



“When You Talk - We Listen!”



MANITOBA PUBLIC UTILITIES BOARD

Re: MANITOBA HYDRO  
GENERAL RATE APPLICATION  
2012/13 AND 2013/14

Before Board Panel:

Regis Gosselin - Board Chairman  
Raymond Lafond - Board Member  
Larry Soldier - Board Member

HELD AT:

Public Utilities Board  
400, 330 Portage Avenue  
Winnipeg, Manitoba  
January 17, 2013  
Pages 4116 to 4378

1 APPEARANCES

2 Bob Peters (np) )Board Counsel

3 Anita Southall )

4

5 Patti Ramage )Manitoba Hydro

6 Odette Fernandes )

7

8 Byron Williams )CAC (Manitoba)

9

10 William Gange )GAC

11 Peter Miller )

12

13 Antoine Hacault (np) )MIPUG

14

15 Michael Anderson (np) )MKO

16

17 Denise Pambrun (np) )City of Winnipeg

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7	90	Mr. Dunsky to reproduce the analysis from slide 41, replacing the savings of eight point five two (8.2) cents a kilowatt hour with a savings of ten (10) cents a kilowatt hour and twelve (12) cents per kilowatt hour; and also provide assumptions associated with that in an accompanying table
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1 --- Upon commencing at 9:11 a.m.

2

3 THE CHAIRPERSON: Good morning. I  
4 believe that we're ready to start today's proceedings.  
5 Do we have any documents that we need to enter into the  
6 record before we start this morning? Nothing.  
7 Nothing, it seems.

8 MR. BYRON WILLIAMS: There might be one  
9 (1) --

10 THE CHAIRPERSON: Nothing -- noth --

11 MR. BYRON WILLIAMS: -- one (1)  
12 document.

13 THE CHAIRPERSON: Okay. Ms. Ramage,  
14 anything from -- anything to enter the record before we  
15 start this morning?

16 MS. PATTI RAMAGE: This is throwing me,  
17 using my left hand. No, we don't have anything this  
18 morning.

19 THE CHAIRPERSON: Good morning, Mr.  
20 Williams. How did you know I really like overhead  
21 presentations? So thank you very much. I'm looking  
22 forward to this.

23 MR. BYRON WILLIAMS: I want to assure  
24 you, Mr. Chair, that I drew the pictures myself, so. I  
25 -- I do -- there is one (1) -- I'd suggest perhaps that

1 we int -- introduce Mr. Dunsky and also ask that he be  
2 affirmed.

3

4 CAC/GAC PANEL 1:

5 PHILIPPE DUNSKY, Sworn

6

7 EXAMINATION-IN-CHIEF BY MR. BYRON WILLIAMS (QUAL.):

8 MR. BYRON WILLIAMS: Good morning, Mr.  
9 Dunsky. You might want to -- perhaps we'll have to  
10 move the other mic over. It doesn't look like that  
11 one's working.

12 MR. PHILIPPE DUNSKY: That'll do  
13 better. Thank you. Thank you.

14 MR. BYRON WILLIAMS: Good morning, Mr.  
15 Dunsky.

16 MR. PHILIPPE DUNSKY: Good morning.

17 MR. BYRON WILLIAMS: Mr. Chair, in  
18 terms of materials that the Board and others in the  
19 room may wish to have in front of them, you may wish to  
20 have reference to Mr. Dun -- Dunsky's curriculum vitae.  
21 And I think the Board staff had made photocopies for  
22 you. For those looking for it, I believe it's the  
23 response to Hydro/CAC/GAC-6-1.

24 Mr. Chair and members of the panel, you  
25 also may wish to have Manitoba Hydro's rebuttal



1 evidence, dated December 7th, 2012. And towards the  
2 end of Mr. Dunsky's direct we'll be referring to pages  
3 31 and 32.

4                   And -- and finally, we'd ask -- we --  
5 we've distributed a document through the -- the room,  
6 we hope. It's the -- the sheets for the PowerPoint  
7 presentation, and it's titled, "Direct Testimony Re:  
8 Manitoba Hydro's 2011 Power Smart Plan." I've got the  
9 colour version. You've got the mostly colour version,  
10 I believe, with the -- the first couple pages as -- as  
11 black and white. And we would suggest that that be  
12 marked as Exhibit CAC/GAC number 4.

13

14 --- EXHIBIT NO. CAC/GAC-4: PowerPoint slide printout:

15                                   "Direct Testimony Re:  
16                                   Manitoba Hydro's 2011 Power  
17                                   Smart Plan"

18

19                   MR. BYRON WILLIAMS: And just before we  
20 -- we start with Mr. Dunsky, Mr. Chair, I -- I should  
21 acknowledge that this is a joint presentation of the  
22 Consumers' Association of Canada, Manitoba branch, and  
23 the Green Action Centre. So most of the questions will  
24 be asked by myself, but I -- My Friend, Mr. Gange, will  
25 be popping up to ask a question around slide 47 or so.

1 And we're also pleased that in attendance are both  
2 Professor Miller, from the Green Action Centre, and Ms.  
3 Desorcy. I think they're buried way over in the -- the  
4 cheap seats somewhere back there.

5 And -- and finally, Mr. Chair, we just  
6 do wish to thank both Mr. Simonsen and Mr. Cathcart for  
7 their assistance in setting up the PowerPoint  
8 presentation. Mr. Williams neglected to advise them  
9 that we were bringing one, so I -- I do apologize to  
10 them.

11

12 CONTINUED BY MR. BYRON WILLIAMS:

13 MR. BYRON WILLIAMS: Mr. Dunsky -- and  
14 -- and the Board may wish to have reference to Mr.  
15 Dunsky's curriculum vitae.

16 But, Mr. Dunsky, what is the nature of  
17 your expertise as it relates to your evidence in this  
18 proceeding?

19 MR. PHILIPPE DUNSKY: Well, I've been -  
20 - excuse me -- working -- excuse me -- on primarily  
21 energy efficiency, to -- to somewhat of a lesser extent  
22 renewable energy, for twenty (20) -- twenty-two (22)  
23 years now in a ver -- variety of capacities.

24 MR. BYRON WILLIAMS: And more partic --  
25 I wonder if you can outline your -- at a -- at a brief

1 level, your work and volunteer experience as it relates  
2 to the subject matter of this report.

3 MR. PHILIPPE DUNSKY: Sure. So for the  
4 past nine (9) -- coming on nine (9) years now, I've --  
5 I've run my firm, Dunsky Energy Consulting. Dunsky  
6 Energy Consulting is a Montreal-based firm. We've got  
7 a full-time staff of eight (8) people, and additional  
8 associates. We're exclus -- we're -- we're focussed  
9 exclusively on one (1) thing and one (1) thing only,  
10 and that is energy efficiency/renewable energy plans,  
11 programs, and policies.

12 So we provide assistance to our clients.  
13 Our clients are primarily either government agencies or  
14 utilities with responsibility for energy efficiency  
15 programming and then, from time to time, either non-  
16 profits or -- or private -- private enterprise. For  
17 example, we might -- we might on occasion work for  
18 large industrial consumers or -- or solutions providers  
19 within the energy efficiency/renewable energy space.

20 But again, primarily the work that we do  
21 is for utilities and government agencies responsible  
22 for delivering energy efficiency programs.

