17 time and effort.

18 We're going to take a lengthy break  
19 now, I believe, as we're waiting for someone to fly in  
20 to provide evidence this afternoon. So we are going  
21 to break until 12:30. Thank you very much. Thank  
22 you.

23

24 (PANEL STANDS DOWN)

25

1 --- Upon recessing at 10:38 a.m.

2 --- Upon resuming at 12:32 p.m.

3

4 THE CHAIRPERSON: Good afternoon. If  
5 we could resume now. The one warning I would give  
6 everyone is we have a very tight timeframe this  
7 afternoon as someone needs to catch a flight, so we're  
8 -- I'm going to try and keep everybody on the schedule  
9 as before us.

10 I was going to ask, do we have any  
11 exhibits? Nothing, okay.

12 Mr. Monnin...?

13 MR. CHRISTIAN MONNIN: Thank you, Mr.  
14 Chair, members of the Board. As you know, this is the  
15 presentation for General Service Small, General  
16 Service Medium and Keystone Agriculture Producers. I  
17 have with me, Mr. A.J. Goulding who will be affirmed  
18 and be -- be providing his opinion evidence today. To  
19 his left is Mr. Jarome Leslie. We will ask for him to  
20 be sworn in as well in order to just provide fact  
21 evidence support to -- to Mr. Goulding.

22 We also have some cleanup to do with  
23 the exhibits on the list. There is a London Economics  
24 report, which is found at GSS/GSM-9. In discussions  
25 with, Mr. Simonsen, we -- there's also be added an

1 errata sheet dated November 3rd, 2017 and signed by  
2 Mr. Goulding which was provided to the Board and all  
3 parties on Friday November 3rd, 2017, and that would  
4 be GSS/GSM-9-1.

5

6 --- EXHIBIT NO. GSS/GSM-9-1: Errata sheet dated  
7 November 3rd, 2017 re  
8 London Economics Report.

9

10 MR. CHRISTIAN MONNIN: And in  
11 companion with that errata sheet was an errata version  
12 of the report which was also provided to the Board and  
13 the parties on November 3rd, 2017, and that will be  
14 GSS/GSM-9-2. Hard copies have been provided to the  
15 Board and for members of the Panel. There are some  
16 additional hard copies here.

17

18 --- EXHIBIT NO. GSS/GSM-9-2: Errata version of the  
19 London Economics Report.

20

21 MR. CHRISTIAN MONNIN: We also have  
22 hard copies of the presentation and we'll be  
23 introducing that as GSS/GSM-13.

24

25 --- EXHIBIT NO. GSS/GSM-13: Panel's Presentation.

1 MR. KURT SIMONSEN: Thank you very  
2 much.

3 MR. CHRISTIAN MONNIN: There are some  
4 hard copies in the back, if anyone wants a copy for  
5 some -- if anyone wants a copy.

6 Being mindful of the time, Mr. -- Mr.  
7 Chair, I recognize that Mr. Goulding's has already  
8 been argument qualified. So I will not proceed with  
9 those questions. However, I do want to ask him a few  
10 questions with respect to the scope of his retainer,  
11 if that's okay.

12 THE CHAIRPERSON: Sorry, I think that  
13 --

14 MR. CHRISTIAN MONNIN: Sorry, he needs  
15 to be sworn -- affirmed, rather.

16 THE CHAIRPERSON: Thank you.

17

18 GASS/GSM/KAP PANEL:

19 A.J. GOULDING, Affirmed

20 JAROME LESLLIE, Sworn

21

22 EXAMINATION-IN-CHIEF BY MR. CHRISTIAN MONNIN:

23 MR. CHRISTIAN MONNIN: Mr. Goulding,  
24 you are president -- you are the president of London  
25 Economics International, is that correct?

1 MR. A.J. GOULDING: Yes.

2 MR. CHRISTIAN MONNIN: And, sir, you  
3 bring over twenty (20) years of experience and  
4 expertise involving electricity and natural gas  
5 markets; is that correct?

6 MR. A.J. GOULDING: Yes.

7 MR. CHRISTIAN MONNIN: London  
8 Economics is an international consulting firm focused  
9 on finance, economic and strategic -- strategic  
10 consulting to the energy and infrastructure  
11 industries; is that correct?

12 MR. A.J. GOULDING: Yes.

13 MR. CHRISTIAN MONNIN: Sir, London  
14 Economics International was retained by my firm Hill  
15 Sokalski Walsh Olson LLP; is that correct?

16 MR. A.J. GOULDING: Yes.

17 MR. LORNE MIDFORD: And you were  
18 advised by me that London Economics International is  
19 being retained to assist the Public Utilities Board  
20 with respect to the intervention of the general  
21 service small and general service medium customer  
22 class; is that correct?

23 MR. A.J. GOULDING: Yes.

24 MR. CHRISTIAN MONNIN: And  
25 subsequently you were revised by me that London

1 Economics International was being retained to assist  
2 the Public Utilities Board with respect to the  
3 intervention of Keystone Agriculture Producers; is  
4 that correct?

5 MR. A.J. GOULDING: Yes.

6 MR. CHRISTIAN MONNIN: And, sir, when  
7 you're retained by Hill Sokalski Walsh Olson, you were  
8 advised by me that London Economics International was  
9 to use its independent judgment regarding the issues  
10 and scope in these proceedings, and focus on the  
11 issues which had the greatest impact on the customer  
12 classes and intervening parties represented by Hill  
13 Sokalski Walsh Olson; is that correct?

14 MR. A.J. GOULDING: Yes.

15 MR. CHRISTIAN MONNIN: And, sir, you  
16 were advised by me and understood that you were to  
17 provide opinion evidence that is fair, objective, and  
18 nonpartisan; is that correct?

19 MR. A.J. GOULDING: Yes.

20 MR. CHRISTIAN MONNIN: And in terms of  
21 London Economics, sir, you are responsible for the  
22 oversight and preparation of the report which -- the  
23 report, the errata sheet, the revised report, the  
24 Information Requests and Information Responses; is  
25 that correct?



1 MR. A.J. GOULDING: Yes.

2 MR. CHRISTIAN MONNIN: And to the best  
3 your knowledge, the information contained in those  
4 materials and those documents is accurate to the best  
5 your knowledge and ability?

6 MR. A.J. GOULDING: That's correct.

7 MR. CHRISTIAN MONNIN: And you  
8 received some assistance from your colleagues at  
9 London Economics International regarding the  
10 preparation of these documents; is that correct?

11 MR. A.J. GOULDING: Yes.

12 MR. CHRISTIAN MONNIN: And recognizing  
13 the role played by your colleagues, this information  
14 is accurate to the best your knowledge and ability?

15 MR. A.J. GOULDING: Yes.

16 MR. CHRISTIAN MONNIN: Mr. Goulding,  
17 please proceed with your presentation.

18 MR. A.J. GOULDING: Okay. Thank you.  
19 It's a pleasure to be here again in -- in Winnipeg.  
20 I'd like to go over briefly some of the themes from  
21 our report and -- and if -- this is going be organized  
22 based on a few key messages: looking at rate increase  
23 impacts; exploring issues associated with the capital  
24 plan; discussing operational efficiencies; and then  
25 some concluding remarks.

1                   So as a reminder, the customer classes  
2 that we were asked to work with represent approx --  
3 approximately 30 percent of the total revenue  
4 requirement which -- which means that they are an  
5 important part of the overall revenue that Manitoba  
6 Hydro receives and their -- their views are -- their -  
7 - sorry, their interests need to be presented. In  
8 September our scope was expanded to include key issues  
9 for Keystone Agricultural Producers.

10                   So, I'd like to reiterate some of our  
11 key findings. Overall, we suggest that the rate  
12 increase should be held in abeyance until further  
13 evidence is submitted, including comprehensive macro  
14 economic modelling, an independent analysis of  
15 alternatives and justification for continuing with  
16 Keeyask, and an independent review of Manitoba Hydro  
17 costs, staffing and operating procedures.

18                   Our key findings include the following:  
19 That it's important to consider the compound impact of  
20 this request and the fact that it is bundled with a  
21 view that there are going to be similar requests in  
22 the future. The ratepayers in the GSS and GSM class  
23 will face harm from the rate increase. Furthermore,  
24 rates in key jurisdictions that compete with Manitoba  
25 in various ways may not increase as -- as fast. The

1 size of the rate increase we believe could be reduced.  
2 And we observe that our customers would find it  
3 difficult to justify making investments that had  
4 negative impacts for nearly two (2) decades. They  
5 would certainly be exploring other alternatives. And  
6 finally, that the pace of the rate increases should be  
7 slowed.

8                   Now, we want to point out, on an  
9 illustrative basis, how these impact -- how the rate  
10 increases would practically impact various customer  
11 classes. And so we examined the impact of five (5)  
12 years of increases at -- at the proposed level. And  
13 we note that over that period -- when we get to the  
14 end of that period, the cumulative impact would be  
15 equivalent to approximately one (1) month's worth of  
16 groceries for the average Canadian household. For a  
17 GSS customer, the cumulative annual increase by 2021  
18 would be over twenty-four hundred dollars (\$2400) and  
19 for a GSM customer, the cumulative increase would be  
20 over sixty-six thousand dollars (\$66,000).

21                   And while later in this presentation  
22 and in our -- our submission we perform an  
23 illustrative macroeconomic analysis. We do note that  
24 if we look at the cost of a full-time equivalent  
25 employee, the overall cumulative five (5) year

1 increase for GSM customers would equate to  
2 approximately twenty-five hundred (2500) FTEs. And  
3 we've noted in our evidence that we're not suggesting  
4 there's necessarily a one-to-one correlation there,  
5 but we do believe that if GSM customers are faced with  
6 an increase of this magnitude, they will need to cut  
7 costs and they will need to consider all sorts of  
8 costs, including levels of employment.

9           Now, as we look at the cumulative  
10 impact of these rate increases, we can see that there  
11 is the potential for Manitoba's competitive advantage  
12 to be eroded. And so the dynamics in these competing  
13 jurisdictions may face -- may provide for less upward  
14 pressure on rates and, indeed, recent corporate tax  
15 cuts in the US are leading to, in some cases,  
16 immediate rate declines.

17           So, the increase in rates by the end of  
18 five (5) years leaves less and less margin for error  
19 for future rate increases if Manitoba is to maintain a  
20 competitive advantage.

21           So, we also performed some high-level  
22 extremely illustrative analysis on the impact on  
23 particular types of agricultural producers. And this  
24 analysis is not intended to be definitive, final. We  
25 understand that with regards to the data that was

1 available to us, individual farms may. Their  
2 proportion -- their allocation of utilities across  
3 electricity, telephone, gas, et cetera may differ.  
4 But, to look at this on -- from a very high level, it  
5 is clear that operating margins for these customers,  
6 holding all other things equal, will -- will decline,  
7 and that they will need to make adjustments if they  
8 are going to maintain similar profit margins.

9           Now, LEI explored at a very high level  
10 what the macro economic impacts of the rate increases  
11 would be. And this involved utilizing a model known  
12 as IMPLAN. It's a model that we've worked with before  
13 and that has been used in a number of infrastructure  
14 evaluations. And again, given the time that was  
15 available to us and the nature of our scope, this is  
16 an illustrative analysis.

17           However, what we noted was that the  
18 impact would be several hundred jobs, potentially.  
19 And when we consider both the residential rate  
20 increase and the GSS and GSM rate increases, the  
21 combined impact is -- has the potential to be well  
22 over five hundred (500) jobs. And we note that the --  
23 Manitoba Hydro's submission suggests that in a low  
24 export price case, the rate increases may need to be  
25 even higher.

1                   Now, we observe that in other parts of  
2 the infrastructure in -- in the complimentary parts of  
3 the infrastructure needed to export to Minnesota,  
4 macroeconomic impacts were explored. And while we  
5 might suggest a different scope for the macroeconomic  
6 analysis that would be done in this particular case,  
7 it is important to note that these are parts of  
8 regulatory submissions that are becoming more common.

9                   Now as -- as we're all aware, capital  
10 expenditures for the next six (6) years are -- are  
11 high and are driven by ongoing investment programs,  
12 particularly including Keeyask.

13                   Now, our view is that insufficient  
14 analysis has been performed of the costs and benefits  
15 of cancelling Keeyask. And it's worth noting that the  
16 costs of alternatives are, potentially, substantially  
17 cheaper. Now, here of course we're simply showing the  
18 capital cost difference between looking solely at the  
19 unspent budget for Keeyask versus the cost of  
20 cancellation and the capital cost of a new CCGT.

21                   But, when you're looking at capital  
22 costs of less than half, the ability to defer for  
23 upwards of fifteen (15) years that difference in  
24 capital cost pays for a substantial amount of  
25 additional operating costs when we look at comparisons

1 on a levelized cost of energy basis.

2                   Now, as we think about the domestic  
3 need for Keeyask, we note that the timeline for that  
4 need has been repeatedly deferred 2024 and 2014, 2030  
5 and 2015, 2035 in 2016. And we also question whether  
6 the elasticity of demand has been fully applied with  
7 regards to the current rate increase and the rate  
8 increases that are projected thereafter.

9                   We've talked a little bit about the  
10 benefits of granularity; about how natural gas plants  
11 can be built closer to when they're needed and in the  
12 size that is consistent with that need. This  
13 scalability is valuable and also the optionality is --  
14 is valuable. The ability to delay or accelerate,  
15 depending on need.

16                   We would also observe that as more and  
17 more Canadian gas is displaced from US markets that  
18 gas is going to be quite economically priced. And  
19 we've observed around the world that projects have  
20 been both downsized to better fit future projections  
21 of need and add to optionality, and large-scale  
22 projects have been -- have been cancelled.

23                   When we looked at the analysis that we  
24 performed in our initial submission, we note that even  
25 if escalation and interest costs are eliminated, that

1 the project still would appear to have negligible  
2 benefits, and that only in a high export price  
3 scenario.

4           We also note that the refreshed  
5 analysis presented in section 2.5.4 only shows the  
6 actual results of the 4.4 percent scenario, the real  
7 discount rate scenario and as we've observed in our  
8 report, it's important that the discount rate reflect  
9 the risks of Keeyask, not of the integrated Utility as  
10 -- as a whole. And that risk profile is quite  
11 different, incorporating, as it does, a -- a  
12 substantial component of merchant sales, as well as  
13 ongoing construction risk.

14           The analysis also doesn't address  
15 various scenarios on how termination costs could --  
16 could change if Keeyask were mothballed or how those  
17 termination costs might be managed or ameliorated. It  
18 doesn't look at phasing in the project or  
19 investigating forms of public-private partnership.

20           So if we turn to operational expenses,  
21 we note that other consultants hired by Manitoba Hydro  
22 have expressed concern about whether there is a focus  
23 on driving improvement in asset management. And as  
24 with all of the analysis in our submission, our  
25 purpose is to suggest that there is further analysis



1 that is -- that is necessary. We've looked at whether  
2 Manitoba Hydro's position changes in the partial  
3 measures of productivity that we calculated if we  
4 adjust for what we believe is a very generous estimate  
5 of gas employees.

6                   We note that there were six hundred  
7 (600) Centra Gas employees when it was acquired by  
8 Manitoba Hydro. The plan at that time was that gas  
9 employees would be reduced to four fifty (450). Given  
10 that nearly twenty (20) years has passed since then,  
11 we would anticipate that the number of employees  
12 devoted to gas operations would have fallen yet  
13 further.

14                   Nonetheless, just to provide some  
15 illustrative calculations, we've assumed that a full  
16 six hundred (600) Centra Gas employees are -- are  
17 currently involved in -- in gas. We've also, again  
18 for illustrative purposes, taken out four hundred  
19 (400) staff that are associated with construction.  
20 When we do that, we still find that Manitoba Hydro is  
21 -- does not meet the industry average in these four  
22 (4) partial measures of productivity that we've  
23 examined. And you can see the results on -- on this  
24 particular slide so.

25                   Finally, to wrap up, it is striking and

1 we note again that other Manitoba Hydro consultants --  
2 this is -- the title is actually a quote that when we  
3 look at the way in which Manitoba Hydro describes its  
4 vision for the future, there are several elements  
5 associated with the Utility of the future that we  
6 don't see significant consideration of. And the  
7 changes that are occurring in the Utility industry  
8 appear to favour smaller, more scalable, more flexible  
9 investments over large-scale centralized generating  
10 stations. And it's important when thinking about the  
11 justification of new investments to take these trends  
12 into -- into account.

13                   So with that we'll end our direct  
14 testimony.

15                   THE CHAIRPERSON: Thank you. Dr.  
16 Williams...?

17

18 CROSS-EXAMINATION BY DR. BYRON WILLIAMS:

19                   DR. BYRON WILLIAMS: Yes, good  
20 morning, members of the -- good afternoon, members of  
21 the Panel and also London Economics folks. We have  
22 one exhibit, which I believe would be Coalition 50  
23 which is from 2014. It's excerpts from a report of  
24 London Economics empirical analysis of total factor  
25 productivity trends in the North American

1 hydroelectric generation industry. A pretty catchy  
2 tidy -- title, hey, Mr. Goulding?

3 MR. A.J. GOULDING: Absolutely, it's a  
4 page turner.

5

6 --- EXHIBIT COALITION-50: 2014 excerpts from a  
7 report of London Economics  
8 empirical analysis of  
9 total factor productivity  
10 trends in the North  
11 American hydroelectric  
12 generation industry

13

14 CONTINUED BY DR. BYRON WILLIAMS:

15 DR. BYRON WILLIAMS: Maybe if we can  
16 go to your PowerPoint slide 16 for a moment. And I do  
17 want to talk to you about benchmarking.

18 Mr. Goulding, just so I understand, was  
19 the -- the analysis presented on this page and turn --  
20 including the MH improvement, was it provided in your  
21 written evidence?

22 MR. A.J. GOULDING: So the -- the  
23 improvements with regards to what -- as -- as we look  
24 back at the IRs there were several questions which we  
25 thought we could provide some additional colour on.

1                   So, the initial analysis was presented  
2 in the report. And then it -- it took a bit of  
3 digging because the gas employees are not fully broken  
4 out in Manitoba Hydro -- in some Manitoba Hydro  
5 reports but we were able to go back to the date of the  
6 acquisition and -- and come up with a reasonable  
7 estimate.

8                   DR. BYRON WILLIAMS:    Okay, thank you.  
9 And just so I can orientate myself to the bottom of  
10 the page, the MH original would have been the -- the  
11 information that you -- you used in -- that you  
12 referred to in your written evidence?

13                  MR. A.J. GOULDING:    Yes.

14                  DR. BYRON WILLIAMS:    And then the MH  
15 improvement is your response to additional dialogue  
16 from the Information Requests?

17                  MR. A.J. GOULDING:    That -- that's  
18 correct. And I want to emphasize that we don't  
19 necessarily agree that those adjustments are  
20 appropriate, but we wanted to explore them to see what  
21 the impact was.

22                  DR. BYRON WILLIAMS:    And on -- on the  
23 right-hand side, we see industry average or kind of  
24 the benchmark figures you've arrived at; correct.

