



“When You Talk - We Listen!”



MANITOBA PUBLIC UTILITIES BOARD

re:

MANITOBA EFFICIENCY  
3-YEAR ENERGY EFFICIENCY PLAN  
(2020/21 - 2022/23)

Before Board Panel:

- Robert Gabor - Board Chairperson
- Marilyn Kapitany - Board Vice Chair
- Hugh Grant - Board Member
- Irene Hamilton - Board Member

HELD AT:

Public Utilities Board  
400, 330 Portage Avenue  
Winnipeg, Manitoba  
January 15, 2020  
Pages 1834 to 2090

1 APPEARANCES

2

3 Bob Peters (np) ) Board Counsel

4 Dayna Steinfeld )

5 Kate Hart )

6

7 Jessica Schofield ) Efficiency Manitoba

8 Nicole Merrick )

9

10 Byron Williams (np) ) Consumer

11 Katrine Dilay ) Association of

12 Danielle Morrison ) Canada (Manitoba)

13 (articling student) ) and Winnipeg

14 ) Harvest

15

16 Antoine Hacault ) MIPUG

17

18 Jared Wheeler ) MKO

19 Markus Buchart )

20

21 Carly Fox ) Assembly of

22 Emily Gugliemin ) Manitoba Chiefs

23

24 William Haight (np) ) For Independent

25 William Gardner (np) ) Expert Consultants

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3	PUB-17	Pre-ask of Mr. Harper	2067
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1	LIST OF UNDERTAKINGS		
2	NO.	DESCRIPTION	PAGE NO.
3	16	Mr. Harper to provide the table showing the allocation percentages and allocated dollars of enabling strategies and the corporate overhead to the electric and gas portfolios by benefits.	2026
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1 --- Upon commencing at 9:02 a.m.

2

3 THE CHAIRPERSON: Good morning,  
4 everyone. Ms. Hart, would you like to take us through  
5 today?

6 MS. KATE HART: Thank you, Mr. Chair.  
7 Cross-examination of Consumers Coalition witness panel  
8 will begin today. We were advised this morning that  
9 MIPUG will take an estimated thirty (30) minutes to  
10 forty-five (45) minutes to cross-examine the witness  
11 panel, followed by AMC, MKO, Efficiency Manitoba, and  
12 Board counsel. Thank you.

13 THE CHAIRPERSON: Thank you. Mr.  
14 Hacault ...?

15

16 CONTINUED CONSUMERS COALITION PANEL:

17 PATRICIA FITZPATRICK, Previously affirmed

18 JIM GREVATT, Previously affirmed

19 CHRIS NEME, Previously affirmed

20 WILLIAM HARPER, Previously sworn

21

22 CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

23 MR. ANTOINE HACAULT: Yes. Good  
24 morning, members of the Board and members of the  
25 Panel. My name is Antoine Hacault, acting on behalf

1 of Manitoba Industrial Power Users Group, for those  
2 who are here for the first time.

3                   Mr. Harper, we've crossed paths before.  
4 Good morning again. I suspect most of the questions  
5 are going to be questions that will be answered by Mr.  
6 Harper, but I'm not necessarily restricting it to --  
7 to him, and I'd like to start by dealing with some of  
8 your comments, Mr. Harper, found in your slides and  
9 I'll start with Slide 9 and 10 as context and then  
10 I'll have some questions on that.

11                   On Slide 9, you made some observations,  
12 the third of which reads as follows:

13                   "Scope to consider alternative  
14                   levels of DSM."

15                   And you had some discussion about that.  
16 And then on Slide 10 you talked under the heading IRP  
17 Components, the fourth bullet -- reading it:

18                   "Construct multiple 'resource  
19                   portfolios.'"

20                   And I'd like to start my questioning  
21 and discussion around those principles that you've  
22 identified by perhaps setting some context which you  
23 may or may not be able to agree with, but I would  
24 suggest that we're in an unprecedent -- unprecedented  
25 investment in hydraulic generation and transmission

1 infrastructure, firstly with Bipole III, Keeyask and  
2 related infrastructure, and finally Manitoba-Minnesota  
3 line.

4                   Would you generally be able to agree  
5 with that?

6                   MR. WILLIAM HARPER:    Yes, I would.

7                   MR. ANTOINE HACAULT:    And is it your  
8 understanding that Keeyask is expected to start  
9 producing power this year?

10                  MR. WILLIAM HARPER:    To be quite  
11 honest with you, I haven't -- haven't been tracking  
12 the construction progress of Keeyask and I really  
13 don't know what -- what the precise timing of it is at  
14 this --

15                  MR. ANTOINE HACAULT:    Okay.

16                  MR. WILLIAM HARPER:    -- point in time.

17                  MR. ANTOINE HACAULT:    Well, it's --  
18 it's not really that critical. Any -- in any event,  
19 we have on the evidentiary record that Keeyask is  
20 expected to provide surplus energy until 2039/40.

21                  Do you have any information different  
22 from that?

23                  MR. WILLIAM HARPER:    No, I don't.  
24 Like I said, the only thing I'd have to qualify is  
25 whether when you're talking with surplus energy it's



1 firm energy or not firm energy, and that would be an  
2 important consideration if you're looking at, say, an  
3 IRP plan going forward.

4 MR. ANTOINE HACAULT: Okay. And the  
5 second piece of information on the capacity side is  
6 that Keeyask is expected to provide surplus capacity  
7 until 2040/41.

8 Do you have information that's  
9 different from that?

10 MR. WILLIAM HARPER: No, I don't, but  
11 the last thing I know is somewhere late -- late in --  
12 late in the 2030s that -- from my recollection, so  
13 that -- so that -- that would align with that.

14 I guess the only observation I would  
15 make on both of those is that, to some extent, I  
16 assume those dates are predicated on some assumption  
17 as to what's the level of DSM that actually is  
18 included in the plan that leads to those dates, which  
19 is somehow -- sort of is a little bit of a chicken and  
20 egg with where we are right now sort of thing.

21 MR. ANTOINE HACAULT: That's an  
22 important characterization, and thank you for making  
23 that clarification, sir.

24 I'll suggest to you that these multi-  
25 billion-dollar projects have started or will soon need

1 to be absorbed into rates.

2 MR. WILLIAM HARPER: I think -- I  
3 think that's a fair comment, yes.

4 MR. ANTOINE HACAULT: And I suggest to  
5 you that this will cause financial pressure on  
6 Manitoba Hydro in absorbing those big projects, in  
7 part through depreciation and interest hitting the  
8 books.

9 MR. WILLIAM HARPER: I think that's  
10 fair. I think that's in line with the comments I made  
11 during my presentation, that, you know, assuming rates  
12 for electricity would go up at -- at inflation over  
13 the next ten (10) years was optimistic at best.

14 MR. ANTOINE HACAULT: Yes. And I'll  
15 suggest to you that since -- since the NFATs, IFFs  
16 have been produced showing various scenarios where  
17 there are one (1) or more years were Manitoba Hydro  
18 may have losses under average flow conditions as it  
19 starts to fully absorb those big projects.

20 MR. WILLIAM HARPER: I think that --  
21 that -- that was the forecast at that time, yes.

22 MR. ANTOINE HACAULT: And another item  
23 of context is that there had been a lot of discussion  
24 about asset management to determine the optimal timing  
25 to invest in repairing or replacing assets in -- in

1 GRA hearings.

2 MR. WILLIAM HARPER: Yes, that's fair.

3 MR. ANTOINE HACAULT: Yeah. And one  
4 (1) of the goals, or some of the goals of asset  
5 management would be to reduce costs and also to ensure  
6 we have reasonable rea -- reliability of our system.

7 MR. WILLIAM HARPER: Yes. I -- I  
8 think it's a matter of trying to balance those two (2)  
9 asset management to figure when it I should be  
10 spending the dollars to get -- to get the most -- I  
11 think I heard the expression before, bang for the  
12 buck.

13 MR. ANTOINE HACAULT: Now I'm finally  
14 closing the loop from where I started with your  
15 multiple resource portfolios and the two (2) quotes I  
16 put to you.

17 I would suggest to you that if one  
18 wanted to see how DSM could be one (1) tool to assist  
19 in reducing the financial pressure that Manitoba Hydro  
20 needs to deal with in the next years, alternative DSM  
21 portfolios could be created to see if and to what  
22 extent DSM could assist in reducing that financial  
23 pressure.

24 MR. WILLIAM HARPER: I think -- I  
25 think that that is a fair comment and a fair -- a fair

1 area for exploration. I'm not too sure from the  
2 context of the information we have here, this is the  
3 forum in which that can be done, but, yes.

4 MR. ANTOINE HACAULT: And you've  
5 indicated -- not sure we have the information that we  
6 need in this proceeding, but if we have the  
7 information, I would suggest to you that it would be  
8 useful information for the PUB to consider and weigh  
9 in deciding on whether to recommend an alternative  
10 plan, firstly in DSM.

11 MR. WILLIAM HARPER: I -- I think  
12 that's -- I think what you're saying just to a large  
13 extent aligns with the heart of the regulation and the  
14 Act that -- that talks about con -- consideration of  
15 the impact on rates, and those sorts of things would  
16 go in -- go into consideration of the impact on rates.

17 And so, I see an alignment between the  
18 two (2), yes.

19 MR. ANTOINE HACAULT: Yes. And I  
20 would suggest to you that perhaps another reason why  
21 these alternatives would be a useful tool for the PUB  
22 to consider would be on the issue of whether to  
23 recommend an increase in the 1.5 percent target or,  
24 conversely, a decrease in the 1.5 percent savings  
25 target of DSM.

1 Do you agree?

2 MR. WILLIAM HARPER: Yes, I agree. In  
3 an ideal world, I -- I think the filing could have  
4 addressed that -- that, as well. As I said in my  
5 presentation, I think, at a minimum, it has to address  
6 alternative portfolios to -- to achieve the prescribed  
7 level of savings.

8 MR. ANTOINE HACAULT: Thank you, sir.  
9 I'll transition now into -- in think it'll help maybe  
10 put a little more definition to what you've indicated  
11 if we had the information kind of comment. And for  
12 that purpose, I would go to your slide 18, sir.

13

14 (BRIEF PAUSE)

15

16 MR. ANTOINE HACAULT: And on the  
17 right-hand side you made the observation on this  
18 slide, second bullet, and I'm quoting, "No peak/off-  
19 peak marginal values for electricity."

20 Is -- are we talking about peak and  
21 off-peak energy values?

22 MR. WILLIAM HARPER: Yes, we are.

23 MR. ANTOINE HACAULT: Okay.

24 MR. WILLIAM HARPER: And, excuse me, I  
25 just noticed, that maybe I didn't get -- there's

1 obviously something wrong with the first bullet in  
2 that slide as I read it now. I apologize for that. I  
3 missed the end -- something I missed on the end of  
4 that.

5 MR. ANTOINE HACAULT: Well, if you  
6 want to take the opportunity to clear up that issue  
7 right now, sir, I'd invite you to.

8 MR. WILLIAM HARPER: I -- I guess 'are  
9 determined' would be the wor -- word I would want to  
10 add to that slide. And thank you very much for the  
11 opportunity.

12 MR. ANTOINE HACAULT: Okay. Now, am I  
13 right in understanding that energy may be worth more  
14 at certain times of the day in a season, for example,  
15 the summer season, when the system's not peaking?

16

17 (BRIEF PAUSE)

18

19 MR. WILLIAM HARPER: I'm sorry, I'm --  
20 I'm not too sure if -- if -- energy would typically be  
21 worth more when the -- to Manitoba Hydro itself,  
22 energy would typically be worth more when the season  
23 was peaking, it would seem to me. I'm not -- not --  
24 not too sure if you got your --

25 MR. ANTOINE HACAULT: Yeah.

1 MR. WILLIAM HARPER: -- if you got  
2 your question correct --

3 MR. ANTOINE HACAULT: Okay. What I'm  
4 trying to drill down to in a particular day, if, for  
5 example, they're looking at the opportunity market.

6 MR. WILLIAM HARPER: Oh, okay.

7 MR. ANTOINE HACAULT: And there --  
8 there would be various times during the day when, if  
9 it's a peaking time, energy would be worth more, I  
10 would suggest, on -- in the MISO market, which is the  
11 current market they're selling into.

12 Do you agree?

13 MR. WILLIAM HARPER: Yes. I think --  
14 I think I -- I was trying to demonstrate that in a  
15 graph I had included in my evidence, yes.

16 MR. ANTOINE HACAULT: Yeah. And your  
17 -- one (1) of your points here, and it's -- for the  
18 record, I don't think we need to go there, it was  
19 confirmed in Daymark EM Round 1, question 20A, is  
20 that, unfortunately, Efficiency Manitoba was not  
21 provided with peak and off-peak marginal energy  
22 values.

23 Is that correct?

24 MR. WILLIAM HARPER: That was my  
25 understanding, yes.

1 MR. ANTOINE HACAULT: Now I'll take  
2 you to -- and I'll maybe do a follow-up with that. If  
3 we're deciding where to invest and what the marginal  
4 value is of that investment, why would this  
5 information be important?

6 Why do you take time to put on the  
7 slide the fact that we don't have it?

8 MR. WILLIAM HARPER: Well, I think  
9 when it comes to evaluating DSM measures in tech --  
10 technologies, one looks at the load profile for -- for  
11 the measure of technology, how -- how much is saving  
12 in the winter, how much is it saving in the summer,  
13 how much is it saving during peak periods, how much is  
14 it saving during off-peak periods.

15 Different measures have different load  
16 -- load profiles. If I'm -- if I have a refrigerator,  
17 that has a much different load profile than in the  
18 heat pump, let -- let's say, in terms of both  
19 peak/off-peak winter/summer.

20 And to the extent -- if there are  
21 different values in those different periods, then  
22 clearly the value to Manitoba Hydro is going to -- a  
23 kilowatt hour in one -- saved on one is not going to  
24 be worth the same to Manitoba Hydro as a kilowatt hour  
25 saved on -- on the other.



1                   And if we're trying to do things like  
2 the program administrative cost test that looks at  
3 value to Manitoba Hydro versus the cost, it -- it's  
4 important to get a clear picture of what the value to  
5 Manitoba Hydro is.

6                   MR. ANTOINE HACAULT:    Okay.  And would  
7 a second reason that it might be important would be  
8 that it would allow Efficiency Manitoba to make  
9 strategic decisions on deciding which measures deal  
10 with peak energy issues or need to deal with peak men  
11 -- energy issues in -- in a particular sector?

12                  MR. WILLIAM HARPER:    Well, I'm not  
13 sure what you mean by, "strategic."  I think it would  
14 allow Efficiency Manitoba to more closely align its  
15 decisions on which measures to take with what's the  
16 value to the Manitoba Hy -- Hydro system.

17                  MR. ANTOINE HACAULT:    And in that way,  
18 it wouldn't just be saying I'm picking a program that  
19 serves the agricultural or residential market, I'm  
20 picking that program because it addresses Manitoba  
21 Hydro's needs with respect to energy issues.

22                                   Is that fair?

23                  MR. WILLIAM HARPER:    Well, I think --  
24 well, I'd like to char -- I'd like to comment a bit on  
25 your characterization.  I think what market I pick in

1 is a whole -- is a whole other consideration in terms  
2 of segments.

3 I could equally look at picking --  
4 picking a program in the residential or the industrial  
5 area that focusses on peak as opposed to more average  
6 energy. So, excluding the -- excluding the specific  
7 reference to agriculture, I'd agree with you, yes.

8 MR. ANTOINE HACAULT: Okay. And  
9 perhaps we can drill down again by getting into a more  
10 specific example. You've used residential. If we go  
11 to PUB Book of Documents page 181, I had looked at  
12 this table before in other --

13 MR. WILLIAM HARPER: Oh, you're going  
14 to challenge me here, okay.

15 MR. ANTOINE HACAULT: No, I'm not  
16 challenging you at all.

17 MR. WILLIAM HARPER: No. I mean the  
18 size of the print.

19 MR. ANTOINE HACAULT: Oh, yeah. Well,  
20 for Ms. Schubert, where I'm going to go is residential  
21 programs, home renovation. And to the right, if we  
22 scroll down... Yeah, that's perfect, Ms. Schubert.

23 So, you're generally familiar with this  
24 table, sir, and the types of values that are being  
25 shown with the formulas?

1 MR. WILLIAM HARPER: I -- I'm very  
2 generally familiar with it, as -- as I said in my  
3 presentation. I didn't go looking at the results, but  
4 -- but I am familiar with it. And I am familiar with  
5 sort of the -- the way the different ratios are  
6 calculated, yes.

7 MR. ANTOINE HACAULT: Okay. So, if --  
8 and here, I just want to get some numbers and some of  
9 the metrics on the record before I get into some more  
10 detailed responses that were provided in the IRs.

11 If we go on the, "Home renovation,"  
12 line, to the extreme right we find the number 10.65.  
13 What would that be, sir?

14

15 (BRIEF PAUSE)

16

17 MR. WILLIAM HARPER: I'm assuming  
18 that's -- that's an attempt -- that's a rough  
19 calculation of what the value is to Manitoba Hydro of  
20 -- of the measure, if -- if I can recall the way --  
21 way the definitions work.

22 MR. ANTOINE HACAULT: Okay. And  
23 there's probably different mathematical ways of  
24 arriving at that. If we go to the extreme left-hand  
25 side, we see a PACT, P-A-C-T for the reporter, benefit

1 of -- it's in millions of dollars, I guess. I'm not  
2 absolutely sure from the table.

3 In any event, twenty-two four two eight  
4 (22,428) on the left, do you see that?

5 MR. WILLIAM HARPER: Yes.

6 MR. ANTOINE HACAULT: I believe it's  
7 in thousands, from the table.

8 MR. WILLIAM HARPER: If that's a comma  
9 there, it's probably thousands, yes.

10 MR. ANTOINE HACAULT: Yeah. And then  
11 we see there's another white heading about two-thirds  
12 of the way to the right that says, "LC savings."

13 Do you have any idea what that is?

14 MR. WILLIAM HARPER: No, I'm sorry, I  
15 don't at this point.

16 MR. ANTOINE HACAULT: The evidence  
17 talks about the benefits in PACT and then in relation  
18 to the savings leads us to the ten point six five  
19 (10.65) cents, and I'll lead you to that response a  
20 little bit later. It might just be a coincidence.  
21 The -- if we divide the PACT benefit by the savings,  
22 we actually hit ten point six four seven (10.647)  
23 cents, which would be rounded to ten point six five  
24 (10.65) cents per kilowatt hour.

25 Now, to get into a particular IR that

1 dealt with this issue, I direct your attention -- I  
2 believe Ms. Schubert has it -- to MIPUG/Daymark-I-  
3 27(a).

4

5

(BRIEF PAUSE)

6

7 MR. ANTOINE HACAULT: Thank you. So  
8 the -- I'll be referring to the two (2) questions in  
9 sequence, but firstly, Question (a). If we go back to  
10 the top of -- of the table, we see that it's a  
11 question related to the table that we were just  
12 looking at. PUB/EM-I-11A, page 2, was where we were  
13 at when I started the discussion, sir. And the  
14 question reads as follows:

15

"Residential New Homes and MR and  
16 home renovation programs indicate  
17 the PACT benefits in cents in  
18 kilowatt hour that exceeds ten (10)  
19 cents."

19

20

Following me so far?

21

MR. WILLIAM HARPER: Yes.

22

23

MR. ANTOINE HACAULT: That applies to  
what I just indicated.

24

MR. WILLIAM HARPER: Yes.

25

MR. ANTOINE HACAULT:

1 "Please indicate in qualitative (and  
2 if possible, quantitative) terms how  
3 these values are so high compared to  
4 other measures. It is -- is it  
5 entirely due to low profile (exam --  
6 for example, savings of energy and  
7 higher value periods?), added  
8 capacity savings (high levels of  
9 peak reduction in relation to energy  
10 reductions), or is there other  
11 factors contributing?"

12 And I won't read the full response.  
13 Could you take time to, yourself, reread and  
14 familiarize yourself with the response to that  
15 question, after which I'll ask you some questions?

16

17 (BRIEF PAUSE)

18

19 MR. WILLIAM HARPER: That's fine. As  
20 I understand the response, the -- the -- the response  
21 is, in -- in a qualitative sense, that the higher  
22 value has to do with the signfi -- the capacity  
23 savings, which probably means you're dealing with a  
24 fairly low -- low load factor measure that has a high  
25 capa -- that has a high capa -- capacity contribution

1 to -- towards the Manitoba Hydro peak.

2 MR. ANTOINE HACAULT: But we don't  
3 have those proportions or that information on -- on  
4 whether it's -- it's an energy peaking value or a  
5 capacity peaking value. We just see the -- the number  
6 internally changing without information.

7 MR. WILLIAM HARPER: Yes, that's  
8 correct. I don't believe that the individual load  
9 profiles for each of the measures are -- are on the  
10 record, nor is -- nor is the detailed information on  
11 the record, at least in a public sense, in terms of  
12 what the marginal values that would be attached to  
13 peak, off-peak, winter/summer peak values are. That's  
14 correct.

15 MR. ANTOINE HACAULT: And those values  
16 are broken down, if we drill down further in marginal  
17 values, between generation, firstly, correct?

18 MR. WILLIAM HARPER: That -- that --  
19 that -- that's correct. There's both energy and  
20 capacity values associated with generation.

21 MR. ANTOINE HACAULT: Yeah. And  
22 within that, if we're looking at long-term marginal  
23 values, we distinguish between generation,  
24 distribution, and transmission long-term values,  
25 correct?

1 MR. WILLIAM HARPER: Right. There'd  
2 be additional attributive value to savings at the  
3 transmission level if -- if it's -- virtually all  
4 customers are -- are served at the transmission level  
5 or -- and if it's customer served at the distribution  
6 level, there'd be additional savings attributed to  
7 distribution capacity savings on the system.

8 MR. ANTOINE HACAULT: And I believe  
9 the evidence on the record is that both transmission  
10 and distribution are measured, in far -- as far as  
11 marginal values long term, for the peak seasonal value  
12 in winter. Is that correct?

13 MR. WILLIAM HARPER: Yes, I -- I  
14 believe they're applied to the winter peak. Yes.

15 MR. ANTOINE HACAULT: But I'll break  
16 it down a bit further. There are some areas in  
17 Manitoba where Hydro has explained in previous  
18 hearings that we have capacity issues in transmission  
19 and distribution, notably in the southeastern area of  
20 Manitoba. Do you recall that evidence?

21 MR. WILLIAM HARPER: Yes, I -- I -- I  
22 believe I call -- yes.

23 MR. ANTOINE HACAULT: But that might  
24 not necessarily be true in some areas of our  
25 metropolitan city, Winnipeg, correct?



1 MR. WILLIAM HARPER: That's correct.  
2 I believe both the distribution and transmission  
3 values are system ave -- average values. That --  
4 that's correct.

5 MR. ANTOINE HACAULT: So that if most  
6 of these programs were being delivered in an area  
7 where you didn't have the need to invest in the near  
8 future in transmission and distribution, the value of  
9 those savings in one (1) region may be different than  
10 another, correct?

11 MR. WILLIAM HARPER: In -- in  
12 principle, yes. I guess it -- it's a hard issue to  
13 address because we also don't have information --  
14 probably Efficiency Manitoba doesn't have information  
15 in terms of where the customer -- in the large part,  
16 where the customers are that are actually going to be  
17 participating in -- in the programs.

18 They've es -- estimated participation  
19 levels, you know, and maybe, generally, where those  
20 types of savings can be achieved, but I -- I don't  
21 think that that information's available on the record  
22 on the savings side, let alone on the value side.

23 MR. ANTOINE HACAULT: But the  
24 legislation does deal with that potential priority,  
25 does it not, sir, in saying that Efficiency Manitoba,

1 if it was strategic in its investments related to a  
2 particular sector of our -- or, region of our province  
3 -- sorry, I misspoke -- which had transmission and  
4 distribution capacity issues, it could focus its  
5 programs in those regions to deal with that particular  
6 issue that is being put to Manitoba Hydro?

7 MR. WILLIAM HARPER: You're putting me  
8 to the test on the Act and the regulation, but I -- my  
9 recollection is it is oriented -- it was more oriented  
10 towards if Manitoba Hydro identified a particular area  
11 where there was a need, they could work with  
12 Efficiency Manitoba to try and address that localized  
13 need with localized programs, yes.

14 MR. ANTOINE HACAULT: It may be a  
15 matter of semantics. We already know it exists. If  
16 Efficiency Manitoba didn't know, they sure know now.

17 Now, if we go back to the table, and  
18 one (1) of the metrics I was comparing before, but not  
19 this particular table, was the -- further down the  
20 table, commercial, industrial, agricultural programs,  
21 and without any particular reason, I had headed to the  
22 custom line, which shows a cost of six point zero  
23 (6.0) cents per kilowatt hour.

24 MR. WILLIAM HARPER: I think you mean  
25 a value of six point -- six point zero seven (6.07)

1 cents per kilowatt hour.

2 MR. ANTOINE HACAULT: That's right.

3 And could you explain again, when you say "a value," a  
4 value to who?

5 MR. WILLIAM HARPER: Assuming -- I'm  
6 assuming this is the estimate of the value to Manitoba  
7 Hydro.

8 MR. ANTOINE HACAULT: Okay.

9

10 (BRIEF PAUSE)

11

12 MR. ANTOINE HACAULT: Now, I'll go to  
13 Question (b) in that same interrogatory, Daymark-I-27.  
14 The question was:

15 "Please provide for each measure the  
16 profile of savings from these  
17 programs in terms of on-peak, off-  
18 peak, summer/winter, and peak/energy  
19 as a proportion of total savings in  
20 the year."

21 And I'll give you the opportunity to  
22 read the response after, which I'll have some  
23 questions.

24

25 (BRIEF PAUSE)

1 MR. WILLIAM HARPER: That's fine,  
2 okay.

3 MR. ANTOINE HACAULT: Okay. Firstly,  
4 and the reference in the record is MIPUG/EM Round 1 3H  
5 -- as in Harry. We don't have the detail which is  
6 requested for each measure, so we can't answer that  
7 question for each measure.

8 Are you in agreement with me?

9 MR. WILLIAM HARPER: That's correct.  
10 I think I've already said that --

11 MR. ANTOINE HACAULT: Yeah.

12 MR. WILLIAM HARPER: -- we don't have  
13 on the record the load profiles for each of the  
14 measures.

15 MR. ANTOINE HACAULT: And in answer  
16 (b) there is reference to PUB/EM 1-11(a). That's the  
17 table that we started with. That's the only  
18 information we have with respect to the profile of  
19 savings which is at a bundle and program level.

20 MR. WILLIAM HARPER: Well, it -- I  
21 guess it really doesn't provide us any information on  
22 the profile of the savings, if you're thinking about -  
23 - I think about load profile as being -- whether the  
24 savings are peak, off peak, winter, summer, it  
25 provides you -- PUB 1-11(a) and (b), I understand we

1 looked at it, provides you information on the costs  
2 and the value, not the -- not where the kilowatt hours  
3 are coming from or the kilowatts are coming from.

4 MR. ANTOINE HACAULT: And again, why  
5 would it be important for the Board to have this  
6 information, in your opinion, sir?

7 MR. WILLIAM HARPER: Well, you know, I  
8 guess -- and maybe I'm not too sure, the Board --  
9 obviously, there was a lot of CSI information  
10 available in the context of this hearing, so perhaps  
11 the Board has that level of information. I'm not --  
12 I'm not sure.

13 I think -- so I like to talk about it  
14 more from the perspective of just generally the  
15 hearing and the proceeding. I think for people to  
16 comment on the plan and have confidence in the plan  
17 after the fact, they have to have some confidence in  
18 how it was developed and -- and the numbers that are  
19 coming out of it.

20 And clearly, I guess, IRs such as the  
21 one posed by MIPUG, demonstrate that there isn't  
22 enough information already many people feel to -- to -  
23 - to have that level of confidence, and I think  
24 therefore the type of information we're talking about  
25 gives confidence and transparency to -- to the process

1 so that people feel comfortable that results of the  
2 plan are credible in their minds as well going  
3 forward.

4 MR. ANTOINE HACAULT: Thank you, sir.

5

6 (BRIEF PAUSE)

7

8 MR. ANTOINE HACAULT: Now, with  
9 respect to the issue of alternatives, you indicated I  
10 think in your testimony that alternatives could deal  
11 with two (2) distinct issues. I'll break it down into  
12 two (2) buckets, as we've been saying.

13 The first is variations of the current  
14 plan but still achieving a 1.5 percent target. That's  
15 one (1) set of alternatives, right?

16 MR. WILLIAM HARPER: Yes.

17 MR. ANTOINE HACAULT: Yeah. And in  
18 that kind of alternative, hopefully the Board could  
19 receive and weigh -- there's different perspectives --  
20 whether or not it makes sense to invest in some of the  
21 lower levelized cost programs, for example, and back  
22 off on some of the higher levelized costs. That might  
23 be one (1) of the scenarios they may wish to consider.

24 MR. WILLIAM HARPER: Yes. I think --  
25 yes, I think, and that applies equally to any of the

1 other considerations that -- that the PUB has to --  
2 there could be alternatives where you're trying to get  
3 a broad -- a broader participation or more increased  
4 access might be another alternative you could look at,  
5 which is giving weight to another consideration.

6                   It's a matter of then looking at those  
7 different results and then comparing them with what  
8 the plan is that Efficiency Manitoba has put forward  
9 to understand how they balance those or what the  
10 balance is that they put forward.

11                   MR. ANTOINE HACAULT:    Yes, thank you.  
12 So say, for example, they could decide to want to  
13 analyse what if we put more investment in the low  
14 income and hard-to-reach customers. That -- that  
15 might be one (1) of the alternatives that they might  
16 want to consider.

17                   MR. WILLIAM HARPER:    Exactly, yes.

18                   MR. ANTOINE HACAULT:    And then in the  
19 second bucket -- or sorry, it might still be in the  
20 first bucket. We could decide, for example, while  
21 we've got some regional transmission and distribution  
22 issues, please redesign this program to deal with this  
23 actual issue which we know Manitoba Hydro has to deal  
24 with and give us a DSM portfolio which deals with this  
25 particular transmission and distribution issue.

1 MR. WILLIAM HARPER: Yes, I -- I could  
2 see that as being part of the first bucket, is one (1)  
3 of the alternatives of that.

4 MR. ANTOINE HACAULT: And you could do  
5 that without changing the 1.5 percent target.

6 MR. WILLIAM HARPER: Yes, you could.

7 MR. ANTOINE HACAULT: And then there  
8 might be a second set of alternatives which might show  
9 an increased investment in DSM as far as target of  
10 savings over 1.5 percent versus also an alternatives  
11 which would be less than the target of 1.5 percent.

12 That could be other sets of  
13 alternatives that could be put before this Board,  
14 correct?

15 MR. WILLIAM HARPER: Yes, and that's  
16 the second set -- second set of alternatives, and I  
17 think what you're talking about is more of a reference  
18 to my presentation also what Daymark -- excuse me, not  
19 Daymark, Efficiency Manitoba noted as being the two  
20 (2) different types of portfolios -- approaches.

21 MR. ANTOINE HACAULT: And, for  
22 example, in that second set of alternatives, the Board  
23 might wish to see the investment in low income and  
24 hard-to-reach customers maintained as a criteria, and  
25 it might also want to see that whatever the level of



1 this investment is, it doesn't change the current  
2 projected in-service date and then see what kind of  
3 portfolio Efficiency Manitoba could come up with, with  
4 those two (2) assumptions being non-movable  
5 assumptions.

6 MR. WILLIAM HARPER: I'm sorry, I'm  
7 trying to understand the question, but when you threw  
8 in the comment about no change in the -- in the  
9 projected in-service date -- maybe you could ex --  
10 explain your -- maybe you could rephrase it a bit  
11 better or explain -- explain how that -- that  
12 question.

13 MR. ANTOINE HACAULT: Okay. I might  
14 try to illustrate that a bit better by looking at  
15 Exhibit 12 -- MIPUG-12, that we had put on the record.  
16 It's some work on alternatives that had been filed in  
17 the 2017/18 GRA. It's work that had been done by  
18 Boston Consulting. It's not here. I'm not intending  
19 to say that the work would still stand today.

20 MR. WILLIAM HARPER: Yes. I read the  
21 day's transcript.

22 MR. ANTOINE HACAULT: But the one (1)  
23 thing they did is they made the assumption -- if we  
24 eventually get the slide, it says no change in the  
25 next resource date. So you see on the table there is

1 a heading "Balanced DSM," and they were, it appears,  
2 considering an alternative where we wouldn't have to  
3 change the new resource date for generation. And I'm  
4 suggesting to you, and -- and we see that it leads to  
5 not a lot more but a slightly lower target of 1.1  
6 percent. That might be a type of scenario that the  
7 Board may, in its wisdom, wish to consider.

8 MR. WILLIAM HARPER: I -- I'm  
9 struggling a little bit, because maybe I don't know --  
10 understand what balanced DSM means, because if the  
11 level of DSM overall changes, then it seems to me your  
12 new date has to change if everything else -- the load  
13 forecast and everything else stays constant. So I  
14 have a difficult time responding without understanding  
15 a bit more clearly what's meant by balanced DSM, to be  
16 quite honest with you.

17 MR. ANTOINE HACAULT: Okay. And  
18 that's fine. I -- I understand that concern and that  
19 comment because we don't have all the background  
20 information. This is more to try and perhaps help  
21 illustrate that the Board could -- because the  
22 legislation indicates in 4(1)(c) that one (1) of the  
23 purposes or the mandates is to avoid new generation,  
24 and if it can have a P -- a DSM portfolio that still  
25 kind of protects those 2039/2040 currently projected

1 in-service dates, but we can do it with a different  
2 portfolio, that might be something that it might want  
3 to consider.

4 MR. WILLIAM HARPER: I think that at a  
5 high principle level, I would agree, yes.

6 MR. ANTOINE HACAULT: Okay. And it  
7 might also wish to consider whether or not, and this  
8 goes back to, if -- if you've been following some of  
9 my cross-examination, I went through -- there were  
10 program limits on the custom programs.