23 MR. BYRON WILLIAMS: Thank you, Mr.  
24 Dunsky. And is there any board or governance  
25 experience that you -- that -- that you believe is

1 relevant to your work in this proceeding?

2 MR. PHILIPPE DUNSKY: Sure. And I  
3 apologize. I just realized I -- I just mentioned the  
4 last nine (9) years. But very quickly, prior to that,  
5 I -- for eight (8) years, I was the director general of  
6 the Helios Centre, which was an energy think tank again  
7 focussed exclusively on the intersection between --  
8 between energy and economics and with real focus on  
9 energy efficiency/renewable energy. Again, so that was  
10 1996 through 2004.

11 And then prior to that, I was an  
12 independent consultant. So I've been doing the same  
13 thing for an awful long time, it seems. As independent  
14 consultant, again, on energy efficiency, demand-side  
15 management, renewable energy, working primarily, at the  
16 time, for -- for government, various government  
17 agencies, as well as -- as non-profit organizations.

18 And during that time, I was also a  
19 member of the Quebec Energy Policy Commission, during  
20 which time we -- we rewrote Quebec's energy policy.  
21 That was in '95/'96, so...

22 Again, going back about twenty-two (22)  
23 years, exclusive focus on energy efficiency, primarily  
24 program design.

25 MR. BYRON WILLIAMS: Now, Mr. Dunsky,

1 you've mentioned clients, primarily government and  
2 utilities, but also non-government and the private  
3 sector.

4 Can you give the Board some insight into  
5 the jurisdictions in which you may have worked?

6 MR. PHILIPPE DUNSKY: Sure. We work in  
7 -- in a variety of jurisdictions; I'd say more in  
8 Canada than the US, but some -- some US as well. So in  
9 Canada, in the past couple of years, we've worked for -  
10 - we've worked in, I believe, eight (8) out of ten (10)  
11 provinces. Our clients are the likes of BC Hydro, the  
12 Government of Saskatchewan, the Ontario Power  
13 Authority, City of Toronto, Hydro-Quebec, Gas  
14 Metropolitan. In the Maritimes, we work for Efficiency  
15 Nova Scotia; Nova Scotia Power, as well; Newfoundland  
16 and Labrador Hydro; Newfoundland Power; New Brunswick  
17 Power; and -- and Efficiency New Brunswick.

18 So, you know, pretty much runs the  
19 gamut. Again, primarily utilities and government  
20 agencies throughout Canada. And then in the US, very  
21 similar clients. Organizations like Efficiency Maine,  
22 Efficiency Vermont, the New York State Energy Research  
23 and Development Authority, the Long Island Power  
24 Authority. So, again, primarily those utilities and  
25 government agencies responsible for DSM.

1 MR. BYRON WILLIAMS: Thank you for  
2 that. And just -- if you could just glance at page 1  
3 of your curriculum vitae for a moment, Mr. Dunsky. And  
4 you -- on that page, you identify your -- a number of  
5 the areas in which you've focussed.

6 And I wonder if you could highlight the  
7 areas of focus which are particularly relevant to your  
8 work in this proceeding.

9 MR. PHILIPPE DUNSKY: Sure. I mean,  
10 honestly, it pretty much all is. I mean, this is --  
11 this is pretty much what I do. So, you know, I, here,  
12 have outlined a few -- a few sort of key areas, if you  
13 will, of the work that I do. The first one (1) here is  
14 comprehensive DSM plans. So, you know, I've been very  
15 deeply involved in reviewing portfolios of DSM  
16 programs, developing full-scale energy efficiency DSM  
17 plans.

18 And I apologize, I -- you know, it  
19 depends on the jurisdiction. Some -- some  
20 jurisdictions, we talk about energy efficiency. In  
21 other jurisdictions, they talk about DSM. So I tend to  
22 use them interchangeably. If there's a preference  
23 here, someone let me know.

24 So, you know, we've developed  
25 comprehensive energy efficiency plans for clients.

1 Most recently, a couple years ago, we developed the  
2 plan for Efficiency Maine. We're currently developing  
3 the plan for -- for New Brunswick Power and -- and  
4 Efficiency New Brunswick. We've been very much  
5 involved in -- in developing of plans, you know, at  
6 that comprehensive -- comprehensive level for a number  
7 of different clients. New Jersey as well, Quebec --  
8 Quebec as well.

9                   In terms of program design -- I did the  
10 absolute mistake of not shutting my phone, and I  
11 apologize. I'll just take a quick second to make sure  
12 that does not happen again.

13                   In terms of program design, again, a lot  
14 of the work that we do is actually designing programs  
15 for clients. So whether that be, you know, low-income  
16 programs, or general residential retrofit programs,  
17 residential new construction programs, programs to --  
18 to encourage adoption of high-efficiency appliances,  
19 we've designed programs for small business, for large  
20 customers, large commercial and institutional  
21 customers, industrial customers as well. It pretty  
22 much runs the gamut.

23                   So when we do program design, you know,  
24 we'll -- we'll go down to the very nitty-gritty,  
25 technical level of looking at each individual measure

1 that might be applicable in the specific market or  
2 specific market segment. We'll -- we'll look at market  
3 dynamics. We will look at best practices throughout  
4 North America to make sure that -- there we go, flight  
5 mode -- to make sure that -- that we're bringing in the  
6 best practices and proven practices and also not, you  
7 know, repeating some painful mistakes that others have  
8 -- have had to go through.

9                   We'll develop market strategies. We'll  
10 develop imp -- implementation strategies and  
11 ultimately, you know, go from the very detailed,  
12 technical level to the very high marketing and  
13 strategic level to make sure that programs can be put  
14 into market and achieve their goals in as cost-  
15 efficient a way as possible.

16                   And so that's the -- the sort of work  
17 that we do on program design, again, for a very broad  
18 array of -- of clients; you know, in the vast majority  
19 of cases, clients who are tasked with implementing  
20 energy efficiency programs with achieving energy  
21 efficiency goals.

22                   MR. BYRON WILLIAMS:    Now, Mr. Dunsky,  
23 you can -- I'd focus on any of the ones that you wish.  
24 On page 2, I do note that you've also have had some  
25 focus in cost-effectiveness and market potential



1 studies.

2 MR. PHILIPPE DUNSKY: Yeah, we do a lot  
3 of work on -- on cost-effectiveness, and I'll say from  
4 two (2) different perspectives or angles. But one (1)  
5 is just literally running the cost-effectiveness tests.  
6 So we've done that. I've, you know, personally done  
7 that on, you know, thousands -- literally thousands of  
8 what we call, you know, measure/building types.

9 So, you know, it might be a -- a  
10 lightbulb in -- in a given type of home and -- and, you  
11 know, and a lightbulb in another type of home or in a  
12 business, you know, going the full -- running the full  
13 gamut of measures, the full gamut of -- of building  
14 types, in a wide variety of climates.

15 So we've run the cost-effectiveness  
16 analyses using all the standard cost-effectiveness  
17 tests for, you know, I'd say pretty much all our  
18 clients. It's -- it's pretty much standard work.

19 And then beyond that, we do a lot of  
20 work as well in -- in advising clients on appropriate  
21 cost-effectiveness testing and appropriate cost-  
22 effectiveness screening. And that's obviously a very  
23 critical thing. I know it's come up a little bit in  
24 these -- in these discussions.