25                  MR. A.J. GOULDING:    Yes.

1 DR. BYRON WILLIAMS: Okay. And I want  
2 to just chat about benchmarking. Leave -- leave aside  
3 Manitoba Hydro for a moment and go to the issue and --  
4 and why one might explore it in a regulatory  
5 conference -- context.

6 And generally stated due to information  
7 asymmetry, you'd agree that regulators often may face  
8 challenges in determining the appropriate level of --  
9 of a Utility's costs?

10 MR. A.J. GOULDING: I would agree,  
11 yes.

12 DR. BYRON WILLIAMS: And broadly  
13 speaking, we -- we -- we could describe benchmarking  
14 is a comparison of some measure of actual performance  
15 against a reference or -- or performance?

16 MR. A.J. GOULDING: Yes.

17 DR. BYRON WILLIAMS: And it's --  
18 benchmarking is a widely used tool in Utility  
19 regulation to assist in judging the efficiency of a --  
20 of a firm's costs and expenditures?

21 MR. A.J. GOULDING: Yes.

22 DR. BYRON WILLIAMS: And although we  
23 are not a performance-based reg -- regulatory regime  
24 in particular, we would see this type of analysis done  
25 in performance-based regulation?

1 MR. A.J. GOULDING: That's correct.  
2 Not exclusively in PBR, but it's certainly something  
3 that in PBR regimes is -- is very common.

4 DR. BYRON WILLIAMS: And, sir, we'll  
5 get to total factor productivity in -- in a moment.  
6 But when you use the metrics at the bottom of this  
7 page, you often might also refer to them as key  
8 performance indicators?

9 MR. A.J. GOULDING: That's correct.

10 DR. BYRON WILLIAMS: And, sir, in the  
11 literature or -- they would often be described as  
12 partial measures of efficiency?

13 MR. A.J. GOULDING: Yes.

14 DR. BYRON WILLIAMS: And we'll come to  
15 a definition of total factor productivity analysis in  
16 a moment but you'll agree that when asked by the  
17 Public Utilities Board, if you were to do more  
18 analysis, what type of analysis you might perform, you  
19 suggested some -- some form of total factor  
20 productivity analysis with the reference being PUB  
21 Information Request 17?

22 MR. A.J. GOULDING: Yes, that's  
23 correct.

24 DR. BYRON WILLIAMS: And one (1) of  
25 the points you were making in this dialogue, you noted

1 that this was an illustrative calculation?

2 MR. A.J. GOULDING: Yes.

3 DR. BYRON WILLIAMS: And you're not  
4 drawing firm conclusions from it, sir, you're  
5 suggesting that it -- it -- in your view gives us a  
6 message that further analysis needs to be done?

7 MR. A.J. GOULDING: Yes.

8 DR. BYRON WILLIAMS: I want to explore  
9 the -- the terms as we use them related to efficiency  
10 for just a few moments, sir.

11 And without asking you to help me  
12 define them quite yet, you'll agree that there are  
13 different ways to look at the concept of efficiency,  
14 including considerations of technical efficiency,  
15 scale efficiency and allocated efficiency, sir?

16 MR. A.J. GOULDING: Yes.

17 DR. BYRON WILLIAMS: And if I  
18 suggested to you that the term "cost efficiency" would  
19 be a measure of a firm's ability to produce a  
20 particular output at minimum cost, given the input  
21 prices it faces, is that a definition you could work  
22 with, sir?

23 MR. A.J. GOULDING: Yes.

24 DR. BYRON WILLIAMS: And would scale  
25 efficiency refer to the degree to which a firm is

1 optimizing the size of its operations?

2 MR. A.J. GOULDING: Yes.

3 DR. BYRON WILLIAMS: And a very catchy  
4 term "input mix allocative efficiency" relates to the  
5 notion that a firm is trying to produce its output  
6 using the least cost mix of inputs, given the input  
7 prices it faces, correct?

8 MR. A.J. GOULDING: Yes.

9 DR. BYRON WILLIAMS: And finally, sir,  
10 technical efficiency, I'll suggest to you, is a firm's  
11 ability to achieve maximum output given its set --  
12 given its set of inputs?

13 MR. A.J. GOULDING: Yes.

14 DR. BYRON WILLIAMS: And we'll go into  
15 this in a bit more detail in a couple moments, but  
16 when regulators are trying to explore efficiency or in  
17 -- in the context of your paper when you use the term  
18 "efficiency," sir, in -- in what way are you using  
19 that term?

20 MR. A.J. GOULDING: Well, I think you  
21 raise an excellent point that -- that at the simplest,  
22 you know, we're talking about, are we getting the most  
23 output for the least amount of inputs? But it's also  
24 important to define what the output is -- what -- what  
25 are the -- the products. And so when -- when we think



1 about efficiency, we were -- in this particular  
2 document talking about it at a very high level, and we  
3 were, as we say, looking at this from different  
4 angles.

5                   When we look at employee -- the number  
6 of employees relative to the total megawatt hours of  
7 throughput; that's one (1) measure of efficiency. It  
8 is not the only measure, nor does it provide a  
9 complete picture of efficiency.

10                   DR. BYRON WILLIAMS:    Okay, thank you.

11 And if we could turn to Coalition Exhibit 50.

12 Kristen, at -- it would be at the bottom, page 11, but  
13 it's about the seventh page in. Oh, that's perfect.  
14 Thank you.

15                   And just above figure 2, you recall  
16 that we -- we used the term before of "partial factor  
17 productivity?"

18                   MR. A.J. GOULDING:    Yes.

19                   DR. BYRON WILLIAMS:    And in this  
20 paragraph we see the distinction being drawn between  
21 total factor productivity and a partial fact -- factor  
22 productivity, and specifically lined in the number of  
23 inputs analysed with -- with single factor  
24 productivity measures relating to output to a single  
25 input, whereas total factor productivity considers

1 output relative to all inputs?

2 MR. A.J. GOULDING: Agreed.

3 DR. BYRON WILLIAMS: Yes. And the  
4 point you were making just in our previous discussion  
5 was taken in isolation partial measures can be  
6 misleading if -- if considered in isolation, agreed?

7 MR. A.J. GOULDING: Absolutely.

8 DR. BYRON WILLIAMS: I just want to  
9 flip to the second page -- or the next page of this  
10 being page 12 of Coalition Exhibit 50. And you'll  
11 agree focusing on figure 3 and -- and, Kristen, that's  
12 perfect, right there.

13 That there are -- are different  
14 empirical techniques used to estimate total factor  
15 productivity broadly divided between non-frontier  
16 techniques and frontier techniques, sir?

17 MR. A.J. GOULDING: Yes.

18 DR. BYRON WILLIAMS: And if we -- we  
19 look to the index method for a moment, would I be  
20 correct in suggesting to you that it's a simpler  
21 technique which perhaps does not allow for the  
22 exploration of scale efficiency and -- and technical  
23 efficiency?

24 MR. A.J. GOULDING: Yes, that's --  
25 that's -- that's correct. Each of these techniques

1 has their advantages and -- and drawbacks and so  
2 you'll note there, for example, under the index  
3 method, among the drawbacks that we have suggested,  
4 are that exploring technical efficiency and scale  
5 efficiency are not something that the index method  
6 allows.

7 DR. BYRON WILLIAMS: And by contrast  
8 just let's pick the data envelope analysis because it  
9 is a catchy phrase as well, sir.

10 It's disadvantage is it really it  
11 requires a large data set, but it does enable one to  
12 dig down deeper into -- if you're looking at -- trying  
13 to explore issues of allocative or technical  
14 efficiency; agreed?

15 MR. A.J. GOULDING: That -- that's  
16 correct.

17 DR. BYRON WILLIAMS: And you'd see  
18 moving to the right, again, if one was looking at  
19 stochastic frontier analysis, some of those same --  
20 same trade-offs between the complexity of the data and  
21 -- and how deep you want to dill -- drill down.

22 And certainly if one was doing future  
23 benchmarking in terms of total factor productivity,  
24 those would be important considerations in terms of  
25 what -- what the nub of the question we're really

1 trying to get at, sir; agreed?

2 MR. A.J. GOULDING: Yes, that's  
3 correct.

4 DR. BYRON WILLIAMS: Now this  
5 particular report, I don't think you were an author of  
6 it, but it was done for the Ontario Power -- power gen  
7 -- generation --

8 MR. A.J. GOULDING: That's right, for  
9 -- for OPG, yes.

10 DR. BYRON WILLIAMS: And in this  
11 particular paper, London Economics chose the index  
12 method, subject to check, you'll accept that?

13 MR. A.J. GOULDING: Yes.

14 DR. BYRON WILLIAMS: As you  
15 contemplate future potential benchmarking for Manitoba  
16 Hydro, are you at that stage yet where you -- you  
17 would -- you can indicate a preference on -- on where  
18 you -- what kind of approach you might use, sir?

19 MR. A.J. GOULDING: I think that the  
20 goal of our submission has been to note that we  
21 believe that further analysis is necessary and, you  
22 know, in any analysis folks are limited by -- by  
23 budget and time and in an ideal world you would use  
24 more than one (1) method, you would look at the index  
25 method, and potentially also do other types of

1 benchmarking, either employee DEA or SFA in order to -  
2 - to see it from both perspectives, right.

3                   You know, clearly, the robustness of  
4 your conclusions is increased if you can get there  
5 using more than one (1) method. And so without saying  
6 definitively what my recommendation would be for a  
7 benchmarking productivity study here, I think my  
8 initial response would be that it would incorporate  
9 more than one (1); that you'd do an index method, but  
10 you'd also look at it using at least one (1) other  
11 method to -- to confirm.

12                   DR. BYRON WILLIAMS:    Okay. I want to  
13 go to page 27 of this excerpt from -- and right there,  
14 Kristen is perfect.

15                   And in the course of this research for  
16 OPG, London Economics that had a great deal of success  
17 getting information -- relevant benchmarking  
18 information from the United States due to the way that  
19 the Federal Energy Regulatory Commission requires  
20 data to be reported by -- by large Utilities; agreed,

21                   MR. A.J. GOULDING:    Yes.

22                   DR. BYRON WILLIAMS:    You had  
23 considerably more challenges getting the Canadian data  
24 necessary for doing total factor productivity  
25 analysis; agreed?

1 MR. A.J. GOULDING: That's correct. I  
2 -- I do want to note one (1) of the distinctions with  
3 regards to the challenge of OPG relative to an entity  
4 like Manitoba Hydro and, that is, that OPG is a pure  
5 gen co (phonetic) and so their portfolio consists --  
6 not exclusively but largely of nuclear and large-scale  
7 hydro.

8 And so that meant that as we explore  
9 the data, we needed to be clear about what we were  
10 looking at. And so one can argue that a vertically  
11 integrated Utility is less rare than a combined hydro  
12 and nuclear entity that has largely regulated rates,  
13 but some degree of merchant exposure.

14 DR. BYRON WILLIAMS: Okay, so I'm  
15 going to take -- and thank you for that helpful  
16 answer. I'm going to take it in in two (2) ways.  
17 Let's deal with -- just -- just to push, in terms of  
18 the data challenges you experienced with this part --  
19 the Canadian data challenges you experienced and  
20 recognizing that OPG is not a vertically integrated  
21 Utility.

22 MR. A.J. GOULDING: Sure.

23 DR. BYRON WILLIAMS: Would you expect  
24 the same kind of Canadian data challenges for Manitoba  
25 Hydro if you were going to pursue this analysis?

1                   MR. A.J. GOULDING:    Yes and no.  And  
2  the reason that I say that is that if -- if we're  
3  looking at aggregate analysis, right, rather than  
4  trying to go and break out just the hydro -- and I  
5  used 'hydro' in the term of hydroelectric generation  
6  facilities here rather than in the more general term  
7  it's used sometimes in Canada.  There will be more  
8  aggregate data available on the vertically integrated  
9  Utility than there is on the unbundled part focused  
10 just on generation.  That's not to minimize the fact  
11 that data challenges exist.

12                   Now, I would argue that -- the fact  
13 that something has challenges isn't necessarily an  
14 argument not to do it or not to explore it.  Even when  
15 there's lots and lots of data available, you still  
16 have to be careful with the data.

17                   DR. BYRON WILLIAMS:   Okay.  And just  
18 taking the other issue going back to your comment  
19 about Hydro as a vertically integrated Utility, would  
20 it be fair to say that in terms of its use by  
21 regulators, most often, benchmarking is used in the  
22 context of transmission and distribution Utilities?

23                   MR. A.J. GOULDING:    Well, I think the  
24 reason that that is the case, is that when we look at  
25 the industry structures let's say in the UK, where the

1 industry was fully unbundled, transmission was  
2 separated, distribution was separated, those regulated  
3 businesses were limited to one (1) part of the -- of  
4 the value chain.

5                   And -- and so the impetus for doing  
6 this kind of analysis really started with -- you  
7 referred to performance based ratemaking earlier, but  
8 that doesn't mean that there hasn't been an interest  
9 in understanding the relative performance of  
10 vertically integrated Utilities as well.

11                   DR. BYRON WILLIAMS:   And so, sir, just  
12 so -- as I understand where -- where you're going with  
13 this, you wouldn't recommend looking at distribution  
14 in isolation or transmission, you're more likely to be  
15 leaning towards examination of the -- a benchmarking  
16 analysis of a vertically integrated -- Hydro as a  
17 whole?

18                   MR. A.J. GOULDING:   So -- yeah, we can  
19 -- we can think from what's ideal versus what is  
20 practical, right.  And one can certainly imagine a  
21 large-scale study where you look at each of the pieces  
22 of Manitoba Hydro's business and you compare them  
23 against other unbundled operations.

24                   I think that part of the challenge,  
25 from a practical perspective, is that you may be more



1 able to compare a set of vertically integrated  
2 Utilities against one another, then to take an  
3 existing vertically integrated Utility, delve in to  
4 each one (1) of its parts, and then try to do the same  
5 for other vertically integrated Utilities, plus build  
6 on other unbundled Utilities. I think that that's,  
7 you know, it's a -- it's something that you could  
8 attempt for PhD thesis over the course of two (2)  
9 years, but it may not lend itself to a regulatory  
10 process.

11 DR. BYRON WILLIAMS: We'll come to  
12 time in just a second, sir. The other exercise that  
13 you did in your written report was you also did a high  
14 level look at some quality -- quality of service  
15 indicators of Manitoba Hydro. And then did a -- again  
16 an illustrative comparison with IDA -- IDACORP.

17 MR. A.J. GOULDING: Yes.

18 DR. BYRON WILLIAMS: In terms of a  
19 comparative level of efficiency -- sorry, of  
20 reliability and -- and -- and looked at some of the  
21 efficiency indicators; agreed?

22 MR. A.J. GOULDING: Yes.

23 DR. BYRON WILLIAMS: And presumably,  
24 sir, one might undertake that for -- for two (2)  
25 reasons. One is, you want to explore whether a

1 Utility is achieving its quality of service results in  
2 an efficient manner compared to their peers?

3 MR. A.J. GOULDING: That's -- that's  
4 correct. So what we want to do -- and this is in a  
5 way -- when I talked about defining the product,  
6 right, the product is electricity but provided within  
7 a certain set of standards, right. And that includes,  
8 you know, existing health -- health and safety  
9 requirements. It includes expectations of reliability  
10 and -- current employment laws, a whole host of things  
11 that go into that definition of the product such that  
12 you can have an understanding of whether or not  
13 additional cost is justified because you're providing  
14 a higher level of reliability.

15 DR. BYRON WILLIAMS: And I guess the  
16 other reason one might want is -- is one is looking at  
17 benchmarking on cost efficiency one -- why one will  
18 also want to keep one's eye on quality of service,  
19 sir, is to make sure that to the extent that Utilities  
20 are seeking cost savings, they're actually pursuing  
21 real efficiency improvements rather than seeking to  
22 reduce service quality?

23 MR. A.J. GOULDING: Absolutely. And  
24 that's -- that's why we have seen in -- in many  
25 jurisdictions measures that are designed to promote

1 productivity being linked explicitly to measures of  
2 service quality.

3 DR. BYRON WILLIAMS: Just to -- just  
4 to finish in terms of the complexity of the -- the  
5 research tasks, sir, and assuming that we're not  
6 inviting someone to complete a PhD thesis, an  
7 effective valuable benchmarking exercise, what kind of  
8 timeframe is -- is one undertaking and -- and any  
9 sense of an upper cost level?

10 MR. A.J. GOULDING: Well, it's -- it's  
11 always difficult to answer questions about costs  
12 without discussing scope. So I -- I -- I want to be a  
13 little bit cautious about that. And, you know, I  
14 would if -- if we were to think backwards and we say,  
15 all right, well, you know, it takes you, let's say, a  
16 month to two (2) months to issue a proper RFP and  
17 select somebody to do it. Then you would probably  
18 want to give them, I would argue, at least three (3)  
19 to four (4) months to do the job.

20 DR. BYRON WILLIAMS: And -- and cost  
21 wise, sir, recognizing the scope problem.

22 MR. A.J. GOULDING: I'm -- I'm going  
23 to say, 300 to 400,000 Canadian.

24 DR. BYRON WILLIAMS: Okay, thank you.  
25 Just -- those are our questions. We -- we had many

1 more but I think that's consistent with my time  
2 estimates.

3 Mr. Chair and -- and -- Mr. Simpson and  
4 Ms. -- or Dr. Simpson and Dr. Compton did have an  
5 undertaking responding to Board Member Grant. I think  
6 we're just prettying it up right now so that -- that  
7 will be filed today.

8 I just want to let -- it does -- let my  
9 friends from -- from KAP and M. Monnin know that it's  
10 coming out -- there may be something in it that is of  
11 interest to these witnesses. Okay.

12 THE CHAIRPERSON: Dr. Grant...?

13 BOARD MEMBER GRANT: Thank you. I  
14 appreciate the value of a benchmarking, and I think  
15 you've pulled out some interesting things for  
16 discussion.

17 Just quickly, are the employee side, is  
18 it adjusted for O&A or is it just Hydro employees?  
19 You have the natural gas people in there as well.  
20 What is the...?

21 MR. A.J. GOULDING: Thank you for --  
22 for asking that. And the initial analysis  
23 incorporated all of the Hydro employees. The  
24 secondary analysis, that we discussed today, took out  
25 a set of assumed Gas employees because we are not

1 privy to the number of employees currently that are in  
2 Gas. We looked back at how many employees there were  
3 at Centra gas when it was -- when it was acquired.

4           And in terms of distinguishing whether  
5 those are O&A or others, we have not made that  
6 distinction at this -- at this level.

7           BOARD MEMBER GRANT: I'm going to  
8 preface this comment by saying, I think a total factor  
9 productivity study for a Hydro installation would be a  
10 disaster and completely misleading.

11           MR. A.J. GOULDING: Okay.

12           BOARD MEMBER GRANT: Okay. The  
13 underlying construct to a TFP analysis is what kind of  
14 production function.