11 Did you follow a little bit of that?

12 MR. WILLIAM HARPER: I understand at a  
13 broad level that there are program limits on -- on  
14 custom programs, yes.

15 MR. ANTOINE HACAULT: Yes. And that,  
16 for example, might also be an alternative that the PUB  
17 may wish to consider, is whether or not investing more  
18 money -- I think the levelized cost was slightly over  
19 a cent per kilowatt hour versus the 4 cents per  
20 kilowatt hour in the residential program that I had  
21 referred to -- whether and to what extent that can be  
22 achieved at a lower cost.

23 MR. WILLIAM HARPER: I must admit I --  
24 I -- I understand there are caps. I don't fully  
25 understand -- there's likely some rationale as to why

1 those caps are in place, which I didn't understand, so  
2 I agree the PUB could consider that. I think you'd  
3 also have to take into consideration there obviously  
4 must be reasons why those caps exist in -- and trying  
5 to accommodate other considerations within the design  
6 of the program, and so that would have to be taken  
7 into account as well, yes.

8 MR. ANTOINE HACAULT: Yeah. And that  
9 would be part of the weighing, but they -- they might  
10 see, well, if I can achieve a DSM resource investment  
11 which does not change my resource date, and I can do  
12 it for less dollars and have a lower target, that  
13 might be something they wish to consider and that  
14 might be an alternative that they may wish to see in a  
15 subsequent hearing.

16 MR. WILLIAM HARPER: Yeah. I can  
17 agree with that, yes.

18 MR. ANTOINE HACAULT: Okay. I have a  
19 couple other smaller questions about the system  
20 context again.

21 So based on the assumption that we're  
22 doing DSM, that leads us to energy surplus until 2039  
23 and capacity surplus until 2040, I would suggest that  
24 the effect of a general system surplus means that  
25 marginal benefits -- we're looking at three (3) years,

1 I'll say -- and the next three (3) years are likely  
2 arising from changes in export transactions.

3 MR. WILLIAM HARPER: On the generation  
4 side, I would say yes.

5 MR. ANTOINE HACAULT: Okay. And on  
6 the generation side, the effect of a general system  
7 surplus means that the marginal benefits are not  
8 likely coming from avoiding capital costs in  
9 generation.

10 MR. WILLIAM HARPER: Yes, I would  
11 agree with that.

12 MR. ANTOINE HACAULT: And I would  
13 suggest to you for the next three (3) years, the  
14 majority of the benefits of DSM savings from Manitoba  
15 Hydro's financial perspective is the revenue it gets  
16 from the freed up energy.

17 MR. WILLIAM HARPER: For -- for the  
18 next three (3) years. I think -- I think when --  
19 maybe I can just comment, I think one has to contrast  
20 that with the fact that the cost-effectiveness tests  
21 that we're using in this regard are looking at the  
22 benefits over the full life of the measure, and as  
23 you've heard, some of the measures have lives that  
24 last a lot longer than three -- three (3) years, and  
25 maybe get into the period of time where you are

1 deferring generation, but -- but with that caveat,  
2 we're focusing just on the next three (3) years, yes.

3 MR. ANTOINE HACAULT: Yeah. And even  
4 if we look for twenty (20) years, if it's a new  
5 generating station, we usually start them about ten  
6 (10) years before, but that would bring us to ten (10)  
7 years from now, so.

8 MR. WILLIAM HARPER: Well, I -- I  
9 guess it depends on precisely when those need dates  
10 are because you'd have to focus on both the -- the  
11 energy need date as well as the capacity need date.

12 MR. ANTOINE HACAULT: Yes. And  
13 conversely, the effect of a general system surplus, as  
14 we are entering, with the in-service of Keeyask, would  
15 mean in Manitoba Hydro's book the corresponding  
16 expense of a DSM investment?

17 MR. WILLIAM HARPER: Yes, that's  
18 correct.

19 MR. ANTOINE HACAULT: And the  
20 corresponding expense of a DSM adves -- investment  
21 includes operating expense related to DSM?

22 MR. WILLIAM HARPER: I'm talking about  
23 here -- because if we're talk -- I think we have to  
24 distinguish between Efficiency Manitoba and Manitoba  
25 Hydro.

1                   Efficiency Manitoba includes -- incurs  
2 operating expenses in order to deliver the programs.  
3 My understanding is they then send -- basically, they  
4 get paid by Manitoba Hydro.

5                   I -- my understanding is then Manitoba  
6 Hydro -- and we haven't heard -- we haven't had a GRA  
7 since this started, but my understanding is Manitoba  
8 Hydro would then likely take those payments and -- and  
9 basically capitalize or amortize the costs.

10                   So, from Manitoba Hydro's perspective,  
11 there would be no operating expense, it would just be  
12 the amortization that was associated with the payments  
13 that they're making to Efficiency Manitoba.

14                   MR. ANTOINE HACAULT:    Okay.  So, in  
15 that case, then we have amortization.  If they  
16 continue the ten (10) year amortization, we'll have  
17 stacks of expenses that continue to incrementally  
18 increase each year as far as amortization costs.

19                   And the first year, we have our stack  
20 that produces 10 percent for year 1 of Efficiency  
21 Manitoba and the second year we have a second stack,  
22 which would be year 2 and year 1 of expenses that  
23 begin to be amortized and so forth going forward,  
24 correct?

25                   MR. WILLIAM HARPER:    Yeah.  I guess

1 dropping off at the other end would be -- we'd be not  
2 having -- if there were efficiency programs that have  
3 been invested in ten (10) years ago, the amortization  
4 for those would be -- would -- would be ceasing, as  
5 well.

6                   So -- and I think that's part of what  
7 the whole issue is, is what the net impact is on  
8 Manitoba Hydro of this, is something that is unclear  
9 from where we're si -- sitting here right now.

10                   MR. ANTOINE HACAULT:    Yeah.  And the  
11 only item we haven't discussed yet that I would also  
12 be taking into account is Hydro, if it's dealing with  
13 it as a capital expense, has a practice of allocating  
14 a certain amount of interest to that capital expense  
15 as part of its general financial picture?

16                   MR. WILLIAM HARPER:    Well, I -- I  
17 guess I'm not too sure.  Minus the word 'allocating'  
18 because we've got -- I -- I don't know whether they  
19 include in -- interest in the amortized -- in the --  
20 in the deferral account for the amortization.

21                   But clearly, if they're -- you know, if  
22 they're forwarding the full funds to Efficiency  
23 Manitoba, the money has to come from somewhere, so  
24 they're probably bor -- borrowing the mo -- a large  
25 portion, not all of the money, unless some of it's



1 coming through rates, yes.

2 MR. ANTOINE HACAULT: Sorry, you made  
3 the last comment all of these items that we discussed  
4 about, firstly, the revenue that it gets from the  
5 freed up energy, and then all these corresponding  
6 expenses that we've discussed would make itself into a  
7 rate impact?

8 MR. WILLIAM HARPER: Well, they --  
9 they -- my understanding, they would all be taken into  
10 account when Manitoba Hydro is going through a GRA  
11 application and working out what its -- what its  
12 projected revenue requirement is going to be for the  
13 test years going forward.

14 MR. ANTOINE HACAULT: Thank you very  
15 much, Mr. Harper. Those were my questions. And thank  
16 you. Sorry, I didn't engage the rest of the panel,  
17 but, Mr. Harper, thank you very much.

18 THE CHAIRPERSON: Thank you, Mr. --

19 MR. ANTOINE HACAULT: Thank you to the  
20 rest of the panel.

21 THE CHAIRPERSON: Thank you, Mr.  
22 Hacault. Ms. Fox...?

23 MS. CARLY FOX: Thank you, Mr. Chair.  
24 And good morning to the Board.

25

1 CROSS-EXAMINATION BY MS. CARLY FOX:

2 MS. CARLY FOX: And good morning.

3 Thank you for being here today. My name is Carly Fox.

4 And I am legal counsel for the Assembly of Manitoba

5 Chiefs in this Hearing today.

6 I appreciate your detailed reports that  
7 you provided, as well as the presentations yesterday.

8 So, the majority of our questions I think were

9 addressed yesterday, but we do have some clarification  
10 questions today specifically for Dr. Fitzpatrick and

11 Mr. Grevatt, okay?

12 So, Dr. Fitzpatrick, I'll start with  
13 you if that's okay.

14 THE CHAIRPERSON: Yeah.

15 MS. CARLY FOX: Yes?

16 THE CHAIRPERSON: Sorry to interrupt.

17 Dr. Fitzpatrick, should we be lowering the lights?

18 DR. PATRICIA FITZPATRICK: That --

19 that would be very much appreciated --

20 THE CHAIRPERSON: Sure.

21 DR. PATRICIA FITZPATRICK: -- while

22 I'm testifying.

23 THE CHAIRPERSON: Okay.

24 DR. PATRICIA FITZPATRICK: Thank you.

25 MS. CARLY FOX: Maybe while we're

1 lowering the lights, Ms. Schubert, can you pull up Dr.  
2 Fitzpatrick's report at the bottom of page 4?

3

4

(BRIEF PAUSE)

5

6 CONTINUED BY MS. CARLY FOX:

7 MS. CARLY FOX: So, I'd like to start  
8 this morning by discussing the topic of meaningful  
9 participation that you discussed in your report, okay?

10 DR. PATRICIA FITZPATRICK: Excellent.

11 MS. CARLY FOX: So, to summarize here,  
12 you state that:

13 "A well-designed process must ensure  
14 that the public has a chance to be  
15 heard, so it's important to solicit  
16 input on multiple occasions using a  
17 variety of techniques which reflect  
18 the different economic, social,  
19 demographic, and cultural  
20 backgrounds of the constituency."

21 Is that correct?

22 DR. PATRICIA FITZPATRICK: That is  
23 correct.

24 MS. CARLY FOX: Would you agree that a  
25 well-designed engagement process must include

1 engagement with First Nation individuals?

2 DR. PATRICIA FITZPATRICK: Absolutely.

3 MS. CARLY FOX: In your presentation  
4 yesterday, you spoke about -- you -- or, actually, you  
5 defined public stakeholder and customer.

6 Can I confirm that the members of the  
7 EEAG, the Energy Efficiency Advisory Group, are  
8 stakeholders according to your definition?

9 DR. PATRICIA FITZPATRICK: I'd like to  
10 clarify the purpose of the definition. So, I included  
11 that side to clear up some confusion that I had  
12 observed during testimony and in the application about  
13 conflating the public and stakeholders and customers  
14 in response.

15 I would argue that -- or I would  
16 suggest that it wasn't a holistic diagram of all of  
17 the representatives who were involved. I would  
18 suggest that First Nations and Metis individuals can  
19 be public. They can be members of the stakeholders.  
20 They may be customers.

21 But, in addition, First Nations and  
22 Metis have inherent rights which transcend all three  
23 (3) of those categories. So, this diagram does not  
24 focus on First Nations or Metis people, it's strictly  
25 to define public stakeholder and customers.

1 MS. CARLY FOX: Thank you. And you  
2 answered, like, four (4) questions with that response,  
3 so thank you. If we move on to page 6 of your report,  
4 you mention that the EEAG members are asked to  
5 facilitate communication and engagement with the  
6 public.

7 But it also appears that they are  
8 sometimes treated as the public by Efficiency  
9 Manitoba, as you just explained, and this can cause  
10 confusion. Is that correct?

11 DR. PATRICIA FITZPATRICK: That is  
12 correct.

13 MS. CARLY FOX: You mentioned in your  
14 presentation yesterday and in your report that  
15 conflating the EEAG with the public seems like an  
16 error, specifically because of section 9(h) of the Act  
17 references the public and stakeholders individually?

18 And is that correct? And I understand  
19 that this is not a legal opinion.

20 DR. PATRICIA FITZPATRICK: Correct.

21 MS. CARLY FOX: Would you agree that,  
22 in addition to the requirement to adhere to the Act,  
23 another reason why this could be an issue is because  
24 the public or individuals might not have a chance to  
25 be heard with regard to program design?

1 DR. PATRICIA FITZPATRICK: Correct.

2 MS. CARLY FOX: And in your  
3 presentation yesterday you mentioned the CRTC  
4 Coalition work. And one (1) of the methods used for  
5 public engagement was using a quantitative survey for  
6 hard to reach persons facilitated by community  
7 organizations.

8 Is that correct?

9 DR. PATRICIA FITZPATRICK: That is my  
10 understanding of tha -- that process.

11 MS. CARLY FOX: In your review of the  
12 EEAG's activities were there any instances where the  
13 EEAG was asked to carry out surveys or other direct  
14 community engagement to be shared at EEAG meetings?

15 DR. PATRICIA FITZPATRICK: My review  
16 of the EEAG report was restricted largely to what was  
17 in the notes, meeting notes. And then, later on, I  
18 had an opportunity to read the response to Daymark.

19 It is my understand -- I -- I did not  
20 see a request for EEAG members to undertake engagement  
21 specifically. I saw some requests for facilitation of  
22 introductions.

23 And I saw on many occasions members of  
24 the EEAG seeking that additional engagement would be  
25 done with their constituencies.

1 MS. CARLY FOX: Okay. Thank you. So,  
2 is it your recommendation then that Efficiency  
3 Manitoba have more direct engagement with individuals,  
4 and that includes First Nation individuals?

5 DR. PATRICIA FITZPATRICK: It is.

6 MS. CARLY FOX: You also note in your  
7 report that the EEAG is a voluntary committee. And  
8 unlike the Board of Directors for Efficiency Manitoba,  
9 members of the EEAG receive no financial compensation  
10 and that all six (6) meetings that the EEAG had were  
11 held in the summer.

12 Is that correct?

13 DR. PATRICIA FITZPATRICK: That's  
14 correct.

15 MS. CARLY FOX: Is it the case in your  
16 review of the meetings minutes and the response to IRs  
17 that members of the EEAG were likely to send one (1)  
18 or two (2) representatives to each meeting?

19 DR. PATRICIA FITZPATRICK: Yes. It is  
20 my review that there were different representatives  
21 sent to different meetings in some instances.  
22 Sometimes there were two (2) representatives from  
23 organizations, sometimes there were none, sometimes --  
24 yes.

25 MS. CARLY FOX: Thank you. Would you

1 agree that, for a member of the EEAG, time spent on  
2 EEAG activities is time not spent on other measures  
3 that the organization is involved with?

4 DR. PATRICIA FITZPATRICK: I would  
5 agree.

6 MS. CARLY FOX: And are you aware of  
7 issues of capacity, specifically adequate staffing  
8 levels and paid positions to divert to other  
9 activities, like, the EEAG could be issues for First  
10 Nations and other organizations?

11 DR. PATRICIA FITZPATRICK: I agree.

12 MS. CARLY FOX: Would you agree that,  
13 if the EEAG was asked to assist with providing  
14 remedies to potential deficiencies in the proposed  
15 Efficiency Manitoba plan as a result of this Hearing,  
16 that this would be an additional significant  
17 responsibility to what was contemplated in the terms  
18 of reference?

19 DR. PATRICIA FITZPATRICK: It would.

20 MS. CARLY FOX: And would you also  
21 agree that these responsibilities would be an  
22 additional burden for organizations that already have  
23 capacity issues?

24 DR. PATRICIA FITZPATRICK: They would.

25 MS. CARLY FOX: Would you agree that,



1 for some EEAG members, failure of Efficiency Manitoba  
2 to fund time spend on EEAG activities for  
3 representatives of the organization coupled with  
4 significant responsibilities anticipated for EEAG  
5 members may discourage organizations from  
6 participating in the EEAG?

7 DR. PATRICIA FITZPATRICK: They might.

8 MS. CARLY FOX: And in your report you  
9 state that:

10 "Members are volunteers who are  
11 committed to developing and  
12 implementing a robust plan. It is  
13 not clear from the data provided in  
14 the research on engagement practices  
15 how Efficiency Manitoba has utilized  
16 this expertise effectively in the  
17 development of the plan."

18 And that's at page 10, Ms. Schubert.

19 But is that correct?

20 DR. PATRICIA FITZPATRICK: That is  
21 correct.

22 MS. CARLY FOX: Do you agree that the  
23 lack of transparency in how the expertise of the EEAG  
24 was utilized to develop the plan could potentially  
25 discourage participation in the EEAG?

1 DR. PATRICIA FITZPATRICK: I'm sorry,  
2 could you repeat the beginning part of your question?

3 MS. CARLY FOX: Sure. Do you agree  
4 that the lack of transparency in how the expertise of  
5 how the EEAG was utilized to develop the plan could  
6 potential discourage participation in the EEAG?

7 DR. PATRICIA FITZPATRICK: I agree.

8 MS. CARLY FOX: So, now I just have a  
9 few questions about the stakeholder engagement survey.  
10 On page 11 of your report one (1) of the survey  
11 concerns is that the list of sectors which respondents  
12 could choose when completing the survey does not  
13 reflect customer segments utilized in the report.

14 For example, there's no option to  
15 select Indigenous. Is that correct?

16 DR. PATRICIA FITZPATRICK: Correct.

17 MS. CARLY FOX: Do you agree then that  
18 this limits the usefulness of the stakeholder survey  
19 as it relates to unreflected customer segments, such  
20 as the Indigenous customer segment?

21 DR. PATRICIA FITZPATRICK: I would  
22 agree that it's one (1) of the things that limits the  
23 utility of this survey, yes.

24 MS. CARLY FOX: Thank you. On page 13  
25 of your report and as discussed yesterday, you spoke

1 that there was limited interaction with Northern  
2 communities and First Nations and there was limited  
3 information with consumers and no specified  
4 interaction with First Nations Metis and low-income  
5 customers.

6 Is that correct?

7 DR. PATRICIA FITZPATRICK: Based on  
8 the information available, yes, that is correct.

9 MS. CARLY FOX: Would you agree then  
10 that, if Efficiency Manitoba did not engage with First  
11 Nations or First Nations customers, that this means  
12 that Efficiency Manitoba failed to engage the First  
13 Nation segment in the Province of Manitoba?

14

15 (BRIEF PAUSE)

16

17 DR. PATRICIA FITZPATRICK: That's a  
18 very complicated question. And again, I'm not a  
19 lawyer, so.

20 MS. CARLY FOX: Right.

21 DR. PATRICIA FITZPATRICK: This would  
22 -- I think that there was limited engagement. I think  
23 there was some interaction through members with the  
24 EEAG but not widespread interaction documented through  
25 the material provided that would demonstrate

1 interaction with individual members of First Nations,  
2 Metis communities, or members of the -- and limited  
3 interaction with members of the public.

4 MS. CARLY FOX: Thank you. So with  
5 First Nations in particular, would you agree that the  
6 First Nations in Man -- Manitoba are very diverse,  
7 they're spread over a vast geographical territory, and  
8 also have different languages and cultures?

9 Is that correct?

10 DR. PATRICIA FITZPATRICK: That is  
11 correct.

12 MS. CARLY FOX: So given this  
13 diversity, would it be important to directly engage  
14 with multiple different First Nations directly?

15 DR. PATRICIA FITZPATRICK: It would.

16 MS. CARLY FOX: Thank you. I just had  
17 one (1) last question on public participation as it  
18 specifically relates to Indigenous programs.

19 And Ms. Schubert, if you could pull up  
20 MKO/Coalition EMI-1?

21 So here, MKO asked you if there's  
22 examples of better par -- public participation models  
23 than the process that was used by Efficiency Manitoba,  
24 and in your response, you state that you:

25 "Undertook a limited random review

1                   of the North American energy  
2                   providers and DSM agencies to answer  
3                   this question."

4                   And I want to refer specifically to the  
5 Yukon update to its twenty (20) year resource plan,  
6 which you refer to in your response right there.

7                   Thank you, Ms. Schubert.

8                   "The update of the twenty (20) year  
9                   resource plan included an eighteen  
10                  (18) month engagement strategy that  
11                  included engagement with Yukon First  
12                  Nations, including meetings with  
13                  chief and council and three (3) sets  
14                  of public meetings in six (6)  
15                  communities chosen based on  
16                  population, connection to the Yukon  
17                  grid, and proximity to potential  
18                  energy projects."

19                  Is that correct?

20                  DR. PATRICIA FITZPATRICK:   That is  
21 correct.

22                  MS. CARLY FOX:    Would you agree that  
23 meeting with the chief and council of a First Nation  
24 about the energy efficiency -- about Efficiency  
25 Manitoba's plan is one (1) way to effectively engage

1 First Nations?

2 DR. PATRICIA FITZPATRICK: It is my  
3 understanding that, yes, it is.

4 MS. CARLY FOX: And would you agree  
5 that, potentially, public meetings in areas of the  
6 province which -- with large First Nation populations  
7 is another way to effectively engage First Nations?

8 DR. PATRICIA FITZPATRICK: I would  
9 agree, with a caveat that, of course, the experts on  
10 how to best engage First Nations are members of First  
11 Nations, and the experts are AMC and MKO and other  
12 people who -- who -- who work with those  
13 organizations, and SCO, et cetera.

14 MS. CARLY FOX: Thank you. Would you  
15 agree that these type of engagement strategies --  
16 meeting with chief and council, in particular --  
17 having public discussions in regional areas of the  
18 province, are strategies that Efficiency Manitoba  
19 should have considered in its program design?

20 DR. PATRICIA FITZPATRICK: Yes, and I  
21 believe there was some direction in the minutes from  
22 the EEAG about that.

23 MS. CARLY FOX: Thank you. And then  
24 would you also agree that these are strategies that  
25 should be used moving forward?

1 DR. PATRICIA FITZPATRICK: Absolutely.

2 MS. CARLY FOX: Thank you very much,  
3 Dr. Fitzpatrick. That's all I have for you.

4 DR. PATRICIA FITZPATRICK: Thank you.

5 MS. CARLY FOX: Okay, Mr. Grevatt.

6 MR. JIM GREVATT: Good morning.

7 MS. CARLY FOX: Good morning. I would  
8 like to start with the project management and risk  
9 mitigation strategies you raised in your report in  
10 your presentation yesterday.

11 If we could pull up page 9 of Mr.  
12 Grevatt's report.

13 Here -- right here on bullet number C -  
14 - or, three (3), sorry. Here you state that:

15 "There are significant risks to  
16 success of Efficiency Manitoba's  
17 2020/2023 plan which should be  
18 accounted for and addressed through  
19 project management and risk maniga -  
20 - risk mitigation strategies;  
21 however, Efficiency Manitoba failed  
22 to address these concerns, appearing  
23 to simply assume that it will  
24 complete the myriad steps leading up  
25 to program launch, full

1 implementation, and realization of  
2 participation and savings targets."

3 Is that correct?

4 MR. JIM GREVATT: That's -- that's my  
5 observation, yes.

6 MS. CARLY FOX: Thank you. Moving on  
7 to page 14 of your report and the paragraph that  
8 starts with "Second":

9 "It simply defies logic and  
10 experience to think that all aspects  
11 of the launch of Efficiency Manitoba  
12 will occur on schedule and on budget  
13 and that participation will meet or  
14 exceed projections and within  
15 expected budgets."

16 Is that correct?

17 MR. JIM GREVATT: That is what I said.

18 MS. CARLY FOX: Mr. Grevatt, are you  
19 aware that part of Efficiency Manitoba's engagement  
20 strategy is communication with sixty-three (63)  
21 different First Nations about energy efficiency  
22 programming?

23 MR. JIM GREVATT: I am not aware that  
24 it's sixty-three (63), but I will take it at your  
25 word.



1 MS. CARLY FOX: Thank you. In the  
2 transcript -- Ms. Schubert, if you could pull up  
3 January 8th on page 820, moving down to line 13.

4 So this was my examination of  
5 Efficiency Manitoba, and here we asked them about  
6 planned participation. So here, Ms. Tuck states that:

7 "When we do find opportunity in a  
8 First Nation, we will continue to  
9 pursue it. If the number of homes  
10 for insulation is fifty (50) and  
11 that year we find seventy-five (75)  
12 or eighty (80) or a hundred (100),  
13 we will do the homes. We won't cap  
14 it at fifty (50)."

15 Does this engagement strategy, as well  
16 as Efficiency Manitoba's plan to provide programming  
17 to First Nations in addition to the numbers targeted  
18 by the plan as filed -- if there's interest, of course  
19 -- increase your concerns about risk mitigation, Mr.  
20 Grevatt?

21

22 (BRIEF PAUSE)

23

24 MR. JIM GREVATT: I'm -- to your  
25 direct question, I'm not sure it increases my -- my

1 concern about risk mitigation; however, when I see  
2 this text and I recall other instances in the  
3 transcript where Efficiency Manitoba indicated that  
4 they would not cap participation, that they would do  
5 more homes if the demand was there, my concern  
6 continues to be whether there is really sufficient  
7 budget to allow them to do that.

8                   And if there's not, they may not have a  
9 cap in place, but they really -- I don't see how they  
10 will -- will manage to do that increased participation  
11 to meet that response -- to respond to that demand.

12                   MS. CARLY FOX: Thank you. So then  
13 one (1) of your recommendations to the Board was that  
14 Efficiency Manitoba develop and file a project  
15 management plan for launching and implementing its  
16 2020 twent -- to 2023 plan -- or, program, sorry.

17                   Is that correct?

18                   MR. JIM GREVATT: Yes.

19                   MS. CARLY FOX: So would you agree,  
20 then, that based on the fact that there is no cap for  
21 insulation on First Nation homes, that perhaps, a  
22 project management plan should be developed  
23 specifically for First Nations customer programming?

24                   MR. JIM GREVATT: Certainly, for First  
25 Nations programming and -- and for all programming,

1 and I think this is a -- a useful example that -- that  
2 could be addressed in the plan, that if demand exceeds  
3 the participation estimates and the available budget,  
4 how will they address that?

5 MS. CARLY FOX: Thank you. Moving on,  
6 I would like to take you to your response to  
7 Efficiency Manitoba's Information Request -- oh,  
8 actually, it's EM-Coalition-I-1, Ms. Schubert.

9 So here, you were asked:

10 "What flexibility should be afforded  
11 to Efficiency Manitoba for it to  
12 make adjustments to program  
13 offerings within an approved  
14 efficiency plan in order to capture  
15 market opportunities specifically in  
16 'A'?"

17 And your response here was that:

18 "Flexibility to make adjustments to  
19 program offerings can lead to better  
20 outcomes, but this flexibility  
21 should be guided by boundaries on  
22 the size or type of changes that can  
23 be made without consulting the  
24 Public Utilities Board or other  
25 stakeholders."

1                   And we already spoke a bit about how  
2 Efficiency Manitoba's statements that First Nation on-  
3 reserve programming could be increased as necessary  
4 where interest in the group is higher than  
5 participation estimates.

6                   So would you agree that a better method  
7 for program development would be to include higher  
8 participation targets from the outset if it is thought  
9 that interest in programs might be higher than  
10 projected?

11                   MR. JIM GREVATT:    Yes, I would agree.

12                   MS. CARLY FOX:     Thank you.  And I just  
13 have a few additional questions about your view of the  
14 scope and scale of the proposed residential sector  
15 programs in the plan, okay?  So on page 24 of your  
16 report, you state that:

17                               "Residential customers of Manitoba  
18                               Hydro in aggregate use one-third  
19                               (1/3) of the electric energy sold in  
20                               the province, more than double the  
21                               portfolio savings they are slated to  
22                               receive in Efficiency Manitoba's  
23                               plan."

24                   Is that correct?

25                   MR. JIM GREVATT:    Yes.

1 MS. CARLY FOX: For the Indigenous  
2 segment, and that includes both Metis and on-reserve  
3 First Nation customers, electric savings are targeted  
4 by the plan as 0.5 percent of the total electric  
5 consumption.

6 Are you aware of that, or would you  
7 like me to pull up the reference in the plan?

8 MR. JIM GREVATT: I'm not specifically  
9 aware of it, but I'm comfortable taking you at your  
10 word on that.

11 MS. CARLY FOX: Okay, thank you.  
12 Also, First Nation on-reserve customers consume 4  
13 percent of total electric energy in Manitoba.

14 Are you aware of that as well?

15 MR. JIM GREVATT: Again, I'll take you  
16 at your word.

17 MS. CARLY FOX: Thank you. Do you  
18 agree that First Nations on-reserve customers are then  
19 slated to receive significantly less electric savings  
20 in the plan compared with their share of electric  
21 consumption?

22 MR. JIM GREVATT: Yes.

23 MS. CARLY FOX: Thank you. On page 30  
24 of your report, you state that:

25 "The savings opportunities that

1 Efficiency Manitoba proposes to make  
2 available for residential customers  
3 can and should be increased. To  
4 have the most impact in reducing  
5 customers' energy bills,  
6 comprehensive approaches that  
7 improve the efficiency of  
8 residential building envelopes  
9 should be expanded. Installing  
10 insulation and air sealing measures,  
11 especially when done in conjunction  
12 with replacement of electric  
13 resistance heat in homes with high-  
14 efficiency cold-climate heat pumps,  
15 can reduce customers' energy use by  
16 significant amounts."

17 Is that correct?

18 MR. JIM GREVATT: Yes.

19 MS. CARLY FOX: Would you agree that  
20 Indigenous customers are es -- or, are you aware that  
21 Indigenous customers are estimated to have the highest  
22 average bill impacts from participation in energy  
23 efficiency programming?

24 MR. JIM GREVATT: I did read that in  
25 the -- the evidence filed by AMC. I did not, you

1 know, review the calculations to confirm it, but I'm  
2 certainly aware of seeing that, yes.

3 MS. CARLY FOX: Okay, thank you. If a  
4 -- if, then, a First Nations on-reserve customer or  
5 any residential customer then does not access energy  
6 efficiency planning or cannot access energy efficiency  
7 programming, then they will not access any associated  
8 bill savings. Is that your understanding?

9 MR. JIM GREVATT: With a very minor  
10 caveat, which is that energy efficiency programming --  
11 and as measured by the program administrator cost  
12 test, can provide -- can mitigate some need for rate  
13 mitig -- increases across the entire system.

14 So to the extent that that occurs, all  
15 customers who are paying bills are going to see some  
16 benefit from programming, but that is going to be, I  
17 think, a very small magnitude compared to the kinds of  
18 savings that an individual home could experience  
19 through participation in programs.

20 MS. CARLY FOX: Thank you. And that's  
21 all my questions for you. Thank you very much, Mr.  
22 Grevatt.

23 Thank you, Mr. Chair.

24 THE CHAIRPERSON: Thank you. Mr.  
25 Wheeler...?

1 MR. JARED WHEELER: I wonder, Mr.  
2 Chair, if I may just move spots here. I'll only take  
3 a minute.

4 THE CHAIRPERSON: Certainly, can I ask  
5 you, how long do you think your cross will take?

6 MR. JARED WHEELER: Well, I had been  
7 estimating about an hour, though some of my questions  
8 have now been crossed off. I'd say maybe about a half  
9 an hour.

10 THE CHAIRPERSON: You know what, I  
11 think we'll -- you move. We'll take the morning break  
12 right now, okay? And we'll reconvene at 10:30. Thank  
13 you.

14

15 --- Upon recessing at 10:12 a.m.

16 --- Upon resuming at 10:33 a.m.

17

18 THE CHAIRPERSON: Mr. Wheeler...?

19 MR. JARED WHEELER: Thank you, Mr.  
20 Chair. By way of brief intre -- introduction, my name  
21 is Jared Wheeler, and with me is Mr. Markus Bucharth.  
22 As you may know, we are legal counsel to Manitoba  
23 Keewatinowi Okimakanak Inc., or MKO in this hearing,  
24 which is a non-profit political advocacy organization  
25 in Manitoba representing twenty-six (26) northern



1 First Nations.

2                   Before we begin, on behalf of our  
3 clients, we say good day to the Board and to everyone  
4 in the room with us, as well as to everyone monitoring  
5 this hearing online.

6                   Thank you to the expert witness panel  
7 from the Consumers Coalition for joining us today. We  
8 will be asking you some questions. Our intention is  
9 to, of course, further everyone's understanding of  
10 Efficiency Manitoba's initial three (3) year  
11 Efficiency plan as well as your reviews of that plan.

12                   Mr. Harper, no offence is intended at  
13 all. Please take it as a compliment resulting from,  
14 perhaps, the -- the thoroughness of your materials,  
15 but we won't be asking you any questions. To the rest  
16 of the panel, though, please do not assume from what I  
17 just said that we do not find your materials to be  
18 thorough. We certainly do.

19

20 CROSS-EXAMINATION BY MR. JARED WHEELER:

21                   MR. JARED WHEELER:    And I think so  
22 that we can build off of what we just heard from Dr.  
23 Fitzpatrick, I think we'll start our questions with  
24 you. And, like I said, building off of what we just  
25 heard in response to counsel for AMC, I'm -- I'm

1 really only going to have a few questions now for you,  
2 and so they'll be very pointed, I would suggest.

3                   Now, I -- I believe that you've said  
4 that, and correct me if I'm wrong, public engagement  
5 should take place early in the process of preparing a  
6 plan. Is that correct?

7                   DR. PATRICIA FITZPATRICK: That is  
8 correct.

9                   MR. JARED WHEELER: So for the next  
10 Efficiency plan, how far in advance would you suggest  
11 that Efficiency Manitoba should begin its engagement  
12 process?

13                   DR. PATRICIA FITZPATRICK: Well, I  
14 think that engagement happens early in the plan and  
15 continues throughout. One (1) of the things I often  
16 teach my students is something called the policy  
17 cycle, about how policies and practices come into  
18 being. It has five (5) key stages.

19                   One (1) is where you -- you set the  
20 agenda; then you develop the policy; then you decide  
21 about which policy you're going to choose, which is  
22 the stage, I would suggest, we're in right now; you  
23 implement the policy; and you evaluate the policy,  
24 which will lead to the next agenda setting.

25                   So it's a five (5) stage process, and

1 there should be opportunities for public participation  
2 and engagement at each stage. And so it's an ongoing  
3 process. Particularly when you're calling it  
4 engagement, you're building a relationship.

5                   And so we're at the decision-making  
6 point of the process, but in implementation, you  
7 should be continuing to engage the public in design.  
8 In -- when you're evaluating your policy, you should  
9 engage the public.