25 I'd say that -- excuse me -- over the

1 past -- over the past couple of years, we've -- we've  
2 probably done some of the deepest work of any of our  
3 counterparts in North American on cost-effectiveness  
4 screening. And I'm -- you know, in the past -- past  
5 few months, I've been going around a lot, getting a lot  
6 of invitations to speak to that topic at leading  
7 industry conferences throughout North America.

8                   So it's cert -- certainly something that  
9 we work very closely on.

10                   MR. BYRON WILLIAMS: Now, Mr. Dunsky,  
11 anything else on those first two (2) pages that you  
12 wish to highlight, or have we -- are you satisfied  
13 we've given the Board a sense of -- of your -- the  
14 ambit of your work?

15                   MR. PHILIPPE DUNSKY: Sure. I mean, if  
16 -- if there are any questions on it, I'm glad to  
17 answer. But, you know --

18                   MR. BYRON WILLIAMS: If I could --

19                   MR. PHILIPPE DUNSKY: -- by and large --

20                   MR. BYRON WILLIAMS: -- ask you to turn  
21 to page 4 of your curriculum vitae for just a second.  
22 And you -- you see, at the top of page 4, highlights of  
23 current projects.

24                   And I would ask you to identify what, if  
25 any, current projects might particularly relate to your

1 relevant expertise for this project.

2 MR. PHILIPPE DUNSKY: Sure. And again  
3 I'd say, you know, in all likelihood, most of them  
4 will. So, you know, right now we're working with --  
5 working for BC Hydro to -- to review and -- and  
6 redesign some of their residential programs.

7 We're doing a lot of work with  
8 Efficiency Nova Scotia, one (1) of the DSM leaders in  
9 Canada today, helping them on a number of fronts. And  
10 so whether it be, you know, program design, cost-  
11 effectiveness frameworks as well, cost-effectiveness  
12 screening, providing technical support and regulatory  
13 support.

14 Maybe I'll skip over the financing  
15 models, but we provide general support to Efficiency  
16 Maine Trust on a number of similar issues that we're  
17 talking about today.

18 We just recently completed a study of  
19 the achievable potential for a demand response savings,  
20 which is, you know, very -- very similar to energy  
21 efficiency but just a little bit -- a little bit  
22 different, for Hydro Quebec, looking at the variety of  
23 -- excuse me -- of technologies that are available for  
24 demand response, but more importantly, how those  
25 technologies can lead to -- to predictable savings and

1 to what extent those technologies can -- can be brought  
2 into the market.

3 I'm -- I was recently chosen as the only  
4 trainer for the Association of Energy Service  
5 Professionals industry training courses on DSM for  
6 Canada. We're currently working for the Government of  
7 Quebec, helping them to -- to examine opportunities.  
8 They're -- they're in the process of revising their  
9 energy policy. And so they're looking at what are  
10 appropriate DSM or energy efficiency targets. So we're  
11 -- we're helping them with that.

12 We're currently, I think I mentioned  
13 before, working with NB Power to develop their first  
14 ever three (3) year DSM plan jointly with Efficiency  
15 New Brunswick. And we also just recently completed a  
16 potential study. So, again, a study of what very  
17 specifically is achievable, in terms of energy savings,  
18 with -- within give market segs -- segments for each  
19 specific measure over a certain period of time. In  
20 their case, I believes it's a twenty (20) year  
21 potential study with five (5) year intervals. So we  
22 recently completed that.

23 Now, I think that --

24 MR. BYRON WILLIAMS: Okay. Thank you.

25 MR. PHILIPPE DUNSKY: -- pretty much

1 covers it.

2 MR. BYRON WILLIAMS: And just, finally,  
3 if you could turn to page 12 of your CV. And you'll  
4 see a reference to public speaking engagements.

5 And are there any matters on there that  
6 are of particular note as it pertains to your evidence  
7 in this proceeding?

8 MR. PHILIPPE DUNSKY: Sure. You know,  
9 lately we've been -- I've been doing a lot of -- been  
10 invited a lot to -- to talk about cost-effectiveness  
11 screening in particular. And it's not something that -  
12 - that I've gone into in any great depth in this -- in  
13 this testimony, but it certainly is something that's  
14 come up in this -- in these hearings. I think it's  
15 certainly not the only -- the only issue that merits  
16 attention. But it certainly would merit attention to  
17 look more carefully at cost-effectiveness screening.

18 And so on that topic, you know, I -- I  
19 was invited to speak on that topic recently at the ASP  
20 conference in Toronto this summer; at the ACEEE  
21 conference, which is the other industry association, in  
22 August in California. I was invited to give a couple  
23 of webinar talks organized by two (2) different  
24 associations, US-based associations, over the fall.  
25 I'll be actually heading to Florida next week to talk

1 about that again at an industry conference.

2                   And I was just recently asked to -- to  
3 go and speak at a conference focussed specifically on  
4 energy efficiency evaluation techniques, but on this  
5 particular topic, in Chicago this -- this coming  
6 summer. So that's occupying a lot of my flying and  
7 presentation time these days.

8                   MR. BYRON WILLIAMS: Thank you. Now,  
9 Mr. Dunsky, as someone who's worked in the area --  
10 whether we use energy efficiency or DSM; I think we can  
11 use them interchangeably -- for the past twenty-two  
12 (22) years, are you the -- the type of consultant who  
13 always recommends more DSM, more energy efficiency?

14                   MR. PHILIPPE DUNSKY: No. You know,  
15 this is the work that I do, so I obviously have a very  
16 strong interest in it. And I do find often that --  
17 often the -- the potential for energy efficiency is --  
18 is understated. There are times that it's overstated  
19 as well. And -- and in those cases, I say so as well.

20                   I -- I believe the last time I was  
21 testifying was actually testifying that, in one (1)  
22 province, that they were aiming too high on energy  
23 efficiency. And -- and I was strongly urging that the  
24 energy efficiency -- excuse me -- that the energy  
25 efficiency goals there actually be ramped down to a

1 more realistic level.

2                   So, you know, I -- I think what's very  
3 important is that because it's such a -- you know, such  
4 a cheap resource in terms of, you know, it's extremely  
5 cost effective generally, the important thing is that  
6 we get it right and that we get as much as we can, but  
7 only what we can. And, you know, I certainly have no  
8 interest in overstating the case for it and then -- you  
9 know, and then seeing targets not met.

10                   The important thing is that we set  
11 appropriate targets and targets that are achievable.  
12 And as long as they are achievable, you know, I think  
13 energy efficiency will have its -- its -- you know,  
14 will have its day. But if we're going, you know, too  
15 far, needlessly far, you know, I think that's just far  
16 too risky. And ultimately, it's about keeping the  
17 lights on. So that's very important to me.

18                   MR. BYRON WILLIAMS:    Mr. -- Mr. Chair  
19 and members of the panel, based upon the information  
20 that Mr. Dunsky has provided to you, we would ask that  
21 he be qualified as an expert in the design and analysis  
22 of energy efficiency and related programs, including  
23 energy efficiency planning, program design, and  
24 evaluation.

25                   THE CHAIRPERSON:    I'd like to hear from

1 the other parties in respect of this request. Ms.