15           MR. A.J. GOULDING: So in terms --  
16 you're asking me or you're -- you're making a  
17 statement, yeah.

18           BOARD MEMBER GRANT: Asking.

19           MR. A.J. GOULDING: So when we  
20 described this, if we went ahead and did the study, we  
21 would want to make sure that we defined all of these  
22 things in a much more detailed way, but, for -- for  
23 me, if we were going ahead and -- and doing this, we  
24 would be looking at the -- the set of inputs that are  
25 used in the sector here in -- in Manitoba and then

1 looking at the production of electricity within a  
2 particular liability factor.

3 BOARD MEMBER GRANT: This is going --  
4 sorry, I'll just take another 30 -- I don't want a --  
5 total factor productivity studies assume a certain  
6 kind of production function --

7 MR. A.J. GOULDING: Yes, I understand  
8 that.

9 BOARD MEMBER GRANT: -- where there's  
10 a, let's say, very easy substitution between labour  
11 and capital --

12 MR. A.J. GOULDING: Yes.

13 BOARD MEMBER GRANT: -- and all these  
14 different capital inputs.

15 MR. A.J. GOULDING: Absolutely.

16 BOARD MEMBER GRANT: If the antithesis  
17 of a hydro type utility where they've got these lump -  
18 - this lumpy capital stock, they -- and if -- for what  
19 -- just as an example, I mean, underlying the  
20 assumption is that if natural gas prices dropped by  
21 \$0.10 tomorrow then Hydro might find it expedient to  
22 go up and take the Keeyask dam apart, put it on a  
23 train, if there was one, bring it down to Winnipeg and  
24 reconstruct it as a -- as a gas -- as a natural gas  
25 generator in downtown Winnipeg, all costly and all

1 instantaneously.

2                   So the fundamental assumptions  
3 underlying the TFP model are just -- just sort of  
4 ridiculous in the context of a Hydro utility, aren't  
5 they?

6                   MR. A.J. GOULDING:   Well, I don't  
7 disagree with you that relying on one (1) method  
8 presents -- potentially presents distorted views.  
9 And, you know, I was -- I was looking back yesterday  
10 at, you know, what we said initially and then what we  
11 said in -- in our IRs and I think that what I would  
12 say now is that, while I don't agree with you that a  
13 TFP study doesn't -- make sure I don't get a double  
14 negative in here.

15                   I believe that a TFP study would  
16 present useful information that would help to guide an  
17 understanding of Manitoba Hydro's costs. I don't  
18 believe that it is necessarily the only analysis that  
19 could or -- or should be done with regards both to  
20 benchmarking and investment decision-making.

21                   And I would -- I would add that, you  
22 know, to a certain extent, even for a Hydro business  
23 there are short run inflexibilities and then there are  
24 long-run flexibilities.

25                   BOARD MEMBER GRANT:   So just the last

1 point. I mean, Hydro utilities and many utilities are  
2 all about the vintages of the capital stock.

3 MR. A.J. GOULDING: Yes.

4 BOARD MEMBER GRANT: It's got capital  
5 stock from all sorts of -- it's the -- it's the  
6 opposite of a -- of the assumptions underlying a TFP  
7 study where capital stock can be adjusted  
8 instantaneously to different price changes.

9 It's just -- the theoretical construct  
10 of a TFP just does not apply in these circumstances.  
11 And so I think coming up with a simple TFP number  
12 would be entirely misleading in this context but...

13 I don't dispute the fact that  
14 benchmarks might be useful, but they need to be  
15 interpreted rather than just come up with a number and  
16 then think that, you know, we don't have to go beyond  
17 that.

18 MR. A.J. GOULDING: I -- I completely  
19 agree with you. All of this analysis is about not  
20 just mindlessly turning a crank, but also thinking  
21 about the issues that you raise about whether capital  
22 and labour are instantly substan -- substitutable;  
23 about how do we compare like for like. All of these  
24 things need to be considered in a proper study.

25 THE CHAIRPERSON: Thank you. Mr.



1 Cordingley...?

2 MR. DAVID CORDINGLEY: Thank you, Mr.  
3 Chair, we have no questions for this witness.

4 THE CHAIRPERSON: Thank you. Mr.  
5 Hacault...?

6

7 CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

8 MR. ANTOINE HACAULT: Thank you, Mr.  
9 Chair. Mr. Goulding and Mr. Leslie, I'm going to  
10 take you to the subject which you discussed on page 33  
11 of your report. Its intergenerational impacts. And  
12 to guide our discussion with that subject, I'll start  
13 at Manitoba Hydro Exhibit 64, slide 30, 3-0.

14 The first question on the issue of  
15 intergenerational impacts was I'd like to have your  
16 opinions or views with respect to using a twenty (20)  
17 year target for meeting reserves to meet major risks  
18 such as drought risk.

19 Is that a reasonable time period?

20 MR. A.J. GOULDING: The -- the time --  
21 sorry, can you define the time period again? You're  
22 looking -- are you sug --

23 MR. ANTOINE HACAULT: Well, the graph  
24 --

25 MR. A.J. GOULDING: -- is

1 approximately twenty (20) years here.

2 MR. ANTOINE HACAULT: Yeah. So what  
3 I'm trying to get a sense of, if we're going to be  
4 talking about intergenerational impacts and inequities  
5 or fairness, with respect to a rate increase and the  
6 way rate increases are put into place.

7 Do you have any comments with respect  
8 to looking at a ten (10) year time period or a twenty  
9 (20) year time period?

10 MR. A.J. GOULDING: Well, I think it's  
11 interesting because if you had asked me this question  
12 fifteen (15) years ago, I probably would have been  
13 more comfortable going with a longer time than I am  
14 today.

15 And the reason for that is that with  
16 the rate at which technology is changing, there's a  
17 question about whether twenty (20) years from now we  
18 are going to have the same set of paradigms where we  
19 assume that the demand curve for most customers is,  
20 essentially, vertical; that nobody's fleeing the  
21 system; that there aren't different ways of -- of  
22 using -- using the system.

23 And so my inclination, I believe, would  
24 be to look more on the shorter side than -- than the  
25 longer side. And, you know, I would -- I would also

1 note that part of the challenge is that, in my view --  
2 recognizing that we started a lower base here in -- in  
3 Manitoba than we do elsewhere in parts of North  
4 America, that the -- the speed and the slope of rate  
5 increases can accelerate change.

6                   And so, you know, as -- as I think  
7 about this question, I think I'm more concerned about  
8 the -- the slope and pace of rate increases over the  
9 near term than I am about moderating rate increases  
10 ten (10) years from now.

11                   MR. ANTOINE HACAULT:   Okay.  Let's  
12 explore that a little bit further.

13                   The underlying data for slide 30, which  
14 shows two (2) different lines.  Firstly, kind of a  
15 blue dotted line, which has a fairly steeper slope and  
16 then going down in 2028 is in Manitoba Hydro Exhibit  
17 52, appendix 1.7.  If we could go to that appendix.  
18 And if we can look at the top part of that graph.  
19 This is out of Manitoba Hydro rebuttal evidence.  And  
20 may be zoom it in a little bit to show the years 2017  
21 to 2027.

22                   We can see that there is, about the  
23 third line down, the price increase line.  Do you --  
24 following me so far?

25                   MR. A.J. GOULDING:   Yes.

1 MR. ANTOINE HACAULT: And I just want  
2 to clarify for the record that anything past April 1  
3 of 2018 is not formally in a rate request. This is  
4 just a -- a scenario that's been put in slides by  
5 Manitoba Hydro and categorized as its plan.

6 We see that in a ten 10 year time  
7 period, going to 2027, there is another line that  
8 talks about the cumulative rate increases, and those  
9 have been modified somewhat to also include the year  
10 2017 on another slide, that we would have cumulative  
11 rate increases in real terms of some 46.6 percent. Do  
12 you see that?

13 MR. A.J. GOULDING: Yes.

14 MR. ANTOINE HACAULT: And then for the  
15 next decade that follows, we see that in a numerical  
16 way, the decrease in rates?

17 MR. A.J. GOULDING: Yes.

18 MR. ANTOINE HACAULT: Do you see me so  
19 far?

20 MR. A.J. GOULDING: Yes.

21 MR. ANTOINE HACAULT: In your  
22 discussion about intergenerational impacts, you  
23 identify grandchildren?

24 MR. A.J. GOULDING: Yes.

25 MR. ANTOINE HACAULT: You're following

1 me so far?

2 MR. A.J. GOULDING: Yes.

3 MR. ANTOINE HACAULT: Just to put  
4 practical to that, I've got two (2) of them, a little  
5 girl, a little boy that come over on a Sunday night,  
6 and there's a piece of pie left, and there's a fight  
7 about who is going to get what part of that pie. And  
8 they say, Well, it's got to be fair.

9 MR. A.J. GOULDING: Right.

10 MR. ANTOINE HACAULT: So how do they  
11 handle it? Which -- well, they say, Well, listen, one  
12 (1) cuts it, and then the other one gets to pick.

13 MR. A.J. GOULDING: Right.

14 MR. ANTOINE HACAULT: Now, if I was  
15 going to cut this pie in front of you in a ten (10)  
16 year segment, the first ten (10) year segment, then  
17 the next ten (10) year segment, do you have any sense  
18 of what my grandchildren might choose?

19 MR. A.J. GOULDING: Well, I would -- I  
20 would expect that -- and again, I think the -- the  
21 thing that we have to be careful of here is that we're  
22 all -- we're talking about rate increases versus  
23 absolute dollars. We're also, you know, we're not  
24 talking conceptually about real versus nominal. And  
25 so when we think about this from a rate increase

1 perspective, right, the second ten (10) years looks  
2 much more favourable than first ten (10) years. But  
3 we have to bear in mind that -- that then that period  
4 is off of an escalated base.

5 MR. ANTOINE HACAULT: Understood. And  
6 do we know if this plan were followed at 7.9 percent  
7 increases -- it's less than that in real terms by the  
8 time you do inflation -- but that would mean in the  
9 Manitoba context, with respect to, say, for example, a  
10 mine who had to choose whether they were going to  
11 operate in the first ten (10) years at 7.9 percent  
12 increases?

13 MR. A.J. GOULDING: So -- and I want  
14 to preface this by saying that obviously, our analysis  
15 focused on --

16 MS. PATTI RAMAGE: Excuse me --

17 MR. A.J. GOULDING: Sorry.

18 MS. PATTI RAMAGE: -- Mr. Chair, I'm  
19 just wondering, and I'm perhaps emboldened by Mr.  
20 Ghikas's statements the other day, but there's no  
21 evidence from this party on mines and -- and we're  
22 putting -- we're using this as a discovery and as -- I  
23 would also say it -- it's friendly cross, but it's a  
24 discovery. This is a cross-examination, not a chance  
25 to put new information on the record that other

1 parties aren't going to be able to deal with.

2 THE CHAIRPERSON: Mr. Hacault?

3 MR. ANTOINE HACAULT: I -- I'd like to  
4 be able -- page 33, these witnesses specifically  
5 identify that some businesses may not be around to  
6 enjoy the lower -- the period of lower rates if it  
7 occurs. So it's -- relates directly to a statement.  
8 And -- and secondly, it's the first time I've ever  
9 heard that cross-examination is limited in the way  
10 that's being suggested by counsel.

11 Cross-examination used in court cases  
12 and everywhere else I've appeared is not only to test  
13 the witness's credibility. Each party has his -- his  
14 or her own case and is entitled to get the evidence  
15 the way he deems appropriate to get that evidence.  
16 And in this proceeding especially, we are limited as  
17 to who we can hire as witnesses. We don't have the  
18 flexibility of hiring witnesses in each area. We are  
19 told by this Board, rightfully so, to have efficiency,  
20 to avoid overlap. So we can't hire people in the  
21 different areas. We need to work with what we have in  
22 the experts that are hired, so I believe my line of  
23 questioning is appropriate.

24 THE CHAIRPERSON: The issue -- the  
25 issue in terms of whether companies will be around in,

1 you know, for the second ten (10) years, I think can  
2 be put to him. I'm just not sure we would be doing it  
3 as mining companies. If you want to do it in terms of  
4 his evidence is sort of generally companies, which  
5 would include mining companies or whoever, I -- I  
6 think it would be appropriate to do, but I -- I don't  
7 know -- we -- we don't have any -- we've got very  
8 generic evidence of mining.

9                   But certainly, if you want to ask him,  
10 you know, based on what evidence he's put in in terms  
11 of companies and the -- the level of rates generally,  
12 don't see a problem with it.

13

14 CONTINUED BY MR. ANTOINE HACAULT:

15                   MR. ANTOINE HACAULT: Thank you. I'll  
16 -- I'll rephrase my question to take the word 'mining'  
17 out and ask you specifically with respect to what you  
18 stated in your evidence, is that businesses may not be  
19 around to enjoy the period of lower rates, if it  
20 occurs. So if I was a business, do you have any  
21 comments on whether I would choose the first decade or  
22 the second decade?

23                   MR. A.J. GOULDING: Well, I think that  
24 if -- if I were a business, I would be choosing the  
25 second decade, if -- if that choice were made



1 available to me. And I think that the -- that the  
2 challenge is that many businesses operating in a -- in  
3 a stable industry would have a -- a hard time feeling  
4 confident that their earned revenues were going to  
5 increase by 7.9 percent per year for -- for six (6)  
6 years. So they're going to look at this and say,  
7 again, depending on the nature of my business, my  
8 margins are going to be falling, and how does that  
9 affect my investment decision making?

10                   And -- and so I think a period in which  
11 the price increases are, you know, consistent with  
12 inflation, or in some cases, below inflation, is a  
13 period that, as a business, I would like to be  
14 operating in rather than one in which the price incre  
15 -- increases from one (1) of my inputs are increasing  
16 at potentially three (3) times inflation.

17                   MR. ANTOINE HACAULT:    And I --  
18 mindful, also, of -- of my time, Mr. Chair and members  
19 of the panel, on page 33, you also put the following  
20 statements in evidence at the clo -- the last  
21 paragraph, about four (4) lines up:

22                                   "Ratepayers are providing additional  
23                                   funding in order to main (sic)  
24                                   financial metrics in the face of  
25                                   events that may or may not occur."

1                   Sir, what are you intending to  
2 communicate here?

3                   MR. A.J. GOULDING:    So when we see the  
4 discussions of the justification for the rate  
5 increase, there is analysis with regards to the idea  
6 that Manitoba Hydro needs to build up resiliency  
7 against things like future drought events.  Now, this  
8 analysis is married to a discussion of various  
9 financial metrics, like the debt to equity ratio and  
10 so forth, but a -- a part of the way in which the rate  
11 increase is justified is to essentially be building up  
12 what isn't exactly, accurately portrayed as an equity  
13 cushion, but it's useful for us to use those terms  
14 that are similar to other -- other businesses.

15                   And so we have this rate at which that  
16 equity cushion is built up, and it's built up more  
17 quickly and to a higher level than what had previously  
18 been -- been the case, and part of the reason for that  
19 is this idea that there are some unexpected events  
20 that may be out there that could cause rate shock in  
21 the future.  And I think that ultimately, there --  
22 there's a question as a ratepayer, Do I want to give  
23 my money to the Utility as a defence against future  
24 events that might cause an increase in rates, or do I  
25 want to keep my money, invest my money, and then if

1 one (1) of these events occurs in the future, then  
2 discuss the pace of the rate increase that would be  
3 necessary to deal with that unexpected event?

4 And I -- I would suggest that the --  
5 most ratepayers may choose -- choose the latter.

6 MR. ANTOINE HACAULT: Thank you for  
7 trying your best to answer my questions, sir. Those  
8 are all of my questions. Thank you.

9 THE CHAIRPERSON: Thank you, Mr.  
10 Hacault. Ms. -- Ms. Ramage...?

11 MS. PATTI RAMAGE: Before we begin,  
12 Manitoba Hydro has a book of documents, along with a  
13 copy of the NFAT terms of reference. We're asking the  
14 book of documents be marked Manitoba Hydro Exhibit  
15 116-3 and the NFAT terms of reference Manitoba Hydro  
16 Exhibit 128. And I have to admit, they may well  
17 already be on the record, but in the time provided,  
18 we --

19

20 --- EXHIBIT NO. MH-166-3: Manitoba Hydro book of  
21 documents

22

23 --- EXHIBIT NO. MH-128: NFAT terms of reference

24

25 THE CHAIRPERSON: Yeah. That's fine,

1 Ms. Ramage.

2 MS. PATTI RAMAGE: And if I could ask  
3 My Friend Mr. Monnin, I'm not sure, did you get a copy  
4 of the NFAT terms of reference, because we could get a  
5 copy to you.

6 MR. CHRISTIAN MONNIN: No, we did not.  
7 We did get a copy of the book of documents last  
8 evening.

9

10 (BRIEF PAUSE)

11

12 MR. CHRISTIAN MONNIN: I'd ask My  
13 Friend that Hydro -- do you intend to dive into the  
14 terms reference right away? If that's the case, I  
15 would allow -- I would ask for Mr. Goulding to be  
16 given the opportunity to review it.

17 MS. PATTI RAMAGE: I do not, and I  
18 will bring to his attention what I -- it's in direct  
19 response to a -- a slide that we -- that he presented.  
20 So we will -- when we get to the slide, I'll bring it  
21 to his attention.

22 MR. CHRISTIAN MONNIN: Thank you.

23

24 CROSS-EXAMINATION BY MS. PATTI RAMAGE:

25 MS. PATTI RAMAGE: Mr. Goulding -- and

1 when I -- if I could, when I start, say, if I say  
2 'you', that means London Economics. I don't intend --  
3 and your group. I -- you'll see when I speak, it'll -  
4 - I'll switch back between London Economics and you,  
5 and if you --

6 MR. A.J. GOULDING: If I need  
7 clarification, I will ask.

8 MS. PATTI RAMAGE: Okay. Thanks.  
9 When dealing with operating efficiencies and this  
10 service quality, your key performance indicators all  
11 involved employee accounts, correct?

12 MR. A.J. GOULDING: That's correct.

13 MS. PATTI RAMAGE: All right. And you  
14 used annual reports to determine the number of  
15 employees for Manitoba Hydro and the selected  
16 comparison utilities. Can you confirm you didn't  
17 delve into whether the term full-time employees in  
18 those reports meant headcount, or whether it meant  
19 full-time equivalent employees based on straight time  
20 hours, or whether it meant full-time equivalent  
21 employees based on straight time hours plus overtime?

22 MR. A.J. GOULDING: Yes, that's  
23 correct.

24 MS. PATTI RAMAGE: Can I take it from  
25 your answer -- or you indicated that in -- in your

1 response to -- and it doesn't need to be -- come --  
2 brought up, PUB/GSS/GSM/KAP-9 that your analysis was  
3 illustrative, and that a more in-depth analysis would  
4 be needed to assess how full-time equivalents are  
5 categorized at each entity?

6                   Can I take from that answer the you  
7 agree that an understanding of what a full-time  
8 employee is is the kind of information that you'd have  
9 to do in order to -- for your benchmarking study to be  
10 more than just illustrative? So that was a mouthful.