10                   So for example, perhaps in Year 2 of  
11 the plan, you might want to do a general public  
12 survey, which would include both consumers of  
13 Efficiency Manitoba and non-consumers; find out from  
14 the non-cu -- customers or non-consumers why they  
15 haven't become involved or utilized the services of  
16 Efficiency Manitoba; and some of that information can  
17 then be used to inform agenda setting or the  
18 development of the next three (3) year plan.

19                   So in answer to your question and to  
20 summarize my answer, it -- participation needs to be  
21 ongoing, and so it -- it should be happening now. It  
22 is happening now. It should continue in February and  
23 moving forward.

24                   MR. JARED WHEELER:    Thank you very  
25 much for that.

1 Ms. Schubert, can we please bring up  
2 PDF page 9 of Dr. Fitzpatrick's expert report, please?

3

4 (BRIEF PAUSE)

5

6 MR. JARED WHEELER: Okay, and we see  
7 here in the second paragraph, the -- the -- starting  
8 at the second sentence:

9 "The EEAG may wish to establish  
10 bylaws to outline a transparent  
11 appointment process,  
12 responsibilities including  
13 relationships with specific sectors,  
14 what constitutes quorum, and general  
15 time commitments."

16 Can we take from this that you're  
17 suggesting that the EEAG could benefit from greater  
18 formality in its processes? Would that be accurate?

19 DR. PATRICIA FITZPATRICK: I'm not  
20 sure I would use the form -- the term 'formality.'  
21 Clarity and clear expectations, and so bylaws is one  
22 (1) way where you can clearly explore the terms of  
23 reference. Many people are familiar with bylaws if  
24 they've been part of not-for-profit boards, and so  
25 it's something that's generally accessible to all

1 different types of advisory structures. But I'm not  
2 sure that that would indicate formality.

3

4

(BRIEF PAUSE)

5

6 MR. JARED WHEELER: Can you tell us --  
7 also with respect to the EEAG, you've recommended  
8 compensation for members of the EEAG a couple of  
9 times, correct?

10 DR. PATRICIA FITZPATRICK: Yes.

11 MR. JARED WHEELER: If we were to  
12 drill down a bit on that, do you have a recommendation  
13 or a suggestion about what type of compensation would  
14 we be talking about, what levels of compensation?

15 Do you have suggestions or  
16 recommendations about that?

17 DR. PATRICIA FITZPATRICK: In some of  
18 my responses, I've included references to policies  
19 from the Government of Yukon or other boards. In my  
20 experience, when people are seeking my expert advice  
21 from a desktop or armchair perspective, what they  
22 usually offer me or my university is certainly per  
23 diems for meetings, expenses to attend meetings,  
24 usually they feed us, and either an annual retainer or  
25 a per diem to allow people to prepare in advance of

1 the meetings. So that would be something that I'm  
2 seeing is becoming increasingly applied for advisory  
3 boards, particularly for organizations that are not  
4 for profit.

5

6 (BRIEF PAUSE)

7

8 MR. JARED WHEELER: I won't ask you  
9 for the specifics of what the Public Interest Law  
10 Centre is contributing for meals or anything like that  
11 for you in this process.

12 If we can bring up PUB/Coalition IR-13,  
13 Ms. Schubert.

14

15 (BRIEF PAUSE)

16

17 MR. JARED WHEELER: And in this -- in  
18 this IR that I'm sure we will see right away, the --  
19 the Board asked you to:

20 "Please provide a statement of the  
21 mandate of the EEAG that you think  
22 should be institute -- instituted."

23 I gather from your response that it  
24 seemed to us that you were reluctant to provide such a  
25 statement, and can you tell us why? And first, were

1 you reluctant to provide a statement, and second, if  
2 so, why did you not want to provide a statement?

3 DR. PATRICIA FITZPATRICK: I was  
4 reluctant to provide a specific statement in my IR  
5 because I think that this is something that should be  
6 the direction of the Board, and so I did not want to  
7 presume as to what activities the Public Utilities  
8 Board would expect and would appreciate the EEAG to  
9 do.

10 Yesterday, I believe in response to  
11 questions by members of the Board, I suggested that in  
12 my experience, I would recommend that, at least for  
13 the first three (3) year plan, the EEAG maintain its  
14 advise function. But again, this is at the discretion  
15 of the Board to make its recommendation.

16 MR. JARED WHEELER: Do you think in  
17 some ways, the mandate of the EEAG -- should that be  
18 self-directed by the EEAG itself as well?

19 DR. PATRICIA FITZPATRICK: I think  
20 that, yes, that is something that the EEAG should have  
21 the time to contemplate and consider. If the -- if  
22 the mandate of the EEAG were to be broader, it would  
23 require more time and resources by its participants,  
24 and so there are a number of things that should be  
25 considered.

1                   And so given the timing of the first  
2 three (3) year plan, I would think that -- that it  
3 would be appropriate for the PUB to make a  
4 recommendation about what the mandate is, subject to  
5 over the next -- during this current plan  
6 implementation, perhaps the EEAG would like to take  
7 time to negotiate and consider the opportunities that  
8 they would like to avail themselves of, and that would  
9 become part of the next plan review.

10                   MR. JARED WHEELER:   Thank you, Dr.  
11 Fitzpatrick. Those are all of my questions for you  
12 this morning. I appreciate your responses very much.  
13 I'm going to shift over to some questions for Mr.  
14 Grevatt.

15                   Mr. Grevatt, please correct me if I'm  
16 wrong, but we heard yesterday that, among other  
17 things, part of the scope of your work for the  
18 Consumers Coalition was to examine Efficiency  
19 Manitoba's proposed plan to reach the savings targets,  
20 including whether the plan adequately considers the  
21 interests of residential customers and the  
22 accessibility of initiatives in the plan to  
23 residential customers, correct?

24                   MR. JIM GREVATT:    Yes.

25                   MR. JARED WHEELER:    And Ms. Schubert,



1 can we please bring up PDF page 8 of Mr. Grevatt's  
2 direct evidence presentation from yesterday, Coalition  
3 Exhibit 18. And I'm looking for PDF page 8.

4 And we heard -- we heard you articulate  
5 this yesterday, and -- and -- and you had mentioned  
6 then that in reviewing the plan and in reviewing the  
7 language in the legislation regarding what the Board  
8 must consider, you had questioned this word  
9 'accessible.'

10 You've underlined it here on this -- on  
11 this slide, correct?

12 MR. JIM GREVATT: Yes.

13 MR. JARED WHEELER: And you provided  
14 us with a very memorable analogy about an Oprah  
15 recommended book. I don't want to make speeches or  
16 anything. I don't think an Oprah reference is dating  
17 yourself as you said you were concerned about.

18 However, I would like to ask now, in  
19 response to AMC counsel, you agreed with a caveat this  
20 morning that, if a customer cannot access a program,  
21 that customer cannot access bill savings from that  
22 program.

23 Does that sound right?

24 MR. JIM GREVATT: Yes.

25 MR. JARED WHEELER: And so, can you

1 tell us then, when you re -- when you reviewed whether  
2 the -- the plan is accessible to all Manitobans did  
3 you consider whether 'accessible' meant financially  
4 accessible, as in affordable?

5

6 (BRIEF PAUSE)

7

8 MR. JIM GREVATT: What I would say to  
9 that is, referring back to one (1) of the points I  
10 made in my evidence, it was very hard for me to tell  
11 from what was included in the plan and -- and in the  
12 IRR specifically what the financial opportunities  
13 were, how the incentives were determined relative to  
14 the costs of various measures, what the specific  
15 barriers that were being addressed in the different  
16 segments by the proposed offerings, you know, and how  
17 those offerings were going to overcome those barriers.

18 So -- so, I -- I think I cannot say  
19 that I, certainly to my satisfaction, was able to  
20 review the financial implications or the financial  
21 ability of different customer segments to participate  
22 based on what was offered.

23 And I guess I would also say that  
24 that's a very important consideration.

25 MR. JARED WHEELER: So, this question

1 of whether the plan is accessible to all Manitobans,  
2 it was difficult to consider whether it was  
3 financially accessible.

4 Did you also consider whether the plan  
5 is physically accessible to all Manitobans?

6 MR. JIM GREVATT: In -- in a sense, I  
7 did. And in the sense that just by looking at the  
8 expected participation and savings that were going to  
9 be attributed specifically to residential and, to a  
10 lesser degree, to income eligible and First Nations  
11 programs, the scale seemed very small to me compared  
12 with the opportunity, the number of households that  
13 meet those -- that would fit in each of those  
14 subcategories.

15 And to me, that -- that suggests that  
16 they're unlikely to be, if you will, physically  
17 available to those segments.

18 MR. JARED WHEELER: As in the Oprah  
19 recommended book is not on the shelf?

20 MR. JIM GREVATT: Exactly. And I just  
21 want to say that the dating myself part was that  
22 because it was a book.

23

24

(BRIEF PAUSE)

25

1 MR. JARED WHEELER: Thank you for that  
2 clarification. Ms. Schubert, can we please flip ahead  
3 a few pages to PDF page 13 of Mr. Grevatt's  
4 presentation?

5 And as we can see on the screen and as  
6 you told us yesterday, the -- the narrative in the  
7 plan -- in your opinion, the narrative in the plan  
8 describes that Efficiency Manitoba will meet mandate  
9 and make improvements over prior implementation, but  
10 there's little detail about how Efficiency Manitoba  
11 will do so, correct?

12 MR. JIM GREVATT: Correct.

13 MR. JARED WHEELER: And so, to  
14 paraphrase that, would I be correct in saying that the  
15 plan tells us that Efficiency Manitoba has a plan to  
16 meet its mandated targets but doesn't really tell us  
17 what that plan is?

18 Is that a fair characterization?

19 MR. JIM GREVATT: It suggests that  
20 Efficiency Manitoba has a plan. And -- and -- but it  
21 doesn't -- you know, I'm not sure whether it -- it  
22 indicates that they do have a plan.

23 MR. JARED WHEELER: Okay. Maybe, Ms.  
24 Schubert, if we can bring up PUB Coalition IR number  
25 6. And I just want to talk about some of what we've

1 seen as your major concerns with the plan as  
2 presented.

3 And so, you would agree that one (1) of  
4 your major concerns is that there's not enough detail  
5 in the plan as presented. Is that correct?

6 MR. JIM GREVATT: Yes.

7 MR. JARED WHEELER: And some of the  
8 missing details then are measure level details?

9 MR. JIM GREVATT: Yes.

10 MR. JARED WHEELER: And you -- you  
11 provide an example here in your response about -- you  
12 say:

13 "It is insufficient to say, only as  
14 Efficiency Manitoba does, in  
15 reference to the home renovation  
16 rebate offers, that it will provide  
17 rebates to homeowners, but then it  
18 doesn't really drill down."

19 Is that correct?

20 MR. JIM GREVATT: Yeah.

21 MR. JARED WHEELER: And -- and the  
22 reference to home renovation rebate offers, that's --  
23 it's just an example?

24 MR. JIM GREVATT: Yes.

25 MR. JARED WHEELER: And so, you would

1 agree then that throughout the plan, measure level  
2 data was not provided by Efficiency Manitoba, correct?

3 MR. JIM GREVATT: Yes. In fairness, I  
4 want to say some of the data were provided in IR.

5 MR. JARED WHEELER: Yes. So, in  
6 response to -- to Information Requests but not in the  
7 plan itself as presented?

8 MR. JIM GREVATT: Correct.

9 MR. JARED WHEELER: And if we can --  
10 right, okay. So, this is exactly what I wanted. The  
11 -- the Board asked you in -- in this Information  
12 Request to please comment on whether you would  
13 consider it to be more efficient and effective to  
14 review measure level data along the lines suggested as  
15 part of the work of the EEAG prior to the development  
16 of the filing of a plan or through the Information  
17 Request and hearing process.

18 And in your re -- your response you  
19 began by stating that, whether it's -- and I guess I'm  
20 paraphrasing here a bit, but whether it's before or  
21 after the filing of the plan, measure level data  
22 should be on the record, correct?

23 MR. JIM GREVATT: Yes.

24 MR. JARED WHEELER: And you had also  
25 indicated that there are strengths to reviewing

1 measure level data with a robust, focussed, and well  
2 facilitated EEAG, correct?

3 MR. JIM GREVATT: Yes.

4 MR. JARED WHEELER: And some of the  
5 strengths of reviewing measure level data with the  
6 EEAG prior to development of the plan is that doing so  
7 would have the potential to more collaboratively  
8 inform Efficiency Manitoba's proposed program  
9 approaches, including the specific measures that are  
10 promoted, proposed incentives and quantities of each,  
11 correct?

12 MR. JIM GREVATT: Yes.

13 MR. JARED WHEELER: And such  
14 discussions, given sufficient time, so discussions  
15 with the EEAG, given sufficient time, could lead to a  
16 more streamlined approval pro -- process with reduced  
17 need for IRs in evidence, correct?

18 MR. JIM GREVATT: Certainly. And, you  
19 know, just a not exact example but one (1), and I'm  
20 referencing the Carolinas again because I was there on  
21 Friday, working with the utility there, it's Duke  
22 Energy.

23 Duke said to us in this collaborative  
24 process, we understand that we're going to continue to  
25 litigate these plans, but we want to -- we don't want

1 to be surprised when we go into litigation, we want  
2 the discussion to have been so robust before we get to  
3 the hearing room that all the parties understand  
4 exactly what the issues are, where we stand on them,  
5 and how, you know, it's likely to unfold and so that  
6 we can minimize the number of issues that actually  
7 have to be litigated, and to which the advocates that  
8 I work for said, great, we're onboard with that. We  
9 want to work with you in this informal process so that  
10 we're as close to being on the same page when we go  
11 into the hearing room as we can be.

12                   And I think that's a good process. It  
13 takes some -- some investment.

14

15                   (BRIEF PAUSE)

16

17                   MR. JARED WHEELER: Perfect. Maybe we  
18 can -- Ms. Schubert, can we bring up PUB Coalition IR  
19 number 7? And here in part A the Board asked you to:

20                   "Please provide a detailed list of  
21 the measure level data" --

22                   So, the -- the question, Ms. Schubert,  
23 if we can see part A:

24                   "Please provide a detailed list of  
25 the measure level data and other



1                   program information that should be  
2                   provided as part of any future  
3                   efficiency plan filings."

4                   And in your response then you -- you  
5 set out a list of program information. I'm not going  
6 to read them all out.

7                   You'd agree that, should all of the  
8 things in the list you provided in your response to  
9 'A' here, should all of those things be included in  
10 future filings, that would likely help to expedite a  
11 future regulatory process?

12                   MR. JIM GREVATT: I believe that it  
13 would.

14                   MR. JARED WHEELER: And you -- you  
15 said that you've -- you've had those discussions in  
16 the Carolina, as well, so that wouldn't be new, to  
17 file a lot of detailed information that can streamline  
18 things?

19                   MR. JIM GREVATT: M-hm.

20                   MR. JARED WHEELER: Okay. Now, I'll  
21 ask Mr. Schubert to please bring up your expert report  
22 on the screens. Ms. Schubert, I'm looking for PDF  
23 page 21 of Mr. Grevatt's report.

24                   And at the second paragraph...

25

1 (BRIEF PAUSE)

2

3 MR. JARED WHEELER: I'm looking for --  
4 it says:

5 "There are additional examples of  
6 confusing and conflicting data."

7 Second paragraph. I very well could  
8 have that wrong, and I apologize for that. You would  
9 agree with me that there are examples of confusing and  
10 conflicting data coming from Efficiency Manitoba.

11 Is that correct?

12 MR. JIM GREVATT: Yes.

13 MR. JARED WHEELER: And in your  
14 report, you refer to an instance in which Efficiency  
15 Manitoba had revised figures for annual reach of  
16 electric houses in the income qualified program at  
17 that time without an explanation.

18 We did hear in response to questions  
19 from one (1) of the Interveners in this process that  
20 there was an explanation of this revision. My only  
21 point now is that would you suggest that there were  
22 multiple instances of confusing and conflicting data  
23 in the plan? I'm not looking for a list.

24 MR. JIM GREVATT: I appreciate that.  
25 Confusing? Certainly. And in the -- well, in the

1 plan, and if I can include the IR, that would be  
2 helpful because we did ask for additional data at a  
3 couple of points, both in the formal IR process and  
4 through conversations within a few days of the filing.

5           The data that were provided did not to  
6 -- did -- were not what I was looking for. So, in  
7 trying to sort them out, I mean, I spent some hours,  
8 as did Mr. Neme, looking over the spreadsheets that  
9 were provided early in November in response to request  
10 for measure level data.

11           And I couldn't find any measure level  
12 data in these reams of spreadsheets. And, you know --  
13 and -- and then there were -- in actual IR responses  
14 some spreadsheets were provided, some data were  
15 provided.

16           In one (1) case, it identified  
17 quantities of measures but only for the gas portfolio,  
18 not for the electric portfolio. There were -- you  
19 know, it wasn't all tied together in a way that made  
20 it easy to understand and to have it -- to understand  
21 it as being consistent with a filing.

22           MR. JARED WHEELER: And would you --  
23 would you agree with me that reams of spreadsheets and  
24 potentially confusing data, that could make a  
25 regulatory process into somewhat of an inefficient

1 process?

2 MR. JIM GREVATT: Definitely.

3 MR. JARED WHEELER: And would you  
4 agree, as set out in your report and as we can  
5 probably see here on the screen if we're at the spot  
6 that I'm thinking we're going to be, you recommended  
7 that the Board should require assurance from  
8 Efficiency Manitoba that it has the resources to carry  
9 out the plan and that it has done appropriate  
10 implementation planning before it recommends approval  
11 of the plan?

12 MR. JIM GREVATT: Yes.

13 MR. JARED WHEELER: Right. And that's  
14 right at the last sentence on this. So, can we take  
15 this to mean that, before submitting a future  
16 efficiency plan to the PUB, one (1) thing Efficiency  
17 Manitoba should be prepared to show is that it has the  
18 resources to carry out the plan put forth?

19 MR. JIM GREVATT: As stated, I think I  
20 might clarify that, that the plan includes a request  
21 for enough resources to meet what is set forth in the  
22 plan because I wouldn't expect that Efficiency  
23 Manitoba would simply have those resources available.

24 Just trying to be specific about the  
25 language.

1 MR. JARED WHEELER: Understood. And I  
2 -- I believe Mr. Chair referred to them as somewhat of  
3 a startup, and so there's some startup hiccups, I  
4 guess --

5 MR. JIM GREVATT: Indeed.

6 MR. JARED WHEELER: -- at this point?  
7 So, before submitting a future plan, Efficiency  
8 Manitoba should be prepared to show that it has done  
9 appropriate implementation planning.

10 Would you agree with that?

11 MR. JIM GREVATT: Yes.

12 MR. JARED WHEELER: And that level of  
13 -- of planning it adva -- in advance would likely help  
14 to make a future regulatory process more efficient,  
15 correct?

16 MR. JIM GREVATT: Yes.

17 MR. JARED WHEELER: And that's because  
18 -- as you've stated in your report and as we can see  
19 on the screen here, that's because this level of data  
20 tells the Board and stakeholders what Efficiency  
21 Manitoba is actually planning to do.

22 Do I have that right?

23 MR. JIM GREVATT: You do. And I think  
24 the point for me is quite important because I found  
25 that I spent a lot of time trying to understand what

1 was being proposed. And I don't think that's a good  
2 use of -- I mean, it's my time, I don't care about  
3 that so much, but -- but someone is paying for this  
4 time, and I don't think that's the best investment,  
5 for me to try to be figuring out what's going on.

6 If I can see what's going on, then I  
7 can use my experience to advise on how appropriate I  
8 think it is.

9

10 (BRIEF PAUSE)

11

12 MR. JARED WHEELER: Thank you for  
13 that. I'm going to leave that area of questions alone  
14 just for -- well, that'll probably be the end of those  
15 questions for you, Mr. Grevatt. I do have one (1)  
16 further question for you though.

17 Ms. Schubert, if we can just go to PDF  
18 page 46 of this report, and I kind of want to straddle  
19 the line between pages 46 and 47. This is not at all  
20 what I was looking for. I apologize for that.

21 MS. KATRINE DILAY: Mr. Wheeler, I'm  
22 not sure if this will be right but can we try page 40  
23 -- 31?

24 MR. JARED WHEELER: And I'll be  
25 scrolling right to the bottom. Yes. Thank you for

1 that. I appreciate that, Ms. Dilay.

2 Now, you conclude here that:

3 "Efficiency Manitoba does not  
4 propose to devote enough of its  
5 efforts to serve the needs of  
6 residential customers, especially  
7 those who currently use electricity  
8 to heat their homes."

9 I'd like if we could see the first  
10 sentence on the -- there we go, perfect. Thank you,  
11 Ms. Schubert.

12 And would you characterize this as a  
13 missed opportunity?

14 MR. JIM GREVATT: A missed opportunity  
15 in the plan, yes.

16 MR. JARED WHEELER: And further down  
17 on page 47, Ms. Schubert.

18 Mr. Grevatt, one of your  
19 recommendations is that:

20 "Efficiency Manitoba should increase  
21 its proposed residential and income  
22 eligible program budgets,  
23 participation and savings to better  
24 meet the needs of Manitoba  
25 households."

1 Correct?

2 MR. JIM GREVATT: Yes. And to be  
3 clear, and I apologize for not being as specific as I  
4 should have been in this language, I included First  
5 Nations programs in the umbrella of residential and  
6 income eligible.

7 MR. JARED WHEELER: And you could  
8 clearly foresee where I was about to go with that, so  
9 thank you for -- for -- for taking care of that for  
10 me.

11 So then, would you agree that this  
12 recommendation could be slightly modified to state  
13 that:

14 "Efficiency Manitoba should increase  
15 its proposed residential income  
16 eligible and Indigenous program  
17 budgets, participation and savings  
18 to better meet the needs of  
19 Manitoba's households"?

20 MR. JIM GREVATT: Yes.

21 MR. JARED WHEELER: Very good. Thank  
22 you very much, Mr. Grevatt.

23 I'm going to turn to some questions we  
24 have for you, Mr. Neme. You've been joining us all  
25 morning and fairly quiet, so let's try to help that.



1 Ms. Schubert, can we please start out  
2 by bringing up Mr. Neme's direct evidence  
3 presentation, Coalition Exhibit 19? I'm going to be  
4 looking for PDF page 15.

5 While Ms. Schubert brings that up, I  
6 feel like we already have a lot on the record about --  
7 about the possibility of switching to heat pumps.  
8 There's been a lot of discussion about that. We're  
9 interested in those discussions. We're not going to  
10 be specifically looking at that in our questions for  
11 you this morning, but our client is very interested in  
12 the information on this slide.

13 Mr. Neme, on this page here you refer  
14 to low income customers on oil/propane as the biggest  
15 missed opportunity. Is that correct?

16 MR. CHRIS NEME: In the context of  
17 directly fuel switching from a fossil fuel heating  
18 system to an electric heating system.

19 As I -- I think I said yesterday, more  
20 broadly speaking as it relates to heat pumps, I think  
21 the -- the -- the -- really the biggest opportunity  
22 that was missed was in more significant investment in  
23 helping the much larger number of Manitoban  
24 households, a significant portion of which are  
25 relatively low income, that heat with inefficient

1 electricity, to use heat pumps as an electric  
2 efficiency measure to reduce their bills. But in the  
3 context of fuel switching, this was the -- the one  
4 kind of major opportunity that jumped out as important  
5 as missing.

6 MR. JARED WHEELER: And it's the con -  
7 - the context of fuel switching that -- that I'd like  
8 to explore a little further.

9 You -- you tell us here that there are  
10 over three thousand two hundred (3,200) customers with  
11 incomes less than twenty-five thousand dollars  
12 (\$25,000) who heat with oil or propane. Correct?

13 MR. CHRIS NEME: That's correct, and I  
14 -- I appreciate that -- the definition of low income  
15 is -- it was the best I could do as a proxy for the  
16 definition of low income because the data that are  
17 represented here come from Manitoba Hydro's 2017  
18 residential survey, and they only show data in twenty-  
19 five thousand dollar (\$25,000) income increments, so  
20 the next one would have been between twenty-five (25)  
21 and fifty thousand (50,000). A significant portion of  
22 those would also undoubtedly be considered LIC0125 low  
23 income.

24 MR. JARED WHEELER: So this  
25 information about thirty-two hundred (3,200) customers

1 who heat with oil or propane, that comes from Manitoba  
2 Hydro data?

3 MR. CHRIS NEME: It does.

4 MR. JARED WHEELER: This feels like a  
5 silly question. You can confirm that you're referring  
6 to thirty-two hundred (3,200) customers in Manitoba?

7 MR. CHRIS NEME: That's correct.

8 MR. JARED WHEELER: And yesterday, if  
9 I recall correctly and if I noted in my notes  
10 correctly, in response to a question from Vice-Chair  
11 Kapitany you referred to these customers as a  
12 particularly vulnerable sector.

13 Is that -- does that sound right?

14 MR. CHRIS NEME: Yes. What I meant by  
15 that was at least in the context of energy efficiency  
16 planning it's very important to place particular  
17 emphasis on treating the needs of lower income  
18 customers because they are the ones that -- that have  
19 the highest energy burdens, pay the highest percentage  
20 of their income on their energy bills.

21 That's -- that kind of a universal  
22 truth across, you know, every state and province, and  
23 from that perspective they are the most economically  
24 vulnerable and could benefit the most from efficiency  
25 investments.

1 MR. JARED WHEELER: So I'm still on  
2 this bullet here, the same bullet. When you talk  
3 about heating with oil or propane, the oil you're  
4 referring to here, to the best of your knowledge then  
5 if this is from Manitoba Hydro data, is that fuel oil  
6 that we're talking about?

7 MR. CHRIS NEME: That's my  
8 presumption, yes.

9 MR. JARED WHEELER: And -- and now on  
10 this slide you also set out that:

11 "Efficiency Manitoba is allowed to  
12 support low income fuel switching  
13 from oil or propane."

14 Is this a reference to Section 14 of  
15 the Efficiency Manitoba regulation and the potential  
16 use of the Affordable Energy Fund?

17 MR. CHRIS NEME: I'm not, off the top  
18 of my head, sure exactly what section of the Act or  
19 regulation that comes from, but yes, it is with  
20 respect to the Affordable Energy Fund.

21 MR. JARED WHEELER: Maybe Ms.  
22 Schubert, can we bring that up? Let's bring up  
23 Efficiency Manitoba Regulation, Section 14, and we'll  
24 -- we'll see under the heading Use of the Affordable  
25 Energy Fund:

1 "Efficiency Manitoba must use the  
2 Affordable Energy Fund only to  
3 undertake initiatives to encourage  
4 and realize efficiency improvements  
5 and conservation in the use of home  
6 heating fuels other than electrical  
7 energy or natural gas, and not for  
8 any other purpose."

9 So a -- a home heating fuel other than  
10 electrical energy or natural gas, fuel oil fits this  
11 definition?

12 MR. CHRIS NEME: Yes.

13 MR. JARED WHEELER: And propane fits  
14 this definition?

15 MR. CHRIS NEME: Yes.

16 MR. JARED WHEELER: Do you know if  
17 diesel fits this definition as a home heating fuel?

18 MR. CHRIS NEME: I don't see why it  
19 wouldn't.

20 MR. JARED WHEELER: And so on -- on  
21 Slide 15 of your presentation that we were just  
22 looking at -- we don't need to go back to that. Well,  
23 we can. It -- it -- it's very easy for Ms. Schubert.  
24 She's very efficient.

25 You tell us that 62 to 82 percent of

1 savings are possible, correct?

2 MR. CHRIS NEME: That's correct.

3 MR. JARED WHEELER: And I'd like to  
4 dig into that a bit. Now, you also reference this in  
5 your report. So can we bring up PDF page 12 of Mr.  
6 Neme's expert report?

7

8 (BRIEF PAUSE)

9

10 MR. JARED WHEELER: And I'm -- I'm --  
11 I'm just looking for a bit of -- I want to understand  
12 this a little bit. So for folks using fuel oil or  
13 propane, you say that 62 to 82 percent of savings are  
14 possible.

15 So -- now this is with respect to fuel  
16 switching. If there was fuel switching, these folks  
17 might see 62 to 82 percent savings?

18 MR. CHRIS NEME: Yes. And the - the  
19 source of that number comes from the graphic that I  
20 also presented in one (1) of my slides yesterday that  
21 was on Manitoba Hydro's website regarding the cost of  
22 heating with fuel oil and propane and electricity with  
23 different system efficiencies in each of those cases.

24 And I think -- I -- I'm doing this off  
25 of memory -- as I recall, depending on the efficiency

1 of the oil or propane heating system, the annual  
2 costs, according to Manitoba Hydro, and I think this  
3 is back in 2017, were in the range of nineteen hundred  
4 (1,900) or twenty-seven hundred dollars (\$2,700),  
5 something like -- something like that, whereas if they  
6 were to use a ground source heat pump, depending on  
7 the efficiency, the ground source heat pump would be  
8 in the five (5) to seven hundred dollar (\$700) range,  
9 and as I noted yesterday, I would expect the air  
10 source heat pumps to be in that same range as well,  
11 depending on -- well, for most of Manitoba anyway.

12 MR. JARED WHEELER: And now you told  
13 us in your direct evidence, and I'm sure it's in your  
14 -- your report as well, that unfortunately for some, I  
15 would suggest, these programs, fuel switching from  
16 fuel oil or propane, possibly diesel if it fits in  
17 that category -- these programs and the use of the  
18 Affordable Energy Fund are not being currently offered  
19 under the plan as proposed. Is that correct?

20 MR. CHRIS NEME: That's my  
21 understanding.

22 MR. JARED WHEELER: Is it your opinion  
23 that fuel switching from oil, propane, or diesel  
24 should be offered under the plan?

25 MR. CHRIS NEME: To the extent it's --

1 it's permitted, yes.

2 MR. JARED WHEELER: And when you say  
3 "to the extent permitted," is it your understanding,  
4 and I'm -- I'm absolutely not looking for a legal  
5 opinion -- is it your understanding that the  
6 Affordable Energy Fund could be a source of financing  
7 such a fuel switch?

8 MR. CHRIS NEME: Yes.

9 MR. JARED WHEELER: And now you -- you  
10 -- you raise a potential issue in your materials  
11 regarding fuel switching away from oil, propane, or --  
12 or -- I suppose based on our conversation this  
13 morning, also diesel, that you refer to a -- maybe I  
14 have the language wrong. Maybe I'm right on point.

15 You refer to it as a -- there's a  
16 perverse disincentive in that such a fuel switch would  
17 increase electricity consumption, correct?

18 MR. CHRIS NEME: What I think I said,  
19 and certainly what I intended to say, is that the way  
20 that Efficiency Manitoba has proposed to account for  
21 the effects of fuel switching on its natural gas and  
22 electricity savings goals is to treat the reduction in  
23 the fossil fuel as a hundred percent going towards  
24 their natural gas energy savings target, so helping it  
25 a lot, and a hundred percent of the increase -- the



1 resulting increase in electricity consumption being  
2 treated as negative savings or as a penalty relative  
3 to achievement of its electricity savings target.

4                   And that there could be circumstances  
5 where, for example, if they are on target to meet or  
6 exceed their gas savings target but maybe struggling a  
7 little bit more to meet their electricity savings  
8 target, they would have a perverse disincentive not to  
9 promote fuel switching because it would just get them  
10 more of a savings that they don't need to meet their -  
11 - one (1) target and make it harder to meet the other  
12 one (1) on which they're regu -- already struggling.

13                   MR. JARED WHEELER:    Do you have a  
14 suggestion of a different way to account for these --  
15 the results of fuel switching in these specific  
16 circumstances that might alleviate some of your  
17 concerns?

18                   MR. CHRIS NEME:    I do. I identified  
19 four (4) options to address that concern in my direct  
20 evidence as well as in my presentation yesterday, two  
21 (2) of which would -- would require, likely, a  
22 statutory change and two (2) of which would not.

23                   Of the one (1) -- of the two (2) that  
24 would not, my preference would -- would be for one (1)  
25 similar to the type of mechanisms that are in place in

1 the states of Vermont and Illinois where a fuel switch  
2 is treated in kind of a two (2) step process, the  
3 first step being a -- a fuel switch to a standard  
4 electric efficiency technology, and the second step  
5 being the upgrade from that standard electric  
6 technology to high efficiency electric technology.

7                   That -- that first step would produce  
8 little to no savings in most cases on the gas for --  
9 relative to the gas targets. Well, it could produce  
10 some but probably -- but certainly not on the order of  
11 magnitude of a hundred equal to a hundred percent of  
12 the reduction. And then the -- the second step would  
13 produce savings relative to electricity target.

14                   MR. JARED WHEELER:    So as we can see  
15 here on the screen, that Ms. Schubert very helpfully  
16 brought up, at PDF page 22 of your direct evidence you  
17 listed this off as alternative number 3, and I would  
18 be correct in saying that that would be your preferred  
19 alternative.

20                   MR. CHRIS NEME:    Absent any ability to  
21 change statute.

22                   MR. JARED WHEELER:    And I want to ask  
23 about one (1) other recommendation that you've put  
24 forward. Ms. Schubert, can we go to PDF page 24?

25                   Mr. Meme -- Neme, you've recommended,

1 as set out at number 4 on this page, that Efficiency  
2 Manitoba should include heat pump incentives for  
3 oil/propane heat customers who qualify for the  
4 affordable energy fund, correct?

5 MR. CHRIS NEME: Correct.

6 MR. JARED WHEELER: And you'd agree,  
7 as we've discussed, that diesel could be a home  
8 heating fuel used by customers and those customers  
9 would -- in your understanding, would qualify for the  
10 affordable energy fund, correct?

11 MR. CHRIS NEME: Again, not issuing a  
12 legal opinion, but my understanding is any fuel that's  
13 not gas would -- would be eligible. Customers heating  
14 with any fuel other than gas or electricity would be  
15 eligible for the affordable energy fund.

16 MR. JARED WHEELER: So, in the event  
17 that this Board decides not to direct Efficiency  
18 Manitoba to more aggressively pursue heat pumps at  
19 this time, could recommendation number 4 be revised to  
20 state that Efficiency Manitoba should include fuel  
21 switching incentives for customers who qualify for the  
22 affordable energy fund.