2 Ramage, do you have any concerns or comments about...

3 MS. PATTI RAMAGE: Manitoba Hydro has  
4 no concerns.

5 THE CHAIRPERSON: Now, I'm sure if --  
6 is Mr. Hacault here this morning?

7 MS. PATTI RAMAGE: I don't believe Mr.  
8 Hacault was planning on attending this morning.

9

10 RULING (QUAL.):

11 THE CHAIRPERSON: Okay. The -- the  
12 panel is prepared to accept Mr. Dunsky as an expert  
13 witness. I guess the first order of business is to  
14 welcome you to Winnipeg, Mr. Dunsky. We're quite  
15 appreciative that you're coming to visit, particularly  
16 on this very cold day. So thank you very much for  
17 attending, and we welcome -- we look forward to asking  
18 you some questions about -- about the topic. We're  
19 very interested in this topic, so thank you for coming.

20 MR. PHILIPPE DUNSKY: Thank you very  
21 much, and si je comprends bien deux aussi dire merci  
22 beaucoup, Monsieur le President, pour l'invitation.  
23 C'est assez interessant pour moi d'arriver a Winnipeg  
24 et s'apprendre que deux des trois membres parlent la  
25 langue que je parle couramment a Montreal. Merci



1 beaucoup.

2 Thank you very much for having me, and I  
3 also want to thank Manitoba Hydro for -- for letting me  
4 come over to their side for this particular logistics  
5 issue.

6 MR. BYRON WILLIAMS: And Ms. Ramage  
7 will of course be -- want to make sure that no one  
8 draws an adverse inference from Manitoba Hydro allowing  
9 you to sit on their side of the table.

10 MS. PATTI RAMAGE: I was going to  
11 suggest we're all really on the same side.

12 MR. BYRON WILLIAMS: Oh, you are too  
13 clever by half, Ms. Ramage.

14 MR. RAYMOND LAFOND: That's the demand-  
15 side.

16

17 EXAMINATION-IN-CHIEF BY MR. BYRON WILLIAMS:

18 MR. BYRON WILLIAMS: Mr. Dunsky, can  
19 you confirm that you were responsible for pre-filed  
20 written evidence which is marked as Exhibit CAC/GAC-3?

21 MR. PHILIPPE DUNSKY: Yes, I was.

22 MR. BYRON WILLIAMS: And you were  
23 responsible for the responses to Information Request  
24 posed by Manitoba Hydro to CAC/GAC, marked as  
25 MH/CAC/GAC/Dunsky number 6?

1 MR. PHILIPPE DUNSKY: I was indeed.

2 MR. BYRON WILLIAMS: And you were  
3 responsible as well for responses to Information  
4 Request posed by the Public Utilities Board marked as  
5 CAC/GAC Exhibit 13?

6 MR. PHILIPPE DUNSKY: Yes.

7 MR. BYRON WILLIAMS: And I've forgotten  
8 the exhibit number for the MIPUG exhibits but you'll --  
9 you'll recall and acknowledge that you were responsible  
10 for the preparation of Information Responses to the  
11 Manitoba Industrial Power Users Group, as well?

12 MR. PHILIPPE DUNSKY: Yes.

13 MR. BYRON WILLIAMS: And with the  
14 exception of any edits that you may make in -- in the  
15 course of your conversation today, can you confirm that  
16 the -- the written testimony and IR responses were  
17 prepared under your direction and control and are  
18 accurate, to the best of your knowledge and belief?

19 MR. PHILIPPE DUNSKY: Absolutely, yes.

20 MR. BYRON WILLIAMS: Mr. Dunsky, I  
21 wonder if you could outline the terms of your retainer  
22 by CAC and GAC?

23

24 (BRIEF PAUSE)

25

1 MR. PHILIPPE DUNSKY: Yes. So I was  
2 asked by -- by CAC and -- and GAC, my clients,  
3 essentially to review the -- the Power Smart -- the  
4 2011 Power Smart plan, in terms primarily of -- of its  
5 overall targets and -- and goals and plan savings, to  
6 compare that with -- or benchmark those -- those  
7 savings with others throughout North America, taking  
8 into account the -- the various contextual differences,  
9 of course, that -- that apply to Manitoba when we look  
10 at -- at other regions, cold being one (1) of them, and  
11 then -- and then to make recommendations based on --  
12 based on that assessment.

13 MR. BYRON WILLIAMS: Were you engaged  
14 to perform a detailed assessment of the individual  
15 programs of Manitoba Hydro?

16 MR. PHILIPPE DUNSKY: No, I was not. I  
17 had been -- I had done that in, I believe it was, 2008  
18 or 2009 for Manitoba Hydro. And you can imagine I had  
19 a little bit -- a little bit of discomfort in this  
20 context of having worked with the great folks to my  
21 right and now eventually, after I'm done, going and  
22 sitting on the left.

23 But -- so I did specifically ask not to,  
24 you know, in a sense, rehash the -- the very detailed  
25 program-by-program-level analysis that was done -- that

1 was done previously. You know, partly because I'm not  
2 sure it's necessary at this particular stage; partly as  
3 well because in the work that I had done previously,  
4 you know, I was -- I was privy to some confidential  
5 information. I had confidential discussions with --  
6 with program managers at Manitoba Hydro. And I  
7 certainly wouldn't want to be in any way, you know,  
8 translating discussions that, you know, frankly, you  
9 know, were -- were initially meant to be private.

10 MR. BYRON WILLIAMS: Thank you. And --  
11 and I guess just the -- the -- I omitted to ask before,  
12 but would it be fair to say that you have testified  
13 before this Board before on the subject of low-income  
14 energy efficiency?

15 MR. PHILIPPE DUNSKY: Yes, I -- I  
16 testified before this Board on low-income energy  
17 efficiency. I've testified, I think, thirteen (13) or  
18 fourteen (14) times now before a variety of -- of  
19 boards, either on behalf of non-profits, like your  
20 clients, or -- or on behalf of DSM program  
21 administrators, like Efficiency Nova Scotia or the  
22 Quebec Energy Efficiency Agency.

23 MR. BYRON WILLIAMS: Thank you, Mr.  
24 Dunsky. And -- and really enough about me and enough  
25 about you. Let's get to the -- your PowerPoint

1 presentation. And I'd -- I'd ask you to lead us  
2 through it.

3 I'll warn you that every once in a  
4 while, I may interrupt to ask a question of  
5 clarification. And I believe as well My Friend, Mr.  
6 Gange, may interrupt towards the end. But it will be a  
7 polite interruption, Mr. Dunsky.

8 THE CHAIRPERSON: Can I just ask a  
9 question before we start? In relation to your opening  
10 comments about your CV, and specifically you said there  
11 was a difference between demand response and demand  
12 management.

13 Could you -- could you explain that one  
14 to me?

15 MR. PHILIPPE DUNSKY: Yeah, and sorry I  
16 may have misspoke. What I -- what I meant to suggest  
17 is there's a difference between energy efficiency and -  
18 - and demand response. And both of those tend to fall  
19 within that broader -- if we're being more precise,  
20 within that broader range of what we call demand-side  
21 management, or DSM.

22 So demand-side management means working  
23 on the demand side. In some cases it means bringing  
24 in, promoting more efficient technologies -- so let's  
25 say a lightbulb that just uses less electricity to

1 produce the same amount of light -- whereas demand  
2 response is not so much about the efficiency of the  
3 technology per se, but about getting customers to  
4 actually shift the times at which they consume their  
5 energy, irrespective of efficiencies.