11                   MR. A.J. GOULDING: I think is it is -  
12 - it is important to define terms so that everybody is  
13 speaking a consistent language. So making sure that  
14 we are talking about the same thing, I'm not sure that  
15 I would necessarily agree that whether -- whether a  
16 full-time equivalent is actually two (2) part-time  
17 employees that are paid a similar amount, or one (1)  
18 full-time employee necessarily colours the result, but  
19 I think it's important to understand what we're  
20 talking about.

21                   MS. PATTI RAMAGE: Now in your report,  
22 you had reduced the Manitoba Hydro's employee account  
23 by nine hundred (900) on account of the recent  
24 reductions. You hadn't done -- made any adjustments  
25 for gas in the report, but have -- have done so in

1 your slides today, correct?

2 MR. A.J. GOULDING: That -- that's  
3 correct, and as -- as I noted, those are illustrative  
4 based on what we thought, frankly, was a high end with  
5 regards to the number of gas employees.

6 MS. PATTI RAMAGE: So you'd agree that  
7 it's -- it's important to exclude any employees from  
8 any account who are devoted to non-electric functions  
9 of the business, correct? You want -- you want to  
10 only include those employees who are -- who relate to  
11 the electric side of the business?

12 MR. A.J. GOULDING: I would agree,  
13 with a caveat that -- relating to the electric side of  
14 the business, we may have different views about the  
15 allocation of particular employees and what they're  
16 doing. But the objective is to match the inputs with  
17 the outputs, and so ultimately, that's -- that's where  
18 -- that's what you would use to guide which employees  
19 you included.

20 MS. PATTI RAMAGE: And if you were  
21 given the time to do an exhaustive analysis, you'd  
22 want to understand -- you'd need to understand not  
23 just Manitoba Hydro's side that you've -- you've made  
24 the corrections for today, we'd have to understand if  
25 those same type of considerations apply to the

1 utilities that we are being compared to. Is that  
2 correct?

3 MR. A.J. GOULDING: So first of all, I  
4 would -- I would say that what we did today were  
5 illustrative adjustments, not necessarily corrections.  
6 But the -- the impact is -- is the same from an  
7 illustrative perspective. But I also agree with you  
8 that we would -- we would want to go through and  
9 describe for each of the comparators why we believe  
10 that the inputs are matched with the outputs.

11 MS. PATTI RAMAGE: So if -- and I  
12 think we're -- we're coming along nicely. We're in  
13 agreement. But if Manitoba Hydro were to follow BC  
14 Hydro's example and contract out five hundred (500) of  
15 its customer service, human resource, finance, and  
16 office service positions, it would reduce its employee  
17 count, and all other things equal, Manitoba Hydro  
18 would perform better in each of the metrics you've  
19 presented, correct?

20 MR. A.J. GOULDING: That -- that's  
21 correct, and it's why, when we discuss the  
22 benchmarking, why we believe that you need to go  
23 beyond these partial measures. It may well be more  
24 efficient and effective to undertake those kinds of  
25 outsourcing activities, and we want to make sure that



1 as we look at this question of efficiency or  
2 productivity from a variety of perspectives, we're  
3 able to assess whether efficient decisions are being  
4 made in terms of outsourcing and insourcing.

5 MS. PATTI RAMAGE: So you'd agree a  
6 kilometre per wire per employee, or export sales in  
7 gigawatt hour per employee will not provide that --  
8 those types of insights, for example, in the example I  
9 previously gave you, whether outsourcing is  
10 financially benefit to -- beneficial to the Utility?  
11 You require more information to do that?

12 MR. A.J. GOULDING: I would agree with  
13 that, yes.

14 MS. PATTI RAMAGE: You'd also agree  
15 that the day that Manitoba Hydro flips the switch on  
16 Keeyask and 683 megawatts are added to the system  
17 overnight, Manitoba Hydro will improve in all of these  
18 metrics?

19 MR. A.J. GOULDING: Not necessarily in  
20 all of those metrics, and so --

21 MS. PATTI RAMAGE: Fair enough, but  
22 it'll improve in the -- I'll just look at them -- in  
23 the total megawatt hour of throughput per employee,  
24 the installed megawatt hour of -- of capacity per  
25 employee, correct?

1 MR. A.J. GOULDING: Yes.

2 MS. PATTI RAMAGE: But you'd agree it  
3 -- it would take a lot of time and effort to develop  
4 that level of in-depth budgeting to find all of those  
5 things, whether -- whether taking those five hundred  
6 (500) employees and moving them out of the Company, if  
7 that's financially beneficial, you need more than  
8 these metrics to do that?

9 MR. A.J. GOULDING: I would agree that  
10 you need more than these metrics to do that. I  
11 wouldn't want to presume that the fact that it takes  
12 lots and lots of time means that it shouldn't be done.

13 MS. PATTI RAMAGE: It takes lots and  
14 lots of time, and probably lots of money. Is that  
15 correct?

16 MR. A.J. GOULDING: Relative to the  
17 benefit that good analysis provides, I don't believe  
18 that it is lots of money. And I realize we're  
19 speaking in broad generalities, right? It's not a  
20 trivial amount of money, but I think you have to think  
21 about it partially as an investment in transparency,  
22 and in being able to assure that good decisions are  
23 being made.

24 MS. PATTI RAMAGE: But -- okay. The  
25 metrics you've provided in your report are not the

1 type of metrics that would tell us whether Manitoba  
2 Hydro is achieving operating efficiencies, correct?  
3 We would have to do more than your report?

4 MR. A.J. GOULDING: I -- I believe  
5 that we've acknowledged that in our report, that --  
6 that more would need to be done.

7 MS. PATTI RAMAGE: Let's move on to  
8 your section on retail rates. If we could have figure  
9 7 brought up of the London Economics report. That is  
10 page -- page 16. There. You have that in front of  
11 you, your figure 7?

12 MR. A.J. GOULDING: Yes.

13 MS. PATTI RAMAGE: You calculated a  
14 commercial rate for Manitoba Hydro of seven point two-  
15 one (7.21) cents per kilowatt hour. You did that by  
16 dividing total commercial sales by commercial  
17 consumption out of the Manitoba Hydro's annual report.  
18 Is that correct?

19 MR. A.J. GOULDING: Yes.

20 MS. PATTI RAMAGE: That means in terms  
21 of the total commercial sales, that the rate that  
22 you've given would also include demand charges and  
23 basic monthly charges in that amount? It's not a pure  
24 energy charge, correct?

25 MR. A.J. GOULDING: Exactly.

1 MS. PATTI RAMAGE: It's a -- it's --  
2 would you agree it's a rough calculation? It doesn't  
3 account for different rates and different blocks of  
4 consumption, correct?

5 MR. A.J. GOULDING: Correct.

6 MS. PATTI RAMAGE: If we could go to  
7 figure 9 now of London Economics report. Here, you  
8 used that seven point two-one (7.21) cents -- I should  
9 -- I should ask you first, so seven-two (72) -- seven  
10 point two-one (7.21) cents is an overstatement, but  
11 it's an approximation, correct?

12 MR. A.J. GOULDING: I don't agree with  
13 you that it's an overstatement, and it's important to  
14 note that when we're trying to look at these across  
15 jurisdictions, that you have to use that particular  
16 metric that you've pointed out. That rate design may  
17 differ across jurisdictions, but ultimately, at the  
18 end of the day, as a very broad approximation of the  
19 cost of electricity, I believe that it is -- is valid.

20 I don't agree with the idea that it's -  
21 - that it's overstated. It is just presented in a --  
22 in a simplified way.

23 MS. PATTI RAMAGE: Help me understand  
24 how it's not overstated if it includes, in addition to  
25 an -- all of the energy charges, all of the basic

1 monthly charges, and all of the demand charges.

2 MR. A.J. GOULDING: So we believe that  
3 these are presented on an internally consistent basis,  
4 and that when we're looking across jurisdictions, we  
5 are looking at total revenues per customer class --  
6 and speaking broadly here -- divided by the -- the  
7 volumes. And so with that in mind, ultimately, if --  
8 if you wanted to present this in a different way, for  
9 example, as revenue requirement per similar customer  
10 classes, that would be an alternative approach.

11 But at the end of the day, from the  
12 customer's perspective, right, it -- it is their --  
13 their total bill that matters. And what we have done  
14 is to present that total bill -- bill using a  
15 volumetric approach as a way for us to be able to try  
16 and make some interjurisdictional comparisons.

17 MS. PATTI RAMAGE: So it's perhaps the  
18 kilowatt per hour identifier that we take issue. Now  
19 -- and I'll move on. It's -- it's not that big a  
20 point, because what I want to look at is figure 9.

21 You used the seven point two-one (7.21)  
22 cents for the purpose of this comparison. Did you  
23 calculate the other jurisdictions rates in the same  
24 way?

25 MR. A.J. GOULDING: So when we looked

1 at, for example, the information from the Energy  
2 Information Administration, EIA generally presents it  
3 in that way, and the -- Jarome, can you confirm with  
4 regards to Manitoba Hyd -- I'm sorry, with regards to  
5 SaskPower and Hydro Quebec?

6 MR. JAROME LESLIE: Yes. With regard  
7 to the Canadian peers, we have taken a similar  
8 approach in relying on the annual reports and the  
9 total volume of sales to commercial customers.

10 MS. PATTI RAMAGE: Now, in your  
11 comparison of figure 9, you assumed a 2 percent per  
12 year increase in the nine (9) jurisdictions that you  
13 compared Manitoba Hydro to, correct?

14 MR. A.J. GOULDING: Yes.

15 MS. PATTI RAMAGE: In Manitoba Hydro  
16 First Round LEI-4, and you don't need to go there,  
17 Manitoba Hydro asked you to provide actual, proposed,  
18 or projected rate increases for each of the nine (9)  
19 jurisdictions cited in your comparison, but you  
20 declined to do so?

21 MR. A.J. GOULDING: Yes.

22 MS. PATTI RAMAGE: I think, in part,  
23 on the basis that there are multiple utilities in  
24 these jurisdictions. Do you recall that?

25 MR. A.J. GOULDING: Yes.

1 MS. PATTI RAMAGE: Would you agree  
2 that there -- there are in fact, though, projected --  
3 there are known projected rate increases in some of  
4 these jurisdictions?

5 MR. A.J. GOULDING: Subject to check,  
6 yes.

7 MS. PATTI RAMAGE: And 2 percent is a  
8 conservative number?

9 MR. A.J. GOULDING: I don't  
10 necessarily -- I -- well, first of all, we have to  
11 define 'conservative' from whose perspective. But I  
12 don't necessarily agree that that is conservative.  
13 And you'll note, you know, we had a little bit of  
14 discussion earlier about the impact of the changes in  
15 -- in tax rates in -- in the US, but there are also  
16 other elements, including the evolving fuel mix, that  
17 may drive stable or potentially declining rates.

18 Each jurisdiction is different. We  
19 recognize that. We believe that the 2 percent is a  
20 reasonable number, and as -- as we note, it is  
21 consistent with some of the assumptions that Manitoba  
22 Hydro itself had made.

23 MS. PATTI RAMAGE: Manitoba Hydro's  
24 provided evidence in this proceeding, for example, of  
25 Saskatchewan at 3.5 percent. Are you aware of this --

1 MR. A.J. GOULDING: Yes, that --

2 MS. PATTI RAMAGE: -- that 3.5 percent  
3 rate increase that's been approved for Saskatchewan?

4 MR. A.J. GOULDING: You will also note  
5 that our concern is not with SaskPower as much as it  
6 is with the competing US jurisdictions.

7 MS. PATTI RAMAGE: Now, looking -- if  
8 we could bring figure 9 back up, the -- Manitoba Hydro  
9 is the blue line at the very bottom of the graph on  
10 the left-hand side? Is that correct?

11 MR. A.J. GOULDING: Yes.

12 MS. PATTI RAMAGE: And so even after  
13 five (5) successive 7.9 percent rate increases, with 2  
14 percent assumed for all other provinces, if we follow  
15 that line, it lands second from the bottom, or second  
16 lowest after the five (5) years of 7.9 percent rate  
17 increases?

18 MR. A.J. GOULDING: That's correct.

19 MS. PATTI RAMAGE: If we can turn to  
20 page 18 of the London Economics report. I'm sorry,  
21 page 18 of -- it's -- I'm looking at -- sorry, slide -  
22 - in your presentation. If we could go to the --  
23 today's presentation, and if we could go to slide 7.

24 Can you confirm that the bar graph in  
25 this slide is -- is a graphical depiction of the



1 conclusions set out in pages 18 to 24 of your report  
2 and the identified IRs? There's no new information  
3 contained in this slide?

4 MR. A.J. GOULDING: Yes, that's --  
5 that's correct.

6 MS. PATTI RAMAGE: Okay.

7 MR. CHRISTIAN MONNIN: Counsel, could  
8 you please specify which IRs you're referring to?

9 MS. PATTI RAMAGE: The IRs listed on  
10 the bottom of the slide.

11 MR. CHRISTIAN MONNIN: Thank you.

12

13 CONTINUED BY MS. PATTI RAMAGE:

14 MS. PATTI RAMAGE: Now if we could  
15 turn to page 19 of your report. Here, we see -- and  
16 if we look in the first paragraph of your report, we  
17 see London Economics finding that the cost of  
18 utilities for hog operations that used purchased feed  
19 and home-mixed feed were two hundred and seventy-one  
20 thousand three hundred and ninety-one dollars  
21 (\$271,391) per farm per year, and that that represents  
22 approximately 1.7 and 1.9 percent of the total  
23 operating expenses of purchased feed and home-mixed  
24 feed farms respectively.

25 The basis of your cost information was

1 the government of Manitoba's guidelines for estimating  
2 swine farrow-finish costs. Is that correct?

3 MR. A.J. GOULDING: Yes.

4 MS. PATTI RAMAGE: And if we go to the  
5 next paragraph, the information that you have provided  
6 in that paragraph regarding average net sales,  
7 operating margins per dollar of revenue, and average  
8 margins per hog farm, that's also information derived  
9 from the government of Manitoba's guidelines for  
10 estimating swine farrow-finish costs?

11 MR. A.J. GOULDING: Yes.

12 MS. PATTI RAMAGE: Now, if I could  
13 have you turn to Tab 2 of Manitoba Hydro's book of  
14 documents. And that is --

15 MR. CHRISTIAN MONNIN: Actually,  
16 counsel --

17 MS. PATTI RAMAGE: Oops.

18 MR. CHRISTIAN MONNIN: -- I'm just --  
19 you're looking at footnotes 51 and 52? I just want to  
20 confirm that. Or is it 53?

21 MS. PATTI RAMAGE: Well, I am looking  
22 at the information contained in those two (2)  
23 paragraphs are identified -- I'm looking primarily at  
24 inf -- footnote number 50 is where the calculation is  
25 done, but --

1 MR. CHRISTIAN MONNIN: And it's 50,  
2 sorry, 50's in the previous page? No, it's okay. I'm  
3 there. All right.

4 MS. PATTI RAMAGE: You're -- you're  
5 with me?

6 MR. CHRISTIAN MONNIN: Yeah. Thank  
7 you.

8 MS. PATTI RAMAGE: So the swine -- the  
9 cost of two hundred and seventy-one thousand (271,000)  
10 is -- is included in footnote number 50. That is how  
11 the calculation was done, where -- where everybody's  
12 on the same page?

13 And if we look to that document, the --  
14 the source of that information -- now I've got to find  
15 where I am. If we could turn to page 8 of the book of  
16 documents. And that is page 1 of the -- the -- I'll  
17 call it the swine report. And if we could look at the  
18 first paragraph of that document, and it -- it reads:

19 "This guide is designed to provide  
20 you with planning information and a  
21 format for calculating costs of  
22 production of a swine farrow to  
23 finish enterprise in Manitoba.  
24 General Manitoba Agriculture --  
25 Agriculture, Food, and Rural

1                   Development, MAFRD, recommendations  
2                   are assumed in using feed and  
3                   veterinary inputs. These figures  
4                   provide an economic evaluation of  
5                   livestock and estimating prices  
6                   required to cover all costs."

7                   And this is the important part:

8                   "Costs include labour, investment,  
9                   and depreciation, but do not include  
10                  management costs, nor do they  
11                  necessarily represent average cost  
12                  of production in Manitoba."

13                  Did you take -- do you recognize that  
14                  quote is taken from the source you used?

15                  MR. A.J. GOULDING:    Yes.

16                  MS. PATTI RAMAGE:    Now if we look to  
17                  the bottom of that page, same -- same document. On  
18                  the bottom of the page, it says:

19                  >Note, this budget is only a guide  
20                  and is not intended as an in-depth  
21                  study of the cost of production of  
22                  this industry."

23                  I put it to you, sir, that you used a  
24                  source which does not purport to represent average  
25                  cost of productions and is not intended as an in-depth

1 study of the cost of production of the hog farm  
2 industry. Is that correct?

3 MR. A.J. GOULDING: We believe that  
4 the source is consistent with our intent, which was to  
5 provide an indication of the impact of the rate  
6 increase on a particular customer class, a set of  
7 analysis that we have not seen elsewhere in the  
8 proceeding.

9 MS. PATTI RAMAGE: Sir, could you tell  
10 me where in your report says that this was to be an  
11 indication? And I think I heard this morning,  
12 extremely illustrative, not definitive or final, high  
13 level were all things that you used to describe this  
14 information in your opening comments. Can you show me  
15 where they appear anywhere in your report?

16 MR. A.J. GOULDING: So if you look at  
17 our final conclusions, what you'll note is that -- so  
18 we've noted, for example, under the macroeconomic  
19 impact, and while we recognize that this appears in  
20 the discussion of in plan, it also applies to all of  
21 the analysis that came before. It says:

22 "The results presented here are of  
23 necessity illustrative, and that LEI  
24 recommends that further such  
25 analysis be required before

1                   finalizing consideration of a rate  
2                   increase of this magnitude."

3                   So those sentences can equally be  
4 applied to the -- both the macroeconomic impact  
5 section, and the sections that came before.

6                   MS. PATTI RAMAGE:    I'm going to -- I'm  
7 going to have to slow you down.  Can you show me where  
8 it says that on the page, which paragraph?

9                   MR. A.J. GOULDING:    Of course.  I -- I  
10 apologize.  Sometimes I have a tendency to speak  
11 quickly.  So if we go to page 26, in section 3.5, what  
12 -- what we see, first of all, the beginning sentence  
13 says:

14                               "The above examples provide insights  
15                               on how the increases in electricity  
16                               costs could impact particular types  
17                               of GSS and GSM consumers."

18                   And then we go on to discuss how we  
19 further augment that analysis by using a -- a  
20 macroeconomic model, and we also note that results  
21 provided are necessarily illustrative.