23 Would you agree with that?

24

25

(BRIEF PAUSE)

1                   MR. CHRIS NEME:    I guess it begs the  
2 question what would they be fuel switching to if  
3 they're not fuel switching to electricity.  I -- I  
4 suppose, if we're talking about fuel switching to  
5 electricity but not including heat pumps, you'd have  
6 them fuel switch to electric resistance heat, I'm not  
7 sure that that would be a good idea.

8                   So, I guess I'm struggling a little bit  
9 with your framing of the question.  Maybe I missed  
10 something.

11                  MR. JARED WHEELER:   No, I don't think  
12 you've missed anything.  I think what I'm looking for  
13 is basically just, rather than say that -- that  
14 Efficiency Manitoba should include heat pump  
15 incentives specifically, there could be other  
16 potential things out there for fuel switching for  
17 folks that are currently using oil, propane, diesel  
18 for heat.

19                  And I'm just suggesting that perhaps  
20 there should be incentives.  And I'm -- I'm wondering  
21 if -- if you'd agree with me that perhaps there should  
22 be incentives for those customers who qualify for the  
23 affordable energy fund to fuel switch, almost in  
24 broader terms, I suppose?

25                  MR. CHRIS NEME:    If we're talking

1 about fuel switching to a fuel that's not a fossil  
2 fuel, like, I'm trying to think what that might be.  
3 Maybe it's renewably produced wood or biofuel.  
4 Perhaps that could be considered, as well, sure, where  
5 it made reasonable economic sense.

6 MR. JARED WHEELER: Thank you, Mr.  
7 Neme. I think we'll leave that there. And I think  
8 that is all our questions for this morning. So, thank  
9 you very much to this panel.

10 MR. CHRIS NEME: Thank you.

11 THE CHAIRPERSON: Thank you, Mr.  
12 Wheeler. I'll ask the panel if they have any  
13 questions.

14

15 (BRIEF PAUSE)

16

17 THE CHAIRPERSON: I've got a question  
18 for Mr. Neme and Grevatt, but I'm not sure how to put  
19 it to you. Both you gentlemen have been in many  
20 hearings similar to this where you've talked about  
21 energy efficiency and DSM measures.

22 Have you been in hearings before where  
23 the person proposing the plan is not the originator of  
24 the information? What we've heard -- just as  
25 background, what we've heard here is that the

1 information's coming from Manitoba Hydro to Efficiency  
2 Manitoba which is then turning it into its efficiency  
3 plan.

4 MR. CHRIS NEME: When you say the in -  
5 - can you clarify what you mean by, "the information"?

6 THE CHAIRPERSON: The --

7 MR. CHRIS NEME: Because I understand  
8 that to be the case with things like avoided costs.

9 THE CHAIRPERSON: All the data is --  
10 is coming from them. So, for example, as part of the  
11 Hearing, we have marginal values. The marginal values  
12 are the marginal values which Manitoba Hydro put  
13 forward. They're not Efficiency Manitoba's marginal  
14 values.

15 MR. CHRIS NEME: Okay. So, yes.

16 THE CHAIRPERSON: In the hearings that  
17 you've been in, have you seen that situa -- do we have  
18 a unique situation or is this something that is -- is  
19 common in the industry?

20 MR. CHRIS NEME: Well, let me -- I'll  
21 take a first crack at this and say that almost by  
22 definition -- well, perhaps not by definition. In  
23 jurisdictions in which the administrator of the  
24 efficiency programs and the entity that's putting  
25 forward a plan is not a utility, it is quite common --

1 in my experience, for assumptions about avoided costs,  
2 whether it's avoided energy costs, avoided capacity  
3 costs, avoided T&D costs, line loss rates, et cetera,  
4 it's quite common for those assumptions to come from  
5 somebody else, whether it's the utility or independent  
6 studies that have been conducted.

7                   For example, in -- in the New England  
8 states, they have a practice every two (2) years of  
9 funding an avoided cost study. They hire experts in  
10 the field with credentials, for examples, like Mr.  
11 Harper's.

12                   They undertake a multi-month process to  
13 analyse the energy markets and capacity markets and  
14 develop long-term forecasts of what the avoided energy  
15 costs would be. And those results are then typically  
16 used by program administrators throughout the region,  
17 and -- and, in this case, actually even including some  
18 utilities, like the utilities who run programs in  
19 Massachusetts and Connecticut and Rhode Island use  
20 them, as does Efficiency Vermont, which is a non-  
21 utility administrator of programs in Vermont.

22                   So, yes, it's -- it's not uncommon with  
23 respect to avoided costs, as least, for assumptions  
24 about -- that are used to estimate the value of  
25 efficiency investments to come from entities other

1 than the entity that's planning to deliver the  
2 programs.

3 THE CHAIRPERSON: But in those  
4 situations, can you test the assumptions? Can they be  
5 tested at the hearings or -- or are they basically put  
6 forward, here are the assumptions, you must go on the  
7 basis of those assumptions?

8 MR. CHRIS NEME: No, they -- I think  
9 it is quite common for them to be available to be  
10 tested, and in the sense that parties who don't  
11 believe the numbers or -- or think some modifications  
12 are appropriate can -- can make their case.

13 That's -- I think that's actually quite  
14 -- quite common. And it's -- in -- in my experience,  
15 also it's quite common for those numbers not to be  
16 confidential.

17 THE CHAIRPERSON: Okay. Thank you.  
18 Mr. Harper, any comment on this area?

19 MR. WILLIAM HARPER: No. And I think  
20 he maybe gives me far more credit for my  
21 qualifications then -- then is due, but I don't have  
22 anything more to add.

23 THE CHAIRPERSON: Okay. Thank you.  
24 Mr. Grevatt...?

25 MR. JIM GREVATT: Just another example



1 in Maryland where there are five (5), now six (6) with  
2 the gas utility, utilities that are bound by the  
3 Empower Maryland Act, so six (6) different  
4 administrators of efficiency programs.

5 But the Maryland Energy Administration  
6 commissioned an avoided cost study by a third party.  
7 And this third party looked at the avoided costs for  
8 each of those utilities, and it was -- you know, it  
9 was workshopped.

10 The utilities had -- had to provide  
11 some data, but they also then had an opportunity to  
12 comment on the outputs that were suggested in the  
13 study, as did other parties.

14 And, eventually, the regulator adopted  
15 that study, and then required the utilities to use  
16 those avoided costs in their cost-effectiveness  
17 analysis.

18 THE CHAIRPERSON: Thank you. Thank  
19 you, gentlemen. We're going to adjourn early. I  
20 believe we'll adjourn until 12:30. Does that give you  
21 enough time, Ms. Schofield?

22 MS. JESSICA SCHOFIELD: Yes. Thank  
23 you, Mr. Chair.

24 THE CHAIRPERSON: Okay. So, we're  
25 going to adjourn now and re -- return at 12:30 with

1 the hope that we're going to complete the cross-  
2 examination and any re-examination this afternoon.

3 Thank you. We're adjourned.

4

5 --- Upon recessing at 11:24 a.m.

6 --- Upon resuming at 12:34 p.m.

7

8 THE CHAIRPERSON: Ms. Schofield...?

9

10 CROSS-EXAMINATION BY MS. JESSICA SCHOFIELD:

11 MS. JESSICA SCHOFIELD: Thank you, Mr.

12 Chair. Good afternoon to the Panel. My name is  
13 Jessica Schofield and I am going to be asking you  
14 questions on behalf of Efficiency Manitoba.

15 If I could start with you, Mr. Neme.

16 I'm going to pick up on some questions that were  
17 covered by Mr. Wheeler before the lunch break.

18 You would agree that the homes in  
19 diesel communities in Manitoba are currently heated  
20 with fuel oil, correct?

21 MR. CHRIS NEME: I'm not sure I  
22 understand the framing of the question. It is  
23 possible for a home to heat with fuel oil. It is  
24 probably not un -- terribly uncommon. It is at least  
25 theoretically possible for a home to be heated with

1 diesel directly, and then it's also possible for a  
2 home to be heated with electricity that's produced by  
3 diesel. So I'm not sure which of those you're asking  
4 me about.

5 MS. JESSICA SCHOFIELD: So I just want  
6 to be clear that when you were speaking earlier today  
7 and in your presentation that when you were looking at  
8 alternatives to heating with fuel oil, that this  
9 includes the diesel communities.

10 MR. CHRIS NEME: It would include any  
11 home that's being heated by fossil fuel other than  
12 gas, whether that's with fuel oil or diesel or propane  
13 or kerosene or...

14 MS. JESSICA SCHOFIELD: Yes. So I'm  
15 going to direct my next few questions specifically to  
16 the diesel communities in Manitoba.

17 MR. CHRIS NEME: Okay.

18 MS. JESSICA SCHOFIELD: So diesel  
19 power generation is used in these communities to  
20 provide electricity. You're aware of that, correct?

21 MR. CHRIS NEME: I'm aware that there  
22 is some of that, yes.

23 MS. JESSICA SCHOFIELD: And diesel  
24 operates to generate electricity at roughly 30 percent  
25 efficiency, correct?

1 MR. CHRIS NEME: I don't know off the  
2 top of my head what would be an appropriate assumption  
3 for that.

4 MS. JESSICA SCHOFIELD: Can you agree  
5 with me, subject to check, that it's 30 percent?

6 MR. CHRIS NEME: Sure.

7 MS. JESSICA SCHOFIELD: Thank you.  
8 And I'm going to suggest that all of the diesel  
9 communities in Manitoba are northern remote  
10 communities that would fall under sub-arctic as  
11 characterized in your presentation yesterday.

12 MR. CHRIS NEME: Okay. I'll take that  
13 as a given for your next question.

14 MS. JESSICA SCHOFIELD: Replacing fuel  
15 oil heat with an air source heat pump would, in fact,  
16 increase load on Manitoba Hydro's diesel generating  
17 system, which would increase diesel fuel consumption,  
18 correct?

19 MR. CHRIS NEME: To the extent that  
20 we're talking about a community whose electricity is  
21 provided by diesel -- diesel generation, if that home  
22 is using fuel oil and converted to electric heat, it  
23 would certainly add to the consumption of diesel,  
24 assuming that's the sole source of the electricity.

25 MS. JESSICA SCHOFIELD: Okay, thank

1 you. And my next question, I'm not sure how much  
2 knowledge you have in regards to the use of propane in  
3 Manitoba, so it's -- I'm going to suggest that the  
4 majority of communities that use propane in Manitoba  
5 are within the Thompson and The Pas area, which are  
6 also northern sub-arctic Manitoba communities.

7 MR. CHRIS NEME: I -- I don't have any  
8 basis for answering that.

9 MS. JESSICA SCHOFIELD: Thank you.  
10 Okay. You spoke earlier this morning about an option  
11 to treat electrification measures in two (2) steps.  
12 Do you recall your testimony?

13 MR. CHRIS NEME: I do.

14 MS. JESSICA SCHOFIELD: Thank you. So  
15 you said an electrification step to a standard  
16 efficiency electric technology and an efficiency step  
17 that counts electric savings relative to step -- to  
18 that step 1 baseline, correct?

19 MR. CHRIS NEME: Correct.

20 MS. JESSICA SCHOFIELD: So, Ms.  
21 Schubert, if I could ask you to pull up PDF page 20 of  
22 Mr. Neme's evidence, please.

23

24 (BRIEF PAUSE)

25

1 MS. JESSICA SCHOFIELD: I apologize,  
2 Ms. Schubert, page 20 of his presentation. Thanks.

3

4 (BRIEF PAUSE)

5

6 MS. JESSICA SCHOFIELD: Oh, you were  
7 just on it. Perfect. Thank you.

8

9 So you present alternatives in this  
10 slide as to how Efficiency Manitoba is accounting for  
11 electrification in its plan, correct?

12 MR. CHRIS NEME: These are potential  
13 alternatives to the proposed approach that Efficiency  
14 Manitoba has put forward, correct.

15 MS. JESSICA SCHOFIELD: Yes. And you  
16 would agree that a customer switching from a natural  
17 gas furnace to an air source heat pump, that there  
18 would be a result -- a resulting reduction of natural  
19 gas that would count towards the natural gas savings  
20 target, correct?

21 MR. CHRIS NEME: Under which  
22 construct?

23 MS. JESSICA SCHOFIELD: If a customer  
24 is switching from a natural gas furnace to an air  
25 source heat pump.

MR. CHRIS NEME: Yes. Un -- under the

1 Efficiency Manitoba proposed construct, is that the  
2 question?

3 MS. JESSICA SCHOFIELD: I apologize,  
4 yes.

5 MR. CHRIS NEME: Yes.

6 MS. JESSICA SCHOFIELD: And this would  
7 also have a corresponding increase in electric  
8 consumption, correct?

9 MR. CHRIS NEME: That's correct.

10 MS. JESSICA SCHOFIELD: Your  
11 alternative suggests that Efficiency Manitoba could  
12 take this two (2) step approach, first assume that the  
13 switch from natural gas to a standard efficiency  
14 electric heating system, then assume a new baseline of  
15 the standard efficiency electric heating system to the  
16 air source heat pumps, correct?

17 MR. CHRIS NEME: Correct.

18 MS. JESSICA SCHOFIELD: And in this  
19 alternative you are recommending that the avoidant  
20 natural gas consumption from the conversion could be  
21 claimed towards the natural gas target, correct?

22 MR. CHRIS NEME: In the first step,  
23 there would be some -- in most cases, some modest  
24 natural gas reduction that would be counted towards  
25 the gas target.

1 MS. JESSICA SCHOFIELD: Yes. And  
2 would you agree that taking this approach is  
3 essentially taking credit for the natural gas impact,  
4 but ignoring the true impact of the electric load?

5 MR. CHRIS NEME: No, not necessarily.  
6 I think it depends on the lens through which you're  
7 looking at an electrification project. If you're  
8 looking at it through the lens of efficiency, one  
9 could do a fuel switch to a standard piece of  
10 equipment -- standard piece of electric heating  
11 equipment, and then do -- do better than that with a  
12 more efficient electric heating system.

13 So I -- I think it's -- I think it's  
14 clear that the net effect is a reduction in gas  
15 consumption or propane or whatever the fuel you're  
16 referring to, and an increase in electricity  
17 consumption. That's the net effect. But I think the  
18 question of how you treat that relative toward savings  
19 goals, looking through an efficiency lens, can be  
20 different.

21 MS. JESSICA SCHOFIELD: Okay, thank  
22 you. Do you think that there could be a risk that an  
23 independent evaluator could challenge these  
24 assumptions, particularly given the low cost of  
25 heating with natural gas versus an electric furnace?



1 MR. CHRIS NEME: I'm not sure what the  
2 cost of the system or the cost of the fuel has to do  
3 with how the savings are treated. Could you please  
4 elaborate?

5

6 (BRIEF PAUSE)

7

8 MS. JESSICA SCHOFIELD: I'm going to  
9 try to reframe my question.

10 MR. CHRIS NEME: Okay, thank you.

11 MS. JESSICA SCHOFIELD: So, are you  
12 suggesting that an independent evaluator would accept  
13 that a customer would switch to an electric furnace  
14 from a natural gas furnace if it was significantly  
15 more expensive?

16 MR. CHRIS NEME: I -- the way I think  
17 about this is that this is a -- an accounting rule so  
18 to speak, that could be pre-established, and -- and  
19 this is quite common in numerous jurisdictions, for  
20 the purpose of savings for this plan and subsequent  
21 plans, and in that context the job of the evaluator is  
22 to assess whether the savings that were estimated and  
23 that were then allocated in each of these two (2)  
24 steps would be its primary function.

25 MS. JESSICA SCHOFIELD: Okay, thank

1 you. You'll recall that during yesterday's  
2 proceeding, Board Member Hamilton enquired of Mr.  
3 Grevatt as to whether he was aware of any research or  
4 pilots that have been conducted that would provide an  
5 answer to whether air source heat pumps would work in  
6 Manitoba's climate, correct?

7 MR. CHRIS NEME: Yes. I believe that  
8 he then deferred that question to me.

9 MS. JESSICA SCHOFIELD: Yes. And in  
10 responding to that question, you indicated that  
11 historically air source heat pumps were not an option  
12 as they did not function at a low enough temperature  
13 to make them worthwhile, not only in Manitoba's  
14 climate but in your own home state of Vermont,  
15 correct?

16 MR. CHRIS NEME: That's correct.

17 MS. JESSICA SCHOFIELD: And, in fact,  
18 your evidence was that historically you would have to  
19 go down below the Mason-Dixon Line in the United  
20 States for air source heat pumps to be a viable  
21 alternative for heating, correct?

22 MR. CHRIS NEME: Correct.

23 MS. JESSICA SCHOFIELD: And you  
24 indicated that that technology and our understanding  
25 of these heat pumps' performance is still evolving,

1 correct?

2 MR. CHRIS NEME: The new technology  
3 that allows performance at much colder temperatures is  
4 still evolving, to be sure.

5 MS. JESSICA SCHOFIELD: Yes. Thank  
6 you for that clarification.

7 And you indicated that one (1) of the  
8 problems was that air source heat pumps had not been  
9 rated and were not scientifically proven and accepted  
10 technical data, which was representative of the way  
11 that they actually operate in climates other than in  
12 the mid and southern parts of the United States and  
13 that this was one (1) of the problems with the  
14 technology, correct?

15 MR. CHRIS NEME: Not exactly. The  
16 problem with the rating system was not the problem --  
17 is not a problem with the technology. It's the  
18 problem with the way we've historically rated the  
19 efficiency of heat pumps.

20 The ratings were based on performance  
21 at temperatures that might be representative of the  
22 middle to southern parts of the US, but not  
23 representative of performance in more northern  
24 climates in the US or in Canada.

25 So it's not a problem with the

1 technology; it's more a problem with the way the  
2 rating system that's been in existence for decades has  
3 been established.

4 MS. JESSICA SCHOFIELD: Okay, thank  
5 you. You indicated that the Canadian Standards  
6 Association has launched an effort to draft new  
7 specifications and testing standards for heat pumps  
8 where they would be -- where there would requirements  
9 to test and rate them, so to speak, to rate their  
10 efficiency across eight (8) different climates,  
11 correct?

12 MR. CHRIS NEME: Correct.

13 MS. JESSICA SCHOFIELD: And so  
14 currently we have no accepted specifications or  
15 testing standards for climates such as in Manitoba,  
16 correct?

17 MR. CHRIS NEME: The Canadian  
18 Standards Association protocol, which has been in  
19 development for several years, is still in draft form.

20 MS. JESSICA SCHOFIELD: Yes. And your  
21 presentation refers to those as preliminary results,  
22 correct?

23 MR. CHRIS NEME: Well, the results  
24 that -- that I presented for several heat pumps were -  
25 - were actually tested in labs at the -- at the

1 temperatures that were laid out, but it was just a  
2 modest subset of the range of products that are  
3 available on the market, so there's clearly more work  
4 to be done.

5 MS. JESSICA SCHOFIELD: And if I  
6 understood correctly, these test results were the  
7 first set of test results obtained over such a broad  
8 range of climates, correct?

9 MR. CHRIS NEME: Under the protocols  
10 of the Canadian Standards Association, or the draft  
11 protocols of the Canadian Standards Association,  
12 that's correct.

13 MS. JESSICA SCHOFIELD: And as I  
14 understand it, these protocols were given less than  
15 two (2) months ago, correct?

16 MR. CHRIS NEME: I'm not sure exactly  
17 when but it's been relatively recent.

18 MS. JESSICA SCHOFIELD: Thank you.  
19 And so you would agree with me that there aren't  
20 accepted standards on which Efficiency Manitoba could  
21 attempt to gauge the relative effectiveness of this  
22 technology in a Manitoba climate, correct?

23 MR. CHRIS NEME: I wouldn't phrase it  
24 quite that way. There is not a final testing  
25 procedure and results from that final testing

1 procedure across the full range of products on which  
2 to rely, that's true.

3 I think you framed your question a  
4 little bit differently. I can't recall the exact  
5 wording, but...

6 MS. JESSICA SCHOFIELD: Thank you for  
7 that clarification, and -- and thank you for your  
8 answers, Mr. Neme.

9 Mr. Grevatt, if I could just ask you a  
10 few questions.

11 MR. JIM GREVATT: Of course.

12 MS. JESSICA SCHOFIELD: Thank you.  
13 Now, before lunch, Mr. Wheeler enquired about  
14 accessibility and specific fi -- specifically,  
15 financial accessibility.

16 Do you recall those questions?

17 MR. JIM GREVATT: I do.

18 MS. JESSICA SCHOFIELD: Thank you.

19 And Ms. Schubert, if I could ask you to pull up page  
20 319 of Efficiency Manitoba's submission, please.

21

22 (BRIEF PAUSE)

23

24 MS. JESSICA SCHOFIELD: And Mr.

25 Grevatt, you would agree that Efficiency Manitoba's

1 strategy for approaching the low-income market largely  
2 addresses this barrier by providing free programs,  
3 correct, or no-cost programs?

4 MR. JIM GREVATT: I -- I -- I don't  
5 feel that I have sufficient information to confirm  
6 that. There certainly are some measures that are in  
7 the plan that seem to be offered at no cost. I don't  
8 know if that's the majority of the savings or the  
9 majority of the budget for the programs.

10 I also understand that there's furnace  
11 replacement options that do require some co-payment  
12 from the customer, including one (1) that is sigic --  
13 significantly cashflow negative for the customer. So  
14 I can't confirm your answer.

15 MS. JESSICA SCHOFIELD: Okay, thank  
16 you.

17 MR. JIM GREVATT: Your question,  
18 sorry.

19 MS. JESSICA SCHOFIELD: Ms. Schubert,  
20 could I ask that you pull up the transcript from  
21 yesterday at page 1767, and specifically, line 11, if  
22 I could. Thank you.

23 Mr. Grevatt, you testified:

24 "And importantly, there weren't in  
25 the plan -- there was not information

1                   about the specific measures that were  
2                   going to be proposed and promoted and  
3                   how they're going to be prioritized."

4                   You see that?

5                   MR. JIM GREVATT:    I do.

6                   MS. JESSICA SCHOFIELD:   Thank you.

7   Now, Ms. Schubert, I'm going to ask you to pull up PDF  
8   page 278 of Efficiency Manitoba's submission.

9                   Now, Mr. Grevatt, I'm going to suggest  
10   that there are several places in Efficiency Manitoba's  
11   plan where we did provide information with respect to  
12   the specific measures that were proposed and would be  
13   promoted.

14                  MR. JIM GREVATT:    I will agree that  
15   the plan provides some incomplete data about the  
16   measures that were going to be promoted.  For  
17   instance, here, I see two (2) energy-efficient  
18   showerheads and outdoor car plug timers.  I don't know  
19   if the direct install home energy checkup program is -  
20   - savings include ten thousand (10,000) outdoor car  
21   plug timers and two (2) showerheads or how -- what the  
22   distribution of measures is going to be, for example.

23                  MS. JESSICA SCHOFIELD:    But -- but you  
24   would agree that the information as to whether they  
25   would be promoted was included.  What measures would



1 be promoted -- that information was included in the  
2 plan.

3 MR. JIM GREVATT: I will agree that  
4 there was some information about the measures that  
5 it's proposed will be promoted.

6 MS. JESSICA SCHOFIELD: And there are  
7 a number of places in the plan where you would agree  
8 that some level of information with respect to the  
9 measures was provided, correct?

10 MR. JIM GREVATT: Yes.

11 MS. JESSICA SCHOFIELD: And you're  
12 aware that the -- I see Daymark received all of the  
13 detailed measure level work papers, which included CSI  
14 values, correct?

15 MR. JIM GREVATT: I understand that  
16 that's what's been represented in filings in -- in the  
17 proceeding, but of course, I have no way of confirming  
18 whether that's true or not.

19 MS. JESSICA SCHOFIELD: But you  
20 understand that Daymark has testified in this  
21 proceeding that they received all of that information,  
22 correct?

23 MR. JIM GREVATT: Yes.

24

25

(BRIEF PAUSE)

1 MS. KATRINE DILAY: Mr. Chair, my  
2 understanding is that Ms. Schofield is ready for Dr.  
3 Fitzpatrick, and so if we just give her maybe thirty  
4 (30) seconds to come back in the room. She is  
5 monitoring online, so she -- as we speak. Thank you.

6 MS. JESSICA SCHOFIELD: Sorry, my  
7 intention was just to give Ms. Dilay a heads-up. I --  
8 I do have a couple other questions. I just was trying  
9 to...

10

11 (BRIEF PAUSE)

12

13 MS. JESSICA SCHOFIELD: Ms. Schubert,  
14 if I could ask you to pull up the IR -- it's  
15 Daymark/EM-I-5.

16

17 (BRIEF PAUSE)

18

19 MS. JESSICA SCHOFIELD: Ms. Schubert,  
20 I apologize. It is the attachment to Daymark/EM-I-5.  
21 I apologize for that. And it's page 86.

22

23 (BRIEF PAUSE)

24

25 MS. JESSICA SCHOFIELD: Could you pull

1 up page 40, actually, Ms. Schubert?

2 Dr. Fitzpatrick, I believe earlier  
3 today, you testified that the EEAG should be provided  
4 with measure level information, correct?

5 DR. PATRICIA FITZPATRICK: No, that  
6 was not me. Was it? Or did I say that could be one  
7 of the -- was that question directly to me, and I said  
8 that could potentially be one (1) of the things?

9 MS. JESSICA SCHOFIELD: I -- I believe  
10 your exact words was that "that could be helpful."

11 DR. PATRICIA FITZPATRICK: Oh, all  
12 right, then. Yes, that could be helpful.

13 MS. JESSICA SCHOFIELD: Thank you.

14 MS. KATRINE DILAY: And perhaps --  
15 perhaps just to clarify, Dr. Fitzpatrick could take  
16 that subject -- subject to --

17 MS. JESSICA SCHOFIELD: Absolutely,  
18 yes.

19 MS. KATRINE DILAY: -- checking the  
20 transcript.

21 DR. PATRICIA FITZPATRICK: Yes, thank  
22 you.

23 MS. JESSICA SCHOFIELD: Thank you, Ms.  
24 Dilay.

25

1 CONTINUED BY MS. JESSICA SCHOFIELD:

2 MS. JESSICA SCHOFIELD: And if I could  
3 refer you to the slide on the screen, which is page 40  
4 of Attachment 1 of Daymark/EM-I-5, you would agree  
5 that this is the sort of information that you were  
6 referring to this morning?

7 DR. PATRICIA FITZPATRICK: I -- I  
8 would say, subject to check, that this type of  
9 information was probably helpful. The question was  
10 specifically posed by a different Intervener, and so I  
11 was talking about the range of things that the EEAG  
12 may include in their consideration generally.

13 MS. JESSICA SCHOFIELD: Thank you.  
14 And Mr. Chair, those are all of my questions.

15 THE CHAIRPERSON: Thank you, Ms.  
16 Schofield. Ms. Hart...?

17 MS. KATE HART: Thank you, Mr. Chair.

18 Good afternoon, members of the  
19 Consumers Coalition witness panel. My name is Kate  
20 Hart, and on behalf of the Board, I would like to ask  
21 Dr. Fitzpatrick some questions about her evidence. My  
22 colleague, Ms. Steinfeld, has questions for Mr.  
23 Harper, Mr. Grevatt, and Mr. Neme.

24

25 CROSS-EXAMINATION BY MS. KATE HART:

1 MS. KATE HART: Dr. Fitzpatrick, I'd  
2 like to ask you some questions about Efficiency  
3 Manitoba's mechanisms for receiving input into the  
4 plan.

5 And Ms. Schubert, could you please  
6 bring up Section 9(h) of the Act.

7

8 (BRIEF PAUSE)

9

10 MS. KATE HART: And Dr. Fitzpatrick,  
11 as I believe you testified earlier, your understanding  
12 of this provision is that it requires that Efficiency  
13 Manitoba include in the plan a description of the  
14 input it received from stakeholders and the public in  
15 preparing the plan. Is that correct?

16 DR. PATRICIA FITZPATRICK: That is  
17 correct.

18 MS. KATE HART: And this provision  
19 also requires a description of the process established  
20 for receiving this input, correct?

21 DR. PATRICIA FITZPATRICK: Correct.

22 MS. KATE HART: Dr. Fitzpatrick, in  
23 your report, I believe you outlined three (3) key  
24 mechanisms used by Efficiency Manitoba to solicit  
25 input into the development of the plan, correct?

1 DR. PATRICIA FITZPATRICK: Correct.

2 MS. KATE HART: Ms. Schubert, could  
3 you please bring up PDF page 7 of Dr. Fitzpatrick's  
4 direct evidence presentation.

5 Dr. Fitzpatrick, this is page 8 of your  
6 direct. And so specifically, Dr. Fitzpatrick, these  
7 three (3) mechanisms are the EEAG, the stakeholder  
8 survey, and the stakeholder summary report.

9 Is that right?

10 DR. PATRICIA FITZPATRICK: That is  
11 correct.

12 MS. KATE HART: So I'd like to turn  
13 now to the -- the first key mechanism that you  
14 identified, Dr. Fitzpatrick: the EEAG.

15 And Dr. Fitzpatrick, I believe in your  
16 evidence, you've referenced that Efficiency Manitoba -  
17 - Efficiency Manitoba's position is that the EEAG can  
18 represent both stakeholders and the public.

19 Is that correct?

20 DR. PATRICIA FITZPATRICK: That is my  
21 understanding of how Efficiency Manitoba articulated  
22 the role of the EEAG in various documentation,  
23 including the main body of the application. The IR  
24 response is in the terms of reference, and so if I  
25 refer you to my report on page 7, I've included a

1 table that describes the different ways that the EEAG  
2 mandate was -- was articulated, and there's -- would  
3 be some inconsistency in what their job was.

4 MS. KATE HART: Thank you. And if we  
5 could go to Coalition/EM-I-25A. Ms. Schubert, if you  
6 could bring that up, please, and just to the response,  
7 that would be great.

8 And I believe here, Efficiency Manitoba  
9 states that outside of the EEAG, which collectively  
10 represents all of the customer segments in the plan,  
11 there was no feedback received from the general public  
12 in adva -- in advance of the plan, correct?

13 DR. PATRICIA FITZPATRICK: Correct.

14 MS. KATE HART: And so I believe  
15 Efficiency Manitoba in this response is saying two (2)  
16 things: 1, that Efficiency Manitoba only received  
17 general public feedback through the -- through the  
18 mechanism of the EEAG; and 2, that the EEAG represents  
19 all customer segments under the plan.

20 Is that correct?

21 DR. PATRICIA FITZPATRICK: I'm not  
22 sure that's my understanding of the testimony of EEAG  
23 and -- or, sorry, of Efficiency Manitoba, and I would  
24 refer you to Efficiency Manitoba for clarification.

25 But my understanding of the body of

1 evidence is that -- that many or most customer  
2 segments, they felt, were represented by the EEAG.  
3 I'm not sure I would characterize it as all based on--

4 MS. KATE HART: And -- and Dr.  
5 Fitzpatrick --

6 DR. PATRICIA FITZPATRICK: -- the  
7 testimony.

8 MS. KATE HART: -- I do want to ask  
9 you about the -- the customer segments, but I guess my  
10 question is, is this a -- is what I just said a -- an  
11 accurate paraphrase of this IR response?

12 DR. PATRICIA FITZPATRICK: Yeah, that  
13 would be an accurate paraphrase.

14 MS. KATE HART: Thank you. And Dr.  
15 Fitzpatrick, if I could ask you to turn now to page 8  
16 of your report, which is PDF page 9.

17

18 (BRIEF PAUSE)

19

20 MS. KATE HART: And if we look at  
21 Table 2, this is a chart you've prepared showing the  
22 member organizations that make up the EEAG.

23 Is that right?

24 DR. PATRICIA FITZPATRICK: That is  
25 correct.



1 MS. KATE HART: And I just have a --  
2 one (1) quick question about these member  
3 organizations, Dr. Fitzpatrick.

4 Is it clear from the plan or any other  
5 documentation prepared by Efficiency Manitoba which  
6 member organizations are part of the EEAG?

7 DR. PATRICIA FITZPATRICK: My  
8 understanding evolved, depending upon where in the  
9 documentation I was reading -- who was a member of the  
10 EEAG, hence the three (3) headings on -- on the  
11 columns. So the EEAG membership list appeared, I  
12 believe, in the -- in the main body of the  
13 application, if I'm -- application page 241. Oh, I  
14 did a good job of citing so you can see exactly where  
15 the references come from.

16 And then participation in meetings, I  
17 think that it's my understanding, based on my reading  
18 of the minutes, that early in the EEAG process, there  
19 may have been more members who were interested in  
20 participating, but over the course of the summer, they  
21 -- they may not have had the capacity or been able to  
22 contribute. And so this is why I've included all  
23 three (3) columns and the reference in the application  
24 material.

25 MS. KATE HART: Thank you, Dr.

1 Fitzpatrick. And looking at this chart of the member  
2 organizations in -- of the EEAG, would you say that  
3 they are representative of all of the customer  
4 segments under the plan?

5 DR. PATRICIA FITZPATRICK: As defined  
6 by someone who has experience with participating in  
7 engagement and public engagement in Manitoba or as  
8 defined by the customer segments from Efficiency  
9 Manitoba's application?

10 MS. KATE HART: Customer segments  
11 within the plan.

12 DR. PATRICIA FITZPATRICK: So...

13

14 (BRIEF PAUSE)

15

16 DR. PATRICIA FITZPATRICK: Could you  
17 ask me your question one (1) more time, please?

18 MS. KATE HART: Sure. Would you  
19 agree, Dr. Fitzpatrick, that the EEAG is  
20 representative of the customer segments within  
21 Efficiency Manitoba's plan?

22 DR. PATRICIA FITZPATRICK: Certainly  
23 in part, yes.

24 MS. KATE HART: But I think your  
25 point, Dr. Fitzpatrick, is that the customer segments

1 within Efficiency Manitoba's plan do not represent the  
2 entirety of the Manitoba public.

3 Is that right?

4 DR. PATRICIA FITZPATRICK: I would  
5 suggest that the members of the EEAG do not represent  
6 the entirety of the Manitoba public and, therefore,  
7 broken down by customer segments in the plan, there  
8 may be gaps.