6

7 CONTINUED BY MR. BYRON WILLIAMS:

8 MR. BYRON WILLIAMS: Okay. Mr. Dunsky,  
9 please proceed.

10 MR. PHILIPPE DUNSKY: Well, thank you  
11 very much. Again, merci. Merci beaucoup de m'avoir  
12 ecoute.

13 I'll obviously give this in French, but  
14 -- in -- in English, I should say, but...

15 MR. BYRON WILLIAMS: I'm not sure --

16 MR. PHILIPPE DUNSKY: That's kind of  
17 how I feel in my life too, yeah.

18 MR. BYRON WILLIAMS: -- whether that's  
19 going to work for Mr. Soldier or not, or Mr. Williams.

20 MR. PHILIPPE DUNSKY: Obviously, if  
21 there are any questions, you know, don't hesitate to --  
22 to ask either afterwards or throughout the  
23 presentation. I'm happy to be peppered with any  
24 questions in any -- either of the two (2) languages, at  
25 least.

1                   Excuse me. Now, we just have to hope  
2 that this works. All right.

3                   So I think I've actually spoken about  
4 who we are. It's my standard slide about who we are at  
5 the outset of any given presentation. So why don't I  
6 just skip this over? Those are some of my clients.  
7 This is -- it's probably an angle issue. Well, we'll  
8 keep trying like this.

9                   Just -- just so everyone knows, just  
10 before we came in today, there was some technical  
11 issues. And so the slide deck that I had is being  
12 presented on a Mac, and so there may be the odd little  
13 glitch like this, but it shouldn't materially change  
14 anything.

15                   So in this -- in this slide, I can maybe  
16 go through five (5) -- five (5) sections, beginning  
17 with an introduction both to DSM as a whole -- and I  
18 apologize if that's going to be too, you know,  
19 needlessly didactic. I think it's just important  
20 sometimes to make sure that we all understand exactly  
21 what we're talking about -- and very quickly to  
22 Manitoba Hydro's Power Smart plan.

23                   I'll then get into the meat of the -- of  
24 the analysis, beginning with a benchmarking exercise.  
25 And we'll go through that exercise as well as the

1 findings. After that, I'll talk briefly -- or address  
2 briefly some of the points that were raised in Manitoba  
3 Hydro's rebuttal evidence to my initial testimony and  
4 then, finally, talk about the implications of all of  
5 this for Manitoba -- excuse me -- for Manitoba Hydro  
6 customers -- I think it's the cold, dry air -- before  
7 concluding with some recommendations.

8                   And hoping that I can get this thing to  
9 work. Is there any way that -- is there any way of  
10 angling the -- the laptop? I think it's just the  
11 receptor is exactly on the other side. Thank you so  
12 much.

13                   Okay. So beginning with the -- with an  
14 introduction then. So just to be clear, you know, the  
15 reason we talk about DSM, of course, is that it is, in  
16 many respects, simply another option to ensure that we  
17 keep the lights on. Fundamentally, that's what we need  
18 to do, is keep the lights on at the lowest cost.  
19 That's always how I -- how I view things, you know,  
20 with some other objectives. But fundamentally, that's  
21 it.

22                   So there are basically two (2) ways of  
23 keeping the lights on when -- when demand is growing.  
24 One (1) is to increase supply, and the other is to  
25 increase efficiency. In -- increasing efficiency



1 reduces demand. And so, again, the important point is  
2 that -- is that those two (2) meet.

3                   Just to give a sense of the importance  
4 of this option -- and this is a really critical --  
5 critical thing to understand, because sometimes energy  
6 efficiency can be seen, you know, when -- when you're  
7 not in the thick of it, I don't want -- I don't want to  
8 say "fluff", but it's not pipe in the ground, all  
9 right? It's not concrete. And so it may be seen as  
10 something a little bit less solid, less powerful as,  
11 let's say, building a new generating station, whereas I  
12 think it's very important to understand the opposite  
13 may be true.

14                   So in the US alone, since 1970 -- so  
15 over the past forty (40) years -- the energy efficiency  
16 has met roughly three-quarters (3/4s) of the total  
17 growth in demand for energy services. By that, I mean  
18 energy service -- the demand for energy services grows  
19 over time because population grows, house -- new homes  
20 are built. They're built larger. We like more -- more  
21 gadgets to be plugged into our homes. So that demand  
22 is growing.

23                   Without energy efficiency, that demand  
24 would have grown four (4) times faster than it actually  
25 did. So we used generation to meet one-quarter (1/4)

1 of the increased need. We used improved energy  
2 efficiency to meet three-quarters (3/4s) of that  
3 increased need. It's by far the single most important  
4 option for meeting the growth in demand for energy  
5 services. That's in the US.

6 In Canada, I just quickly pulled out a  
7 very similar analysis that was done by the federal  
8 government in the residential sector. In the  
9 residential sector over the past twenty (20) some  
10 years, increased supply has been used to meet 15  
11 percent of the growth and demand. Increased efficiency  
12 has met 85 percent of the growth and demand.

13 So again, without this -- the  
14 improvement in energy efficiency that we can promote  
15 and -- and enhance through our programs, you know,  
16 demand would have grown about seven (7) times faster  
17 than it actually did with, obviously, some very  
18 important implications, in terms of the number of, you  
19 know, power plants that we would need to have built  
20 over that same time.

21 So it's just to give a sense of it.  
22 Again, the single most important resources for  
23 balancing supply and demand actually comes on the  
24 demand side, not on the supply side. It's ironic,  
25 because we spend an awful lot of time debating, you

1 know, which generation option is better, you know --  
2 should we go for -- for hydro or for gas or -- or for  
3 wind -- when, in fact, that's really responding to a  
4 relatively small portion of the growth for needs.

5           Now, that resource itself has a pretty  
6 strong business case for it, going forward. And the  
7 very first value proposition from energy efficiency, of  
8 course, is that it's extraordinarily cheap. It's a  
9 very cheap resource to mine.

10           So I put up this graph here. This is --  
11 this is just comparing what we know about the cost of  
12 energy efficiency with the most recent estimates of the  
13 costs of different generating options put out by the  
14 Energy Information Administration.

15           You know, energy efficiency, I mean,  
16 typically costs about two (2) to three (3) cents a  
17 kilowatt hour on average. I've put two (2) to four (4)  
18 here just to -- you know, that may grow over time, so  
19 you never know. Let's just say energy efficiency costs  
20 around two (2) to four (4) cents a kilowatt hour. You  
21 know, new hydro will tend to cost somewhere in the  
22 range of seven (7) to fourteen (14) cents depending, of  
23 course, on the site.

24           Wind might be in the range of seven (7)  
25 to twelve (12). Natural gas really depends. Of

1 course, that's -- that's a moving target these days,  
2 with the evolution of natural gas prices. But  
3 typically we might be talking about six (6) to ten (10)  
4 or eleven (11) cents a kilowatt hour, assuming that  
5 we're actually trying to address the carbon in that  
6 gas.

7                   And then if we look at coal, assuming  
8 that we're doing coal with carbon capture storage,  
9 which I think it pretty much the only type of -- of new  
10 coal plant that we would consider building in Canada,  
11 you know, you're looking in the range of thirteen (13)  
12 to sixteen (16) cents a kilowatt hour.