22                   MS. PATTI RAMAGE:    Sir, the section  
23 you're quoting from is an entirely different section  
24 of your report.  It is a -- it is -- it follows the  
25 section on impact on commercial customers, and it's

1 included in that section. It is not -- it's not part  
2 of the same section, sure -- sir, and I put it to you  
3 that you have used decimals to describe the impacts on  
4 these farm operations. You've used very small  
5 percentages, and you have attempted to display this  
6 with a degree of accuracy that your source information  
7 cannot support.

8 MR. A.J. GOULDING: So I don't agree  
9 with your conclusion. I believe that even if we did  
10 not sprinkle every single section with the -- the word  
11 'illustrative', we have, throughout our analysis,  
12 noted that these are meant to be illustrative  
13 examples, and that further analysis is required, but  
14 that no analysis of this sort has been presented by  
15 anyone else.

16 I -- I would concede one (1) thing. I  
17 -- I agree with you on going to two (2) decimal  
18 points, all right? That -- that's something that  
19 perhaps gives a -- a fallacy of misplaced precision,  
20 and I -- I would certainly, you know, rather than  
21 saying 17.97, moving that to 18 percent in the top  
22 paragraph on page 26, completely agree with you on  
23 that particular point. But I -- I don't agree that  
24 when you take the document in its entirety, that we  
25 have presented this analysis as being the final word

1 on any of these.

2                   What we have done is tried to say,  
3 Look, not only do we believe that there will be an  
4 impact on the customer classes that we were asked to  
5 analyze, but we've tried to put some numbers to this,  
6 and that certainly more time and a more in-depth  
7 analysis would provide further colour on -- on these,  
8 but the overall point remains, which is there's going  
9 to be an impact, and for most businesses, to have the  
10 cost of an input increase by this amount on a  
11 consistent and cumulative basis will, in turn, impact  
12 future investment decisions.

13                   MS. PATTI RAMAGE:    Okay.  Let's --  
14 let's look at -- at how you've used -- we'll use the  
15 hog -- hog guidelines to start off.  If we could look  
16 at footnote 50.  And what page are we on?

17

18   (BRIEF PAUSE)

19

20                   MS. PATTI RAMAGE:    Footnote -- in  
21 footnote 50, if we call that up, you say that:

22   "LEI calculated the hydroelectric  
23   portion of these costs by  
24   multiplying the rate of Hydro and  
25   the amount of Hydro used."



1                   And the rate you used in this case for  
2 general service was five point three (5.3) cents per  
3 kilowatt hour. That's the -- the rate reported in  
4 this guide, and you used the number 512,058 kilowatt  
5 hours per year. That's a fairly precise number, isn't  
6 it?

7                   MR. A.J. GOULDING:    Yes.

8                   MS. PATTI RAMAGE:    And if we go to --  
9 let's look at page -- you got that from the swine --  
10 the swine estimating guidelines, correct?

11                  MR. A.J. GOULDING:    Yes.

12                  MS. PATTI RAMAGE:    And if we could  
13 look to page 8 of the swine estimating guidelines,  
14 which is page 15 of the book of documents, and if we  
15 see there -- we'll see near the top of the page a rate  
16 for Hydro, and then a number for Hydro usage, that  
17 same 512,058 kilowatt hours. Do you see that?

18                  MR. A.J. GOULDING:    Yes.

19                  MS. PATTI RAMAGE:    Now, can we turn to  
20 page 19 of the book of documents. And if we look on  
21 page 19, you'll see -- would you agree, subject to  
22 check, that if we used the 500 and -- it was 512,058  
23 kilowatt hours at a rate of five cents (\$0.05) -- five  
24 point zero-three (5.03) cents per kilowatt hour, we  
25 would come up with the value of twenty-seven thousand

1 one hundred and thirty-nine (27,139) for Hydro, and  
2 that's the number used in your report, correct?

3 MR. A.J. GOULDING: Yes.

4 MS. PATTI RAMAGE: And you see it's on  
5 that page, and you see to the right, blank lines  
6 headed by your cost?

7 MR. A.J. GOULDING: Yes.

8 MS. PATTI RAMAGE: The reason your  
9 cost is there is because this is a workbook. It's not  
10 a study of operating costs, correct?

11 MR. A.J. GOULDING: Regardless of  
12 whether it is a workbook, the costs that are provided  
13 here provide an indication of the overall mix of  
14 inputs for this particular activity. So as we've  
15 noted, the -- the fact that the calculations that  
16 we've made aren't representative of any particular  
17 individual farm, do not, we believe, undermine the  
18 overall point that a -- a rate increase is going to  
19 impact the margins of these particular producers.

20 MS. PATTI RAMAGE: But that's not what  
21 your report says, sir. Your report says that these  
22 are the average costs for the industry, and this is  
23 what's going to happen to the industry, when in fact,  
24 the data that you've used is a workbook that gives a  
25 farmer an -- an example so that they can figure out a

1 budget for their farm. You're imputing a lot more  
2 information into this than -- than exists in this  
3 workbook. It --

4 MR. A.J. GOULDING: Well, I mean, I  
5 find your assertion interesting, because surely if  
6 farmers are being provided a workbook that has  
7 information that is not at all representative of the  
8 industry, then the workbook itself isn't terribly  
9 useful to those farmers. And I would -- I would  
10 certainly hope that the government of Manitoba isn't  
11 issuing workbooks that have no relationship to -- to  
12 average costs.

13 MS. PATTI RAMAGE: Well, let's --  
14 let's turn to the next workbook that you've used. And  
15 if we could see that -- if we could go to Tab 5,  
16 potato production costs. And if we look at page 58 of  
17 the book of documents, you'll see a very similar  
18 statement at the front of this document:

19 "The following budget is estimates  
20 of the cost of producing process --  
21 processing potatoes in Manitoba."

22 Do you see that in the first paragraph  
23 of this?

24 MR. A.J. GOULDING: I do.

25 MS. PATTI RAMAGE: And then if we look

1 to the last sentence of that paragraph:

2 "Costs include labour, investment,  
3 depreciation and owner management  
4 costs, but do not necessarily  
5 represent the average cost of  
6 production in Manitoba."

7 Do you see that statement?

8 MR. A.J. GOULDING: I do.

9 MS. PATTI RAMAGE: And again, you see  
10 the statement at the bottom of the page:

11 "This budget is only a guide, and it  
12 is not intended as an in-depth study  
13 in the cost of production of this  
14 industry."

15 So the same caveats have been put in  
16 place with respect of this guide?

17 MR. A.J. GOULDING: Yes.

18 MS. PATTI RAMAGE: So when I look at  
19 your calculations on this one, this guide, I found  
20 them hard to follow, so I -- I'd like to -- to see if  
21 we can see how the -- your calculations blend with  
22 what information is provided in the guide. And here,  
23 if we could turn to page 20 -- 21 of London Economics  
24 report.

25

1 (BRIEF PAUSE)

2

3 MS. PATTI RAMAGE: And if we look at  
4 page 21, and we -- we look at the fourth line down, I  
5 think you see:

6 "ELI thus assumes 60 percent of the  
7 irrigation cost to be attributed to  
8 electricity."

9 I think I'm starting -- I think we  
10 maybe want to go up to the top of the next page. We  
11 can go to 20. If you just go up, I -- because I'm  
12 getting midway through a sentence. Okay:

13 "According to the government of  
14 Manitoba's guidelines for estimating  
15 the Information Requests --  
16 irrigating processing potato costs  
17 in 2016, the cost of utilities for  
18 general use and the cost of  
19 irrigation is approximately a  
20 hundred and five dollars (\$105) per  
21 acre and fifty-four (54) dol --  
22 fifty-four dollars and ninety-four  
23 cents (\$54.94) per acre  
24 respectively."

25 MR. CHRISTIAN MONNIN: There's --

1 MS. PATTI RAMAGE:

2 "For irrigation costs, the  
3 guidelines assume that 40 percent of  
4 the pumping is done with the use of  
5 diesel whereas the remaining 60  
6 percent is done with electricity."

7 MR. CHRISTIAN MONNIN: Counsel, I just  
8 -- for the benefit of clarity for the record, I'm not  
9 sure whether it's relevant to your question or not,  
10 but you missed "per year" on both of those. So it's  
11 per acre per year, and per acre per year.

12

13 CONTINUED BY MS. PATTI RAMAGE:

14 MS. PATTI RAMAGE: That's fine, per  
15 year.

16 Now, what you've said is that you've  
17 made an adjustment, and 60 percent of the irrigation  
18 costs to be attributed to electr -- are be attributed  
19 to electricity. In other words, utilities for  
20 irrigation cost approximately forty-four dollars and  
21 thirty-one cents (\$44.31) per year. So you've made an  
22 adjustment of 60 percent to get to forty-four thirty-  
23 one (44.31), correct?

24 MR. A.J. GOULDING: Yes.

25 MS. PATTI RAMAGE: Leading to the

1 total cost of utilities of a hundred and forty-nine  
2 dollars (\$149) per acre per year? That's correct?

3 MR. A.J. GOULDING: Yes. I apologize.

4 MS. PATTI RAMAGE: Okay. Now, could  
5 we go back to Tab 5 of the book of documents, page 59.  
6 You know what, I jumped the gun a little early. I'm  
7 just going to have you -- if we could jump back to the  
8 -- the actual report, the LEI report.

9 The -- just to make it simpler, you've  
10 calculated a hundred and forty-nine dollars (\$149) per  
11 acre per year by adding the cost of general utilities  
12 you've referred to of a hundred and five dollars and  
13 thirty-eight cents (\$105.38) together with the forty-  
14 four dollars and -- and thirty-one cents (\$44.31) per  
15 year to get to a hundred and forty-nine (149),  
16 correct?

17 MR. A.J. GOULDING: Yes.

18 MS. PATTI RAMAGE: So if we could now  
19 go to Tab 5, and at page 59, I'd like -- there's two  
20 (2) numbers I want to focus in on. And we'll start  
21 with the cost of utilities. Do you see that at --  
22 under operating costs, number 1.12 of a hundred and  
23 five dollars and thirty-eight cents (\$105.38)?

24 MR. A.J. GOULDING: Yes.

25 MS. PATTI RAMAGE: Do you see that

1 number?

2 MR. A.J. GOULDING: Yes.

3 MS. PATTI RAMAGE: And that's the same  
4 hundred and five dollars and thirty-eight cents  
5 (\$105.38) you -- you represent -- you identified in  
6 your report as cost of general utilities, correct?

7 MR. A.J. GOULDING: Yes.

8 MS. PATTI RAMAGE: Now if we could  
9 turn to page 69 of the book of documents, which is  
10 page 12 of these guidelines, it sets out how that  
11 hundred and five dollars (\$105) was calculated. And  
12 we see that, if we could scroll down the page, under  
13 utilities.

14 MR. A.J. GOULDING: Yes.

15 MS. PATTI RAMAGE: It in -- it's --  
16 includes seventy-five thousand (\$75,000) on account of  
17 Hydro and seventy-two hundred dollars (\$7,200) on  
18 account of telephone?

19 MR. A.J. GOULDING: Yes.

20 MS. PATTI RAMAGE: Correct? So would  
21 you agree, subject to check, that if we remove the  
22 amount for telephones, the amount of a hundred and  
23 five dollars and thirty-eight cents (\$105.38) per acre  
24 drops to ninety-six dollars and sixteen cents  
25 (\$96.16)?



1 MR. A.J. GOULDING: Yes, I agree with  
2 that.

3 MS. PATTI RAMAGE: And that has not  
4 been adjusted for in your report?

5 MR. A.J. GOULDING: We are happy to  
6 make that adjustment.

7 MS. PATTI RAMAGE: Okay. Now next, if  
8 we look at the forty-four dollars (\$44) report, forty-  
9 four dollar (\$44) amount you had for the cost of  
10 irrigation, if we can jump back to page 20. I know,  
11 this is hard, doing this jumping around. Page 20.

12 Here, you say -- if you look at the  
13 second line from the bottom -- well, let's keep going  
14 down, scrolling to 21. Here you have that you  
15 identify the cost of the irrigation as being fifty-  
16 four dollars (\$54) per acre per year.

17 Do you see that --

18 MR. A.J. GOULDING: Yes.

19 MS. PATTI RAMAGE: -- at the top of --  
20 the very top line?

21 MR. CHRISTIAN MONNIN: Fifty-four point  
22 ninety-four (54.94) just to be correct.

23

24 CONTINUED BY MS. PATTI RAMAGE:

25 MS. PATTI RAMAGE: Fifty-four (54) --

1 that's correct. Sorry, Mr. Monnin.

2 You then say:

3 "For irrigation cost, the guidelines  
4 assume that 40 percent of pumping is  
5 done with the use of diesel, whereas  
6 the remaining 60 percent is done  
7 with electricity. LEI thus assumes  
8 60 percent of irrig -- the  
9 irrigation cost to be attributed to  
10 electricity. In other words,  
11 utilities for irrigation costs are  
12 approximately forty-four dollars and  
13 thirty-one cents (\$44.31) per acre  
14 per year."

15 Sir, if the cost of irrigation is  
16 fifty-four dollars and ninety-four cents (\$54.94) per  
17 acre per year, how can forty-four dollars and thirty-  
18 one cents (\$44.31) be considered 60 percent of that  
19 cost?

20 MR. A.J. GOULDING: Thank you for  
21 identifying that, and we'd be happy to submit a -- a  
22 discussion of that subsequent to this.

23 MS. PATTI RAMAGE: Okay. Thank you.  
24 Yeah, can we have an undertaking?

25 MR. A.J. GOULDING: Sure. I --

1 MS. PATTI RAMAGE: The undertaking is  
2 that the representatives of LEI will provide an  
3 explanation of how the fifty-four dollars and ninety-  
4 four cents (\$54.94) per acre per year for irrigation  
5 costs translated by 60 percent -- or -- or how the  
6 number forty-four thirty (44.30) -- forty-four dollars  
7 and thirty-one cents (\$44.31) was arrived at.

8 Can I start that over? The  
9 representatives of London Economics will provide an  
10 undertaking and advise how they calculated forty-four  
11 dollars and thirty-one cents (\$44.31) for irrigated --  
12 irrigation costs.

13 MR. CHRISTIAN MONNIN: I would just --  
14 to add just one (1) amendment to that, hopefully a  
15 friendly amendment, that it wouldn't be the  
16 representatives of LEI. It would be Mr. Goulding.  
17 This is Mr. Goulding's --

18 MS. PATTI RAMAGE: I'm sorry.

19 MR. CHRISTIAN MONNIN: -- evidence.

20 MS. PATTI RAMAGE: That's fine. And I  
21 am going to -- I'm going to jump -- and I might be  
22 able to avoid this undertaking. If we could go to  
23 page 11 -- or page 68 of the guide, and we see how  
24 irrigation costs are calculated, this maybe -- this  
25 might avoid this undertaking.

1                   If you look under point -- one point  
2 zero seven (1.07), you see Hydro pumping cost is five  
3 dollars (\$5) an hour, whereas propane is eight dollars  
4 (\$8) an hour. Do you see that?

5                   MR. A.J. GOULDING:    Yes.

6                   MS. PATTI RAMAGE:    Hydro's assume --  
7 is assumed to irrigate 460 acres of the sample farm,  
8 and diesel's assumed to be used on 312 acres? Do you  
9 see that?

10                  MR. A.J. GOULDING:    Yes.

11                  MS. PATTI RAMAGE:    So would you -- the  
12 400 -- would you accept, subject to check, that 468  
13 acres translates into 68 percent of that farm -- or 60  
14 -- translates into 60 percent of the farm?

15                  MR. A.J. GOULDING:    Subject to check.

16                  MR. CHRISTIAN MONNIN:   And -- and  
17 counsel, I apologize for mucking up your transcript,  
18 here, but you referred to propane at eight dollars  
19 (\$8) an hour, and I just want to be clear that you  
20 were referring to diesel, eight (8) -- eight dollars  
21 (\$8) an hour.

22

23 CONTINUED BY MS. PATTI RAMAGE:

24                  MS. PATTI RAMAGE:    I -- I appreciate  
25 your making the correction. I was back on the other

1 one. Diesel is eight dollars (\$8) an hour, and Hydro  
2 is five dollars (\$5) an hour.

3 And I think the lines on the right-hand  
4 side of the page have been inserted so the individual  
5 farmer can adjust the budget by putting in its own  
6 figures, correct?

7 MR. A.J. GOULDING: Yes, that's  
8 correct.

9 MS. PATTI RAMAGE: And the choice --  
10 and the purpose of inputting those numbers is to  
11 account for the different field choices and how much  
12 each is used, correct?

13 MR. A.J. GOULDING: Yes.

14 MS. PATTI RAMAGE: The assumptions  
15 will be different for every farm?

16 MR. A.J. GOULDING: Yes.

17 MS. PATTI RAMAGE: And I'm going to --  
18 I'm going to take a flyer at this --

19 MR. CHRISTIAN MONNIN: Counsel --

20 THE CHAIRPERSON: Sorry --

21 MS. PATTI RAMAGE: Sorry.

22 THE CHAIRPERSON: -- the reporter  
23 asked if this was still an undertaking.

24 MS. PATTI RAMAGE: It still is, until  
25 we got one (1) last question, and we might be able to

1 avoid it with this question.

2

3 CONTINUED BY MS. PATTI RAMAGE:

4 MS. PATTI RAMAGE: If you -- if you  
5 factor in the less-expensive Hydro fuel is used on  
6 only 60 percent of the farm, you could -- you would  
7 use -- the proper number to use would be an -- a  
8 weighted average, is -- and that fifty-four dollars  
9 and ninety-four cents (\$54.94) is, in fact, a weighted  
10 average between the diesel and the Hydro costs. Does  
11 that make sense to you?

12 MR. A.J. GOULDING: I think we would  
13 prefer to address this in the undertaking.

14 MS. PATTI RAMAGE: Okay. We'll do it  
15 that way, then. I'm going to -- I will ask you to  
16 accept, subject to check, and you can check in the  
17 undertaking, that the -- the cost should have been,  
18 instead of forty-four dollars and thirty-one cents  
19 (\$44.31), it should have been point six (.6) -- it  
20 should have been twenty-six dollars and fifty-nine  
21 cents (\$26.59). And if you could check that number,  
22 please as part of that undertaking.

23 MR. CHRISTIAN MONNIN: We'll -- we'll  
24 bundle that with the undertaking, counsel.

25 MS. PATTI RAMAGE: Okay. Next, this

1 one will go much better.

2 MR. CHRISTIAN MONNIN: I'll -- I'll  
3 defer to Ms. Ramage on that one to repeat the  
4 undertaking.

5 MS. PATTI RAMAGE: The undertaking is  
6 to confirm or check whether the value of forty-four  
7 dollars and thirty-one cents (\$44.31) included in the  
8 calculation should have been twenty-six dollars and  
9 fifty-nine cents (\$26.59), and also to confirm what  
10 the total value should be.

11 I believe, again, subject to check,  
12 that it's a hundred and twenty-two dollars and  
13 seventy-five cents (\$122.75), not the hundred and  
14 forty-nine sixty-nine (149.69) that was used in the  
15 report.