9 MS. KATE HART: Dr. Fitzpatrick,  
10 assuming that the EEAG consisted of member  
11 organizations that were more representative of the  
12 Manitoba general public and which facilitated  
13 engagement with their constituencies, do you think  
14 this would be a valid way for Efficiency Manitoba to  
15 receive input from the public?

16

17 (BRIEF PAUSE)

18

19 DR. PATRICIA FITZPATRICK: I have two  
20 (2) parts to my answer. And the first is, based on  
21 your assumptions, I think this would be a valid way.  
22 So, that includes a broader representation by agencies  
23 and an additional mandate for the EEAG members to  
24 engage their constituencies.

25 The second part to my answer is that,

1 but they'll still need to be a way for the public to  
2 speak directly with Efficiency Manitoba because  
3 certainly members of the public may not be part of the  
4 EEAG organizational members, or they may not be aware  
5 of the EEAG or who its organizational members.

6 So, that could be an important role for  
7 the EEAG to play, but still there needs to be  
8 opportunity for the public to speak directly with the  
9 Crown corporation.

10 MS. KATE HART: Thank you. Dr.  
11 Fitzpatrick, I'd like to turn now to the experience  
12 and expertise of the EEAG. Ms. Schubert, could you  
13 please bring up section 27(2) of the Act?

14

15 (BRIEF PAUSE)

16

17 MS. KATE HART: Dr. Fitzpatrick, I  
18 believe you referred to this provision before, but is  
19 it your understanding that this section provides that  
20 Efficiency Manitoba must seek to appoint persons with  
21 expertise and effic -- and experience in energy  
22 efficiency and an understanding of the functioning of  
23 the PUB's role in relation to energy efficiency?

24 DR. PATRICIA FITZPATRICK: That is my  
25 understanding as a layperson of how I read that

1 section.

2 MS. KATE HART: And if we turn back to  
3 page 8 of your report, which is PDF page 9, would you  
4 agree that these member organizations here have that  
5 expertise and experience in energy efficiency?

6 DR. PATRICIA FITZPATRICK: I would  
7 agree that the organizations have that experience.

8 MS. KATE HART: And, Dr. Fitzpatrick,  
9 given the -- the EEAG is supposed to consist of  
10 members who have expertise and experience in energy  
11 efficiency, can the EEAG also be a mechanism by which  
12 Efficiency Manitoba receives input from the general  
13 public?

14 DR. PATRICIA FITZPATRICK: Again, it  
15 would be a mechanism through which Efficiency Manitoba  
16 receives input from the general public with the caveat  
17 that the EEAG would have to have that specific  
18 direction, be supported in their endeavours to seek  
19 that input, and receive and analyse and contribute  
20 that -- that input.

21 And the public will still need to be  
22 able to contact Efficiency Manitoba directly.

23 MS. KATE HART: Thank you. Dr.  
24 Fitzpatrick, in your report and in your testimony  
25 today you've indicated that EEAG members should

1 receive some form of compensation, I believe.

2                   And so, one (1) question I have, and  
3 this is more addressed to the panel at large, is are  
4 any of you aware of any funding models for energy  
5 advisory groups similar to the EEAG that are used in  
6 other jurisdictions?

7

8   (BRIEF PAUSE)

9

10                   MR. CHRIS NEME:    It's not exactly the  
11 same thing, but in the three (3) southern New England  
12 states, in Massachusetts, Connecticut, and Rhode  
13 Island, where there are energy efficiency advisory  
14 councils, the advisory councils hire experts.

15                   And, in fact, our firm is part of the  
16 team of consultants in all three (3) states. We are  
17 the -- the prime consultant in Connecticut and we are  
18 subcontractors to the prime consultant in  
19 Massachusetts and Rhode Island.

20                   And the funding for our time to support  
21 the energy efficiency advisory councils is paid by the  
22 utilities whose programs the advisory council is  
23 charged with reviewing, interacting with the utilities  
24 on negotiating performance goals with, et cetera.

25                   That's the -- and -- and there have

1 been other examples of what are commonly called  
2 collaborative processes in other jurisdictions where  
3 the ex -- where experts that are hired by stakeholders  
4 have their -- answer to the stakeholders but have  
5 their costs with some clarity upfront about what the  
6 budgets would be and so on paid for by the utilities  
7 so that those stakeholders can engage with the  
8 utilities on a kind of more level playing field in  
9 terms of the expertise they can bring to the table.

10 MR. JIM GREVATT: And if I could just  
11 add, on the several collaboratives that I work on  
12 there is not compensation. And my observation is  
13 that, while there's good representation among advocacy  
14 organizations that have funding to send people to  
15 these collaboratives, there is very likely some gaps  
16 in representation, and I would say specifically gaps  
17 in -- in hearing the voices of customers rather than  
18 sort of large organizations that advocate on behalf of  
19 customers.

20 This is an issue that has come up in  
21 Maryland, in particular, where there was a large  
22 planning meeting with a lot of advocates. And we  
23 looked around the room and said, but there are no --  
24 and this was specifically on income eligible programs,  
25 there are no people in this room who would qualify as

1 an income eligible participant in the programs.

2 That's quite a shortcoming.

3 DR. PATRICIA FITZPATRICK: And I think  
4 I would defer to the specific examples within the  
5 energy sector. But a similar structured organization  
6 is the technical advisory committee for the Impact  
7 Assessment Agency.

8 And, as noted in IR PUB-Coalition-13,  
9 there is an amount of compensation paid to members of  
10 the technical advisory committee as well as having  
11 their expenses paid for their contribution to the  
12 agency.

13 MS. KATE HART: Thank you. So --

14 THE CHAIRPERSON: Sorry, Ms. Hart, can  
15 I just interrupt for a second?

16 MS. KATE HART: Yes.

17 THE CHAIRPERSON: Ms. Fitz --  
18 Fitzpatrick, when you're talking about compensation  
19 for the organizations, are you talking about  
20 compensation of the organization or are you talking  
21 about compensation of the individual who attends the  
22 meeting?

23 DR. PATRICIA FITZPATRICK: I would  
24 defer the structure to negotiation amongst the EEAG  
25 members and the organizational representatives. In



1 some instances, compensation can be paid to the  
2 organization.

3 For example, for my testimony here, the  
4 money I'm receiving is going to a fund through the  
5 University of Winnipeg which then I will be able to  
6 use for student research, so it's not going to me as  
7 an individual.

8 In other instances, perhaps the money  
9 would go to the individual. And so, that can be at  
10 the discretion of whatever policy is established with  
11 the EEAG and its representatives and Efficiency  
12 Manitoba whether or not the funding goes to the not  
13 for profit or to the individual appointee.

14 THE CHAIRPERSON: Okay. Thank you.  
15 Sorry, Ms. Hart.

16

17 CONTINUED BY MS. KATE HART:

18 MS. KATE HART: So, Dr. Pi -- Dr.  
19 Fitzpatrick, to return to the -- the key mechanisms  
20 that you had identified, aside from the EEAG, the --  
21 the other two (2) key mechanisms used by Efficiency  
22 Manitoba to slit -- to list -- to solicit input for is  
23 the stakeholder survey and the stakeholder summary  
24 report, correct?

25 DR. PATRICIA FITZPATRICK: That is my

1 understanding, yes.

2 MS. KATE HART: And apart from these  
3 three (3) key mechanisms, are you aware of any other  
4 mechanisms that Efficiency Manitoba used to solicit  
5 input into the plan from either the public or  
6 stakeholders?

7 DR. PATRICIA FITZPATRICK: I'm not  
8 aware of the presence of that in the application  
9 before this Board.

10 MS. KATE HART: Thank you. Dr.  
11 Fitzpatrick, in your report you note that Efficiency  
12 Manitoba's position is that the PUB's review of the  
13 plan is part of the process for soliciting input into  
14 the plan.

15 Is that correct?

16 DR. PATRICIA FITZPATRICK: That's what  
17 the application material in it -- in its entirety  
18 says, yes.

19 MS. KATE HART: And do you agree with  
20 that position?

21

22 (BRIEF PAUSE)

23

24 DR. PATRICIA FITZPATRICK: Could you  
25 repeat the position?

1 MS. KATE HART: Sure. So, I -- I  
2 believe in your report you note that Efficiency  
3 Manitoba's position is that the PUB's review of the  
4 plan, so this Hearing, is part of the process for  
5 soliciting public input into the -- the plan itself.

6 And my question to you is: Do you  
7 agree with that view?

8 DR. PATRICIA FITZPATRICK: On the  
9 whole, I -- I do not agree. I do not agree because  
10 the plan is, for its most part, complete. And so, an  
11 important principle of meaningful participation is  
12 early engagement.

13 And so, the opportunity to be part of  
14 the hearings process in front of the Board is a little  
15 late in terms of the process for Efficiency Manitoba  
16 to seek public feedback and to have that public  
17 feedback meaningfully documented in the plan.

18 That being said, this is part of the  
19 decision-making phrase -- phase. And, as I spoke of  
20 this morning, it's important to continue to engage the  
21 public. And so, I think that this is a good step, the  
22 -- the public hearings.

23 I wouldn't have rested my application  
24 on it, but I'm thankful for the process on behalf of  
25 the public and the perhaps forty-four (44) people who

1 are watching this, and the panels that will be coming  
2 on the 24th, as well.

3 MS. KATE HART: Thank you. And are  
4 you aware that, in addition to the EEAG, Efficiency  
5 Manitoba has also testified in this Hearing that  
6 public input has informed the decades of DSM  
7 programming offered at Manitoba Hydro and that this  
8 input has informed the plan itself which builds on  
9 Manitoba Hydro programming?

10 DR. PATRICIA FITZPATRICK: I -- I was  
11 one (1) of the forty-four (44) listening to that  
12 testimony, yes.

13 MS. KATE HART: Thank you. And does  
14 this past input address some of your concerns  
15 regarding the lack of general public input into the  
16 plan?

17 DR. PATRICIA FITZPATRICK: No, it does  
18 not. I'm appreciative that it existed. But without  
19 the entirety of the information and the context, I --  
20 I rested my analysis on what was in the application in  
21 front of the Board and looked at that material.

22 And so, I appreciate the past history,  
23 but I'm not sure the -- what that meant specifically.

24 MS. KATE HART: Thank you. Given the  
25 time constraints Efficiency Manitoba was under, do you

1 think it reasonably solicited public and stakeholder  
2 input into the preparation of the plan?

3 DR. PATRICIA FITZPATRICK: I was asked  
4 a similar question in the IR process. And I think  
5 that it was more directed about the allocation of  
6 resources.

7 So, certainly as someone who  
8 specializes in public input and public engagement,  
9 that's the first thing I do when I start a project, is  
10 seek input from the people who the project is about to  
11 find out, if they're interested, what they would be  
12 interested in.

13 And so, as a scholar and a researcher  
14 in the area, I couldn't imagine not starting that way.  
15 The people from Efficiency Manitoba had a very short  
16 time period to pull together the application, and I  
17 can appreciate that there was limited staffing. And I  
18 can appreciate many things that happened.

19 And so, I can also appreciate that the  
20 people who were writing the application have not had  
21 twenty (20) years of experience working with public  
22 participation and the insight that I have available to  
23 me, so I think it's understandable.

24 MS. KATE HART: Okay, thank you. I'd  
25 like to move on now to Effic -- Efficiency Manitoba's

1 engagement with Indigenous and hard-to-reach groups.

2 In your report, I believe you indicate  
3 that overall Efficiency Manitoba has had limited  
4 interactions with the public, low income, and hard-to-  
5 reach customers in the design of the plan, correct?

6 DR. PATRICIA FITZPATRICK: According  
7 to the material before me, yes.

8 MS. KATE HART: And are you aware of  
9 Efficiency Manitoba's testimony that it will work with  
10 Indigenous communities and with the EEAG to establish  
11 an Indigenous energy efficiency working group?

12 DR. PATRICIA FITZPATRICK: I am -- I  
13 am excited to read about what that will look like.

14 MS. KATE HART: And going forward, Dr.  
15 Fitzpatrick, do you think that this working group  
16 could be a good way to receive public or stakeholder  
17 input?

18 DR. PATRICIA FITZPATRICK: Depending  
19 upon the design, the mandate, the communication  
20 strategy, all of these things, it could be a very good  
21 way.

22 MS. KATE HART: Dr. Fitzpatrick, could  
23 I please take you to page 15 of your report? And this  
24 is PDF page 16, Kristen.

25 Is it your understanding that this is a

1 list of the ways Efficiency Manitoba plans to solicit  
2 public feedback going forward?

3 DR. PATRICIA FITZPATRICK: It is,  
4 based on the response to Coalition EMI-125(c).

5 MS. KATE HART: Thank you. And if we  
6 were -- if we focus on letter "D," the organization's  
7 engagement model, does this refer to the stakeholder  
8 engagement model that is depicted on page 90 of the  
9 plan?

10 DR. PATRICIA FITZPATRICK: I believe  
11 so.

12 MS. KATE HART: And could -- could you  
13 please turn to page 90 of the plan?

14

15 (BRIEF PAUSE)

16

17 MS. KATE HART: Ms. Schubert, if we  
18 could just stay on actually the -- the model, that'd  
19 be great. Thank you.

20 And the EEAG is at the centre of this  
21 model, correct?

22 DR. PATRICIA FITZPATRICK: Yes.

23 MS. KATE HART: And I believe that  
24 Efficiency Manitoba's position is that in this model  
25 the EEAG includes the general public, correct?

1 DR. PATRICIA FITZPATRICK: That is  
2 their position, yes.

3 MS. KATE HART: And then the middle  
4 ring represents partnerships Effic -- Efficiency  
5 Manitoba will form with various environmental, social,  
6 and business associations.

7 DR. PATRICIA FITZPATRICK: That is my  
8 understanding.

9 MS. KATE HART: To obtain feedback  
10 into the plan.

11 DR. PATRICIA FITZPATRICK: M-hm.

12 MS. KATE HART: And finally the outer  
13 ring represents program design and delivery partners  
14 from which Effic -- Efficiency Manitoba will seek  
15 advice and feedback.

16 DR. PATRICIA FITZPATRICK: Yes.

17 MS. KATE HART: And in your view, Dr.  
18 Fitzpatrick, is this stakeholder engagement model  
19 adequately representative of stakeholders and the  
20 general public?

21 DR. PATRICIA FITZPATRICK: No. I  
22 would appreciate some more consideration about this  
23 model, so I have concerns. If the model is focusing  
24 on who, which it may be, it's missing key  
25 participants. I would separate out the public from



1 the Energy Efficiency Advisory Group.

2 I'm wondering where specifically First  
3 Nations and Metis partners are, things like that, and  
4 if it's focusing on the how, it's not clear about how  
5 these groups will be engaged. So I'm -- I'm a little  
6 unclear on this model as a whole.

7 MS. KATE HART: Thank you. I believe  
8 in your report you also noted that there are  
9 significantly more business and economy organizations  
10 than social or environmental organizations around the  
11 middle ring of this model. Is that correct?

12 DR. PATRICIA FITZPATRICK: Yes. That  
13 was based on other information in the report where  
14 Efficiency Manitoba had identified some potential  
15 partners, and so I added up how many were in each  
16 ring, yes.

17 MS. KATE HART: If I could just take  
18 one (1) moment.

19

20 (BRIEF PAUSE)

21

22 MS. KATE HART: I'd like to thank Dr.  
23 Fitzpatrick for her responses to my questions. I have  
24 no further questions. Thank you.

25 THE CHAIRPERSON: I'll ask the Panel

1 if they have any questions, and if not, you can leave.

2 Any questions? Okay, I do, which I wrote down a few  
3 pages ago.

4 Dr. Fitzpatrick, in the public  
5 engagement model, how do you ensure you actually have  
6 engagement from the public rather than from people who  
7 are simply representing interest groups, but  
8 indicating they are there as members of the public?

9 DR. PATRICIA FITZPATRICK: In -- in  
10 the public participation literature as a whole?

11 THE CHAIRPERSON: Yeah.

12 DR. PATRICIA FITZPATRICK: Well,  
13 that's a really interesting question and something  
14 that's confronting administrative organization such as  
15 yourself, because certainly the public is becoming  
16 savvy.

17 Environmental organizations and  
18 industrial associations are about sending out key --  
19 key messages that they wish their constituency to  
20 represent in public hearings, and so, for example, I  
21 saw this when the Senate came to Winnipeg to hear  
22 about -- the Senate Subcommittee, to hear about the  
23 environmental assessment process.

24 And so I think that the first thing to  
25 say is a broad caveat that just because an individual

1 has been supported by an organization, an industrial  
2 partner or environmental group, doesn't mean that  
3 their -- their voices should be discounted completely,  
4 because it does take a lot of energy and effort to  
5 appear before an administrative tribunal or board. As  
6 friendly as the board is, respectfully it can be quite  
7 an intimidating process to register, to follow  
8 deadlines. It can be quite time-consuming.

9                   So -- and then the second point is that  
10 when the entirety of the engagement process is  
11 available, the entirety of the record is available to  
12 the -- to the board, to the tribunal, who is hearing  
13 from it, then if you go through you can -- you can see  
14 it -- it becomes quite clear who's repeating talking  
15 points from a -- an organization versus who's trying  
16 to make presentations simply on their own. And so you  
17 can apply discretion in terms of giving people some  
18 leeway in their wording and in what they're trying to  
19 say.

20                   And so my very long answer to your  
21 question is, it involves how -- how the administrative  
22 tribunal or board analyses the data will take that  
23 into account.

24                   THE CHAIRPERSON:    So I -- would I be  
25 correct in suggesting that we wouldn't take

1 information at face value. We'd actually have to  
2 receive the information and then assess it and  
3 determine whether, in fact, we think that individual  
4 is representing themselves or is simply one (1) of a  
5 number of people working in concert for a group?

6 DR. PATRICIA FITZPATRICK: Yes. With  
7 the caveat that you -- you wouldn't discount what they  
8 had to say flat out, but you could argue and identify  
9 -- one (1) of the factors you might consider in  
10 framing the degree to which you find that comment  
11 important and representative of a variety of voices is  
12 whether or not it -- it was part of an association or  
13 an environmental group, but you would still give that  
14 comment due respect because, again, the effort to get  
15 involved in one (1) of these processes is significant,  
16 and anyone who takes the opportunity and the time and  
17 overcomes any barriers to participate has certainly  
18 made an effort that merits some consideration of what  
19 they have to say.

20 THE CHAIRPERSON: Okay. Then the  
21 second question is: Do we give as much weight to that  
22 information as to information that comes by social  
23 media, because it certainly doesn't require a person  
24 to attend here -- requires the person to get on to  
25 their phone and send a message or -- or simply live in

1 the -- in the digital world rather than appear.

2 I guess the --

3 DR. PATRICIA FITZPATRICK: Are you  
4 asking about the Twitt -- Twitter sphere or --

5 THE CHAIRPERSON: Either Tw -- I mean,  
6 the reality -- the reality is that public consultation  
7 is changing because of social media.

8 DR. PATRICIA FITZPATRICK: M-hm. This  
9 is true.

10 THE CHAIRPERSON: And the question is,  
11 you know, I guess we'll see, are -- are people going  
12 to show up or are they simply going to get on to the  
13 phones and express their opinions.

14 And if -- in that case, what does  
15 somebody like Efficiency Manitoba or this Board do  
16 when we have a wealth of messages coming to us but we  
17 don't have a wealth of people appearing before us?

18 DR. PATRICIA FITZPATRICK: Yes. So,  
19 subject to, of course, this is changing on a yearly  
20 basis. And what my students use is actually not  
21 Twitter anymore. I think we're into something called  
22 TikTok. And I don't even know what that is.

23 So, I think that right now and for this  
24 period of time -- people know what TikTok is, okay,  
25 excellent.

1 Right now, for this period of time, the  
2 PUB has in the past had -- and I'm not sure if it's  
3 available for this specific hearing, but you've had a  
4 comments portal where people can submit their  
5 comments.

6 And I have been involved in supervising  
7 a student to analyse I think it was twenty-three  
8 hundred (2,300) pieces of individual feedback that  
9 you've received through that portal, which was then  
10 submitted, although it might have missed the evidence  
11 deadline, in a previous hearing.

12 And so, I think that that portal is a  
13 really excellent way to reach people who -- who will  
14 not be able to come to make presentations in front of  
15 you or will have missed the -- the presentation  
16 deadline.

17 And so, in terms of the analysis of  
18 that information, with a student who has experience  
19 organizing information and grouping it accordingly, I  
20 -- subject to check, I think that might have been  
21 thirty (30) or forty (40) hours of them just figuring  
22 out how to code it and present the -- the results to  
23 the Public Utilities Board in a meaningful way.

24 And that was an excellent way to engage  
25 the public, and I would commend you for doing that.

1 I'm not sure, again, if that portal is open for this  
2 Hearing. If it is, it would be really interesting to  
3 hear and to -- to read and to analyze the results from  
4 the general public who may or may not be able to come  
5 to Winnipeg to present in front of you or may not know  
6 about the Skype potential or things like that.

7 THE CHAIRPERSON: Thank you, Dr.  
8 Fitzpatrick. We appreciate your assistance.

9 DR. PATRICIA FITZPATRICK: Thank you  
10 for allowing me to present.

11

12 (DR. PATRICIA FITZPATRICK STANDS DOWN)

13

14 MS. DAYNA STEINFELD: I'm prepared to  
15 continue, Mr. Chair, yeah.

16 THE CHAIRPERSON: Okay. Thank you.

17

18 CROSS-EXAMINATION BY MS. DAYNA STEINFELD:

19 MS. DAYNA STEINFELD: Mr. Harper, good  
20 afternoon.

21 MR. WILLIAM HARPER: Good afternoon.

22 MS. DAYNA STEINFELD: I'll start with  
23 you because you've been on the bench for a while, so  
24 we'll bring you in at this point.

25 On page 8 of your report, which is PDF

1 page 10, you identify the typical components of an  
2 integrated resource plan and state that the first is  
3 identification of the objectives of the plan, correct?

4 MR. WILLIAM HARPER: I'll just get --  
5 get myself oriented here. Yes. And that's -- yes.

6 MS. DAYNA STEINFELD: And by,  
7 "Objectives," just to be clear, are you referring to  
8 kilowatt per hour targets, budget, other objectives  
9 maybe non-economic?

10 MR. WILLIAM HARPER: Well, I gu -- I  
11 guess, and this is why I pause a bit, because --  
12 excuse me -- objectives in -- in two (2) contexts.  
13 And this is in the context of an IRP when you're  
14 looking for new -- new resources.

15 There are similarities to what we're  
16 doing here in terms of percentage targets. But sort  
17 of usually the main objective in an IRP is to address  
18 the need for new resources at some particular point in  
19 time in the future.

20 So, that's the -- in order to meet a  
21 certain level of -- minimum level of reli -- of  
22 reliability on the system. So, that's -- that sort of  
23 is -- the objective is why people are in the room to  
24 begin with sort of thing.

25 In -- in addition to that, what I



1 included in this comment were -- were the more broader  
2 objectives of the plan in terms of what are the  
3 considerations or objectives that we've taken into  
4 account in terms of trying to figure out how are we  
5 doing to meet that particular need, and so there were  
6 objectives in two (2) contexts.

7 MS. DAYNA STEINFELD: At transcript  
8 page 1,027, please, Ms. Schubert.

9

10 (BRIEF PAUSE)

11

12 MS. DAYNA STEINFELD: And I can give  
13 you a moment to read this. And I think, if we scroll  
14 down just a bit, what I see Mr. Stocki describing here  
15 is that the intent of the Efficiency Manitoba  
16 legislation is different from the typical intent or  
17 objectives of an integrated resource plan.

18 Would -- would you agree with that  
19 statement?

20 MR. WILLIAM HARPER: Well, the end  
21 result is different in a sense if an integrated  
22 resource plan is trying to come up with a combination  
23 of resources to meet the overall needs whereas the  
24 objective in this case is to come up with a  
25 combination of resources to meet a particular target

1 that's been established.

2                   What I was trying to say in my evidence  
3 was not that the two (2) are the same, but there are  
4 an extreme amount of similarities in terms of the  
5 steps in the processes and the thought process that  
6 should go through in coming up with the appropriate  
7 prefer -- portfolio.

8                   And it was win -- within that context I  
9 was -- I was looking at the IRP as a -- as a source of  
10 what seems to have been -- been established at least  
11 within Manitoba and pre -- previous reports from the  
12 Board on the NFAT as -- as a process one should be  
13 using when -- when looking at this type -- types of  
14 issues.

15                   MS. DAYNA STEINFELD:   And with the  
16 process that's been established in the legislation in  
17 terms of setting a particular savings target for both  
18 electricity and natural gas, is it your view that that  
19 approach is consistent with a typical integrated  
20 resource planning approach?

21                   MR. WILLIAM HARPER:   You know, at --  
22 at a high level, no. At a high level -- at a high  
23 level, as I said, you're trying to identify what  
24 resources are required to meet the overall reliability  
25 of the system which typically involves new resources

1 at a partic -- at a particular need date.

2                   And when it comes to say DSM, that --  
3 that could involve more DSM, less DSM, and so there is  
4 no one (1) prescribed number for DSM. And I think the  
5 fact that there was just one (1) prescribed number for  
6 DSM in the various NFAT alternatives was -- was what  
7 led to the Board -- Board's concern and the  
8 recommendations about integrated resource planning in  
9 the first place.

10                   MS. DAYNA STEINFELD: Is it your view  
11 then that it would more closely here -- adhere to  
12 standard integrated resource plan practices to do an  
13 integrated resource plan, and then from that,  
14 establish the savings targets that Efficiency Manitoba  
15 should be trying to meet?

16                   MR. WILLIAM HARPER: I think in -- in  
17 an ideal world, that's the way you would do it. The  
18 way that I've seen it in other jurisdictions where  
19 I've been involved is you have an integrated resource  
20 plan that sort of involves identifying the resources  
21 needed.

22                   And coming out of that integrated  
23 resource plan is a long-term plan as to where -- how  
24 DSM should evolve because that will -- in terms of how  
25 it fits into the integrated resource plan.

1                   And then that long-term DSM plan is  
2 then used as a guide to inform what applications that  
3 are made every two (2) or three (3) years, similar to  
4 the three (3) year application here, inform what the -  
5 - what the utility or, in this case, Efficiency  
6 Manitoba, might be doing on a shorter term basis.

7                   So, the way I thought about it, we have  
8 the cart before the horse at this particular point in  
9 time, but that's the way the team and the horse have  
10 been set up for now.

11                   MS. DAYNA STEINFELD:   And so, I take  
12 it from that response, Mr. Harper, you're not  
13 recommending that the Board should tell the minister  
14 to not approve the plan until there's been -- horse  
15 comes before the cart, I guess, until there -- until  
16 there's been an integrated resource plan that then  
17 flows down to the savings targets?

18                   MR. WILLIAM HARPER:   No.  And that's  
19 why I think earlier on when we were talking about  
20 whether it be different portfolios with the same  
21 target or portfolios with alternative targets, I -- I  
22 think I made the comment that, within the context  
23 we're doing here, what you really want to be looking  
24 at portfolios with the same target because we're  
25 focussing on the 1.5 percent or the 0.755 percent in

1 the numbers.

2 I mean, to say we should do nothing and  
3 approve no plan, which means nothing happens for the  
4 next three (3) years, or maybe the next five (5) or  
5 eight (8) years, is really a lost -- a lot of lost  
6 opportunity.

7 MS. DAYNA STEINFELD: Is it something  
8 that you would like to see for the next or subsequent  
9 plans?

10 MR. WILLIAM HARPER: At some point in  
11 time. And maybe if I can make the comment. It seems  
12 to me what -- what would be ideal, in my view, would  
13 be, if -- coming out of this process with perhaps a  
14 recommendation from the PUB to the minister that --  
15 that we sort of -- if I can use the vernacular have to  
16 get -- you have to get the horse before -- before the  
17 cart fairly soon and get -- and somehow, that involves  
18 processes which involve both Efficiency Manitoba and  
19 Manitoba Hydro and sort of get -- get it righted  
20 around.

21 MS. DAYNA STEINFELD: And what you're  
22 identifying there, I believe, is that Efficiency  
23 Manitoba itself doesn't necessarily have the expertise  
24 or resources to on its own do an integrated resource  
25 plan, it would involve collaboration with at least to

1 the utility, if not others?

2 MR. WILLIAM HARPER: Yes, I would  
3 definitely agree with that.

4 MS. DAYNA STEINFELD: And would you  
5 say that it would be appropriate for Manitoba Hydro to  
6 undertake an integrated resource plan and use that to  
7 produce DSM targets for Efficiency Manitoba or is  
8 there a greater degree of collaboration that you would  
9 envision?

10 MR. WILLIAM HARPER: I think there's a  
11 greater degree of collaboration because -- and like I  
12 said in my presentation -- I think if Effic -- excuse  
13 me, if Manitoba Hydro is looking at different options  
14 and different DSM options within an IRP process, the  
15 people they're going to be going to, to get the  
16 information in terms of what types of DSM  
17 opportunities are there, how much could we expect to  
18 get, how much would that cost, will all come, in my  
19 mind, from -- from Efficiency Manitoba.

20 Otherwise, we're going to be  
21 duplicating the information Efficiency Manitoba  
22 already has.

23 MS. DAYNA STEINFELD: And with that  
24 answer, are you suggesting that Efficiency Manitoba  
25 would complete I think what's been called a DSM

1 potential study?

2 MR. WILLIAM HARPER: Well, that would  
3 be one (1) part that -- that -- that would be one (1)  
4 piece -- the piece that'd be feeding into it, yes.

5 MS. DAYNA STEINFELD: And that study  
6 would identify potential savings and associated costs  
7 per kilowatt and kilowatt hour that could be an input  
8 into an integrated resource plan?

9 MR. WILLIAM HARPER: I think it also  
10 goes on to identify the status of -- of the  
11 technologies as well in terms of sort of, you know --  
12 sort of are -- are -- are the -- are they applicable  
13 as well, so it goes beyond just costs and -- and --  
14 and savings, yeah.

15 MS. DAYNA STEINFELD: And just to go  
16 back to timing again, if that were to happen for the  
17 next plan, would that have to get started with  
18 Manitoba Hydro imminently?

19 MR. WILLIAM HARPER: I -- I would  
20 think yes, you know, and -- and I hate to say this,  
21 but I -- I -- I think it would be optimistic to think  
22 it could all be done by the next plan, but it would be  
23 really great if it could.

24 MS. DAYNA STEINFELD: Start sooner  
25 rather than later and -- and see how far you can get.

1                   Turning to a different topic, you  
2 discuss in your report and your direct evidence  
3 presentation what I'm calling the derivation of the  
4 consumption baseline, so the -- the starting point  
5 with Efficiency --

6                   MR. WILLIAM HARPER:     The reference  
7 load, I think, is the -- the --

8                   MS. DAYNA STEINFELD:     The reference  
9 load. I very ineloquently, with Efficiency Manitoba,  
10 called it the 'of what,' in terms of 1.5 percent of  
11 what. But we -- we can go with your more technical  
12 terminology.

13                   So at Book of Documents, PUB Exhibit  
14 14, page 48.

15

16                   (BRIEF PAUSE)

17

18                   MS. DAYNA STEINFELD:     These, I  
19 believe, are excerpts from your evidence, Mr. Harper.  
20 On this page, we have the derivation of the  
21 electricity savings required to meet the target  
22 percent of load, and if we go over to the next page,  
23 we'd see the natural gas table.

24                   Have I described that properly?

25                   MR. WILLIAM HARPER:     But to be clear,



1 these aren't tables that I prepared. These are --  
2 these are direct excerpts from IR responses, I believe  
3 it was PUB-I-45, that -- that Efficiency Manitoba  
4 provided.

5 MS. DAYNA STEINFELD: And in fact, you  
6 wouldn't have prepared these tables, necessarily,  
7 because you've identified concerns with the approach  
8 that Efficiency Manitoba has taken.

9 MR. WILLIAM HARPER: Right. I think  
10 the format of my evidence in each case was to -- to  
11 outline what was the approach Efficiency Manitoba took  
12 and what were the comments I had. And I think these  
13 tables, if I'm not mistaken, are taken from the  
14 'what's the approach Efficiency Manitoba took' in --  
15 in my evidence.

16 MS. DAYNA STEINFELD: I think if we  
17 turn to page 50 of this exhibit, there's a comment  
18 near the bottom of the page that identifies  
19 deficiencies with the current plan, and in particular,  
20 the inconsistencies between gross firm energy values  
21 used for the purposes of determining the electrical  
22 energy target values and electrical energy that is  
23 metered and sold to a customer as required by the Act.

24 Have I got that right?

25 MR. WILLIAM HARPER: Yes, that -- that

1 -- that's correct.

2 MS. DAYNA STEINFELD: And in -- in  
3 that regard, that concern that's identified there --  
4 is the concern that since volumes measured at the  
5 point of generation are greater than the volumes  
6 measured at customers' meters, the calculation of the  
7 consumption baseline or -- or reference load is  
8 inflated?

9 MR. WILLIAM HARPER: I -- I think I'd  
10 -- I'd answer your question in two (2) parts, if I  
11 could. One is the -- one (1) is the consumption  
12 baseline has been inflated. I think Efficiency  
13 Manitoba also inflated the savings numbers, so there  
14 is no inconsistency at that point in time. I mean,  
15 they've -- they're measuring -- they're measuring them  
16 too on a common basis. They're just measuring at a  
17 different point than what the Act suggests that should  
18 be -- should be mea -- measured at.

19 So not saying there's any inconsistency  
20 in terms of one's being measured at generation and  
21 one's being measured at the meter. It's just a matter  
22 of there's an inconsistency with -- with the way the  
23 Act was -- was suggesting it should be measured.

24 MS. DAYNA STEINFELD: So what you're  
25 saying there is both the reference load and the

1 savings achieved are measured at generation.

2 MR. WILLIAM HARPER: That's my  
3 understanding, yes.

4 MS. DAYNA STEINFELD: But your view  
5 is, again, not a legal view, but that the Act requires  
6 that it be measured at the meter, which would req --  
7 apply to both the reference load as well as the actual  
8 savings.