13                   And, you know, whether those numbers can  
14 be, you know, pushed a little bit higher or pushed a  
15 little bit lower ultimately doesn't really matter,  
16 because we're talking about multiples. Energy  
17 efficiency comes in at multiples below the cost of any  
18 other of those resources.

19                   One (1) other thing I should mention  
20 before I forget, it's also generally recognized to have  
21 a lower risk than those options. And that may seem  
22 very counterintuitive because, again, it -- it sort of  
23 has an ephemeral quality to it, whereas a power plant  
24 is, you know, solid pipes in the ground.

25                   But there are a number of different

1 risks involved in building new power plants, whether  
2 they be, you know, cost overruns, construction delays.  
3 If you're talking about renewable energy, we never know  
4 exactly how much it's going to -- how much wind we're  
5 going to have, how much sun we're going to have, how  
6 much rain we're going to have.

7                   If we're talking about, let's say, a gas  
8 plant, the same things apply. You know, we have  
9 construction delays. We have co -- construction cost  
10 overruns. But more importantly, we're really betting  
11 that our crystal ball on the -- our crystal-ball  
12 forecasts of gas prices are going to pan out. Those  
13 things can change over time.

14                   So there are a lot of risks there. On  
15 energy efficiency, there's certainly risks as well, but  
16 one (1) of the advantages is that energy efficiency is  
17 actually a portfolio of many different pieces. And  
18 when you're managing an energy efficiency portfolio,  
19 you can -- you can spread that risk across literally,  
20 you know, hundreds or thousands of measures/market  
21 segments.

22                   So, you know, if one (1) particular  
23 effort is not performing as planned, you can ramp up  
24 another that's planning -- tha -- that's working better  
25 than planned. You got a lot more access to a lot more

1 levers to make sure that, you know, over time, we're  
2 hitting the targets that we need to hit.

3                   So a number of jurisdictions that have  
4 looked at that have -- have come to that conclusion and  
5 actually provide a sort of risk premium, if you will,  
6 to energy efficiency when they're comparing options.

7                   So that's just on the -- on the cost of  
8 risk side. You know, beyond that, there are other  
9 reasons why energy efficiency is often the preferred  
10 option. They -- you know, they may or may not be of --  
11 be of importance to this forum; I'm not sure. But  
12 certainly employment is one (1) of them. Energy  
13 efficiency actually creates, again, multiples more jobs  
14 per million dollar invested than do new power plants.

15                   Again, that seems counterintuitive as  
16 well, and -- but it's been borne out in every single  
17 study that's ever been done of the macroeconomic  
18 impacts of various options. The reason is simple.  
19 First, the money that you're putting into energy  
20 efficiency is going to be staying more local than just  
21 about any other option that you can have. It's  
22 essentially going to, you know, retrofit contractors,  
23 to builders to, you know, home hardware stores, staying  
24 very much local.

25                   And second of all, and very critically,

1 it's helping customers to save money. And that money,  
2 when its saved is then re-spent largely -- not  
3 entirely, but largely -- in the community, in the  
4 province. And that -- that has its own multiplier  
5 effect.

6           So, you know, we just -- my firm just  
7 completed, with another firm, macroeconomic impact  
8 study of energy efficiency versus supply options for  
9 four (4) Canadian provinces. Unfortunately, Manitoba  
10 was not -- not one (1) of them. But, again, in every -  
11 - in every case, it was -- it wasn't even close. You  
12 know, the -- the jobs created were significantly higher  
13 than the alternative.

14           From a climate perspective, typically,  
15 energy efficiency is viewed as the first priority in  
16 reducing carbon emissions. Of course, Manitoba --  
17 Manitoba is, along with my home province of Quebec, you  
18 know, a bit of -- a bit of an exception or a bit of an  
19 anomaly in that we rely largely on hydro and -- and, to  
20 a lesser extent, wind power.

21           So, you know, in Manitoba Hydro's case,  
22 energy efficiency has the added value when it's applied  
23 to -- to gas heating or to oil heating, of course,  
24 reducing carbon emissions directly. And when its  
25 applied to electricity, you know, in some cases that

1 may free up renewable energy to be exported to the US,  
2 therefore offsetting or reducing carbon emissions  
3 there. Ultimately, carbon, it doesn't matter where  
4 it's emitted; so it still matters.

5 I just very quickly referred to the  
6 economic side of things in that energy efficiency being  
7 such a cheap resource does increase household  
8 disposable income. In other words, if I'm spending  
9 less on my utility bills, that leaves me more money in  
10 my pocket. And if it leaves me more money in my  
11 pocket, I can then go out and spend that on other  
12 things that matter to me.

13 And similarly for businesses. It frees  
14 up business capital for more productive use.  
15 Businesses can do a lot more interesting things with  
16 their money than -- than send cheques -- no -- no  
17 insult intended -- but than send cheques to Manitoba  
18 Hydro when -- for services that involve wasted energy.

19 And then finally, there's customer  
20 satisfaction. Energy efficiency is an opportunity for  
21 customers to reduce their bills, of course, but also to  
22 secure other benefits. Often times, people do energy  
23 efficiency -- and I think that Manitoba Hydro alluded  
24 to this in -- in one (1) of their responses to an IR.  
25 People adopt efficient technologies for all sorts of



1 reasons, including things like comfort.

2                   You know, I -- I know I just recently  
3 did a very big renovation on my home, and one (1) of  
4 the things we did was insulate and weatherize. My  
5 family is a lot happier, irrespective of the bill  
6 savings that -- that we secured. We also put in a  
7 geothermal system, and now we have cooling in the  
8 summertime, which is a nice little bonus as well, again  
9 irrespective of the bill savings themselves. So there  
10 are a lot of other benefits that -- that participants  
11 receive, other than just reduced bills.

12                   So, you know, by and large those are the  
13 five (5) -- say, the five (5) pillars of the business  
14 case for energy efficiency for that resource. Now,  
15 again, if we -- if we come back to the idea of it being  
16 a resource, the question is, you know: Is this a  
17 resource that -- that is extinguishable? Or is this a  
18 resource that. once we get at it and once we improve  
19 efficiency to a certain point, it's done and we have to  
20 move on?

21                   And experience shows that that is not  
22 the case, by any stretch of the imagination. In -- in  
23 every respect, it's what one would call a renewable  
24 resource in that we are constantly  
25 renewing/replenishing the pool of energy efficiency

1 opportunities.

2                   You know, give the example of lighting,  
3 where, you know, fifteen (15) years ago, twenty (20)  
4 years ago, I was -- I was, you know, a very rare and  
5 unusual breed of person who went out and bought himself  
6 a compact fluorescent and put that in my socket, and  
7 the damn thing flickered all the time and, you know.  
8 And that was great back then. Now CFLs are more  
9 common. But, you know, now I just did a big retrofit  
10 in my home and I put in LEDs.

11                   You know, new things come up all the  
12 time, you know: ECM motors, high-performance T8  
13 lighting, you know, continuous insulation panels for --  
14 for new construction, ductless heat pumps, et cetera,  
15 et cetera.

16                   So really, this is a matter of  
17 innovation. And it should never be viewed as something  
18 where, well, you know, we've mined that and that's it.  
19 I think a great analogy for that is, ironically, if you  
20 look at mining, or -- or even better, oil and gas  
21 drilling, you know, where the -- the more we look, the  
22 more we find. So long as we're motivated to look, we  
23 will find more oil.