16 MR. CHRISTIAN MONNIN: Is -- is that -  
17 - do you have that? Okay. We'll -- we'll take that  
18 undertaking.

19

20 --- UNDERTAKING NO. 72: Mr. Goulding to confirm or  
21 check whether the value of  
22 forty-four dollars and  
23 thirty-one cents (\$44.31)  
24 included in the  
25 calculation should have

1                   been twenty-six dollars  
2                   and fifty-nine cents  
3                   (\$26.59), and also to  
4                   confirm what the total  
5                   value should be

6  
7                   THE CHAIRPERSON:    Ms. Ramage,  
8                   according to my timing, you're at your time.  But I'm  
9                   just wondering if you'd like some additional time.  
10                  And if so --

11                  MS. PATTI RAMAGE:    Yeah, I -- I would  
12                  like some additional time.  Mr. Peters had offered his  
13                  -- his time earlier -- oh.

14                  THE CHAIRPERSON:    We're -- we're into  
15                  hand signals now.  How much additional time would you  
16                  need, Ms. Ramage?

17

18                                   (BRIEF PAUSE)

19

20                  THE CHAIRPERSON:    Maybe we'll take a  
21                  break for ten (10) minutes --

22                  MS. PATTI RAMAGE:    Yeah.  Okay.

23                  THE CHAIRPERSON:    -- how's that?  And  
24                  you can talk to Mr. Peters.

25                  MS. PATTI RAMAGE:    I'd be happy to



1 jump to the next topic right now, if --

2 THE CHAIRPERSON: Okay. That --

3 MS. PATTI RAMAGE: -- I had a bunch  
4 more --

5 THE CHAIRPERSON: -- Mr. Peters has  
6 enough time, and if the panel has questions later.

7 MS. PATTI RAMAGE: Let -- yeah, let's  
8 have a quick break, and I'll talk to Mr. Peters.

9 THE CHAIRPERSON: Okay. We'll be back  
10 at quarter to. Thank you.

11

12 --- Upon recessing at 2:32 p.m.

13 --- Upon resuming at 2:48 p.m.

14

15 THE CHAIRPERSON: Yes, if we could  
16 resume. Ms. Ramage, I understand you're going to have  
17 another half-hour.

18

19 CONTINUED BY MS. PATTI RAMAGE

20 MS. PATTI RAMAGE: Yes, and let's see  
21 -- see how it goes. I want to turn to -- very quickly  
22 to your analysis on the general service small and  
23 medium customer classes, your representative analysis  
24 of convenience stores and hotels.

25 You used data from the US National

1 Association of Convenience and Fuel Retailing State of  
2 the Industry Summit Report to analyse the impact of  
3 five (5) years of 7.9 percent rate increases on  
4 Manitoba Hydro convenience stores; is that correct?

5 MR. CHRISTIAN MONNIN: Counsel, which  
6 page are you referring to in the report?

7 MS. PATTI RAMAGE: I'm referring to  
8 page 25 of the report.

9 MR. A.J. GOULDING: Yes.

10

11 CONTINUED BY MS. PATTI RAMAGE:

12 MS. PATTI RAMAGE: And based on that  
13 information, your evidence is that electricity  
14 accounts for 4 percent of the monthly operating  
15 expenses of US convenience stores; correct?

16 MR. A.J. GOULDING: Yes.

17 MS. PATTI RAMAGE: And based on -- if  
18 we turn the page to page 25, based on data from the  
19 2017 Hotel Operating Statistics Almanac, you conclude  
20 that electricity accounts for a total of 8 percent of  
21 all hotel operating expenses; is that correct?

22 MR. A.J. GOULDING: Yes.

23 MS. PATTI RAMAGE: You're aware that  
24 Dr. Adonis Yatchew filed evidence in this proceeding  
25 as an independent expert consultant.

1 Have you reviewed his report?

2 MR. A.J. GOULDING: No.

3 MS. PATTI RAMAGE: Well, if we could  
4 bring up appendix 4 to Dr. Yatchew's report. This is  
5 a table. It's titled Manitoba Hydro Electricity Cost  
6 Shares by Subsector. Its source is CANSIM tables.

7 Would you agree that CANSIM tables are  
8 produced by Statistics Canada?

9 MR. A.J. GOULDING: Just a quick  
10 correction. The title is Manitoba Electricity Cost  
11 Shares by Subsector not Manitoba Hydro Electricity  
12 Cost Shares by Subsector.

13 MS. PATTI RAMAGE: Certainly, thank  
14 you.

15 MR. A.J. GOULDING: And I believe your  
16 question was whether this was produced by Statistics  
17 Canada --

18 MS. PATTI RAMAGE: Yes.

19 MR. A.J. GOULDING: is that correct?  
20 Yes, I believe that's the case.

21 MS. PATTI RAMAGE: And if we could  
22 scroll down the page to under the heading Services.  
23 There we see Services. If you look at the fourth line  
24 down, "miscellaneous store retailers."

25 You see that Stats Canada has used the

1 figure of 1.05 percent. Do you see that?

2 MR. A.J. GOULDING: I see the number.  
3 Again, the document right now in the -- in the view is  
4 cut off so I can see is the number.

5 MS. PATTI RAMAGE: And I'm -- you can  
6 ask to see more of the document, if it -- if you need  
7 something else if that --

8 MR. A.J. GOULDING: Yes, could --  
9 could you scroll towards the top? I just want to make  
10 sure that I see and understand the -- the column  
11 heading. So, yes, that's -- that's helpful.

12 So cost shares by subsector and you've  
13 called out the -- if we can go back to what you had  
14 called out. You've call out services and you're  
15 looking at miscellaneous store retailers.

16 MS. PATTI RAMAGE: Right.

17 MR. A.J. GOULDING: Yes --

18 MS. PATTI RAMAGE: And I'm -- I'm --  
19 can we also look now down that page and you'll see  
20 'traveller accommodation'. Do you see that?

21 MR. A.J. GOULDING: Yes.

22 MS. PATTI RAMAGE: Traveller  
23 accommodation would mean a hotel?

24 MR. A.J. GOULDING: As -- yes, it  
25 could mean a hotel.

1 MS. PATTI RAMAGE: And in -- in this  
2 CANSIM document it indicates that electricity  
3 represents 1.45 percent of total operating costs of  
4 traveller accommodations; is that correct?

5 MR. A.J. GOULDING: Yes.

6 MS. PATTI RAMAGE: Would you agree  
7 that the significant difference between the Canadian  
8 and US data would be due to the impact of different  
9 cost drivers north and south of the 49th parallel?

10 MR. A.J. GOULDING: So the -- there  
11 could be many drivers based on these differences and  
12 those could include -- I beg your pardon. You're --  
13 you're -- could you rephrase your question, so that I  
14 can answer it precisely?

15 MS. PATTI RAMAGE: Would you agree  
16 that the significant difference between the Canadian  
17 and US data and I'm -- here I'm referring to the 8  
18 percent hotel number that your US data brings compared  
19 to the 1.45 percent that Dr. Yatchew's Stats Canada  
20 data produces.

21 Do you agree that the significant  
22 difference would be due to the impact of different  
23 cost drivers north and south of the border?

24 MR. A.J. GOULDING: Yes.

25 MS. PATTI RAMAGE: Those could include

1 wage differences?

2 MR. A.J. GOULDING: Yes.

3 MS. PATTI RAMAGE: Those could include  
4 heating and cooling differences --

5 MR. A.J. GOULDING: Yes.

6 MS. PATTI RAMAGE: -- due to climate?

7 And would you agree that Canadian data would be  
8 appropriate for comparing Canadian convenience stores  
9 and Canadian hotels?

10 MR. A.J. GOULDING: So first, I would  
11 say that there are a variety of ways and sources of  
12 setting up a framework for doing this analysis, and  
13 that what we have provided is an illustrative  
14 discussion of the share.

15 I'm not convinced that the use of Stats  
16 Can. data versus using industry association always  
17 results in a better outcome but I do agree that using  
18 Canada specific data, where one is comfortable with  
19 it, produces relevant results.

20 THE CHAIRPERSON: Sorry, can I  
21 interrupt for a second. Sir, if you're doing a study  
22 of American companies, would use Canadian statistics  
23 instead of American statistics?

24 MR. A.J. GOULDING: I completely  
25 understand your point and the counsel from Manitoba

1 Hydro. I note, however, that there are a number of  
2 circumstances where the data sets are deeper in the US  
3 and that -- that can provide additional information.

4           So -- but completely agree that in a  
5 specific and fulsome study that I'd always want to  
6 have the best data available and that the use of a  
7 Canadian data set would be -- would be helpful.

8

9 CONTINUED BY MS. PATTI RAMAGE:

10           MS. PATTI RAMAGE: Sir, I'm going to  
11 move to page 40 of your report now. And in the  
12 bullets on page 40 you make the recommendation that  
13 Manitoba Hydro be required to investigate: Could  
14 Keeyask be separated from Manitoba Hydro into a  
15 private or public private partnership potentially with  
16 Manitoba Hydro purchasing a portion of the power under  
17 a power purchase agreement.

18           Do you see that?

19           MR. A.J. GOULDING: Yes.

20           MS. PATTI RAMAGE: Sir, are you aware  
21 that the Keeyask generating station is owned by an  
22 entity called Keeyask Hydro Limited Partnership --

23           MR. A.J. GOULDING: Yes.

24           MS. PATTI RAMAGE: -- Part -- you are?  
25 Yes? Then your recommendation is for Manitoba Hydro

1 and its four (4) Keeyask Cree Nation partners to enter  
2 into a further partnership with another entity?

3 MR. A.J. GOULDING: So let's read the  
4 language specifically here in terms of what we  
5 recommended which is, I believe, that we recommended  
6 exploring this option rather than providing a final  
7 recommendation with regards to how to proceed.

8 MS. PATTI RAMAGE: Okay. But, you  
9 acknowledge, to explore the option is to say, we would  
10 be looking at Manitoba Hydro and its four (4) Keeyask  
11 Cree Nation partners to -- that make up a partnership  
12 to enter into another partnership; correct?

13 MR. A.J. GOULDING: There's a variety  
14 of ways it could be structured, but yes, that would be  
15 one (1) approach.

16 MS. PATTI RAMAGE: Now if I was to  
17 revise you, and I don't think you will find this  
18 difficult, to accept that it took roughly eight (8)  
19 years from the signing of Agreements In Principle with  
20 Manitoba Hydro's Cree Nation partners to negotiate the  
21 terms of the joint Keeyask development agreement.

22 Is it realistic to expect that bringing  
23 another group into the mix will bring efficiencies and  
24 cost savings to the table?

25 MR. A.J. GOULDING: It's not just



1 about efficiencies and cost savings. It's also about  
2 determining how to allocate risk and to cap risk that  
3 I think are something that should be explored.

4                   You've talked about the timeframe that  
5 it took you to enter into this set of agreements, but  
6 you now have the entity. It has, I presume, its own  
7 government structure and there's no doubt that it  
8 would take time to negotiate with a pension fund or  
9 another organization and, particularly, given the  
10 potential economics of the facility to determine how  
11 best to proceed but I think that it is important to  
12 not rule out alternatives that would help to stabilize  
13 and manage risks on behalf of ratepayers.

14

15                   (BRIEF PAUSE)

16

17                   MS. PATTI RAMAGE:    Sir, can you advise  
18 the Board who else you would see as being able to  
19 accept the level of risk associated with this project  
20 and who else -- I'll start with.

21                   Who else has -- has the cost of  
22 borrowing that Manitoba Hydro enjoys, as a...?

23                   MR. A.J. GOULDING:    So I -- I mean, I  
24 guess I'm a bit puzzled because if no one else will  
25 take on this risk, why should ratepayers? And so I

1 think that is -- is one (1) element that strikes me in  
2 -- in this particular matter.

3                   But when we look at the extent of  
4 infrastructure that Canadian entities have purchased  
5 around the world and we're talking hydro stations,  
6 airports, toll roads, a wide range of infrastructure  
7 assets invested in largely by Canadian pension funds,  
8 some of whom we -- we advise, I would say that in  
9 terms of a deep understanding of the sector and access  
10 to low-cost capital, those kinds of entities are ones  
11 that can be considered.

12                   MS. PATTI RAMAGE:    You've also said --  
13 suggested potentially with Manitoba Hydro purch --  
14 purchasing a portion of the power under a power  
15 purchase agreement; correct?

16                   MR. A.J. GOULDING:    Yes.

17                   MS. PATTI RAMAGE:    You're aware that  
18 the Keeyask Hydro Limited Partnership already has a  
19 power purchase agreement with Manitoba Hydro?

20                   MR. A.J. GOULDING:    Yes.

21                   MS. PATTI RAMAGE:    So you acknowledge  
22 the terms of that agreement would also have to be  
23 renegotiated?

24                   MR. A.J. GOULDING:    Yes.

25                   MS. PATTI RAMAGE:    You have a section

1 in your report titled -- headed Presentation of  
2 Cancellation Costs Are Inadequate?

3 MR. A.J. GOULDING: Yes.

4 MS. PATTI RAMAGE: You'd agree that in  
5 order to arrive at cancellation cost estimates, you  
6 would need access to information such as removing and  
7 disposing of concrete structures, coffer dams, work  
8 areas, roads and the work camp, all of the costs of  
9 restoring the site to its original condition?

10 MR. A.J. GOULDING: Yes.

11 MS. PATTI RAMAGE: And you didn't have  
12 access to that information --

13 MR. A.J. GOULDING: So --

14 MS. PATTI RAMAGE: -- except at a high  
15 level?

16 MR. A.J. GOULDING: At a high-level,  
17 that's correct.

18 MS. PATTI RAMAGE: You'd also require  
19 access to information regarding all contractual  
20 obligation -- obligations and commitments associated  
21 with Keeyask? For example, the cancellation of the  
22 general service -- general civil construction  
23 contract. Correct?

24 MR. A.J. GOULDING: I think that my  
25 concern about the termination costs and the way that

1 they're presented is that I don't see any particular  
2 discussion of the extent to which these can be  
3 negotiated, adjusted, how they could be ameliorated.

4           And I think that that's an important  
5 element when we think about these particular  
6 termination costs. As you say, there are a range of  
7 contracts that need to be reviewed; discussions about  
8 whether if the various parties were held to strict  
9 performance; whether there are ways of reducing the  
10 potential termination payments. This is -- this is  
11 not to suggest that this is easy, but it is to suggest  
12 that, you know, if we were dealing with two (2) purely  
13 commercial entities and looking at termination of a  
14 large-scale project, there would inevitably be some  
15 fairly hardheaded negotiations that would go on to try  
16 and manage those termination costs.

17           MS. PATTI RAMAGE: Well, you'd agree  
18 that you would have to understand the implications of  
19 cancelling the project and negotiation -- negotiating  
20 with our First Nation partners before making any mov -  
21 - any decision or opining on this topic?

22           MR. A.J. GOULDING: So I believe that,  
23 first of all, the objective of reconciliation is  
24 absolutely critical and so none of my comments here  
25 should be taken to undermine or suggest that I don't

1 believe that that is an important thing for the  
2 province and -- and Canada to engage in.

3           But what I would suggest is that in any  
4 project like this, all of the shareholders would --  
5 would need to be consulted and involved. So, I don't  
6 think that's necessarily unique in this particular  
7 case.

8           MS. PATTI RAMAGE:    You -- you  
9 indicated you -- you didn't see anything on  
10 negotiating or reducing potential termination costs.

11           Do you have any reason to believe that  
12 wasn't assessed as part of either BCG or Manitoba  
13 Hydro's review of termination -- of the possibility of  
14 termination?

15           MR. A.J. GOULDING:   So, we believe  
16 that a fulsome discussion of those issues has not been  
17 presented.

18           MS. PATTI RAMAGE:    You also made  
19 comments or recommendation regarding consideration of  
20 pausing the project; is that correct?

21           MR. A.J. GOULDING:    Yes.

22           MS. PATTI RAMAGE:    Are you aware that  
23 coffer dams are neither designed or have -- nor does  
24 ours have the necessary permit to last then -- more  
25 than a few years?

1 MR. A.J. GOULDING: Yes.

2 MS. PATTI RAMAGE: You are aware of  
3 that. So you understand the -- the engineering  
4 considerations associated with protecting that site  
5 and -- and res -- building a new coffer dam, sir?

6 MR. A.J. GOULDING: Understanding  
7 that doesn't mean that this should not be analysed.

8 MS. PATTI RAMAGE: It -- pausing the  
9 project would also require costs being incurred to  
10 secure the site and maintain it in a safe and  
11 environmentally acceptable manner?

12 MR. A.J. GOULDING: So first of all,  
13 we need to discuss whether we're talking about a pause  
14 of six (6) months to perform further analysis or  
15 whether we're talking about a pause of six (6) years.  
16 Those are different pieces of analysis that would need  
17 to be performed.

18 But, given the magnitude of the  
19 potential investment and the uncertainty about the  
20 value of the output over a fifteen (15) year or more  
21 period, I think that we all agree that it's important  
22 to get this decision, right, and that there are I  
23 think -- there's a concern that continuing to create  
24 facts on the ground will foreclose later decisions.

25 And so, examining these issues as

1 quickly as possible will be critical to protecting  
2 ratepayers and investors in -- in this project.

3 THE CHAIRPERSON: Can I interrupt for  
4 a second, sir. You said "get this decision right."  
5 I'm just wondering what is "this decision?" Are you  
6 talking about Keeyask or are you talking about the  
7 rate? I -- based on what you were saying --

8 MR. A.J. GOULDING: No, I --

9 THE CHAIRPERSON: -- I had trouble  
10 understanding what this decision is.

11 MR. A.J. GOULDING: Yes, I apologize --

12 THE CHAIRPERSON: No, that's --

13 MR. A.J. GOULDING: -- for not being  
14 clear on that particular question and -- and I realize  
15 to a certain extent there's -- there's a linkage  
16 between the two (2) here.

17 So I was speaking in this context  
18 specifically about continued investment in Keeyask.  
19 Now, that -- were additional study to be performed  
20 that would potentially impact your views with regards  
21 to the magnitude of -- of the rate increase.

22 But, there -- there might be ways to  
23 come to a decision about the rate increase sooner,  
24 while a further decision was ongoing with regards to  
25 the nature of future capital investments.

1 CONTINUED BY MS. PATTI RAMAGE:

2 MS. PATTI RAMAGE: Sir, while we  
3 pause, whether it's six (6) months or six (6) years,  
4 you'd agree contracts would have to be cancelled?  
5 They'd have to be re-tender? They'd have to be  
6 renegotiated?

7 MR. A.J. GOULDING: That would depend  
8 on the nature of the contract.

9 MS. PATTI RAMAGE: And Manitoba Hydro,  
10 for whatever period of pause we are speaking of, would  
11 then -- would be exposed to the risk of escalation  
12 costs on any work pushed off to the future?

13 MR. A.J. GOULDING: That is correct,  
14 but that doesn't mean -- just the fact that there's a  
15 cost to getting better information and making better  
16 decisions doesn't mean that it is necessarily ill-  
17 advised to take that step.