9 MR. WILLIAM HARPER: Yes, and if you -  
10 - there was an IR response that I -- there's two (2)  
11 IR responses that I responded to: one was from, I  
12 believe, the Board, where I talked about how that  
13 would impact the reference load and the numbers  
14 change; and one of them's from MIPUG, where they're  
15 asked how would the savings change, and that number  
16 altered as well.

17 And when you put the two (2) together,  
18 I think as the conversation I was having with Vice-  
19 chair Kapitany yesterday, the percentages comes out  
20 the same because the adjustments to both, you know,  
21 offset each other.

22 MS. DAYNA STEINFELD: And included in  
23 the gross firm energy would be sales to customers such  
24 as street lighting, flat-rate water heating that are  
25 not metered, correct?

1 MR. WILLIAM HARPER: That -- that are  
2 not metered and which seems -- in my mind, struck me  
3 as being inconsistent with what the Act was saying,  
4 yes.

5 MS. DAYNA STEINFELD: And picking up  
6 on the discussion that you had with Vice-chair  
7 Kapitany yesterday, I heard you saying that it is more  
8 of a concern about technical adherence to the Act  
9 rather than a conceptual view of the appropriate re --  
10 approach.

11 MR. WILLIAM HARPER: I think -- I  
12 don't know whether it's as much a technical adherence  
13 to the Act as -- the concern itself was the fact that  
14 closer adherence to the Act might avoid future con --  
15 controversy in terms of how these numbers are -- are  
16 calculated, and I think any time we can avoid  
17 controversy, particularly within regulatory forms, the  
18 better it is.

19 MS. DAYNA STEINFELD: You also in your  
20 evidence -- and I don't know that we need to go there,  
21 but -- identify other concerns regarding the 2018/'19  
22 DSM load forecast and codes and standards corrections.

23 Do you consider those concerns to be  
24 important enough that the consumption baseline or --  
25 or reference load should be amended before the plan is

1 approved?

2 MR. WILLIAM HARPER: Well, I think I  
3 maybe have -- those are two (2) issues. I maybe have  
4 a slightly different comment on both of them. I -- I  
5 don't know why it -- why the 2018/'19 numbers were  
6 excluded. There was no clear explanation for that,  
7 and it seem to be obvious that it should. And to be  
8 quite honest with you, there's not a real effort  
9 involved in -- in changing it.

10 When it comes to the duplication on the  
11 codes and standards, I do not know to what degree the  
12 overlap exists. And in that regard, if there'd been a  
13 second round of interrogatories, we -- we -- we -- we  
14 prop -- we probably could have found out. And I think  
15 -- so that's an area where I -- I really can't answer  
16 your question because I -- I don't know what the  
17 degree of overlap is.

18 MS. DAYNA STEINFELD: In the rebuttal,  
19 and you touched on this in your direct evidence,  
20 Efficiency Manitoba states that the adjustments would  
21 result in minimal variability. I take it you would  
22 accept that.

23 MR. WILLIAM HARPER: Well, I accept  
24 that in terms of the same point I made before. We end  
25 up with a percentage savings in the same order of

1 about 1.5 percent, so it wasn't the fact that changing  
2 the way we do the calculation is going to mean a  
3 fundamental im -- impact on the plan in terms of the  
4 savings requirements. It was more a matter of going  
5 forward, let -- let's simplify and de-controversialize  
6 (sic) the process, if I can put it that way.

7 MS. DAYNA STEINFELD: And at a  
8 conceptual level, are you taking issue with Efficiency  
9 Manitoba including codes and standards savings?

10 MR. WILLIAM HARPER: I'm sorry, what  
11 do you mean by including codes and standards?

12 MS. DAYNA STEINFELD: Counts --  
13 counting savings from codes and standards.

14 MR. WILLIAM HARPER: I think with --  
15 with -- with -- I think you have to talk about --  
16 because we're talking here about the derivation of the  
17 reference line, and clearly, codes and standards  
18 impact on the reference line, so I -- I -- I take no  
19 issue with that at all. It was more a matter of the  
20 issue of are we double-counting some things.

21 MS. DAYNA STEINFELD: Thank you.

22

23 (BRIEF PAUSE)

24

25 MS. DAYNA STEINFELD: Mr. Chair, I

1 might go into another topic area, which may be fifteen  
2 (15) or twenty (20) minutes, and then we could take an  
3 afternoon break, if that suits the panel.

4 At slide 15 of your direct evidence,  
5 Mr. Harper, there's discussion here that we also see  
6 in your report regarding other factors that could be  
7 included in evaluation criteria in terms of the  
8 portfolio development.

9 Is this discussion implying that there  
10 should be cost-effectiveness tests used to screen  
11 individual measures in or out as the portfolio is  
12 designed?

13

14 (BRIEF PAUSE)

15

16 MR. WILLIAM HARPER: I'm trying --  
17 because I think your question focusses ju -- just --  
18 just on cost-effectiveness --

19 MS. DAYNA STEINFELD: Yes.

20 MR. WILLIAM HARPER: -- screening, as  
21 opposed to the other measures, which was the lead-in  
22 to your question.

23 I -- I think in constructing the  
24 portfolio, Efficiency Manitoba has to be aware of what  
25 -- what are -- what's the cost-effectiveness of the

1 individual measures, because that's going to impact  
2 the -- the overall results in -- in -- for -- for the  
3 portfolio overall.

4 I don't think they're necessarily  
5 screened out at that particular point in time because,  
6 1) as I said in my opening comment, cost-effectiveness  
7 is a consideration, it isn't a, yes, it's cost-  
8 effective, it's in, no, it's not cost-effective, it's  
9 out, and that applies both at the measure level and,  
10 as I understand it, even at the portfolio level.

11 But clearly, in constructing  
12 portfolios, you know, you -- you have to know, if I'm  
13 putting a lot -- a lot of measures that are not cost-  
14 effective, I'm probably going to end up with a  
15 portfolio that's pretty close to not cost-effective or  
16 -- and so, I -- I think it has to be not screened in  
17 or out, but understood and taken into consideration  
18 when -- when you're constructing a portfolio.

19 MS. DAYNA STEINFELD: So, part of the  
20 analysis but not necessarily used to completely reject  
21 or accept measures at this point in time?

22 MR. WILLIAM HARPER: Yes.

23 MS. DAYNA STEINFELD: And is it your  
24 understanding that Efficiency Manitoba did include  
25 that type of analysis around cost-effectiveness and



1 the design of the portfolio?

2 MR. WILLIAM HARPER: I think we have  
3 to talk about which portfolio we're talking about  
4 because my understanding, there were two (2)  
5 portfolios. There was a preliminary portfolio.

6 And in my understanding, that included  
7 all -- all measures, ex -- except I think there were a  
8 couple un -- under the solar water heating which were  
9 kicked out, but -- or maybe it was pool heating. I'm  
10 sorry, I can't remember which.

11 But other than that -- other than that,  
12 my understanding is all measures that passed that --  
13 the high-level screen we talked about were included in  
14 the preliminary port -- portfolio.

15 And then, after the preliminary  
16 portfolio was -- was developed, they then went into  
17 some fine-tuning of that. And in that particular  
18 case, it's not clear to me that any measures were  
19 excluded. I think perhaps programs were tweaked be --  
20 because the cost-effectiveness in this case involves  
21 such things as the level of incentives that you're  
22 paying because that's involved in the program cost --  
23 program administrative cost test.

24 I don't know if any measures were  
25 actually excluded, but I think some of the program

1 designs were tweaked in order to improve the cost-  
2 effectiveness and -- and align the portfolio more --  
3 more with the targets.

4 MS. DAYNA STEINFELD: At the final  
5 stage of the -- of developing the final portfolio,  
6 would it be your view that a measure that does not  
7 pass either the PACT or the TRC should be excluded  
8 unless it is justified on the basis of another factor?

9

10 (BRIEF PAUSE)

11

12 MR. WILLIAM HARPER: I -- I'm  
13 struggling with it at the measure level or at the  
14 portfolio level because, at the end, the Board  
15 considers this at the portfolio level.

16 And if there are issues in terms of  
17 whether if at the portfolio it's con -- portfolio  
18 level it -- there's considered to be an issue, then I  
19 think I would have to drill down and look -- look at  
20 individual -- look -- look at individual measures.

21 And so -- so, that -- but -- but I'm  
22 not too sure if you would go down to that lev -- level  
23 of pre -- of precise screening on each individual  
24 measure.

25 MS. DAYNA STEINFELD: So, maybe

1 leaving the Board's role aside, would it be your  
2 recommendation that Efficiency Manitoba perform that  
3 kind of measure level screening around cost-  
4 effectiveness and justifying particular measures on  
5 another basis if they are not cost-effective?

6 MR. WILLIAM HARPER: Well, I think,  
7 yes, at a broad level, in a sense that -- but I think  
8 one -- one doesn't want to lose the emphasis that  
9 there are oth -- other considerations and that, you  
10 know, clearly, you have a measure in there because  
11 you're try -- because you're trying to accomplish one  
12 (1) or more of the considerations or the objectives of  
13 the plan overall.

14 And if it isn't accomplishing any of  
15 the objectives of the plan, then one would wonder why  
16 it was there to begin with.

17 MS. DAYNA STEINFELD: You mentioned  
18 yesterday, I believe it's on your slide 17, that it  
19 was not clear to you what design criteria were used by  
20 Efficiency Manitoba.

21 Are you suggesting that Efficiency  
22 Manitoba should develop clear design criteria or is it  
23 more that there should be alternative portfolios  
24 developed?

25 MR. WILLIAM HARPER: I -- I think

1 there needs to be -- I think both is --

2 MS. DAYNA STEINFELD: Okay.

3 MR. WILLIAM HARPER: At the end of the  
4 day, if -- if I think about it, there were really  
5 three (3) issues in my mind. One (1) was, when it  
6 came to the development of the preliminary portfolio,  
7 we know all of the screened issues were put -- were  
8 put in the preliminary portfolio, but each of those  
9 measures or technologies had to have a program design  
10 constructed around it, incentive levels, who was going  
11 to target.

12 And that's what isn't clear to me, what  
13 were the objectives that underlay the -- that program  
14 in the preliminary portfolio for -- for each of the  
15 measures and each of the bundles.

16 Similarly, when it came to the final  
17 por -- portfolio, I have similar issues in terms of  
18 the transparency in terms of how the -- what -- what  
19 revisions were made and what -- what impacts they had.  
20 That's 2.

21 And then the third -- and then the  
22 third issue would be the development of no -- the  
23 development of alternative portfolios then helps one  
24 in a broader sense understand the -- the tradeoffs  
25 that are being made between the various

1 considerations.

2 MS. DAYNA STEINFELD: At slide 16, you  
3 also identify some other concerns or recommendations.  
4 You discussed in your direct evidence the creation of  
5 a central repository.

6 That's something that you recommend  
7 Efficiency Manitoba do, correct?

8 MR. WILLIAM HARPER: Yes. This has to  
9 do with when you're collecting information on options  
10 that you might -- might consider using.

11 And if you think about it, a DSM  
12 potential study is -- is essentially going to do that  
13 because it's trying to collect all the in --  
14 information on different options, to some extent,  
15 constructed in a -- in a standard -- in -- in a  
16 standard format, and so it could be used.

17 And we had the same -- some types of  
18 information on -- on each measure, and it's  
19 comparable, so -- so we're doing apples to apples when  
20 we're trying to figure out how we're going to  
21 construct a portfolio.

22 And I guess -- I guess, if -- if they  
23 get the DSM potential study done over the plan period  
24 and if that's what they're going to be relying on as  
25 the basis of all their information, then maybe that's

1 somewhat akin to a central repository.

2                   If they're going to -- if the DSM  
3 potential study is going to feed into a broader base  
4 of information they're going to be using, then maybe  
5 perhaps the central repository is -- is still  
6 required.

7                   MS. DAYNA STEINFELD:     Another  
8 recommendation on this slide is consideration of  
9 alternative incentive levels.

10                   And I believe you mentioned that that's  
11 critical in terms of the levels of participation and -  
12 - and program costs?

13                   MR. WILLIAM HARPER:     Well, I -- I  
14 think what -- what I was trying to point out was that  
15 the program administrative cost test is different from  
16 the TTRC test.

17                   And one (1) of the fundamental  
18 differences is that the level of incentives is -- the  
19 level of incentives you're paying is critical in the  
20 overall determination of the test.

21                   In the TRC test, it makes no -- it  
22 makes no difference at all. And so that, if it's  
23 critical in the determination of the PAC text, it's  
24 going to be critical in your calculation of cost-  
25 effectiveness. It's also going to be critical in

1 terms of -- it also defines that -- you know, how many  
2 -- not only in terms of costs, but also in terms of  
3 how many participants you're going to have and how  
4 many kilowatt hours of savings you're going to get.

5                   So, it feeds into a lot of different  
6 aspects of -- of the results such that I have is -- I  
7 have one (1) -- if I have a particular measure and I'm  
8 offering no incentives as opposed to the same measure  
9 and offering lots of incentives, to some extent,  
10 that's two (2) totally different options in terms of  
11 the savings I'm going to get, the cost-effectiveness  
12 of that.

13                   So, you can't just say there's just a  
14 single cost-effectiveness measure associated with each  
15 measure, in my mind.

16                   MS. DAYNA STEINFELD:    And with the  
17 shortcomings that you've identified on this slide and  
18 in our discussion, is it your view that Efficiency  
19 Manitoba's plan should be approved despite these  
20 items?

21                   MR. WILLIAM HARPER:    Well, I think  
22 it's -- I think it's -- I have a problem here because  
23 it -- it's a shortcoming in the plan.  And I think I  
24 had an -- it's a shortcoming in the plan that one  
25 really can't really rectify within -- between now and

1 -- and April 1st, to be quite honest with you.

2 I think it has to be then a  
3 consideration that has to be taken into account both  
4 in terms of looking at this plan, but probably more  
5 importantly in terms of any views as to how future  
6 plans should be developed.

7 MS. DAYNA STEINFELD: So, are you  
8 suggesting, Mr. Harper, that even with concerns and  
9 shortcomings, you've identified it is preferable for  
10 Efficiency Manitoba's plan to proceed than it would be  
11 to maintain say a status quo Manitoba Hydro DSM  
12 programming?

13 MR. WILLIAM HARPER: Yes, I'm saying  
14 I'm pre -- it's preferable for a plan to -- to  
15 proceed. I haven't -- I was looking at the appro --  
16 the -- the approach taken in terms of the actual  
17 results that come out.

18 You -- you -- there were lots of other  
19 views that have been presented here in terms of that,  
20 but I think it's preferable that a plan be -- be  
21 approved as opposed to no plan.

22 MS. DAYNA STEINFELD: Just before we  
23 break, I have a couple of quick questions in a  
24 slightly different area just looking at the LRI. You  
25 touched on this in your direct evidence.



1                   And I believe it's at slide 20 where  
2 you discuss your recommendation that a ten (10) year  
3 time frame be used.

4                   Are you familiar with the evidence that  
5 the independent expert consultant filed on the  
6 adjustments that they would do to the LRI analysis?

7                   MR. WILLIAM HARPER: I read it. I  
8 can't say -- you know, I read it fairly quickly given  
9 the time frame we're working within. I can't say I  
10 fully comprehended it. I'll -- I'll be quite honest  
11 with -- with you.

12                   There were different buckets there.  
13 And I tried a couple times to understand what was  
14 going to each bucket, and I can't I say fully  
15 understood it.

16                   MS. DAYNA STEINFELD: I take it from  
17 that response that you're not able to comment on  
18 whether you viewed that approach as being reasonable  
19 to address the concerns that you've identified with  
20 the thirty (30) year time frame?

21                   MR. WILLIAM HARPER: No, I wouldn't  
22 feel comfortable at all.

23                   MS. DAYNA STEINFELD: Mr. Chair, I  
24 think that would be a good time for an afternoon break  
25 if it suits the panel.

1 THE CHAIRPERSON: Thank you. Mr.  
2 Steinfeld, any idea how long you have left?

3 MS. DAYNA STEINFELD: I suspect  
4 roughly forty-five (45) minutes.

5 THE CHAIRPERSON: We'll -- we'll break  
6 for fifteen (15) minutes. Thank you.

7

8 --- Upon recessing at 2:00 p.m.

9 --- Upon resuming at 2:21 p.m.

10

11 THE CHAIRPERSON: Ms. Steinfeld...?

12 MS. DAYNA STEINFELD: Thank you, Mr.  
13 Chair.

14

15 CONTINUED BY MS. DAYNA STEINFELD:

16 MS. DAYNA STEINFELD: Mr. Harper, I  
17 have a few more areas of questions for you. In your  
18 evidence, you discussed the discount rate. You  
19 touched on this yesterday, and I'm hoping, for my  
20 benefit, that you might be able to briefly explain in  
21 simple terms what the discount rate is. What is that  
22 concept?

23 MR. WILLIAM HARPER: In -- in both the  
24 PACT -- like, if we may talk about in the context of  
25 the PACT test because that's really, probably, the

1 easiest place. The PACT test is trying to look at  
2 both -- both the ben -- benefits and the value, and  
3 the -- and primarily the benefits that are going to be  
4 achieved from a particular DSM program are going to  
5 extend over a number of years.

6           If you're putting in a furnace, it  
7 could be thirty (30) years forward you're going to be  
8 reducing load and, therefore, having some -- providing  
9 some benefit to Mani -- to Manitoba Hydro. And  
10 Manitoba Hydro has provided dollar values associated  
11 with those in terms of what's the benefit in that year  
12 of -- of -- of achieving those savings.

13           And anybody who's got a retirement  
14 investment fund or is putting money in the bank knows  
15 that there's a time val -- there's a time value of  
16 money, and a dollar I have to spend now is worth more  
17 to me than a dollar I have to spend a yea -- a year  
18 from now. And therefore, to some extent, savings I'm  
19 going to get a year from now are worth less to me than  
20 savings I'm going to get right now.

21           And what the discount rate is saying is  
22 if I'm -- if I'm going to discount future savings by  
23 some -- by some amount in order to put this all on an  
24 equal footing basis, what's the discount rate I use?  
25 And Manitoba -- excuse me, Efficiency Manitoba, in its

1 C -- PAC -- PAC Test analysis, used a 6 -- 6 percent  
2 discount rate, and that was a number that, basically -  
3 - that they got from Manitoba Hydro.

4 MS. DAYNA STEINFELD: In your report  
5 at page 39, you have a discussion about the NFAT  
6 proceeding and Manitoba Hydro's cost of equity.

7

8 (BRIEF PAUSE)

9

10 MS. DAYNA STEINFELD: And it might be  
11 PDF page 39 or page 39 of the report. I'm not sure  
12 which one we're on. So perhaps PDF page -- oh, there  
13 we go.

14 Yeah, right there. Thank you, Ms.  
15 Schubert.

16 And in the middle of this paragraph on  
17 the screen, Mr. Harper, we see discussion about the  
18 determination of the appropriate discount from the  
19 customer's perspective. I just want to be clear on  
20 terminology.

21 Are -- in this discussion, are you  
22 referring to what is sometimes called the 'social  
23 discount rate'?

24 MR. WILLIAM HARPER: Yes, I am. In --  
25 in -- in broad terms, I guess, with the caveat that,

1 typically, when people come up with a social discount  
2 rate, they come with one -- one (1) particular number.  
3 But that's the extent and the -- the amalgam of the  
4 fact that there are a variety of different types of  
5 customers that are served by Manitoba Hydro, each of  
6 which would have, to some extent, a different view as  
7 to what their time value of money is.

8                   That may even be different residential  
9 customers would have a view, but obviously, industrial  
10 customers would have a different view from residential  
11 customers.

12                   MS. DAYNA STEINFELD:    You've raised  
13 the discount rate in the context of the PACT test.  
14 Does it also matter in -- in the context of the LRI  
15 and -- and rate impact analysis?

16                   MR. WILLIAM HARPER:    Yes, but in the  
17 sense that it's the same issue.  If there's an  
18 uncertainty about what it should be, perhaps what you  
19 should be doing is looking at the sensitivity of -- of  
20 the results to -- to variations in the discount rate.

21                   MS. DAYNA STEINFELD:    Yesterday, you  
22 explained that Efficiency Manitoba uses a 6 percent  
23 discount rate.

24                   Are you recommending that a higher  
25 discount rate be used, at least for the residential

1 customer class --

2 MR. WILLIAM HARPER: No.

3 MS. DAYNA STEINFELD: -- customer  
4 segment, I guess?

5 MR. WILLIAM HARPER: No, I --  
6 actually, what I was -- what I was recommending in my  
7 report is that -- is that the Board in considering,  
8 say, the results of the PAC Test, look at not only the  
9 si -- the number that Efficiency Manitoba has provided  
10 for the -- for the -- what -- the 6 percent discount  
11 rate value, but look at the sensitivity analysis. I  
12 think they did a sensitivity around five (5) and seven  
13 (7), and I think that's probably a reasonable range of  
14 sensitivity analysis to consider.

15 MS. DAYNA STEINFELD: Is the discount  
16 rate most relevant in the context of DSM having an --  
17 an objective of lowering future costs?

18 MR. WILLIAM HARPER: Well, I -- I -- I  
19 think... Could you reframe the question again? I'm  
20 not certain I agree with it.

21 MS. DAYNA STEINFELD: Certainly. If  
22 you use an -- a -- a different discount rate or adjust  
23 the discount rate to better reflect the customer's  
24 time value of money, is that most relevant when you're  
25 considering the effect of DSM as -- as reducing future

1 costs, let's say in the sense of avoiding capital  
2 investment?

3 MR. WILLIAM HARPER: Well, clearly,  
4 since you're discounting, it has the most effect on --  
5 on costs that are going to be incurred at some point -  
6 - or -- or savings that are going to be incurred at  
7 some point -- point -- in time in the future. And the  
8 further forward you go, the bigger the -- the bigger  
9 the effect it has.

10 MS. DAYNA STEINFELD: Thank you, Mr.  
11 Harper. The moment we've both been waiting for. I'd  
12 like to turn to some cost allocations questions -- and  
13 maybe Vice-Chair Kapitan as well.

14 Is it your understanding that under the  
15 legislative framework, Efficiency Manitoba's costs are  
16 borne by the utility?

17 MR. WILLIAM HARPER: Yes, it's -- it's  
18 my understanding that Efficiency Manitoba basically  
19 works up its budget, it's approved, and then there's  
20 even a schedule of payments, I believe, they've worked  
21 out in terms of how much they're going to be asking  
22 for from Manitoba Hydro each month based on the  
23 current plan.

24 MS. DAYNA STEINFELD: And at a high  
25 level, the -- the costs for gas programs are allocated

1 to the Centra gas utility and the costs for electric  
2 programs are allocated to Manitoba Hydro, correct?

3 MR. WILLIAM HARPER: That's correct.  
4 There's two -- well, I guess at a high level, there's  
5 two (2) port -- portfolios. I would assume that the -  
6 - because, for want of a better word, the bill that's  
7 sent to Manitoba Hydro would break the bill down  
8 between the -- between the two (2) portfolios, and it  
9 would then get assigned to the two (2) utilities.

10 MS. DAYNA STEINFELD: In your direct  
11 evidence presentation, at slide 23, you identified  
12 that there are also costs related to overhead and  
13 support costs, and would you agree that these costs  
14 are not readily identifiable as being linked to one or  
15 -- or the other portfolio?

16 MR. WILLIAM HARPER: Yes, I think  
17 that's the distinction between -- if I have a electric  
18 program, I know the costs involved in that are  
19 attributable to the electric utility. The gas  
20 program, they're attributable to the gas utility. The  
21 cost of -- the cost of the legal counsel that's  
22 appearing today to assist Efficiency Manitoba in their  
23 participation, that's obviously supporting both  
24 programs. It can't be directly assigned to one (1) or  
25 the other.



1 MS. DAYNA STEINFELD: And we'll get to  
2 the details, but I'm correct that Efficiency Manitoba  
3 has a means of allocating those overhead and support  
4 costs as between the two (2) utilities.

5 MR. WILLIAM HARPER: Yes, and I think  
6 I tried to summarize that on -- on slide 23 of my  
7 presentation.

8 MS. DAYNA STEINFELD: In general, when  
9 we're looking at the support costs and copat --  
10 corporate overhead costs, would you say that the goal  
11 is to reasonably attribute the costs based on whether  
12 the gas or electric portfolio is causing the cost to  
13 be incurred?

14 MR. WILLIAM HARPER: Yes, which I  
15 guess is consistent with the common -- the first  
16 bullet I have under my comments, which is based on the  
17 principle of cost/causation.

18 MS. DAYNA STEINFELD: Thank you. So  
19 what I have just described is -- is the principle of  
20 cost/causation.

21 What you explained yesterday, I  
22 believe, is that Efficiency Manitoba is maintaining  
23 the prior Manitoba Hydro methodology for allocating  
24 these corporate overhead and support costs.

25 MR. WILLIAM HARPER: That's what's

1 described on -- on the left-hand side of the slide.

2 MS. DAYNA STEINFELD: So as I  
3 understand it, the methodology allocates the cost  
4 proportionately based on equivalent energy savings?

5 MR. WILLIAM HARPER: Yes, we've got  
6 kilowatt hour savings. We've got cubic metre savings.  
7 The convert both of those to gigajoules so you can  
8 compare them on a comparable basis, and what the  
9 result would be is 75 percent of the gigajoule savings  
10 are coming from electric and 25 percent are coming  
11 from gas. And so the corporate overhead and enabling  
12 strategies cost are allocated 75/25.

13 MS. DAYNA STEINFELD: On slide 23, you  
14 speak about alternative allocation approaches, and  
15 you've identified, I think, two (2) different  
16 approaches that are cost driver approaches.

17 Is that accurate?

18 MR. WILLIAM HARPER: Well, I guess  
19 they're two (2) fairly simple ones, and the reason  
20 they're simple ones is -- actually, utilities that get  
21 into this on a more sophisticated basis will drill  
22 down into what are the actual types of support costs  
23 that we have and the types of corporate overheads and  
24 try and get much more precise and maybe attach  
25 different cost drivers to different types of costs.

1 I guess one -- we didn't have that type  
2 of information to some extent. To some extent,  
3 Efficiency Manitoba's still forming its structure, and  
4 so if you were to say, How many staff do you have  
5 working in HR, which you might want to allocate on a -  
6 - on how many people do you have working in gas versus  
7 electric and allocate your HR Department on that  
8 basis.

9 They don't have that in -- information  
10 right now, and so what I was trying to suggest was at  
11 least at this point that you could maybe look at  
12 higher level cost drivers, and I suggested two (2)  
13 here.

14 MS. DAYNA STEINFELD: It might be  
15 helpful if we turn to PUB-14, Board counsel Book of  
16 Documents, at page 283, which is an Information  
17 Request response where, Mr. Harper, you've detailed  
18 some of the alternative approaches.

19 So if we look at the program cost  
20 allocation approach, the split here is 69.6 percent  
21 electric and 30.4 percent gas, correct?

22 MR. WILLIAM HARPER: I'm just trying  
23 to orient myself. That's the -- because I know you  
24 asked me based on program costs, right. That's the --

25 MS. DAYNA STEINFELD: In the middle of

1 the screen here.

2 MR. WILLIAM HARPER: Right, yes. The  
3 -- 69.6, 30.4, yeah. Yeah, in total if you  
4 incorporate the directly assigned costs as well.  
5 Yeah.

6 MS. DAYNA STEINFELD: And what that's  
7 really saying is that we're identifying that 69.6  
8 percent of the costs for Efficiency Manitoba's  
9 programs are for electric programs. Is that correct?

10 MR. WILLIAM HARPER: In terms of the  
11 overall program costs, yes.

12 MS. DAYNA STEINFELD: I take it it's  
13 your view that this allocation approach is more  
14 cost...

15

16 (BRIEF PAUSE)

17

18 MR. WILLIAM HARPER: I'm sorry, I just  
19 want to make sure I agreed to the right number when --  
20 when you were you saying this. We're -- we're looking  
21 at the chart in the mid -- in the middle of the page,  
22 if I'm not mistaken?

23 MS. DAYNA STEINFELD: Yes. So under  
24 20/1(b).

25 MR. WILLIAM HARPER: Right. And so

1 actually it's 68.9 percent of the program costs would  
2 be electric, 31.1 percent would be -- I wasn't sure  
3 those are the numbers you -- you reported -- you gave  
4 me or not, yes.

5 MS. DAYNA STEINFELD: It wasn't, and  
6 thank you for that correction. I appreciate that.

7 Is it your view that this approach is  
8 more cost/causal than the allocation approach that  
9 Efficiency Manitoba is using for these costs?

10 MR. WILLIAM HARPER: Yes, it is.

11 MS. DAYNA STEINFELD: And why is that?

12 MR. WILLIAM HARPER: Well, be --  
13 because basically what you're looking at is, this is  
14 based on the premise that I've got direct program  
15 costs that -- that are involved and those direct  
16 program costs could be involved in people working on  
17 it. It could be involved in -- in incentive payments,  
18 and to some extent the support costs or the corporate  
19 overhead costs or things like HR, which is supporting  
20 the people in each case. It's -- it's IT, which is  
21 supporting the workstations in each case. It's  
22 probably a finance department that's helping issue  
23 invoices in each case, which are all support -- which  
24 is to some extent driven by the program costs.

25 And so I guess from -- at a high level

1 it's more related to -- to cost/causation than the --  
2 than the other approach, which is clearly just based  
3 on savings.

4 MS. DAYNA STEINFELD: If we scroll  
5 down to PUB Coalition 20-1(c), this table is labeled  
6 Program Costs, but I -- I believe it should be labeled  
7 Program Staff Costs --

8 MR. WILLIAM HARPER: Yes.

9 MS. DAYNA STEINFELD: -- based on the  
10 --

11 MR. WILLIAM HARPER: Yes, you're  
12 correct and I apologize.

13 MS. DAYNA STEINFELD: And we can -- if  
14 we went back to the actual Information Request, we'd  
15 see that that's what (c) asks for.

16 Am I right that this approach uses the  
17 proportion of staff costs for each of the portfolios?

18 MR. WILLIAM HARPER: That's correct.  
19 And Efficiency Manitoba, in IR responses, gave us both  
20 the total program costs that were directly assigned,  
21 total program costs directly assigned to each of the  
22 portfolios, as well as just the staffing-related costs  
23 associated with each portfolio. This is following the  
24 second approach.

25 MS. DAYNA STEINFELD: So the split

1 here tells us that 69.8 percent of the program staff  
2 costs are related to the electric portfolio?

3 MR. WILLIAM HARPER: That's correct.

4 MS. DAYNA STEINFELD: And I take it,  
5 again, your view is that this allocation is more cost  
6 causal than Efficiency Manitoba's approach?

7 MR. WILLIAM HARPER: Yes. Because to  
8 some extent, some of their corporate overhead costs  
9 are going to be driven by what are the direct staff  
10 costs that are involved with -- with each of the two  
11 (2) portfolios.

12 MS. DAYNA STEINFELD: At page 281 we  
13 can see -- yes, at page 281 we can see the actual  
14 Information Request response, and you were also asked  
15 to provide a table showing the allocation by benefits.  
16 I'm not sure that table was provided.

17 Was there a reason that that table was  
18 missed?

19 MR. WILLIAM HARPER: I'm sorry. It  
20 was probably just missed in a sense that I -- I just  
21 didn't fully read the IR at the time. I apologize.

22 MS. DAYNA STEINFELD: That's  
23 understandable in the -- in the time constraints. I  
24 just wasn't sure if it was something that -- that  
25 couldn't be done. If -- if it is something that could

1 be done, could that perhaps be provided by way of  
2 undertaking?

3 MR. WILLIAM HARPER: Well -- or maybe  
4 it's a matter of -- I assume if you take allocation by  
5 benefits, if it's benefits based on Manitoba Hydro's -  
6 - excuse me, Efficiency Manitoba's approach, then if  
7 you want to scroll -- then (a) and (b) were the same.

8 So maybe it was a matter of when you  
9 say by -- or by benefits, I think you have to clarify  
10 what -- what you meant by -- by benefits, because we  
11 allocated based on benefits measured in a -- on a gig  
12 -- gigajoule basis.

13 MS. DAYNA STEINFELD: I believe what  
14 was being sought was an allocation based on the dollar  
15 value of the benefits as opposed to the gigajoule  
16 value.

17 MR. WILLIAM HARPER: Okay, yes. I  
18 think in my evidence I've actually given the  
19 percentage of -- of those, which would mean just  
20 adjusting the tables here to incorporate that -- that  
21 alternate percentage. If that's something you -- you  
22 would like me to do, I can undertake that as an  
23 undertaking.

24 MS. DAYNA STEINFELD: I believe your  
25 evidence gives the split as 89.4 percent electric and



1 10.6 percent gas, but I think it may be helpful to  
2 have the table showing the results as well.

3                   So if we could have an undertaking for  
4 Mr. Harper to provide the table showing the allocation  
5 percentages and allocated dollars of enabling  
6 strategies and the corporate overhead to the electric  
7 and gas portfolios by benefits.

8                   Is that acceptable, Ms. Dilay?

9                   MR. WILLIAM HARPER:    If you don't  
10 mind, maybe at the same time I'll take the same time  
11 to correct the heading in that third table there so  
12 it's clear as well.

13                   MS. DAYNA STEINFELD:    Sure, that -- I  
14 think that makes sense. Thank you, Mr. Harper.

15                   MS. KATRINE DILAY:     And that's  
16 acceptable to us. Thank you.

17                   MS. DAYNA STEINFELD:    Thank you, Ms.  
18 Dilay.

19

20 --- UNDERTAKING NO. 16:    Mr. Harper to provide the  
21                                   table showing the  
22                                   allocation percentages and  
23                                   allocated dollars of  
24                                   enabling strategies and the  
25                                   corporate overhead to the

1 electric and gas portfolios  
2 by benefits.

3

4 CONTINUED BY MS. DAYNA STEINFELD:

5 MS. DAYNA STEINFELD: Staying on the  
6 benefits by dollar value, what would be the rationale  
7 for using that approach?