24                   And, you know, there are debates around  
25 that about how long that can go on for. But, you know,

1 if you go back at -- I put a little picture on the  
2 left; that's the very first oil well ever dug -- you  
3 know, dug an oil well, found oil. Fantastic, you know,  
4 now we've got some oil. After a certain point of time,  
5 you know, that -- that well was depleted. And when  
6 that well was depleted, you know, that particular  
7 gentleman could have gone home and said, All right,  
8 well, that's it. But we found ways to dig bigger wells  
9 and, you know, dig deeper under the ground to find more  
10 oil.

11                   And, you know, once we -- you know, we  
12 moved forward and we developed a lot of conventional  
13 oil fields and -- and once those started to hit their  
14 peak, you know, we could have said, Well, that's it,  
15 there's no more oil. You know, we've sort of hit the  
16 peak oil, and it's time to go home. But we didn't.  
17 You know, we moved on with new technology into deep-  
18 water oil drilling.

19                   By the way, I'm not a big fan of -- of  
20 oil, but -- but I think it's a very important -- it's a  
21 very good analogy for energy efficiency. If we're  
22 motivated to find it, we will continue to find it and  
23 continue to -- to dig deeper and find more  
24 opportunities, as our neighbours to the west are right  
25 now, in Alberta, with oil sands.

1 MR. BYRON WILLIAMS: Mr. Dunsky, before  
2 you leave this subject area, a slide ago you talked  
3 about the economic benefits and the customer  
4 satisfaction that could accrue from energy efficiency  
5 programming. But let me -- let me play devil's  
6 advocate for a second, if you'll permit me.

7 That's alwa -- always fine and good if  
8 you're -- if there's programs for you to participate in  
9 and if you're able to participate. But what if you're  
10 not able to participate? Maybe your income doesn't  
11 allow you to make that upfront capital investment.  
12 Maybe you live in an apartment or there aren't -- there  
13 isn't programming in -- in rural areas for all electric  
14 customers.

15 How do -- how do they benefit?

16 MR. PHILIPPE DUNSKY: Well, it's --  
17 it's a very fair point, and I -- and I -- I will  
18 address that briefly later on in the slide deck. But,  
19 you know, certainly I'm very -- very cognizant of that.  
20 I've spent a lot of time actually designing low-income  
21 programs.

22 I -- I think the -- the very -- the  
23 important thing to understand with the question of  
24 access to programs is if you are being very restrictive  
25 in your programs, in what you're putting out in the

1 market, you're probably defacto -- not by design, but -  
2 - but defacto -- not going to be providing sufficient  
3 opportunities for everyone to benefit.

4                   If, on the other hand, you are being  
5 aggressive in the market, you know, essentially  
6 providing something for everyone, being in every market  
7 space, being -- hitting every market opportunity, and  
8 addressing the different barriers that different  
9 people, you know, and businesses have, that's the way  
10 of ensuring that everyone can, in fact, participate in  
11 this.

12                   So, you know, there -- there are certain  
13 types of programs that, you know, by their very nature  
14 -- excuse me -- low-income customers are, you know, not  
15 going to be able to participate in, and, you know, one  
16 (1) example being home energy retrofits. In that  
17 particular example, it's very important from an equity  
18 standpoint that you offer, you know, a specific program  
19 to address the unique needs and barriers of that  
20 customer segment. That's the equity portion. And --  
21 and Manitoba Hydro does that already with its low-  
22 income program.

23                   There are other programs, by the way --  
24 and I wanted to clear, it's not a binary thing. There  
25 are other programs like that where the program, by its

1 very nature, requires thousands of dollars in  
2 investment, and a low-income customer won't be able to  
3 participate. There are other programs where low-income  
4 customers actually do participate without needing any  
5 special requirement for them.

6                   You know, I remember when we -- when we  
7 looked at this question for Efficiency Maine. You  
8 know, we built in the question of income into program  
9 evaluations. And so one (1) of the questions, we were  
10 -- we were, you know, surveying participants to various  
11 programs and, among other things, asking what their  
12 income was to get a sense of who's partaking in this.

13                   So there were programs, like, for  
14 example, programs that promote CFL lighting, where  
15 participation was just as strong among low-income  
16 customers as non-low-income customers. There were  
17 programs like -- like fridge -- fridge buy-back  
18 programs, where low-income customers were actually  
19 participating disproportionately higher than non-low-  
20 income customers in that program.

21                   So, you know, again, it's a bit of a  
22 complex thing, but it's just to say that there are --  
23 there are ways to ensure, if we want to, that pretty  
24 much everyone can have access to these programs in one  
25 (1) way or another.

1 MR. BYRON WILLIAMS: And I apologize  
2 for side-tracking you, but please -- please go on to  
3 slide 8.

4 THE CHAIRPERSON: Since we're asking  
5 questions, I should have asked this question earlier.  
6 In relation to slide number 5, where you talked -- you  
7 looked at the -- the -- how EE had supplied the  
8 majority of residential growth and demand, and I just  
9 noticed that the -- the data is somewhat dated now,  
10 because it really ends at 2006.

11 What's been experienced since 2006?

12 MR. PHILIPPE DUNSKY: I honestly  
13 couldn't say. And the reason is that this sort of  
14 analysis is -- is not an easy thing to do. So this is  
15 just the most recent study that was done on this topic  
16 by the Office of Energy Efficiency of the federal  
17 government. I'm not aware of a more recent look at  
18 that particular question. But, honestly, I have -- you  
19 know, if anything, I would suspect that efficiency  
20 would be accelerating -- would have accelerated since  
21 that time, because since 2006, across Canada,  
22 efficiency programs have accelerated their growth quite  
23 substantially.

24

25

1 (BRIEF PAUSE)

2

3 MR. PHILIPPE DUNSKY: So I'm just going  
4 to skip back here. Almost, almost. Okay. Now it's  
5 gone too far. All right.

6 So that's in terms of the resource.  
7 Now, in terms of Manitoba Hydro, you know, I do want to  
8 say Manitoba Hydro has a strong history with energy  
9 efficiency in -- in Canada. Manitoba as a province has  
10 received A-plus ratings from -- from the CEEA in the  
11 past. And, you know, I think in part that -- certainly  
12 in strong part, that reflects some of the programming  
13 that Manitoba Hydro has done. They've received awards  
14 for -- for certain initiatives. So they have a very  
15 strong history with DSM.

16 I would also say, and I think it's  
17 important to know, Manitoba Hydro has some very unique  
18 strengths for delivering DSM. And, you know, I was --  
19 I was joking with -- with Mr. Williams here about this  
20 yesterday. You know, I've got clients who -- I'll  
21 exaggerate a little bit -- who would die to be in  
22 Manitoba Hydro's position, in terms of some of the  
23 advantages and some of the unique strengths that they  
24 have to deliver DSM.

25 For one (1), Manitoba Hydro covers the



1 entire province. And that may seem like a simple and  
2 obvious thing, but I work in a lot of places where they  
3 don't. If you look at a place like Massachusetts, for  
4 example, which is leading DSM in North America right  
5 now, you know, their utilities are responsible for  
6 energy efficiency. And their utilities -- if you look  
7 at their -- their service territory, you know, it's the  
8 -- the worst Swiss cheese you could possibly imagine.  
9 You've got multiple utilities. They've -- they all  
10 cover, you know, different -- different municipalities  
11 throughout the state. It's just a pockmarked state.  
12 It makes it extraordinarily difficult to intervene in  
13 the market; makes it, you know, very difficult to work  
14 upstream, for example, with -- with suppliers, with  
15 wholesalers, with large -- large box -- you know, large  
16 box retails. There's a unique -- not a unique, but  
17 there's an important advantage that Manitoba Hydro has,  
18 can afford the strength to bring DSM to market.