18 MS. PATTI RAMAGE: There'd be a cost  
19 in demobilizing and re-mobilizing; true?

20 MR. A.J. GOULDING: Yes.

21 MS. PATTI RAMAGE: You're aware that  
22 it in -- in a recent review of Site C in BC that both  
23 the BCUC and the government of British Columbia  
24 rejected the option of -- outright rejected the option  
25 of pause as simply unacceptable?



1 MR. A.J. GOULDING: I am aware of the  
2 decisions that they came to. I don't agree with those  
3 decisions.

4 MS. PATTI RAMAGE: If I could have one  
5 moment.

6

7 (BRIEF PAUSE)

8

9 MS. PATTI RAMAGE: Sir, if I could  
10 have you turn to slide 15 of your presentation. The  
11 heading states:

12 "Manitoba Hydro's use of a 4.4 real  
13 discount rate is not appropriate as  
14 it is not matched to the risk of the  
15 Keeyask project."

16 MR. A.J. GOULDING: Yes.

17 MS. PATTI RAMAGE: And now -- and this  
18 is not on any list, could you please bring up  
19 Coalition-Manitoba Hydro first round 214(a).

20 Sir, this was an IR response to a  
21 Coalition question posed to Manitoba Hydro. And I  
22 bring it to your attention because it sets out the net  
23 present values relative to cancelling Keeyask and the  
24 tieline under P50 and P90 capital cost estimates.

25 And that is set out in the response to

1 (a). If we could just scroll down the page to the bar  
2 graph.

3 Sire, do you see in that response that  
4 varying discounts were used; 4.4 percent, 5.4 percent  
5 and 7.5 percent?

6 MR. A.J. GOULDING: Yes.

7 MS. PATTI RAMAGE: So it's incorrect  
8 to say that Manitoba Hydro only used a 4.4 percent --  
9 or use of a 4.4 percent is not appropriate. We, in  
10 fact, used.

11 MR. A.J. GOULDING: So as you will see  
12 the title says:

13 "...use of a 4.4 percent real  
14 discount rate is not appropriate as  
15 it is not matched to the risk of the  
16 Keeyask project."

17 And when we turn to -- so this is tab 2  
18 of 2.5.4 of --

19 MR. CHRISTIAN MONNIN: Kristen, it  
20 would be tab 2 of the application.

21 MR. A.J. GOULDING: Page 48. And on  
22 that particular page what we see is that while in  
23 previous paragraphs Manitoba Hydro discusses  
24 alternative assumptions, in this particular document  
25 the emphasis is on the 4.4 percent real WACC numbers.

1 And so our title is a response to that particular  
2 statement.

3

4 CONTINUED BY MS. PATTI RAMAGE:

5 MS. PATTI RAMAGE: But you acknowledge  
6 Manitoba Hydro did, in fact, do the analysis based on  
7 a 5. -- a 4.4, a 5 point -- 4.4 percent a 5.4 percent  
8 and a 7.5 percent basis, correct?

9 MR. A.J. GOULDING: We would  
10 acknowledge that there are examples of other discount  
11 rates that are used but would note that it does not  
12 appear that those other discount rates were used to  
13 justify an argument in favour of a go-forward  
14 decision.

15 MS. PATTI RAMAGE: If I could go to  
16 slide -- and I think this is my last question, slide 9  
17 of your -- of London Economics' presentation.

18 Slide 9 is that Manitoba Hydro has not  
19 filed evidence on macroeconomic impacts of its  
20 development plan nor its current rate request. And I  
21 want to focus on the portion of the statement that we  
22 have not provided evidence on macroeconomic impacts of  
23 the development plan.

24 Sir, you're aware that -- that a review  
25 of the Keeyask generating station was part of the

1 Needs For and Alternatives To proceedings?

2 MR. A.J. GOULDING: Yes, and I'd --  
3 I'd like to amend. I mean, I -- I agree with you that  
4 this -- that this title was overly prescriptive. I  
5 think that the title of this slide should have been,  
6 in our view, Manitoba Hydro has not filed sufficient  
7 evidence on macroeconomic impacts. So I appreciate  
8 your correction.

9 MS. PATTI RAMAGE: Yes, and just to  
10 confirm, sir, if we could bring up Manitoba Hydro  
11 Exhibit 128, the NFAT terms of reference.

12 The NFAT review was conducted by the  
13 PUB; correct?

14 MR. A.J. GOULDING: Yes.

15 MS. PATTI RAMAGE: And if we look  
16 under 'scope of review,' item 2H, that's on the third  
17 page of that document.

18 The Public Utility Board did, in fact,  
19 review and you see:

20 "(h) the socioeconomic impacts and  
21 benefits of the plan and  
22 alternatives to northern and  
23 Aboriginal communities."

24 Do you see that, sir?

25 MR. A.J. GOULDING: Sorry, I'm just --

1 you're looking at (h)?

2 MS. PATTI RAMAGE: (h).

3 MR. A.J. GOULDING: Yeah, and I -- I  
4 would like to zero in on that for a couple of reasons.  
5 One (1) is the timing and you'll note that our concern  
6 is not just about Keeyask, but also about the impact  
7 of the -- of the rate increase.

8 Furthermore, I would note that that  
9 sentence, "the socioeconomic impacts and benefits of  
10 the plan and alternatives to northern Aboriginal  
11 communities" does not actually talk about the macro  
12 economic impact of -- of costs. It doesn't say "net  
13 benefits," it says "benefits."

14 And we're all driven by our -- our  
15 scope with regards to what we -- what we look at and I  
16 would argue that the macroeconomic analysis that needs  
17 to be done now needs to look at -- at the province. It  
18 needs to look at the impact of the rate increases, as  
19 well as the impact of continued or not continued  
20 investment in Keeyask.

21 MS. PATTI RAMAGE: So when you say  
22 about the continued or not continued investment in  
23 Keeyask, you'd acknowledge that there would be a  
24 macroeconomic impact of terminating roughly one  
25 thousand (1000) employees if we terminated Keeyask?

1                   MR. A.J. GOULDING:    So I believe that  
2 the question should be looked at wholistically and  
3 that any discussion of those job losses which if -- if  
4 I understand your previous discussion were, in fact,  
5 temporary jobs that we need to look at that relative  
6 to the potential jobs not lost due to a more moderate  
7 set of -- of rate increases.

8                   THE CHAIRPERSON:    Ms. Ramage, we've  
9 got to wrap it up.  One more.

10                  MS. PATTI RAMAGE:    That was my last  
11 question so.

12                  THE CHAIRPERSON:    Thank you.  Thank  
13 you very much.  Mr. Peters...?

14                  MR. BOB PETERS:    Yes, thank you, Mr.  
15 Chair.

16

17 CROSS-EXAMINATION BY MR. BOB PETERS:

18                  MR. BOB PETERS:    There's just a couple  
19 or a few areas I'd like to speak to Mr. Leslie, Mr.  
20 Goulding about.  And I'm going to, some trepidation,  
21 head to that benchmarking issue.

22                                I understood from the discussions --  
23 well, perhaps we should start on page 52 of Exhibit  
24 GSM-9.

25                  MR. CHRISTIAN MONNIN:  Counsel?  9-2

1 is the most current version of the report, just for  
2 the benefit of the record.

3 MR. BOB PETERS: Is it any different  
4 on this page?

5 MR. CHRISTIAN MONNIN: I don't know  
6 but 9-2 is the errata version after the errata sheet  
7 which is correct --

8 MR. BOB PETERS: Let's use 9-2 if that  
9 suits you better.

10

11 CONTINUED BY MR. PETERS:

12 MR. BOB PETERS: The three (3)  
13 recommendations that you're making, Mr. Goulding and  
14 Mr. Leslie, are contained on this page, correct?

15 MR. A.J. GOULDING: The -- the  
16 recommendations are on -- on screen, yes.

17 MR. BOB PETERS: They haven't changed  
18 regardless of which --

19 MR. A.J. GOULDING: No, no.

20 MR. BOB PETERS: -- edition that I  
21 have?

22 MR. A.J. GOULDING: No.

23 MR. BOB PETERS: Okay, thank you. In  
24 dealing with the sentence says:

25 "LEI I believes that Manitoba

1 Hydro's request for a rate increase  
2 should be held in abeyance until the  
3 following analysis is performed and  
4 submitted to the Board for its  
5 review."

6 So, first of all, is there a timeline  
7 that encompasses all three (3) of these  
8 recommendations? How long should this rate  
9 application be held in abeyance?

10 MR. A.J. GOULDING: That's an  
11 interesting question. I think that my response would  
12 be something in the range of six (6) to nine (9)  
13 months. You want enough time to do substantive  
14 analysis on all three (3) of these issues, while  
15 recognizing that it's important to do so in a -- in a  
16 timely fashion.

17 MR. BOB PETERS: Okay. Well, let's  
18 deal with the first one: to conduct a properly  
19 conducted macroeconomic analysis.

20 Are you familiar with the work that was  
21 done by Dr. Yatchew in these proceedings?

22 MR. A.J. GOULDING: Yes, it was  
23 referred to earlier in this -- in -- in my testimony  
24 by the counsel for Manitoba Hydro.

25 MR. BOB PETERS: Have you had an



1 opportunity to review it?

2 MR. A.J. GOULDING: I have not  
3 reviewed it in detail.

4 MR. BOB PETERS: Have you reviewed any  
5 of the Information Requests or the testimony that Dr.  
6 Yatchew provided this Board?

7 MR. A.J. GOULDING: I focused on the  
8 IRs that were directed to -- to us and on my own  
9 evidence.

10 MR. BOB PETERS: So you haven't  
11 reviewed that?

12 MR. A.J. GOULDING: That's correct.

13 MR. BOB PETERS: Okay. So you're not  
14 aware as to whether Dr. Yatchew's information would be  
15 considered a properly conducted macroeconomic  
16 analysis, are you?

17 MR. A.J. GOULDING: No.

18 MR. BOB PETERS: And have you had an  
19 opportunity to read the -- the evidence, the cross-  
20 examinations and the Information Request by Drs.  
21 Simpson and Compton in these proceedings?

22 MR. A.J. GOULDING: No.

23 MR. BOB PETERS: All right. Thank  
24 you. Turning to the -- let's turn to number 3, the  
25 benchmarking. An independent review of Manitoba

1 Hydro's staff and costs.

2 That's the recommendation that there'd  
3 be benchmarking, correct?

4 MR. A.J. GOULDING: Yes. In -- in  
5 this particular -- so, in -- in our initial  
6 submission, we did not describe what sort of  
7 benchmarking should -- should take place, but we -- we  
8 noted that we felt that an independent review was  
9 necessary.

10 MR. BOB PETERS: And just to be clear,  
11 the independent review is another -- another way of  
12 saying independent benchmarking?

13 MR. A.J. GOULDING: Yes, I --  
14 benchmarking analysis would be appropriate.

15 MR. BOB PETERS: And Dr. Williams took  
16 you to some work done by some colleagues of yours at  
17 London Economics for the Ontario Power Generation  
18 company; correct?

19 MR. A.J. GOULDING: Yes.

20 MR. BOB PETERS: You didn't have any  
21 involvement in that?

22 MR. A.J. GOULDING: My involvement was  
23 more early on. I believe I sat on the panel. These  
24 proceedings went over the course of I think more than  
25 two (2) years, so I did sit on a panel earlier on, but

1 I was not involved in this -- in this particular  
2 document.

3 MR. BOB PETERS: Well, perhaps that  
4 answered my question. I was wondering what the  
5 timeline was for the preparation by London Economics  
6 International of the benchmarking study for OPG and  
7 was it as long as two (2) years?

8 MR. A.J. GOULDING: Not -- not for the  
9 preparation, no. And I think, again, this is the type  
10 of thing -- I apologize, I'm getting away from the mic  
11 here. But the study itself I think if you were going  
12 to give somebody a reasonable amount of time, you'd  
13 probably want to give them around four (4) months I  
14 would say; possibly you could get it done in -- in  
15 three (3).

16 That particular proceeding went  
17 through, you know, several different iterations. So  
18 no, I wouldn't take that answer of two (2) years as  
19 being the amount of time that would be required.

20 MR. BOB PETERS: Well, the analysis by  
21 London Economics International took the better part of  
22 two (2) years.

23 MR. A.J. GOULDING: Not the analysis,  
24 no. The -- the process in Ontario was -- was long.

25 MR. BOB PETERS: All right. So let me

1 get back to my question: How long did it take London  
2 Economics International to prepare their benchmarking  
3 study for OPG?

4 MR. A.J. GOULDING: So, my sense is to  
5 actually prepared that as opposed to the whole overall  
6 engagement of testifying but to prepare this report is  
7 consistent with my -- with my answer; that this is  
8 something that can be done in four (4) months.

9 MR. BOB PETERS: In discussions with  
10 Dr. Williams and I'll turn to what's marked as page 12  
11 on Consumers Exhibit 50, please. Although it's the  
12 12th page in the document, I'm afraid. Thank you.

13 One of the comments or portions of your  
14 evidence that I took when you're talking to Dr.  
15 Williams was, if you were recommending something for  
16 Manitoba Hydro, you would -- you would, first of all,  
17 use the total factor productivity methodology; is that  
18 correct?

19 MR. A.J. GOULDING: So in our response  
20 to IRs, we had mentioned total factor productivity. I  
21 think that what ideally I would want to do is to look  
22 at total factor productivity from more than one (1)  
23 perspective. So to use both an index method and  
24 potentially data envelopment analysis, and recognizing  
25 the concerns of Dr. Grant, to also look at alternative

1 comprehensive benchmarking analysis to take account of  
2 the inflexibility of -- of capital.

3 MR. BOB PETERS: Okay, I'm not going  
4 to pretend I understood that answer but let me just  
5 come at it this way.

6 The third last page of Exhibit  
7 Coalition-20 -- sorry, Coalition 50. Sorry, it's  
8 number 52 at the bottom. I don't know what that is on  
9 the PDF that Dr. Williams cobbled together. Yes, I'd  
10 like to go to the top of the page, please see if I  
11 could.

12 When I read this over the recess, it  
13 looked like London looked at eighteen (18) total  
14 factor productivity studies on electricity generation  
15 companies and distribution companies, and those were  
16 in North America?

17 MR. A.J. GOULDING: No, I believe that  
18 those were worldwide, subject to check.

19 MR. BOB PETERS: Okay. And it  
20 mentions four (4) different methodologies were used in  
21 the studies.

22 And is that consistent with the  
23 methodologies that you showed Dr. Williams in terms of  
24 the index method and the data envelopment analysis, as  
25 well as the stochastic frontier analysis?

1 MR. A.J. GOULDING: Yes.

2 MR. BOB PETERS: All right, leaving  
3 aside then this total factor productivity methodology,  
4 what other methodologies would you recommend for  
5 benchmarking of a vertically integrated hydro Utility  
6 like Manitoba Hydro?

7 MR. A.J. GOULDING: So I would look at  
8 using some econometric approaches as well and -- and I  
9 believe that the economic -- sorry, econometric  
10 approaches would provide an alternative way of looking  
11 at this relative to the TFP and -- and the three (3)  
12 methods that we have stated for -- for TFP.

13 So, I believe econom -- sorry,  
14 econometric analysis would also be one (1) form of  
15 benchmarking that we would suggest be explored.

16 MR. BOB PETERS: As a separate  
17 methodology from total factor productivity?

18 MR. A.J. GOULDING: Yes.

19 MR. BOB PETERS: So that's a better  
20 methodology for the vertically integrated utility like  
21 Manitoba Hydro than a TFP methodology?

22 MR. A.J. GOULDING: I'm not suggesting  
23 it's necessarily better. What I believe makes the  
24 most compelling analysis is to approach a question  
25 using several different methodology -- methodological

1 techniques and then see if the results reinforce one  
2 another or if they diverge, and then understand why  
3 they diverge, and then to present the conclusions  
4 based on what makes the most practical sense given the  
5 configuration of jurisdiction.

6 MR. BOB PETERS: What's the peer group  
7 for Manitoba Hydro in such analysis?

8 MR. A.J. GOULDING: Well, we described  
9 a peer group in the set of partial productivity  
10 measures that we describe. And so we put forth some  
11 indicative ideas as to how -- how that would be pulled  
12 together.

13 Now, in this particular case we focused  
14 on Utilities -- vertically integrated Utilities that  
15 had a large degree of hydro in their -- in their  
16 generation portfolio.

17 You know, if -- if we were performing  
18 an in-depth study I think what we'd want to look at is  
19 whether we would relax that somewhat with regards to  
20 the configuration of the generation portfolio or not,  
21 and what the advantage and disadvantage that would be.

22 MR. BOB PETERS: Is there an already  
23 existing index for peer groups to Manitoba Hydro?

24 MR. A.J. GOULDING: We would want to  
25 create that.

1 MR. BOB PETERS: To create that you'd  
2 need the cooperation from the other Utilities?

3 MR. A.J. GOULDING: Well, it's -- it's  
4 interesting, as I mentioned earlier, you know, one (1)  
5 of the challenges of doing the OPG study was that they  
6 were merged more unique with regards to both the  
7 nature of the regulatory framework and their asset  
8 base.

9 So, I believe that more data would be  
10 available if we think about this on a vertically  
11 integrated basis, than -- then was available for OPG.  
12 And when I say more data would be available, I say  
13 that without necessarily the cooperation or opening of  
14 books of the other Utilities.

15 MR. BOB PETERS: All right, back to  
16 page 52 of Exhibit GSSM-9-2. On the recommendation  
17 also -- your recommendations, Mr. Goulding and Mr.  
18 Leslie, include an independent analysis of whether  
19 Keeyask should be postponed, modified or cancelled;  
20 correct?

21 MR. A.J. GOULDING: Yes.

22 MR. BOB PETERS: And on slide 11 --  
23 and you've had some discussion with Ms. Ramage on this  
24 point already. Let's -- let's start from the basis  
25 that -- is the best way to determine whether Keeyask



1 should go or no go a net present value test?

2 MR. A.J. GOULDING: So I think that  
3 that is a good starting point. We recognize that as,  
4 you know, economists and financial analysis --  
5 analysts, we tend to view things without the benefit  
6 of a political lens and we understand that there are  
7 considerations that go beyond what a single NPV  
8 analysis could -- could take.

9 But yes, I -- I agree with you that  
10 that is -- is a good starting point.

11 MR. BOB PETERS: Okay, we'll start  
12 with that then on page -- of Manitoba Hydro's rebuttal  
13 Exhibit 52, page 56 of 78.

14 MR. A.J. GOULDING: Yes.

15 MR. BOB PETERS: If I could ask for  
16 that. I could refer to the Consumers Coalition IR but  
17 I don't want to give them credit for that.

18 On this page in front of us on  
19 approximately line 20, Manitoba Hydro conducted a net  
20 present value analysis to determine whether a go or no  
21 go should be issued in respect of Keeyask; correct?