8 MR. WILLIAM HARPER: Well, I guess I  
9 was just trying to think about the approach that  
10 Efficiency Manitoba had proposed and -- not that I was  
11 advocating it, but that if we're talking about savings  
12 in gig -- gigajoules, I was trying to think about,  
13 well, why would you use gigajoules as opposed to using  
14 the dollar value of the savings, because that's what  
15 we're trying to do.

16 We're trying to save dollars at the end  
17 of the day, if you want to put it that way. And so  
18 that was -- that was just -- that was -- that was just  
19 -- just the rationale that I was using.

20 MS. DAYNA STEINFELD: From a cost/  
21 causal perspective, can we say that more overhead and  
22 support costs would be incurred for the portfolio that  
23 achieves the greater proportion of the benefits?

24 MR. WILLIAM HARPER: Well, I think if  
25 you just look at the percent -- repeat that again. I

1 wasn't sure --

2 MS. DAYNA STEINFELD: Maybe I'll put  
3 it another way. Is it a cost/causal approach to  
4 allocate on the basis of the portfolio that achieves  
5 the greater proportion of the benefits is allocated  
6 the greater proportion of the cost?

7 MR. WILLIAM HARPER: I don't believe  
8 it is.

9 MS. DAYNA STEINFELD: So even though  
10 you haven't included a table here, that doesn't change  
11 your evidence that the two (2) approaches that you  
12 prefer are the program costs and program staffing  
13 costs --

14 MR. WILLIAM HARPER: I think --

15 MS. DAYNA STEINFELD: -- approaches?

16 MR. WILLIAM HARPER: I think they're  
17 two (2) illustrative approaches, and perhaps I was  
18 fortuitous enough that when I did both of them, they  
19 came up at close -- close to the same number.

20 I was originally thinking, well, if  
21 they don't, do I have to take the average of the two  
22 (2) or what do I do going forward, but they -- they  
23 were -- they were close enough as it was, thank  
24 goodness.

25 MS. DAYNA STEINFELD: Unfortunately,

1 I'm going to take you there now. So the -- the two  
2 (2) methodologies come out to an approximate 70/30  
3 percent split.

4 If the split were to differ between the  
5 two (2) methodologies at some point in the future,  
6 would you have a preference for one or the other from  
7 a cost/causality perspective, between program costs  
8 and program staffing costs?

9 MR. WILLIAM HARPER: No. I -- at this  
10 point in time I don't have a particular reason for --  
11 for -- for having a preference, and I think it's --  
12 it's common actually when utilities are doing these  
13 sorts of studies sometimes if they aren't too sure  
14 which one to use, sometimes they'll have three (3)  
15 different allocators and you aren't too sure which one  
16 applies, so it'll be one-third, one-third, one-third.

17 I mean, it's not uncommon for people to  
18 think, well, there's maybe more than one (1) way to  
19 look at this and if we do it just one (1) way we're  
20 going to perhaps bias the results one(1) way or the  
21 other, so we'll just take an average of them.

22 MS. DAYNA STEINFELD: Is there  
23 something that you would suggest Efficiency Manitoba  
24 keep an eye on in terms of the information around what  
25 its program staffing costs actually are as the

1 organization gets underway and assess whether the  
2 allocation should be adjusted going forward?

3 MR. WILLIAM HARPER: It -- it's a  
4 little bit awkward because my understanding is, is  
5 that through this process we approve a three (3) year  
6 budget, and the three (3) year budget is going to  
7 include the allocation of corporate overheads and  
8 enabling strategy costs between the two (2).

9 And so I'm struggling with how I  
10 reconcile that over the course of the next three (3)  
11 years with the fact that the budgets will be approved  
12 now for -- for the three (3) years.

13 If you were doing individual budgets  
14 every year, you might want to take it like that, but I  
15 think within the construct we have now, we're probably  
16 left with setting a number right now, because I don't  
17 think they can move dollars around between the two (2)  
18 approved budgets. That's not my understanding.

19 MS. DAYNA STEINFELD: So you and I  
20 might come back to this conversation at the time of  
21 the next plan and look again at whether the allocation  
22 is -- is appropriate at that point in time.

23 MR. WILLIAM HARPER: Yeah. I think  
24 that -- that would be reasonable to see, because even  
25 if you did the same -- used the same methodologies you

1 might well find different values. You probably will  
2 find different values. I guarantee you'll find  
3 different values.

4 MS. DAYNA STEINFELD: Thank you, Mr.  
5 Harper. I do have one (1) last area of questions for  
6 you, but I'm -- I'm going to leave them for now  
7 because it's the -- the pre-ask that I provided with  
8 your counsel, and we can come back to that if time  
9 allows.

10 For now, I'd like to move on to Mr.  
11 Neme. Good afternoon, sir.

12 MR. CHRIS NEME: Good afternoon.

13 MS. DAYNA STEINFELD: You've already  
14 spent a lot of time today talking about air source  
15 heat pumps, but I do have a few additional questions  
16 in that area.

17 Your recommendation at a -- at a high  
18 level is that Efficiency Manitoba increase its  
19 emphasis on air source heat pumps as an electric  
20 efficiency measure, correct?

21 MR. CHRIS NEME: In several ways, but  
22 most importantly as an electric efficiency measure,  
23 yes.

24 MS. DAYNA STEINFELD: Yesterday you  
25 mentioned that your recommendation would be to use

1 somewhere between 3 to 5 percent of the portfolio  
2 budget for air source heat pumps.

3 Do I have that right?

4 MR. CHRIS NEME: I didn't frame it  
5 exactly as a recommendation. I think what the bullet  
6 says is that, even if Efficiency Manitoba were to  
7 spend just 3 to 5 percent of its budget on heat pumps  
8 -- on air source heat pumps, that could make  
9 significant progress in advancing the market.

10 That said, in -- in terms of a  
11 recommendation, that wouldn't be -- that's probably a  
12 reasonable number to -- to think about as a starting  
13 point.

14 MS. DAYNA STEINFELD: And are you  
15 suggesting that it be 3 to 5 percent of the overall  
16 budget or the electric portfolio budget?

17 MR. CHRIS NEME: When I came up with  
18 those numbers, I was looking -- I -- they were a  
19 function of the overall portfolio budget.

20 MS. DAYNA STEINFELD: And subject to  
21 check, that would be between 2.1 and \$3.5 million?

22 MR. CHRIS NEME: Per year.

23

24 (BRIEF PAUSE)

25

1 MS. DAYNA STEINFELD: And is it your  
2 view that Efficiency Manitoba could use that portion  
3 of the budget for air source heat pumps while still  
4 maintaining other objectives under the legislation,  
5 like, cost-effectiveness and accessibility?

6 MR. CHRIS NEME: Yes. I think it  
7 would help with accessibility.

8 MS. DAYNA STEINFELD: You were  
9 provided, and I don't think we need to bring it up,  
10 but with a document for reference that we've marked as  
11 Exhibit PUB 19 for identification purposes,  
12 information supplied by Efficiency Manitoba suggesting  
13 that air source heat pumps could cost in the range of  
14 approximately fifteen thousand dollars (\$15,000). I  
15 believe the range was twelve (12) to eighteen (18).

16 Does that affect your analysis at all  
17 knowing the -- the potential cost numbers for  
18 installation of an air source heat pump?

19 MR. CHRIS NEME: No. For starters, I  
20 have some concerns with some of the numbers. So, let  
21 me walk through a couple of those. The -- the first  
22 is that the estimated cost for -- for a whole home  
23 centrally ducted air source heat pump at fifteen  
24 thousand dollars (\$15,000) is -- seems really high to  
25 me.



1                   I -- I don't have the resources at the  
2 -- the moment, and I haven't since I've had the chance  
3 to -- to look since I first saw these numbers to check  
4 on costs for the -- these types of -- of equipment in  
5 other places, but that number seems -- strikes me as  
6 very high.

7                   On the other hand, the cost shown for  
8 the -- for ductless mini-splits at, you know, thirty-  
9 five hundred (3,500) to four thousand (4,000) a piece  
10 is about in the range of what I would have expected.

11                   However, I think there's a couple of  
12 other issues here that need to be considered. First,  
13 with respect to the whole home example, this is shown  
14 for a 2,500 square foot home. According to Manitoba  
15 Hydro's residential survey, only about 8 or 9 percent  
16 of homes in the province have more than two thousand  
17 (2,000) square feet, so I'm not sure how  
18 representative that would be of the -- of the market  
19 at large. Smaller heat pumps cost less money.

20                   And then with respect to the ductless  
21 mini-split example, the suggestion here is that you  
22 would need four (4) of them for a thousand square foot  
23 bungalow.

24                   And while that might be true if you had  
25 as your objective displacing all of the electric

1 resistance heat, at least for certain temperatures,  
2 that probably doesn't make sense as a program  
3 strategy.

4                   In -- in my experience in the  
5 jurisdictions that are fairly aggressively these days  
6 promoting ductless mini-splits and, frankly, in my own  
7 experience in my own home, number 1, I'm not sure you  
8 would ever need really four (4) of them for -- to --  
9 to displace most of the heat in a -- in a building  
10 that -- that small.

11                   If you keep doors open and -- and so  
12 on, a lot of the heat is going to -- going to  
13 transfer. But perhaps more importantly, if you're  
14 strategic and smart, and contractors who install these  
15 things are, about where to put them, the first head  
16 that you put in might get you 40 to 50 percent of --  
17 of what you're trying to get at.

18                   The second one might get you 25 perc --  
19 percent more. The third one might get you 15 percent.  
20 You're going to have diminishing returns in the amount  
21 of additional heat you're displacing as you add heads.

22                   And so, for -- for most homes, or  
23 certainly of this size, I would suspect that two (2)  
24 would be as far as you would want to go.

25                   And you might be able to displace, at

1 least at the, you know, reasonable temperatures, three  
2 quarters of the electric resistance heat, with only  
3 two (2) of them, you know, by -- while bearing only 50  
4 percent of the cost, so to speak. So, that's another  
5 important consideration in thinking about these costs.

6           A couple of other things. These are  
7 presumably one (1) off kind of cost estimates, you  
8 know, if we had to install one (1) in one (1) home,  
9 what would it cost. There's a fair amount of electric  
10 resistance heat in multi-family buildings, multi-unit  
11 residential buildings.

12           I think, in fact, the -- it's -- you're  
13 more likely percentage wise to have electric heat in a  
14 -- in a multi-unit residential building in Manitoba  
15 than you are in a single family building.

16           And so, when you're installing these in  
17 multi-family buildings, you have the ability to buy  
18 fifteen (15), twenty (20), thirty (30) of them at a  
19 time, potentially, and there's cost discounts that --  
20 that come with that.

21           I did some work for the Toronto  
22 Atmospheric Fund looking at this -- well, looking at  
23 heat pumps in multi-unit residential buildings in  
24 Ontario a couple years ago. And I think we estimated  
25 that the -- the bulk of discount could be on the order

1 of 15 to 20 percent when you're -- when you're  
2 treating those buildings rel -- relative to what it  
3 would be for a single family for the -- for the -- at  
4 least for the -- the ductless mini-split systems.

5 A couple of other points. Heat pumps  
6 provide cooling as well as heating. And to the ex --  
7 so -- and -- and people replace their air condit --  
8 central conditioners.

9 There's a fair amount of central air  
10 conditioning in -- in Manitoba, as I understand it  
11 from the Manitoba Hydro data. More than 60 percent of  
12 -- of homes in the province have central A/C and a  
13 significant additional portion use window air  
14 conditioning units.

15 These cold climate heat pumps are  
16 remarkably efficient at cooling as well as heating,  
17 typically much more efficient at cooling than even,  
18 you know, so-called Energy Star rated central air  
19 conditioners.

20 So, if you are -- so, there's a couple  
21 of aspects to this. If you're installing -- there was  
22 an observation made here that, if you're installing a  
23 central heat pump at the time that you otherwise would  
24 have been replacing your electric furnace, the  
25 incremental cost would be down -- would be down

1 because you have to subtract out the cost of the  
2 electric furnace.

3                   The same would also be true if you're  
4 replacing it at -- or installing it at the time you  
5 otherwise would have been installing a new central air  
6 conditioner, or perhaps even sometimes people replace  
7 their heating and cooling systems at the same time.  
8 You get the double benefit of subtracting out both of  
9 those costs.

10                   And then, finally, I would expect that  
11 over time, if we begin to get some market traction and  
12 these products start getting sold in any significant  
13 volume, that we'll -- you know, there's some  
14 opportunities for cost reductions as the -- the market  
15 gets more familiar with the technology.

16                   So, for -- for all of those reasons, I  
17 believe that the costs that are presented here are --  
18 are likely overstated, and potentially significantly  
19 overstated.

20                   MS. DAYNA STEINFELD:    Do I take from  
21 that answer, Mr. Neme, that you do not accept the  
22 evidence in this proceeding that cold-climate air  
23 source heat pumps have a PACT ratio of less than one  
24 (1)?

25                   MR. CHRIS NEME:        It's -- I -- I don't

1 think you can assign a PACT ratio to a product,  
2 because the -- the PACT ratio is a function of the  
3 size of the incentive. So what the PACT ratio -- the  
4 PACT ratio for a heat pump with a thousand-dollar  
5 (\$1,000) incentive is going to be different than a  
6 PACT ratio for a heat pump with a two-thousand (2,000)  
7 or three-thousand (3,000) or four-thousand-dollar  
8 (\$4,000) incentive.

9 MS. DAYNA STEINFELD: And one (1) of  
10 the things you've identified in your evidence is that  
11 Efficiency Manitoba should consider increasing the  
12 amount of the customer incentive?

13 MR. CHRIS NEME: Yes, and one -- one  
14 (1) other option that I didn't present in my testimony  
15 that -- that could also be considered is to do what's  
16 called -- in common parlance within the efficiency  
17 industry, is to -- to move the incentives upstream.  
18 For example, in my home state, Efficiency Vermont does  
19 not provide incentives to end-use customers for cold-  
20 climate heat pumps. Instead, they -- they provide the  
21 incentives to distributors in the state who are  
22 selling to contractors who are selling to customers.

23 One (1) of the advantages of doing that  
24 is administrative. You have only a small number of  
25 market actors that you have to have transactions with.

1 But another advantage is that you can discount the  
2 product a couple steps removed from the customer. And  
3 because product costs are increased with every step  
4 down the supply chain as markups get applied, you can  
5 kind of have the compounding effect of eliminating  
6 some of those markups down the line so that you may be  
7 able to get more traction in the market with the  
8 incentive level that Efficiency Manitoba is planning.

9                   And I will also say that I'm not  
10 entirely clear what that is for ductless heat pumps,  
11 if we can come back to it in a second. But if you  
12 took that incentive and applied it at the distributor,  
13 you might get more market traction and more  
14 participation than if you applied it at the -- at the  
15 end-use customer.

16                   MS. DAYNA STEINFELD: If the  
17 suggestion, though, is to increase the amount of the  
18 incentive, whether it's to the customer or the  
19 distributor -- and you're increasing the incentive  
20 spend, correct?

21                   MR. CHRIS NEME: Sure, but the point I  
22 was making is at the distributor, you might not need  
23 to increase the incentive and still get more  
24 participation as a result.

25                   MS. DAYNA STEINFELD: One (1) of the

1 things you mentioned yesterday in your evidence is  
2 that there is increased headroom for spending on heat  
3 pumps. It was on your slide 9, but what I'd like to  
4 take you to is transcript page 650, starting at line  
5 17, and I can give you a moment to read this. It goes  
6 over the page onto transcript page 651 to line 18.

7

8 (BRIEF PAUSE)

9

10 MR. CHRIS NEME: Okay.

11

12 (BRIEF PAUSE)

13

14 MS. DAYNA STEINFELD: And perhaps, Ms.  
15 Schubert, if we can just scroll so we can see up to  
16 line 18.

17

18 (BRIEF PAUSE)

19

20 MR. CHRIS NEME: Yes.

21 MS. DAYNA STEINFELD: Mr. Neme, I  
22 believe what we are reading here is Mr. Stocki  
23 explaining that one (1) of the reasons for the lower  
24 acquisition cost is the removal of the roadway  
25 lighting conversion, which Manitoba Hydro is



1 completing. Is -- is that your understanding of the  
2 discussion here?

3 MR. CHRIS NEME: I -- I have read  
4 that. I -- I'm a little bit confused because the  
5 first part of the text you had me read talked about  
6 the gas costs, and I'm not entirely clear how that's  
7 related to roadway lighting.

8 MS. DAYNA STEINFELD: And we could go  
9 back further into Ms. Dilay's questions. I just  
10 wanted you to have the context of the answer. But the  
11 point I'd like to focus on is the lower acquisitions  
12 costs, which we see referenced at line 9 here, and  
13 then the reference to area and roadway lighting.

14 Does that information change your  
15 conclusion that there's increased headroom for  
16 spending on heat pumps?

17 MR. CHRIS NEME: No. My understanding  
18 of the directive was to lower costs -- the costs of  
19 acquisition relative to what Manitoba Hydro achieved  
20 in the past, while achieving greater comparable or  
21 greater savings.

22 I -- my read of that language is -- is  
23 at the portfolio level, there're all kinds of things  
24 that can change, you know, relative to when Manitoba  
25 Hydro -- you know, relative to the baseline costs and

1 savings that Manitoba Hydro was acquiring. So I --  
2 I'm not sure why that would change the conclusion.

3 MS. DAYNA STEINFELD: My understanding  
4 of what Mr. Stocki is explaining here is that the  
5 apples-to-apples comparison of acquisition costs has  
6 to remove the area and roadway lighting spend because  
7 that's being wrapped up, and so you don't necessarily  
8 have as big of a drop-off between Manitoba Hydro's  
9 acquisition costs and Efficiency Manitoba's  
10 acquisition costs. Does that assist?

11 MR. CHRIS NEME: Not really. I'm not  
12 sure I follow the logic of that -- of that suggestion.  
13 There're all kinds of things that drop off. Lighting  
14 -- residential lighting is going to be less accessible  
15 as a technology now. New technologies emerge onto the  
16 markets, so are those really apples-to-apples  
17 comparisons to what was available several years ago?

18 Portfolios evolve all the time, and so  
19 I read the minister's directive as, Whatever the  
20 portfolio existed back when Manitoba Hydro was running  
21 thing relative to your portfolio, acquire equal or  
22 greater savings at a lower cost.

23 I guess the further point I'd make is  
24 that eleven million dollars (\$11 million) would  
25 represent about a -- off the top of my head, 15

1 percent of the -- give or take, of the current  
2 Efficiency Manitoba portfolio cost, because I also  
3 noted in my -- in that table that you're referencing,  
4 the cost of acquisition per kilowatt hour in  
5 Efficiency Manitoba's proposed plan is 49 percent  
6 lower. So even if you took -- you know, even if you  
7 increased the cost by 15 percent -- or, took 15  
8 percentage points away, you're still, on a per-unit  
9 basis, way ahead.

10 MS. DAYNA STEINFELD: We can go to the  
11 -- the transcript reference if it's helpful.

12 And Ms. Schubert, if -- in case we need  
13 it, it's starting at transcript page 753.

14 But Efficiency Manitoba gave evidence  
15 in this proceeding that the approach they're taking to  
16 air source heat pumps is -- is a judicious approach,  
17 and the idea is that they're providing an incentive in  
18 their current plan to start with that measure in order  
19 to inform the next plan.

20 In your evidence yesterday, you spoke  
21 about pursuing heat pumps in the current plan in order  
22 to enable future electrification, so I'm wondering if  
23 you can explain whether your position is actually all  
24 that different from what Efficiency Manitoba is saying  
25 that it's doing. Is it -- is it a matter of degree?

1 MR. CHRIS NEME: No, I think they're  
2 pretty substantial differences, and -- and -- and --  
3 and maybe I'll start by saying that the main focus or  
4 the -- you know, the principal area in which I've  
5 suggested they could increase the promotion of cold-  
6 climate air source heat pumps is as an electric-  
7 efficiency measure.

8 And I think I also observed that even  
9 if you didn't care about climate change or future  
10 electrification, there would be great merit in doing  
11 that simply in developing the market for addressing  
12 what is the single largest residential electric end  
13 use in the province, just from an electric efficiency  
14 perspective.

15 And you then have the added benefit, in  
16 developing the market in that way, of also enabling  
17 future electrification. So that's -- I guess that's  
18 the -- the -- my first point.

19 And then secondly, I think as I noted  
20 yesterday, while I agree with Efficiency Manitoba that  
21 there's some uncertainties to be explored around this  
22 technology, I don't see how their approach of  
23 installing three (3) units with less than a year's  
24 worth of -- of data before they have to file their  
25 next plan is actually going to tell them anything

1 about how this technology functions in this -- in this  
2 market. On -- you need to do a lot more than that.

3                   You need to -- to -- to have any real  
4 sense about how this works -- not just  
5 technologically, but in terms of how customers  
6 interact with them -- so that you're not only  
7 understanding better which types of models to promote,  
8 but what types of controls to promote with them, how  
9 to educate the customers on how to use them, and so  
10 on. You can't learn that with the level of effort  
11 that they've put forward in their plan.

12                   And then I guess the last thing I'd say  
13 is the one (1) -- I -- I believe it's Daymark 13.  
14 There was a spreadsheet provided that showed for gas  
15 measures what level of rebate is being provided and  
16 what percent of incremental cost that represents.

17                   And for air source heat pumps, the -- I  
18 believe the number was two thousand dollars (\$2,000)  
19 on average. And that would cover, on av -- on  
20 average, 19 percent of the incremental costs would  
21 suggest that the -- that the measure costs a little  
22 over ten thousand dollars (\$10,000).

23                   That's not a ductless mini-split heat  
24 pump, so it's not even clear that that's a technology  
25 that Efficiency Manitoba was contemplating when they

1 put their plan together.

2                   So, for all of those reasons, I  
3 struggle to see how what they're proposing is going to  
4 actually enable them to be better prepared to promote  
5 this technology in the -- in the next plan and why I  
6 don't think that -- while I do agree that we -- that  
7 we are on the same page in -- on -- in suggesting that  
8 there's some uncertainties to be -- to be better  
9 understood, I think our approach to understanding  
10 those uncertainties -- when I say, "Our," I mean my --  
11 my proposed approach relative to their proposed  
12 approach are very different.

13                   MS. DAYNA STEINFELD:    Am I correct  
14 that cold climate air source heat pumps have no winter  
15 capacity value in Manitoba?

16

17   (BRIEF PAUSE)

18

19                   MR. CHRIS NEME:    It would depend on  
20 the situations, the conditions under which system  
21 peaks occur here. And I'm not familiar enough with  
22 the details of the outdoor temperatures at which they  
23 occur.

24                   My -- my guess would be that -- but  
25 it's just a guess, that most of the peaks would occur

1 at outdoor temperatures -- most of the winter peaks  
2 would occur at outdoor temperatures where cold climate  
3 heat pumps are not providing any -- any savings, but  
4 I'm not sure that that would be always the case.

5 I -- I know, just by way of example,  
6 sometimes in -- in my region, in New England, we  
7 assume that summer peaks are associated with hot days  
8 when it's, you know, 30 to 35 or 30 Celsius.

9 But we sometimes experience peaks in  
10 May when there are unforced outages. And so, there  
11 may be examples like that where they could contribute,  
12 but if we're -- for the perhaps more common peaks,  
13 that may well be true.

14 MS. DAYNA STEINFELD: Are you aware  
15 that the plan is projecting solar PV project  
16 participation at the level of two hundred and twenty  
17 (220) installations?

18 MR. CHRIS NEME: Solar PV?

19 MS. DAYNA STEINFELD: Yes.

20 MR. CHRIS NEME: I didn't look at the  
21 solar PV numbers.

22 MS. DAYNA STEINFELD: Are you able to  
23 explain to -- to this Board why heat pumps, and not  
24 solar?

25

1 (BRIEF PAUSE)

2

3 MR. CHRIS NEME: Well, I -- I guess  
4 I'd go back to something I said earlier, which is the  
5 single -- single largest residential electric energy  
6 end use in the province is space heating. There are  
7 two (2) ways you can reduce space heating through  
8 efficiency.

9 One (1) of them is by improving the  
10 building envelope, making it tighter, adding  
11 insulation, et cetera. And the other which produces  
12 in percentage terms much greater savings it to trans -  
13 - is to move from inefficient electric resistance heat  
14 to -- to advanced heat pumps.

15 So, if you want to offer something to  
16 customer -- residential customers that can address  
17 their single biggest part of their energy bill, it  
18 seems like that is a technology that really should be  
19 explored.

20 I'm not saying that solar PV shouldn't.  
21 Frankly, I'm not sure why that has to be an either/or.  
22 Why not -- why not both? If there's a rationale for  
23 promoting solar PV, why not do both?

24 I think that, to some extent, this gets  
25 to Mr. Grevatt's point, that residential customers are



1 in many, many different places in terms of the kinds  
2 of investments they're considering, the kind of  
3 investments they're willing to consider, the condition  
4 of their home, et cetera.

5                   And from that perspective, the broader  
6 your portfolio of offerings in terms of measures to --  
7 to residential households, the more likely it is that  
8 you're going to enable more of them to participate in  
9 the short-run.

10                   So, I -- I guess the bottom line is, if  
11 there's rationale for PV, there's certainly rationale,  
12 from my perspective, for heat pumps. If there's  
13 rationale for PV, offer them both.

14                   MS. DAYNA STEINFELD: Thank you, Mr.  
15 Name. With you, as well, the only other question I  
16 have really is to the pre-ask, so I may come back to  
17 you, but I'd like to turn to Mr. Grevatt.

18                   At slide 18 of your evidence you  
19 discuss your concerns around some of the measure level  
20 data that was not provided. And sorry, Ms. Schubert,  
21 what I actually would like to go to is transcript page  
22 331 at lines -- starting at line 9.

23

24

(BRIEF PAUSE)

25

1 MS. DAYNA STEINFELD: In this  
2 discussion between myself and, I -- I believe, Mr.  
3 Stocki, he explains that Efficiency Manitoba's view is  
4 that they're required to look at cost-effectiveness at  
5 a portfolio level, and so they were not looking to  
6 pre-screen out measures, individual measures, or  
7 programs along the way.

8 Based on Efficiency Manitoba's view of  
9 -- of looking at things at a portfolio level, is it  
10 still your view that it is important to have measure  
11 level information as part of the portfolio design?

12 MR. JIM GREVATT: It -- it definitely  
13 is. And while I agree with the approach of, in  
14 general, of screening a portfolio for cost-  
15 effectiveness rather than eliminating necessarily any  
16 particular measures based on cost-effectiveness  
17 testing, you know, I don't know how you select  
18 measures without understanding how cost-effective they  
19 are and the relative benefits and costs and both from  
20 the program perspective and for the customer  
21 perspective.

22 I -- I honestly don't know how you do  
23 that. And it's a kind of information that would be --  
24 if a potential study was done well and looked at the  
25 economic potential, you would have all the -- those

1 data, and then could make choices. And, well, so,  
2 yes.

3 MS. DAYNA STEINFELD: And in terms of  
4 the concerns you've identified around insufficient  
5 measure level data, is it your view that it's  
6 sufficient to assess these matters at a bundle level?

7 MR. JIM GREVATT: Well, again, that --  
8 I think that can be useful. I still -- I go back to  
9 if I were designing bundles of measures, I would want  
10 to understand still what the individual measure cost-  
11 effectiveness was.

12 And I believe you asked Mr. Harper a  
13 question earlier about -- it may have bene you or --  
14 or another party, I'm sorry. But I remember the  
15 question was, would -- would a measure have to be, or  
16 something that was included, be cost-effective or meet  
17 some other criterion in order to be included, and --  
18 and I agree with that.

19 But how can you make that determination  
20 if you don't know whether it's cost-effective or not?

21 MS. DAYNA STEINFELD: At transcript  
22 page 336, Efficiency Manitoba confirms that they did  
23 not have an analysis for costs at a -- at a measure  
24 level.

25 So, is it your understanding that

1 Efficiency Manitoba did not in fact calculate the  
2 cost-effectiveness of -- of individual measures? I'm  
3 sorry, I don't have a line for that.

4

5

(BRIEF PAUSE)

6

7

MS. DAYNA STEINFELD: You can take  
8 that subject to check if it's easier.

9

MR. JIM GREVATT: Subject to check.

10

MS. DAYNA STEINFELD: Do you think  
11 that cost-effectiveness should have a role in terms of  
12 that screening element that you referenced earlier?

13

Should -- should there be a point in  
14 time when you screen a measure out for cost-  
15 effectiveness reasons?

16

MR. JIM GREVATT: Well, in general  
17 terms, yes. Unless -- as Mr. Harper suggested, if a  
18 measure doesn't -- is not cost-effective and doesn't  
19 satisfy some other requirement or objective of the  
20 plan, it would be hard to understand why you would  
21 include it.

22

MS. DAYNA STEINFELD: Does it matter,  
23 from your perspective, if bundles are cost-effective  
24 or not at the bundle level if the overall portfolio is  
25 cost-effective?

1

2

(BRIEF PAUSE)

3

4

MR. JIM GREVATT: Well, to -- to your  
5 specific question, does it matter, it -- it does  
6 matter. Is it -- would I eliminate any bundle that's  
7 not cost-effective? I -- I'm not sure. It would  
8 depend on whether it satisfied some other criterion.

9

For example, there could be measure  
10 bundles that included emerging technologies that were  
11 very promising that at the moment might not be cost-  
12 effective, but where there was good reason to think  
13 that it could become cost-effective with time as the  
14 market matured.

15

That might be a good reason to include  
16 such a bundle.

17

MS. DAYNA STEINFELD: And when you say  
18 that it does matter, and I might be asking you to  
19 repeat yourself, but if you could explain why, why is  
20 it important to know or to assess the cost-  
21 effectiveness at -- at the bundle level?

22

MR. JIM GREVATT: I think it's  
23 important -- it's important to understand what you're  
24 trying to accomplish with a plan and what you are  
25 actually accomplishing. So if you're not looking at

1 the bundle level, if you're not looking at the measure  
2 level, you're -- you're -- I think there's a lot of  
3 guesswork involved in -- and -- I believe that it's in  
4 customer's best interest to develop a plan that meets  
5 all of the criteria and that is cost-effective at the  
6 portfolio level.

7                   Again, I don't know how -- how would  
8 you make decisions if you didn't understand how a  
9 measure bundle responds to all of the criteria, cost-  
10 effectiveness, accessibility, et cetera? You have to  
11 have those data to be able to make decisions whether  
12 to screen things in or not.

13                   MS. DAYNA STEINFELD:     You've also  
14 discussed in your evidence, deliverability risks, or  
15 risks, that Efficiency Man -- Manitoba may face in  
16 terms of achieving success.

17                   At transcript page 671, I believe,  
18 beginning at line 9, with respect to the question of  
19 preparing a project management plan, in part  
20 Efficiency Manitoba's position is that they were not  
21 required by legislation to prepare a project  
22 management or risk management plan.

23                   Do you accept that as a response?

24                   MR. JIM GREVATT:     I -- as a response  
25 for not filing one, sure. As a response for not

1 having one, no.

2 MS. DAYNA STEINFELD: Are there  
3 specific items that you would recommend Efficiency  
4 Manitoba include in -- in that kind of management  
5 plan?

6 MR. JIM GREVATT: I believe that  
7 either in an IRR or -- I believe it was in my -- an  
8 IRR, I did list some of the items that I think should  
9 be included.

10 And, you know, there's a lot of  
11 information available on the web and universities,  
12 course work -- there's a lot. I mean, there are  
13 certifications in project management and -- I think  
14 it's the Project Management Institute. You can be a  
15 certified project manager, and there's quite a lot  
16 involved in looking at what are all the things that  
17 are required to be accomplished in order to meet the  
18 objective, when does each thing need to be  
19 accomplished, what are the dependencies.

20 For example, if -- let's look at the  
21 CRM system. In order to deploy the CRM system, we  
22 have to find a contractor to build it, so you can't  
23 deploy it before you have the contractor. So  
24 outlining all those dependencies is important,  
25 estimating the amount of time that's required to

1 accomplish each one of those things, and then thinking  
2 about, well, is this possible. If not, where do we  
3 have room -- you know, do we have any cushion on any  
4 of these tasks or is it -- you know, how can we adjust  
5 the plan so that we can actually succeed.

6 I think one (1) of the examples I -- I  
7 talked about, and I believe I saw it in the transcript  
8 somewhere, that Efficiency Manitoba was getting some  
9 support for procurement from Hydro. That's great. So  
10 one (1) of the options was if we need to do all these  
11 -- let all these contracts, let out the RFPs, and go  
12 through negotiation and selection process and sign  
13 contracts, is there -- given the limited staff size  
14 that's currently at Manitoba -- Efficiency Manitoba,  
15 is there some third party support that could help them  
16 get through that process. So these are the kinds of  
17 things that you would do in a project management plan.

18 MS. DAYNA STEINFELD: In the context  
19 of the April 1st, 2020, implementation date for this  
20 plan, are you suggesting that Efficiency Manitoba  
21 develop a management plan for this plan or is this a -  
22 - something they should have for the next plan?

23 MR. JIM GREVATT: I think it would  
24 behoove Efficiency Manitoba to have a project  
25 management plan for this plan, recognizing that the



1 time line is tight. Perhaps the full project  
2 management plan is not completed. Maybe there are  
3 priorities that have to be focused on and other  
4 aspects of the launch, some things that are going to  
5 happen after April 1st. Maybe the project management  
6 plan for those tasks gets developed later.

7                   This is in no way meant to reflect  
8 what's happening within Efficiency Manitoba, because I  
9 don't know.

10                   I used to work in a division of a  
11 company where the motto was ready, fire, aim, and,  
12 right, that's not the way you're supposed to do it,  
13 and -- because there was such a -- the culture was,  
14 we're just going to run -- we're just going to do --  
15 we're going to get everything done, and nobody stepped  
16 back to think about how to do things in an effective,  
17 efficient way.

18                   Again, I don't mean to imply that's  
19 happening at Efficiency Manitoba, I don't know, but I  
20 believe that having a plan reduces the likelihood of  
21 that sort of approach.