22 MR. A.J. GOULDING: Yes.

23 MR. BOB PETERS: Am I correct to say  
24 that even though Manitoba Hydro says it's \$2 million  
25 better off by proceeding with Keeyask, you don't

1 accept that because Manitoba Hydro's discount rate you  
2 think was too low?

3 MR. A.J. GOULDING: Yes.

4 MR. BOB PETERS: And when Manitoba  
5 Hydro conducted their net present value test, it was  
6 earlier on then how much money they've spent to date;  
7 correct?

8 MR. A.J. GOULDING: Yes.

9 MR. BOB PETERS: I understand, in  
10 loose terms, from previous witnesses from Manitoba  
11 Hydro that approximately 50 percent of the budget of  
12 Keeyask has now been spent as of this week.

13 Would you accept that, subject to  
14 check?

15 MR. A.J. GOULDING: Subject to check.

16 MR. BOB PETERS: Now, if that is the  
17 case that would then also impact on the net present  
18 value calculation; correct?

19 MR. A.J. GOULDING: Yes.

20 MR. BOB PETERS: And it's a point --  
21 at some point you've spent so much money that you're -  
22 - you're halfway there, and you're also halfway from  
23 the starting line. So what do you do. That's --  
24 that's the test, correct?

25 MR. A.J. GOULDING: I would not couch

1 it in those terms. I think the test is always: how  
2 much more do I have to spend relative to the value of  
3 the outputs, and relative to the cost of alternatives.

4 And so it doesn't matter whether I'm 20  
5 percent done, 50 percent done, 70 percent done,  
6 ultimately, what matters is how much more do I have to  
7 spend; what am I going to get out of it; and how does  
8 that compare to -- to alternatives.

9 MR. BOB PETERS: Okay, let's take that  
10 in the two (2) halves that you've given it to me.

11 In terms of how much Manitoba Hydro has  
12 spent, has left to spend, the breakup costs, and all  
13 those matters that you discussed with Ms. Ramage, that  
14 leads Manitoba Hydro to a positive net present value  
15 of at least \$2 billion on a P50 level.

16 Do you accept that?

17 MR. A.J. GOULDING: I accept that  
18 that's the results of their analysis.

19 MR. BOB PETERS: Yes, that's all I'm  
20 asking. And then you bring into that factor, well,  
21 what about the gas fired generator option. And you  
22 understand that the net present value tests run by  
23 Manitoba Hydro was to compare it to building a gas-  
24 fired generation; correct?

25 MR. A.J. GOULDING: I do.

1                   MR. BOB PETERS:    So let's turn to your  
2 slide number 11 of your slide deck today, which was  
3 GSS Exhibit 13.

4                   MR. A.J. GOULDING:    Yes.

5                   MR. BOB PETERS:    I need the panel -- I  
6 need the Board to understand what this is telling them  
7 and would it be correct for me to conclude that what  
8 you're trying to tell the Board is that if you stopped  
9 Keeyask and went with a gas generator, you need to  
10 come up with about \$3 billion?

11                   MR. A.J. GOULDING:    Inclusive of  
12 cancellation costs and what -- what I want to  
13 emphasize is that what's presented here is -- is -- is  
14 not NPV analysis, it's just to point out two (2)  
15 things:  One is that on a capital cost comparison  
16 alone, the difference is -- is striking.  And the  
17 second is that particularly when we think about doing  
18 a net present value analysis, right, we're able to  
19 adjust the timing of the combined cycle gas investment  
20 in smaller increments and to match that investment  
21 better with the future profile of expected load, and  
22 indeed, to not actually have to pull the trigger on  
23 that investment until the need becomes more evident.

24                   So we're not intending this slide  
25 itself to be a net present value analysis, but rather

1 to -- to note that the dichotomy in terms of looking  
2 at the capital cost gives us pause when we look at the  
3 analysis that's been presented with regards to go  
4 forward.

5 MR. BOB PETERS: All right. I fully  
6 understand it's not a net present value analysis and I  
7 think we talked about that when we referred to  
8 Manitoba Hydro's Exhibit 52 and we talked about  
9 Hydro's numbers. So -- so if -- I think your clear on  
10 that point; is that acceptable?

11 MR. A.J. GOULDING: Yes.

12 MR. BOB PETERS: All right. So what  
13 you're looking at here is simply capital cost.

14 MR. A.J. GOULDING: That's correct.

15 MR. BOB PETERS: How big of a cheque  
16 do you have to write to either finish Keeyask or to  
17 scrap Keeyask and put up a gas generator; correct?

18 MR. A.J. GOULDING: Yes, and my only  
19 point is that you don't have to write all of that \$3  
20 billion cheque right now whereas if you finish  
21 Keeyask, you do have to write that cheque -- I'm  
22 oversimplifying -- you know, now being within the next  
23 three (3) to four (4) years.

24 MR. BOB PETERS: Yeah and if it was a  
25 gas generator you'd buy it, I think your evidence was,

1 June 2030 would be the year that you might be looking  
2 at that?

3 MR. A.J. GOULDING: Yes.

4 MR. BOB PETERS: Now, you don't  
5 include fuel costs in your numbers, do you?

6 MR. A.J. GOULDING: Absolutely that --  
7 and -- and so --

8 MR. BOB PETERS: Absolutely you do or  
9 you don't?

10 MR. A.J. GOULDING: Sorry. I'm trying  
11 to agree with you emphatically.

12 MR. BOB PETERS: Thank you.  
13 Absolutely you don't.

14 MR. A.J. GOULDING: That's right.

15 MR. BOB PETERS: All right. So if we  
16 say water is free, gas -- natural gas isn't, is it?

17 MR. A.J. GOULDING: I -- I'm sorry, I  
18 don't mean to be facetious, but part of the challenge  
19 for all of us in terms of forecasting natural gas  
20 prices has been that lower for longer appears to be  
21 approaching lower forever.

22 And so when you characterize, you know,  
23 water as being free and there being a -- a cost for  
24 natural gas, which we would note that the water is  
25 not completely free when you take into account the --

1 MR. BOB PETERS: The third of a penny  
2 water rental fee?

3 MR. A.J. GOULDING: Yes, yes, yes. So  
4 I -- I realize I'm being a bit pedantic on that, but  
5 nonetheless -- and there are variable operating costs  
6 associated with -- with having a hydro station.

7 But nonetheless natural gas is expected  
8 to be very cheap for a very long time. And so when we  
9 look at this analysis, and we think about what would  
10 happen on a net present value basis, yes, I get that,  
11 you know, we need to look into carbon costs associated  
12 with natural gas, and that gas is not free.

13 But, there's a substantial amount of  
14 gas in North America. Canadian gas is being  
15 essentially trapped in Canada, leading to yet lower  
16 prices and, you know, we -- we believe that it's  
17 important to do careful analysis of these trends when  
18 we think about doing a net present value analysis.

19 MR. BOB PETERS: Manitoba Hydro builds  
20 Keeyask properly, it's going to last a hundred years.  
21 Do you accept that?

22 MR. A.J. GOULDING: I certainly hope  
23 that that's the case, yes.

24 MR. BOB PETERS: And if -- if you had  
25 to build your natural gas combined cycle gas turbine

1 and you built it well, is it going to last twenty-five  
2 (25) years?

3 MR. A.J. GOULDING: Well, let me  
4 elaborate on that answer a little bit because I don't  
5 want to be facile when we talk about hydro stations  
6 lasting 100 years. And, you know, I've -- I have some  
7 experience with regards to hundred year old hydro  
8 stations.

9 For those stations to last for a  
10 hundred years, there is a maintenance cycle. There is  
11 consistent investment that has to be made. Any site  
12 that is nominally 100 years old today has had  
13 significant investment made at, most likely, the 25  
14 year, 50 year, 75 year or more frequently with regards  
15 to all of the non-concrete equipment, plus you will  
16 have had substantial continued maintenance on that  
17 concrete.

18 So let's be clear that when we talk  
19 about an asset that's going to -- that -- that may  
20 last for a hundred years, it's not, you know, set it  
21 and forget it. But there are substantial capital  
22 costs going forward.

23 Now, let's -- let's turn to our gas-  
24 fired generation. And I -- I agree with you that if -  
25 - if I'm running a pro forma comparing gas and hydro,



1 I'm going to use different amortization rates thinking  
2 about useful economic life and so forth.

3 But, there are certainly natural gas  
4 plants that have been operating for 50 years, for  
5 example, same caveats apply. You would have done a  
6 refurbishment in the 25 to 30 year range and the -  
7 what I might call the mission of that plant may well  
8 have changed over time from, you know, being baseload  
9 to -- to peaking. You might've put on more controls.

10 But I -- I think that we -- we have to  
11 be clear when we make these comparisons that the fact  
12 that you -- you might decide to completely repower a  
13 gas-fired turbine after 25 years doesn't necessarily  
14 make that the wrong choice relative to a 60 year hydro  
15 station.

16 MR. BOB PETERS: Mr. Chair, I'd like  
17 to thank Mr. Goulding and Mr. Leslie for attending.  
18 Those complete my questions.

19 THE CHAIRPERSON: Thank you. I'll ask  
20 the Board if they have questions. Okay, I've got a  
21 few questions.

22 Mr. Goulding, during your testimony, I  
23 believe it was during your testimony, you were -- you  
24 were talking about the costs of doing these reports  
25 and as I review it it looks like of the three (3)

1 reports, the macroeconomic modelling would be three to  
2 \$400,000; is that correct?

3 MR. A.J. GOULDING: I want to go back  
4 to what we were discussing because I'm trying to  
5 remember whether we were talking about the  
6 macroeconomic modelling or we were talking about the  
7 benchmark. I believe we're talking about the  
8 benchmarking but, yeah, yeah so.

9 THE CHAIRPERSON: Well, the  
10 benchmarking is 3 to \$400 million -- sorry, 3 to  
11 \$400,000 --

12 MR. A.J. GOULDING: I'd be happy to  
13 accept the cheque but I don't think that would be  
14 appropriate.

15 THE CHAIRPERSON: -- is the  
16 benchmarking?

17 MR. A.J. GOULDING: Yeah. Yes.

18 THE CHAIRPERSON: The macroeconomic  
19 modelling is how much?

20 MR. A.J. GOULDING: I want to caveat  
21 that, again, with the same caveat that I had for the  
22 benchmarking study, which is, it all depends on the  
23 scope. In my opinion, that is something that is less  
24 expensive and could be, in theory -- I don't like  
25 speculating on the stand.

1 THE CHAIRPERSON: Okay, so it's less  
2 than 3 to 400,000?

3 MR. A.J. GOULDING: Yeah, I -- I -- I  
4 think you could do that, you could do it well for a  
5 hundred to a hundred and fifty.

6 THE CHAIRPERSON: Okay is this  
7 Canadian dollars or US dollars?

8 MR. A.J. GOULDING: Yes, let's say  
9 this is all Canadian.

10 THE CHAIRPERSON: Okay. Your second  
11 bullet is a robust independent analysis of whether  
12 Keeyask should be postponed, modified or cancelled.

13 Did you review the Boston Consulting  
14 Group report?

15 MR. A.J. GOULDING: Six hundred and  
16 sixty-six pages (666).

17 THE CHAIRPERSON: Six hundred -- yes.

18 MR. A.J. GOULDING: Yes. So I'm aware  
19 of the magnitude of that particular report.

20 THE CHAIRPERSON: But you think there  
21 should be another report done because it wasn't  
22 independent enough or --

23 MR. A.J. GOULDING: I'm -- I'm  
24 concerned that it wasn't independent and I'm not sure  
25 that the page length in and of itself indicates

1 anything in particular about whether -- whether a  
2 study is comprehensive or -- or appropriate.

3           So I do think that a fully independent  
4 review would be -- would be beneficial. And so -- and  
5 I do believe that that can be conducted in a timely  
6 fashion and at a more modest cost than the BCG report.

7           THE CHAIRPERSON: I believe that you  
8 said that you thought these reports could be done in  
9 three (3) to four (4) months, is that correct?

10           MR. A.J. GOULDING: I think that I was  
11 asked to speak specifically about two (2) of the three  
12 (3) reports and speaking about them in isolation.

13           So, I think that the -- I believe that  
14 what I have said with regards to the benchmarking  
15 report is that something around four (4) months would  
16 be necessary.

17           I think that a robust macroeconomic  
18 analysis can probably be performed in six (6) to eight  
19 (8) weeks. Again, it depends upon the nature of the  
20 model, the availability of the model, updating the  
21 linkages in the economy, but I believe that that can  
22 be done in two (2) months or less.

23           THE CHAIRPERSON: Your starting point  
24 would only be after this hearing was over, correct?  
25 The Board would issue an Order, correct?

1 MR. A.J. GOULDING: Yes.

2 THE CHAIRPERSON: There would be --  
3 the project would be scoped? There would be terms of  
4 reference --

5 MR. A.J. GOULDING: Yes.

6 THE CHAIRPERSON: -- agreed to by the  
7 parties?

8 MR. A.J. GOULDING: Yes.

9 THE CHAIRPERSON: There would be an  
10 RFP issued?

11 MR. A.J. GOULDING: Yes.

12 THE CHAIRPERSON: And that tendering  
13 process would go through?

14 MR. A.J. GOULDING: Yes.

15 THE CHAIRPERSON: Now how long do you  
16 think that would take?

17 MR. A.J. GOULDING: Well, I don't want  
18 to present myself as an expert on your -- your  
19 processes, right and -- but I believe without knowing  
20 all of your own internal constraints, I believe that  
21 that could be done within two (2) months.

22 THE CHAIRPERSON: Well, I would  
23 suggest to you, sir, that considering that we haven't  
24 finished the hearing or written an Order that you're  
25 probably optimistic.

1 MR. A.J. GOULDING: And I -- I just  
2 want to clarify that I was saying with regards to the  
3 procurement process, I was not suggesting that that  
4 was a elapsed time from right now, but elapsed time  
5 from after the hearing.

6 THE CHAIRPERSON: If we're holding the  
7 project in six (6) to nine (9) months it means that  
8 we've lost this summer's construction season, correct?

9 MR. A.J. GOULDING: Understood.

10 THE CHAIRPERSON: Would you accept  
11 that there was evidence at this hearing that there  
12 will be at least twenty-four hundred (2400) people at  
13 base camp this year working on this project?

14 MR. A.J. GOULDING: I would accept  
15 that.

16 THE CHAIRPERSON: And that this  
17 project started with three (3) separate companies  
18 joining together and working with the Aboriginal First  
19 Nations?

20 MR. A.J. GOULDING: Yes.

21 THE CHAIRPERSON: And it took a while  
22 to get them to work together as a -- as a unit,  
23 coherent unit?

24 MR. A.J. GOULDING: Yes.

25 THE CHAIRPERSON: So if -- if the camp

1 is not working for an entire summer, what do you think  
2 the chances are of having those people come back a  
3 year later?

4 MR. A.J. GOULDING: As -- as I believe  
5 I noted earlier, I acknowledge that there are costs to  
6 obtaining what I believe are -- are better information  
7 and so I understand that there are costs to  
8 mobilization and -- and demobilization and my -- my  
9 concern is that there are a number of elements that  
10 could cause this project to go more negative, that we  
11 may not have seen the end of potential cost overruns;  
12 that the export pricing has potential to continue to  
13 be on the low end or lower. And that load growth may  
14 continue to be adjusted.

15 And what worries me is that I  
16 understand and acknowledge how hard it is to get  
17 parties to work together, particularly parties that  
18 may not have had reason to trust each other in the  
19 past, but the -- when we think about all the ways in  
20 which we could spend \$5 billion in the province that  
21 would lead to a productive outcome, I'm -- I'm not  
22 convinced that the fact that it -- it took parties a  
23 while to come up with their existing contractual  
24 relationships is in and of itself a justification from  
25 not doing further analysis of this project.

1 THE CHAIRPERSON: In moving forward,  
2 sir, would you agree that we need to look at the risks  
3 of potential different outcomes?

4 MR. A.J. GOULDING: Yes.

5 THE CHAIRPERSON: And is one (1) of  
6 the risks we need to contemplate that we would -- our  
7 -- this Board would Order that the project be held in  
8 abeyance, we lose the construction season, we lose the  
9 workers and we end up with a report that mirrors the  
10 recommendation of the Boston Consulting Group report?

11 MR. A.J. GOULDING: I think  
12 intellectually I have to agree with you, and that  
13 would certainly be a risk and -- but I think that -- I  
14 understand that it's a difficult decision for anybody  
15 to make, and that the risk that you described is  
16 there.

17 But, I am concerned that the Utility  
18 sector is evolving certainly far more rapidly than we  
19 anticipated even five (5) years ago, and that -- you  
20 know, if we use an example of, let's say, Darlington,  
21 right, and I think Darlington -- it presents arguments  
22 from both sides, right. The folks that look at  
23 Darlington, which is a nuclear station in Ontario, and  
24 say, well, gee, the reason that it cost so much is  
25 that they stopped it and started it and stopped it



1 again, right.

2                   The alternative view would be -- well,  
3 in fact, one (1) of the drivers of rates being high in  
4 Ontario was that a substantial amount was spent on  
5 assets that were not needed at the time and have, you  
6 know, proved over time to -- well, they make a  
7 contribution to system today, they may not have been  
8 the most economic decision at that time.

9                   And so when we think about the  
10 repercussions of making a decision in a world where  
11 you have more and more distributed energy and people  
12 making choices about whether to be part of the grid or  
13 not, that means that the risk of this asset becoming  
14 stranded is becoming higher.

15                   And so, I hear you, that one (1) risk  
16 of holding something in abeyance is that a future  
17 report would say, yeah, we still think it's okay to go  
18 ahead. But I'm not convinced that all of the factors  
19 that would inform a decision about continuing with  
20 this investment have been fully taken into account.

21                   THE CHAIRPERSON:    Okay. Thank you,  
22 sir. Mr. Monnin, any re-examination?

23                   MR. CHRISTIAN MONNIN:    Thank you, Mr.  
24 Chair, no questions for re-examination.

25                   THE CHAIRPERSON:    Thank you. We have

1 somebody waving from the back. I believe it's Dr.  
2 Williams.

3 DR. BYRON WILLIAMS: Mr. Chair,  
4 members the Panel, we had indicated we would be filing  
5 an undertaking. So this is a request for Professor --  
6 Dr. Compton and Dr. Simpson from transcript page 4615.  
7 And we believe it should be marked as Coalition -- C  
8 Consumer Coalition 51.

9

10 --- EXHIBIT NO. CC-51: Undertaking Response from  
11 transcript page 4615

12

13 THE CHAIRPERSON: Okay, thank you.  
14 Gentleman, thank you very much. We appreciate you  
15 attending. We're going to adjourn and reconvene at  
16 9:00 a.m. on Monday morning. Thank you, have a good  
17 weekend.

18

19 (PANEL STANDS DOWN)

20

21 --- Upon recessing at 4:00 p.m

22

23

24

25

1

2

3

4 Certified Correct,

5

6

7

8

9

\_\_\_\_\_

10 Cheryl Lavigne, Ms.

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25