22                   MS. DAYNA STEINFELD: Yesterday you  
23 had some discussion about the idea of starting with  
24 the first year of Efficiency Manitoba's plan,  
25 approving the first year, but having Efficiency

1 Manitoba file an amended plan for year two (2) and  
2 year three (3).

3                   What difference do you think it would  
4 make to take that approach of amending the second and  
5 third year of the plan?

6                   MR. JIM GREVATT: Well, I -- I think  
7 there are two (2) key points. One (1) is, with the  
8 uncertainty around specifically the codes and savings  
9 standards assumptions, that it would give them an  
10 opportunity to adjust, if appropriate, based on  
11 information from the independent assessor, to adjust  
12 other areas of the plan, both -- cost and savings in  
13 other programs so that they meet the savings  
14 requirement, and have sufficient budget to do that.

15                   The other reason that I suggest that  
16 approach is that to simply approve the plan as filed  
17 says we think this is sufficient and appropriate, and  
18 -- and I personally, if I were making that decision, I  
19 wouldn't be comfortable saying that.

20                   I think more information is needed, I  
21 think more needs to be done in terms of accessibility  
22 for residential customers, and I think -- how --  
23 however the reason I suggest as a -- an option for the  
24 Board to consider this first year approval, is that  
25 many of the launch tasks that Efficiency Manitoba's

1 going to be required to accomplish, they're not going  
2 to change that much.

3 Even if -- so if -- if the Board chose  
4 to reject the plan outright, send it back and have  
5 them do another plan, that would delay staffing up,  
6 the contracting the development of the CRM and all  
7 these tasks that they need to do.

8 So -- so I personally wouldn't want to  
9 say stop everything. We don't want to lose those  
10 opportunities to -- to get savings in the meantime,  
11 but neither do we want to say everything's just great  
12 the way it is.

13 MS. DAYNA STEINFELD: You also  
14 suggested in -- in your slides, as well I believe in a  
15 discussion with Mr. Wheeler yesterday, the idea of  
16 requiring Efficiency Manitoba to file a project  
17 management plan and risk mitigation strategy with the  
18 Board.

19 Is that primarily for transparency  
20 reasons?

21 MR. JIM GREVATT: Yes. It's for  
22 transparency and to understand that they confirmed  
23 that they have such a plan.

24 MS. DAYNA STEINFELD: And are you  
25 suggesting that the Board do anything in particular

1 with that filing or is the filing in and of itself  
2 enough?

3 MR. JIM GREVATT: It is my hope that  
4 the filing is enough and I'm not suggesting that the  
5 Board do anything with that.

6 To -- to clarify, my intention is not  
7 at all to suggest that the Board should be micro-  
8 managing Efficiency Manitoba. This is really about  
9 encouraging them and supporting them in doing the  
10 things that they need to do in order to succeed.

11 MS. DAYNA STEINFELD: Your evidence  
12 also discussion -- discusses some concerns you have  
13 around what you call a conservative scope and -- and  
14 scale for residential opportunities.

15 Is your concern that the plan does not  
16 have enough breadth to ensure a broad base of  
17 customers have access to DSM measures?

18 MR. JIM GREVATT: That's probably not  
19 my primary concern. My primary concern is the scale  
20 that -- for example, with the direct install program,  
21 I think they started eight hundred (800) houses in the  
22 first year and get up -- maybe twelve hundred (1,200)  
23 and sixteen hundred (1,600) in the next two (2) years,  
24 and in a similar program which I cited in my evidence  
25 that Baltimore Gas and Electric operates twice as many

1 residential customers. They do thirty-six thousand  
2 (36,000) in 2018, direct install, visit the home,  
3 putting in a bunch of measures, do a mini-assessment  
4 of the opportunities, and so forth. And they've been  
5 doing that for about eight (8) or ten (10) years at  
6 that volume.

7                   So ramping up to sixteen hundred  
8 (1,600) doesn't seem like very many customers. Four  
9 hundred and eighty-five thousand (485,000) households  
10 in Manitoba doesn't seem like a lot of households.

11                   MS. DAYNA STEINFELD: You've also  
12 discussed a -- a concern around the magnitude of codes  
13 and standards savings on the residential side.

14                   Am I right in understanding that your  
15 concern is that that would only assist customers who  
16 are building a new home or undertaking major  
17 renovations in reducing their bills, so not enough  
18 residential customers will be able to benefit from  
19 those kinds of savings?

20                   MR. JIM GREVATT: Exactly. Not enough  
21 residential customers, and -- and especially not  
22 enough residential customers who are of moderate and  
23 lower incomes.

24                   MS. DAYNA STEINFELD: At page 30 of  
25 your report, you -- you discuss your view that

1 Efficiency Manitoba can do more to provide meaningful  
2 opportunities for its residential customers. Does  
3 doing more mean more residential programs?

4 MR. JIM GREVATT: It doesn't  
5 necessarily mean more programs. It means more  
6 participants. It may mean broader measures, so  
7 within, let's say, the home renovation program, trying  
8 to make as many of the measures as are cost-effective  
9 for the customer, trying to help support the customer  
10 in -- in getting as much done as possible when they --  
11 when they're engaged.

12 MS. DAYNA STEINFELD: And in terms of  
13 more participation, in your view, how can Efficiency  
14 Manitoba go about increasing participation in  
15 residential programs?

16 MR. JIM GREVATT: Well, I mean, there  
17 are a lot of tools that programs use to generate  
18 participation. And there's marketing and outreach;  
19 there's having attractive incentives; there's -- as  
20 Dr. Fitzpatrick discussed, I mean, there's engagement  
21 with the public to understand what they value and what  
22 would motivate them to participate; there's designing  
23 measure offers to meet their needs.

24 So it's -- it's not a -- and -- and  
25 different programs approach it in different ways.

1 Some programs have modest incentives, but they do lots  
2 of marketing. Some don't do a lot of marketing; maybe  
3 they don't have to, because the incentives are so  
4 generous that word of mouth is taking care of -- of  
5 that.

6                   There are a lot of different ways you  
7 can do it, but understanding what the customers are  
8 interested in, what they care about, messaging in ways  
9 that's responsive to that, doing some assessment of if  
10 -- if this energy efficiency measure makes sense to us  
11 and we look at the cost-effectiveness and we decide  
12 it's cost-effective, and we think, Well, why -- why  
13 aren't all the homeowners doing this, because  
14 logically they should, but they're obviously not.

15                   So what's keeping them from doing it?  
16 Understanding those barriers and trying to design  
17 programs in a way that's responsive to that.

18                   MS. DAYNA STEINFELD:    Thank you.

19

20   (BRIEF PAUSE)

21

22                   MS. DAYNA STEINFELD:    Mr. Grevatt, are  
23 -- are you familiar with the concept of behavioural  
24 nudges, and if so, do you have any comments in that  
25 regard?

1 MR. JIM GREVATT: Behavioural nudges  
2 such as -- OPower was the program that has done most  
3 of this in the States where home energy reports are  
4 sent to customers and shaming them into modifying  
5 their energy use. I have some familiarity.

6 What I would say is, I mean, these  
7 programs are fairly -- there has been a lot of  
8 evaluation done on these programs, and they generally  
9 conclude that there are some savings and they're cost-  
10 effective.

11 My cautions are that -- one (1)  
12 evaluation that I recall -- actually, this is some  
13 years ago that OPower discussed. They said, Well, we  
14 really looked at to see what people were doing, and  
15 they were buying one (1) additional efficient  
16 lightbulb for getting these reports, and that was the  
17 basis of a lot of the savings. The savings were  
18 there, but -- but it wasn't a huge action.

19 But I think that some customers  
20 probably do actually maybe yell at their kids to turn  
21 off the lights more or whatever those behavioural  
22 changes are. Set back the thermostat.

23 They -- the -- so the -- I think I said  
24 two (2) cautions, and I've already started saying some  
25 of them, so maybe it's more than two (2). But I think



1 part of the reason behaviour programs became so  
2 widespread is because most energy efficiency programs  
3 are assessed based on first-year savings. There was  
4 some discussion about first-year versus lifecycle  
5 savings earlier. Behaviour programs are pretty good  
6 at getting first-year savings for relatively low cost.

7                   They're not that good at getting  
8 lifecycle savings, because the -- there's some  
9 persistence, but not years' worth of persistence. And  
10 when you look at the levelized cost, it can be fairly  
11 expensive.

12                   So I think it's entirely reasonable for  
13 programs to include behaviour savings, especially in  
14 targeted groups, perhaps, where -- you know, high-use  
15 customers or something like that, but -- but as a --  
16 you know, one (1) modest component of the portfolio.

17                   MS. DAYNA STEINFELD:       Thank you, Mr.  
18 Grevatt.

19                   Mr. Chair, for the -- for the purposes  
20 of the record, I -- I will note that we have filed two  
21 (2) pre-asks as exhibits that were circulated  
22 yesterday evening: one, PUB-17, is a pre-ask of Mr.  
23 Harper; and the other, PUB-18, is a pre-ask of Mr.  
24 Neme. So I do just want to note that those exhibits  
25 have been marked for the record.

1

2 --- EXHIBIT NO. PUB-17: Pre-ask of Mr. Harper

3

4 --- EXHIBIT NO. PUB-18: Pre-ask of Mr. Neme.

5

6 MS. DAYNA STEINFELD: I'm wondering,  
7 and I'll take direction from the panel -- I can go  
8 through these pre-asks in person with the witnesses  
9 here to discuss the recommendations and conclusions on  
10 their reports, and particularly the items where they  
11 suggest remedial action and what the -- the details of  
12 that recommendation are in terms of the -- the  
13 remedial action.

14 If you would prefer, I could also ask  
15 the -- them as an undertaking on the understanding  
16 that the -- the -- the witness could provide  
17 additional comments or options that may not be  
18 discussed here. And I'm -- I'm in the hands of the  
19 panel in that regard.

20

21 (BRIEF PAUSE)

22

23 THE CHAIRPERSON: I think we'd prefer  
24 to hear it.

25

MS. DAYNA STEINFELD: Certainly.

1

2 CONTINUED BY MS. DAYNA STEINFELD:

3

MS. DAYNA STEINFELD: So Mr. Harper,  
4 we'll start with yours, because I believe your exhibit  
5 number comes first. So your counsel, I take it, has  
6 provided you with a copy of the pre-ask and you've had  
7 a chance to review it?

8

MR. WILLIAM HARPER: Yes, I reviewed  
9 it.

10

MS. DAYNA STEINFELD: And at your  
11 report, pages 51 through 54, there are a variety of  
12 conclusions and recommendations. I've asked you to  
13 address the items where remedial action is suggested,  
14 and I'm wondering if you can walk us through those and  
15 if we can put the report up on the screen and -- and  
16 find them in order, perhaps.

17

MR. WILLIAM HARPER: Yes, and maybe I  
18 -- I've got the page number, which may not be the same  
19 as the PDF, but it starts at page -- page -- the  
20 actual page number 49 of the report, if we -- we want  
21 to go there.

22

And maybe while -- while they're  
23 finding that page, I'd just like to note that in  
24 reading through the options that you gave me, I've a  
25 couple of variations, and some of them appear more

1 than once, so I thought I might explain them at the  
2 start so I don't end up having you to go over them  
3 again.

4 MS. DAYNA STEINFELD: Please --

5 MR. WILLIAM HARPER: Because when it  
6 comes to no action, I think there were two (2) aspects  
7 of that that struck me: no action because I basically  
8 agreed with Efficiency Manitoba, or no -- no action  
9 required by Efficiency Manitoba because this was a --  
10 really a recommendation I was making to the PUB as to  
11 how it should approach its review and in consideration  
12 of the plan. And I'll make that distinction when I'm  
13 going through it.

14 The second thing is, I don't -- we --  
15 is it possible to put the pre-ask itself up on the  
16 screen?

17 (BRIEF PAUSE)

18

19 MR. WILLIAM HARPER: When it came to  
20 bullets 3 and 4, I found -- I had a little bit of an  
21 awkward time with the wording, because it was my  
22 understanding that the EEAG was an advisory group to  
23 Efficiency Manitoba. And so in both cases, I've  
24 reworded this as "delegate to Efficiency Manitoba to  
25 develop the remedy with input from the EEAG," as

1 opposed to delegating to -- to the EEAG, if -- if you  
2 make that --

3 MS. DAYNA STEINFELD: That's  
4 acceptable. Thank you, Mr. Harper.

5 MR. WILLIAM HARPER: And then -- and  
6 then lastly, when it came to energ -- Efficiency  
7 Manitoba addressing in the next plan, or maybe during  
8 -- during the period, without input from the EEAG, I  
9 don't want to presume that if I pick that particular  
10 option, that doesn't preclude Efficiency Manitoba from  
11 approaching and engaging the EEAG if it feels that  
12 that would be useful in terms of them addressing that  
13 particular measure.

14 So with those caveats, I'll go through  
15 the --

16 MS. DAYNA STEINFELD: Thank you, Mr.  
17 Harper.

18 MR. WILLIAM HARPER: -- I'll through -  
19 - through the various bullets. And excuse me, there  
20 are -- and a -- a number of them here, and I -- and so  
21 this -- this make take a few moments.

22 If we go to the DSM targets, which is  
23 the start of about halfway down the page there, I  
24 think it's fair to say the first bullet is really an  
25 introduction to bullets 2 and 3. So if I combine

1 bullets 2 and 3 together, I guess I really view this  
2 as being a revised 2020/'23 plan before a final  
3 approval is given.

4                   And this was because my recommendation  
5 is for the reference load. And the planning savings  
6 to be calculated is set out in slide 12 of my  
7 presentation.

8                   Or even if the PUB adopts Efficiency  
9 Manitoba's approach, then at a minimum, I think the  
10 calculation of the reference load needs to be revised  
11 to include the Manitoba Hydro's 20 -- 2018/2019 DSM  
12 plan, so on either event, there's some action  
13 required.

14                   Furthermore, in -- in either event,  
15 some action is required for Efficiency Manitoba to  
16 clarify whether the adjustment for codes and standards  
17 has added back in the impact of new codes and  
18 standards to be introduced after 2017/'18 and, if so,  
19 re -- remove that from the add back, which is  
20 something that isn't clear to me.

21                   So, I think this -- so there's action  
22 required whether they accept my recommendations or  
23 not. And then they combine bullets 2 and 3 which now  
24 deal with the gas savings.

25                   Again, it's revise the 2023 plan before

1 approval is given, really, in this case, reflecting my  
2 recommendation, which would be to revise the gas  
3 reference load -- load to remove the DSM adjustments.

4                   But again, even if the Board were to  
5 accept Efficiency Manitoba's approach, I think, at a  
6 minimum, they would have to revise the calculation of  
7 the reference load in order to include the impact of  
8 Centra's 2018/2019 DSM plan, which they haven't --  
9 which they haven't done so to date.

10                   If I then turn over the page to the  
11 last bullet -- no. If I could go to that page, to the  
12 last bullet, the same page, the last bullet at the  
13 bottom, I think there's no action required here  
14 because, effectively, I'm agreeing with the approach  
15 that Efficiency Manitoba has taken.

16                   If I go to the evaluation criteria --  
17 there's only one (1) here. And I would put this in  
18 the category of delegate to Efficiency Manitoba to  
19 develop the remedy with input from the EEAG so that an  
20 acceptable remedy can be incorporated into the next  
21 plan.

22                   If we go to options considered, in  
23 terms of the first bullet, I really feel this is being  
24 a var -- variation on something that -- an option that  
25 you didn't give me because, in my mind, this is

1 something that really falls in the responsibility of -  
2 - of Efficiency Manitoba.

3                   So, I say delegate to Efficiency  
4 Manitoba to develop the -- the remedy so an acceptable  
5 remedy can be incorporated into the current plan while  
6 it's being im -- implemented.

7                   And this specifically applies to the  
8 central repository and how you re -- coordinate the  
9 option information.

10                   On the second bullet under the options  
11 considered, this is one where I'd put it under the  
12 category of delegate to Efficiency Manitoba to develop  
13 the remedy with input from the EEAG so an acceptable  
14 remedy can be incorporated into the next plan.

15                   When it comes to the preferred  
16 portfolio selection, I -- I think I would put this in  
17 the category as Efficiency Manitoba to address in --  
18 in the next plan -- and I -- I'd say they can probably  
19 do this without input from the EEAG from the  
20 stakeholders, but -- but if I feel that -- that it's  
21 useful, I -- I think they shouldn't be discouraged  
22 from doing so.

23                   With respect to the second bullet under  
24 the options considered, I would put that in the  
25 category of delegate to Efficiency Manitoba to develop



1 a remedy with input from the EEAG so an acceptable  
2 remedy can be incorporated into the next plan.

3                   When it comes to the cost-effectiveness  
4 test, the -- the first bullet there I would put in the  
5 category of Efficiency Manitoba to address in the next  
6 plan without EEAG or other stakeholder in -- input.

7                   The second -- second bullet is one (1)  
8 I would characterize as no action required because  
9 it's really a recommendation as to how the PUB should  
10 approach its review and consideration of the current  
11 plan. And that also applies to the -- I just want to  
12 make sure I'm on the wro -- right page here.

13                   Sorry, did -- and that also applies to  
14 the second bullet -- to the second and third bullets  
15 un -- under the PACT test. I was on the PACT test  
16 there. I hadn't -- I'm sorry, I hadn't mentioned  
17 that.

18                   I don't think there's any action  
19 required on the thirty (30) year discount period  
20 because I'm agreeing with Efficiency Manitoba on that  
21 -- that regard.

22                   When it comes to the life cycle revenue  
23 cost test, I think there's really -- this is dealing  
24 with two (2) issues, 1) the marginal values and,  
25 secondly, the discount rate.

1                   In terms of the marginal values, this  
2 is something Efficiency Manitoba should address in the  
3 next plan and probably does -- does not require EEAG  
4 input.

5                   In terms of the discount rate, I would  
6 say this is no action required because it's a  
7 recommendation to the PUB in terms of how it should be  
8 approaching its review and consideration of the  
9 current plan.

10                  With respect to the -- with respect to  
11 the rate impacts and focussing on ten (10) year values  
12 as opposed to thirty (30) values, no action is needed  
13 that is really -- because that's really a  
14 recommendation as to how the PUB should approach its  
15 review and consideration of the current plan.

16                  With respect to the system energy  
17 inputs, no action is required at all. I was agreeing  
18 with Efficiency Manitoba's approach.

19                  In terms of the electric rate increase  
20 assumptions, again, this is a bit of a other or a  
21 variation. This is a recommendation as to how the PUB  
22 should approach its review and consideration of the  
23 current plan.

24                  However, I think some action is needed  
25 to confirm -- to confirm the PUB has the -- has the

1 necessary information to do this, which, in my mind,  
2 would be an electric LRI done over a ten (10) period  
3 using annual rate increases of 3.9 percent and an  
4 electric LRI over a thirty (30) period using 3.9 for  
5 the first ten (10) years, and then inflation  
6 thereafter.

7                   It's not clear to me that all that  
8 information's currently on -- on the record.

9                   In terms of -- of the last bullet there  
10 under the li -- life cycle revenue impact analysis, I  
11 -- I'm effectively agreeing with Efficiency Manitoba.  
12 No action's required.

13                   If we go over to the customer bill  
14 impacts, no action is required on Efficiency Manitoba  
15 -- Efficiency Manitoba's part because this is really,  
16 again, a recommendation to the PUB in terms of the  
17 approach they should use in reviewing and considering  
18 the plan.

19                   And finally, when it comes to the  
20 allocation of support cost, this is really something  
21 that -- how the current plan should be revised before  
22 -- before final approval is given.

23                   MS. DAYNA STEINFELD:    Thank you, Mr.  
24 Harper.  I appreciate you taking the time to go  
25 through that pre-ask.  If the panel had questions of

1 Mr. Harper at this time, they could be asked;  
2 otherwise, I can turn to Mr. Neme's pre-ask and...

3 THE VICE-CHAIRPERSON: Mr. Harper,  
4 just on that last one where you said that the cost  
5 driver approach could be reconsidered before final  
6 approval of a plan, you mean before we give our  
7 recommendation to the Government on this current plan?

8 MR. WILLIAM HARPER: Well, I guess,  
9 what -- what I envisioned on this is Efficiency  
10 Manitoba has a -- has a current proposed approach,  
11 which is 75/25 split between electric and gas  
12 portfolios.

13 It would presume to me that, you know,  
14 fof -- I -- I wasn't sure. It seemed to me final  
15 approval's what comes from the min -- from the  
16 minister, if I understand the legislation correctly.

17 So, basically, the revise in the plan  
18 would be probably you making a recommend -- my view  
19 would be you, as the panel, making a recommendation to  
20 -- to the minister that this is how the costs should  
21 be allocated and this would be the -- the resulting  
22 totals for the portfolio.

23 And that would be the revision that  
24 would then be the -- what the minister would approve,  
25 if that helps.

1

2

(BRIEF PAUSE)

3

4

MS. DAYNA STEINFELD: And, Mr. Neme,  
5 your -- your pre-ask, which is at PUB Exhibit 18, if  
6 you wanted to similarly caveat or revise the wording  
7 here, please feel free to do so. And then you can  
8 take us through the items in your recommendations at  
9 report page 19.

10

MR. CHRIS NEME: Okay. Thank you. I  
11 might of even had a slightly different read of the  
12 pre-ask options than -- than Mr. Harper did. And I'm  
13 not sure my answers fit perfectly into any of the  
14 categories anyway, so I'll walk through them with this  
15 kind of lens in mind. And maybe you can help me  
16 figure out which one (1) of these is most clo -- my  
17 answer most closely aligns.

18

MS. DAYNA STEINFELD: I'm -- I'm less  
19 concerned about the categories of options I've  
20 provided and -- and more concerned about how you would  
21 suggest these remedial action items be addressed, so  
22 please approach them in the way you feel best.

23

MR. CHRIS NEME: Okay. Thank you.  
24 So, my first recommendation is -- is really to provide  
25 some clarity about high-level policy guidance and

1 perspective that -- the effects of the plan,  
2 Efficiency Manitoba's plan, on -- both in the way they  
3 plan it and in the way that they implement it with  
4 respect to greenhouse gas emissions, and including  
5 future enabling of reductions of greenhouse gas  
6 emissions through electrification matters, is a  
7 relevant secondary objective relative -- and providing  
8 that direction and guidance.

9           There's nothing in that that would  
10 require stopping approval of this plan. The plan  
11 should -- you know, that -- that has nothing to do  
12 with this. It's -- it's more about making sure  
13 Efficiency Manitoba understands that, as they  
14 implement this plan and as they plan the next one,  
15 that this is a consideration that -- that they should  
16 have in mind.

17           The second, third, and fourth of my  
18 recommendations are all about changes in the design of  
19 some of the programs that Efficiency Manitoba is -- is  
20 offering.

21           Number 2 is to increase emphasis on  
22 heat pumps as an electric efficiency measure in the  
23 home renovation program.

24           Number 3 is to offer heat pumps as an  
25 electric efficiency measure for electrically heated

1 low-income customers and their income qualified  
2 program.

3                   And number 4 is to offer incentives for  
4 heat pumps who are -- for customers who qualified for  
5 the Affordable Energy Fund and use fuel, oil, or  
6 propane for -- for space heating, with perhaps  
7 additional refinements that were discussed in --  
8 earlier today.

9                   I'm sorry -- all three (3) of those  
10 recommendations are recommendations to change what's  
11 in the current Efficiency Manitoba plan, so it's not  
12 about waiting for the -- for the next plan cycle.

13                   Exactly how that should manifest itself  
14 is -- I think there are several options. As Mr.  
15 Grevatt had suggested in -- in his testimony, I  
16 wouldn't want to suggest holding up Efficiency  
17 Manitoba getting started over these changes, so I -- I  
18 wouldn't suggest your option number 2 of not letting  
19 the plan be approved until these changes are made. I  
20 think these changes can be made as Efficiency Manitoba  
21 is working on other aspects of its evolution and the  
22 delivery of its services.

23                   I kind of like Mr. Grevatt's suggestion  
24 of giving kind of -- maybe one -- a different way of  
25 putting it is a conditional approval. Well, actually

1 he suggested approve for -- for one (1) year and then  
2 ask Efficiency Manitoba to file revisions for years  
3 two (2) and three (3) so that things can get started.

4 I -- I suppose an alternative for these  
5 three (3) recommendations would be a conditional  
6 approval, go ahead and get started but we want you to  
7 make these three (3) changes and report back to us on  
8 what -- what changes you made.

9 As for consultation with EEAG, that  
10 could be helpful for all three (3) of these, I  
11 suppose, as would further discussions with -- with the  
12 industry and perhaps other groups as well as necessary  
13 to refine the program offerings in these three (3)  
14 categories.

15 Does that answer your question with  
16 respect to those three (3)?

17 MS. DAYNA STEINFELD: It does, thank  
18 you.

19 MR. CHRIS NEME: Number 5 is a  
20 recommendation to direct Efficiency Manitoba to change  
21 the way it accounts for fuel switching measures  
22 relative to both its electric and gas savings goals.  
23 That also does not require stopping approval of the  
24 plan.

25 Frankly, I'm not sure it even requires



1 any follow up from Efficiency Manitoba. It would just  
2 be kind of a policy direction to -- we propose to  
3 track things this way, track them a different way, and  
4 that could start from day -- from day one (1).

5 And the last recommendation, and -- and  
6 I don't think there would need to be any consultation  
7 on that -- on that one either.

8 The last recommendation, which is to  
9 consider providing feedback to legislators on some  
10 alternative methods for setting goals, that also  
11 wouldn't require holding up the -- the plan. That  
12 would be something that the -- the Board would need to  
13 -- to mull over and decide whether it was something  
14 that they wanted to pursue with -- with government and  
15 could proceed at whatever pace it thought was  
16 appropriate for -- for doing so.

17 MS. DAYNA STEINFELD: Thank you, Mr.  
18 Neme.

19 Mr. Chair, those are my questions of  
20 this panel. I'd like to thank them for their -- their  
21 time in answering my questions and -- and for their  
22 travel to Manitoba to assist the Board in its work.

23 THE CHAIRPERSON: Ms. Hamilton has a  
24 question.

25 BOARD MEMBER HAMILTON: Thank you.

1 Mr. Neme, one (1) further question with regard to the  
2 diesel communities, and I apologize if you've covered  
3 this already, but if there were the use of heat pumps  
4 in diesel communities to replace electric resistance  
5 heating, is that going to result in reduced greenhouse  
6 gases because you're burning less diesel to create the  
7 energy necessary to run those pumps?

8 MR. CHRIS NEME: Absolutely.

9 BOARD MEMBER HAMILTON: Thank you.

10 THE CHAIRPERSON: Ms. Dilay, any re-  
11 examination?

12 MS. KATRINE DILAY: Mr. Chair, I do  
13 have three (3) questions in total. I have one (1)  
14 question for Mr. Neme and two (2) questions for Dr.  
15 Fitzpatrick. So maybe I'll start with Mr. Neme as Dr.  
16 Fitzpatrick will make her way back to the hearing  
17 room.

18 MR. CHRIS NEME: She's quick.

19 MS. KATRINE DILAY: Yes. She's very --

20

21 RE-DIRECT EXAMINATION BY MS. KATRINE DILAY:

22 MS. KATRINE DILAY: Mr. Neme, you'll  
23 recall a discussion with Efficiency Manitoba counsel  
24 regarding the -- I believe it was the Canadian  
25 Standards Association protocols regarding heat pumps.

1 Do you recall that discussion?

2 MR. CHRIS NEME: I do.

3 MS. KATRINE DILAY: And my  
4 understanding was that you'll agree that those  
5 protocols are currently in draft form. And would that  
6 mean that there's currently insufficient information  
7 to proceed with your recommendations regarding heat  
8 pumps?

9 MR. CHRIS NEME: No, it does not. I  
10 don't -- while that is -- well, the information from  
11 the testing thus far, according to the Canadian  
12 Standards Association's draft protocols, are certainly  
13 helpful, I don't think it's the only useful  
14 information to suggest that beginning to promote cold  
15 climate air source heat pumps in Manitoba would have  
16 value.

17 So, for example, to give a couple of  
18 other reference points, the Northeast Energy  
19 Efficiency Partnerships has developed and -- and --  
20 and evolved a definition that they use of cold climate  
21 heat pump that requires, for example, for  
22 manufacturers to get their products listed, that they  
23 are able to produce heat at their nameplate capacity  
24 with a COP of 1.75, considerably better than a 1.0  
25 that electric resistant heat provides, at 5 degrees

1 Fahrenheit, which is minus 15 Celsius.

2                   And that -- while that certainly  
3 doesn't cover all the hours of heating that would be  
4 experienced in Manitoba, it will still cover a fairly  
5 substantial portion of them. And so that's -- we --  
6 and we now have a very broad listing of products that  
7 meet -- that meet that standard.

8                   So while it's -- it's imperfect for its  
9 application here, it at least suggests that there are  
10 a fair number of products that could provide a  
11 substantial amount of savings in -- in heating mode,  
12 and of course as I noted earlier, there's -- there's  
13 potentially substantial savings in -- in cooling mode  
14 as well.

15                   I guess a related point I would make is  
16 that if you were to look at the -- the graph that I  
17 presented in this interrogatory response and in my  
18 presentation yesterday of the performance of the cold  
19 climate heat pumps that have been tested thus far  
20 relative to the draft Canadian Standards Association  
21 protocols, the seasonal COPs that are shown for the  
22 next coldest climate, what -- what is called the cold  
23 drying climate, which is where I live, they probably  
24 average in the 2.5 to 2.7 range, which is very  
25 consistent with several field studies that -- that

1 I've seen of the performance of those products in --  
2 in my climate or similar climates to mine.

3                   And it gives me some comfort that these  
4 products that are on -- on the market, that combined  
5 with these test -- initial testing results, gives me  
6 some comfort that these -- that the -- the values that  
7 are shown in this graph for the colder climate that  
8 Manitoba experiences, you know, have some, you know,  
9 decent probability of playing out, because all of  
10 these models that were tested thus far to the Canadian  
11 Standards Association were products that, by design,  
12 they -- they started with products that met the --  
13 meet cold climate heat pump standards.

14                   So both of those things give me comfort  
15 that there is enough information to get -- to get  
16 started while we absolutely need to continue to -- to  
17 explore and follow the testing that continues to get  
18 done.

19                   I guess one (1) other thing I'd -- I'd  
20 say in addition is that there's nothing to stop -- in  
21 fact I would potentially even encourage Efficiency  
22 Manitoba to engage with manufacturers if -- if they  
23 want to have greater certainty about performance of  
24 even colder temperatures.

25                   And I'll give an example that about

1 five (5) years ago in my home state of Vermont, when  
2 we were beginning to -- to promote cold climate heat  
3 pumps, there was no definition of cold climate, and in  
4 fact I actually worked a little bit with Efficiency  
5 Vermont at the time to develop a definition of cold  
6 climate that was then revised following discussions  
7 with major manufacturers.

8                   Manufacturers submitted to Efficiency  
9 Vermont performance data that they've measured at all  
10 kinds of different temperatures, including down to  
11 mine 25 Celsius.

12                   And Efficiency Vermont, because there  
13 was no standard at the time, created a standard that  
14 eventually morphed into the current need cold climate  
15 standard.

16                   And, you know, again, by comparison,  
17 Efficiency Vermont serves about 40 percent fewer  
18 residential households than Efficiency Manitoba would.  
19 So, it wasn't like it was some giant California  
20 utility that had massive resources to -- to do this  
21 that we would suggest didn't exist here.

22                   So, there would be nothing to stop  
23 Efficiency Manitoba from -- from starting with the  
24 need climate standard, and then refining the list of  
25 products they're willing to rebate or support based on

1 the continued release of results from the testing to  
2 the Canadian Standards Association and/or any other  
3 information that they might require manufacturers to  
4 supply to them.

5

6 (DR. PATRICIA FITZPATRICK RETAKES THE STAND)

7

8 MS. KATRINE DILAY: Thank you, Mr.  
9 Neme. Dr. Fitzpatrick, I have two (2) questions for  
10 you. The first one (1) arises from your discussion  
11 with my friend, Ms. Hart.

12 In your opinion, recognizing the time  
13 line for the filing of the plan, has Efficiency  
14 Manitoba adequately engaged the public at large to  
15 date?

16 DR. PATRICIA FITZPATRICK: I would  
17 argue, no, there's been a missed opportunity, but I  
18 think that that could be remedied moving forward.

19 MS. KATRINE DILAY: Thank you. And  
20 then the second question I have arose from your  
21 discussion with Chairperson Gabor regarding engagement  
22 with the public versus stakeholders.

23 In your opinion, are there tools that  
24 Efficiency Manitoba could be using to engage the  
25 general public that would be different than tools that

1 they may be using to engage stakeholders?

2 DR. PATRICIA FITZPATRICK: Yes, there  
3 -- there are tools that can be used to engage the  
4 general public, large groups of people as opposed to  
5 stakeholders, which are smaller.

6 There's a great body of literature  
7 coming out of Canada starting in 1998 with a report by  
8 Praxis. It's summarized in work by Sinclair and  
9 Diduck, two (2) scholars who I've re -- referenced in  
10 my Information Requests.

11 And so, depending upon what information  
12 you're seeking and what is the size of the audience,  
13 there are different mechanisms that can be used to  
14 engage the public.

15 I -- in my research, experience, and in  
16 my professional opinion, the more you can hear from  
17 the public, the better. And so, the idea of being  
18 swamped with five thousand (5,000) online answers  
19 fills my heart with joy. And I think of what I could  
20 do with that data to -- to get a better understanding  
21 of -- of what the potentials are.

22 And so, there's certainly growing  
23 information about how to deal with managing more and  
24 more volumes of information out there.

25 MS. KATRINE DILAY: Thank you. Those



1 are my questions for the panel on re-direct.

2 THE CHAIRPERSON: I would like to  
3 thank the panel for attending and assisting us. And I  
4 wish you safe travels and a warm trip home. Thank you  
5 very much.

6 We're adjourned until Monday at 9:00  
7 a.m. Thank you.

8

9 (CONSUMER COALITION PANEL STANDS DOWN)

10

11 --- Upon adjourning at 3:53 p.m.

12

13

14 Certified Correct,

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19 Donna Whitehouse, Ms.

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