19 Manitoba Hydro -- Hydro also has full  
20 electric/gas integration. That too is a pretty rare  
21 thing, certainly in Canada. I'm not -- I'm not  
22 thinking of pretty much anyone else who has that --  
23 that full integration. There probably are one (1) or  
24 two (2). But certainly, the -- the utilities that I  
25 work for are either util -- either electric utilities

1 or gas utilities.

2                   And so, you know, inevitably, there's a  
3 bit of -- of a doubling up of effort. You've got two  
4 (2) entities who are going out, and sometimes to  
5 different markets, but sometimes to the very same  
6 market. You know, you've got -- I'm doing work in  
7 British Columbia right where, you know, we've got an  
8 electric utility that has DSM goals, in terms of energy  
9 efficiency in residential space heating, for example,  
10 and the gas utility that has goals to reduce space-  
11 heating needs, as well.

12                   You know, it's this -- they're dealing  
13 with the same contractors. They're dealing with the  
14 same market barriers. They're dealing with the same,  
15 by and large, with a few exceptions, the same products  
16 and services. But they are two (2) separate  
17 organizations that, you know, now actually are working  
18 really hard to coordinate together. You don't have  
19 that problem. It's a fantastic advantage that you  
20 have.

21                   The history of DSM in Manitoba, you  
22 know, again, you have a pretty, you know, reasonably  
23 important history, including, you know, existing  
24 relationships with a fair number of market channels,  
25 you know, very experienced and capable staff at

1 Manitoba Hydro Power Smart. So again, you're building  
2 on -- and you have a very strong foundation there.

3                   You have a few other advantages, as  
4 well, that, again, I've got clients who would love to  
5 have this and who don't. Billing integration, for  
6 example; you know, the fact that Manitoba Hydro offers  
7 financing on the bill, I can tell, you I -- I have  
8 clients who -- you know, the DSM department won't dare  
9 even try to get that to happen, because when they have  
10 to go over to the billing department, you know, the  
11 billing department basically says, Look, you know, I'm  
12 going to char -- I'm going to charge you, you know, a  
13 million dollars just to open the file to even look at  
14 the possibility of bringing this into our billing  
15 system.

16                   It's extraordinarily complex stuff. We  
17 don't want to touch this. You've got that going, and -  
18 - and that's a great advantage. Data integration:  
19 This is the case for any utility, but a number of  
20 leading energy efficiency delivery program  
21 administrators are not utilities, and so they don't  
22 benefit from having the full data on what customers are  
23 actually consuming. Manitoba Hydro has all this data  
24 available to it - again, hugely valuable.

25                   So it's just to say that Manitoba Hydro

1 has a lot of strengths for DSM both because of their  
2 Power Smart team and because of some unique  
3 characteristics that aren't specific to the Power Smart  
4 team, per se. So there -- there is that -- that  
5 history of successful DSM there, including recognition  
6 for some of their programs.

7                   Now, this is where, you know, my  
8 analysis begins. And this is, frankly, where I was  
9 surprised. So there's been in -- since 2000, I'll call  
10 it, reasonably steady growth, which is a pretty --  
11 pretty much an indu -- industry-wide trend in DSM.

12                   But now looking forward, we're looking  
13 at a very, very different picture. And all of the  
14 sudden, you know, as of this -- well, I was going to  
15 say this year -- as of 2012, you know, savings are  
16 planned to decline, and very rapidly. And, you know,  
17 this is -- it's a very -- it's a very striking picture  
18 to me. It's -- it's a very striking set of numbers to  
19 me.

20                   You know, I remember when -- when Mr.  
21 Williams first -- first approached me to do this work.  
22 And my initial reaction was, Well, why don't you -- why  
23 don't you let me first take a look at -- at the plans,  
24 because there may be no need -- no need for me to come  
25 here? You know, Manitoba Hydro, again, you know, has

1 very, you know, very good ability to run Power Smart  
2 programs and -- and push that. So, you know, there's  
3 no need. And -- and that's when I looked at this and  
4 said, All right, well, there's -- there's something  
5 going on here.

6                   So the first thing that I did, of  
7 course, is to verify a question that is increasingly  
8 important in our industry. And I'll call it "crowding  
9 out". And that is that increasingly -- it's a very  
10 good thing -- governments are getting involved. And  
11 governments are coming in and adopting tighter energy  
12 codes and tighter energy standards.

13                   And so there's always a risk that, you  
14 know, maybe in a particular jurisdiction, codes and  
15 standards are coming in so strong that they're in  
16 effect crowding out the ability of -- of an entity to  
17 generate -- to generate savings from voluntary  
18 programs. In other words, you know, if we're locking  
19 in all the savings with a -- with a mandatory code,  
20 then maybe you can say, Well, you know, it gets a lot  
21 tougher to -- to encourage things voluntarily beyond  
22 that code level.

23                   So, you know, I did look at that  
24 question. You know, thankfully, Manitoba Hydro  
25 provided that information. And so this is that same

1 picture, including the effect of anticipated codes and  
2 standards as well as -- I think there's even some self-  
3 generation in there. So it's the all-in picture.

4 And again, the numbers change, but the  
5 trajectory remains the same. There's a very sudden,  
6 very dramatic reduction as of just about now, going to  
7 the future. So that's, you know, the big picture  
8 understanding the Power Smart. And now we're going to  
9 get into the analysis.

10

11 CONTINUED BY MR. BYRON WILLIAMS:

12 MR. BYRON WILLIAMS: Could you just  
13 flip back to slide 10 for one (1) second, Mr. Dunsky?

14 MR. PHILIPPE DUNSKY: Sure.

15 MR. BYRON WILLIAMS: If I look at it,  
16 am I correct in suggesting that the peak in terms of  
17 incremental annual savings was 2009? In that range,  
18 anyways?

19 MR. PHILIPPE DUNSKY: In that range. I  
20 think there was -- there was one (1) peak prior to that  
21 --

22 MR. BYRON WILLIAMS: A lit -- a bit --  
23 a bit earlier than that --

24 MR. PHILIPPE DUNSKY: -- and I'm not --

25 MR. BYRON WILLIAMS: Okay.

1 MR. PHILIPPE DUNSKY: -- I'm not sure  
2 exactly what that was. Probably introduction of a new  
3 code --

4 MR. BYRON WILLIAMS: Okay.

5 MR. PHILIPPE DUNSKY: -- is what it  
6 was.

7 MR. BYRON WILLIAMS: Thanks very much.

8 MR. PHILIPPE DUNSKY: So I was asked to  
9 -- to conduct a benchmarking analysis. And, you know,  
10 to be -- to be clear about it, benchmarking is -- is  
11 not about -- I don't remember if I said this in the  
12 slide here or not, but I'll just -- I'll just say it  
13 right now.

14 You know, the value of benchmarking is  
15 to indicate the nature of the opportunity. You know, I  
16 think it's really important when we look at a  
17 benchmarking exercise, especially when we're looking at  
18 something like fifty (50) odd comparable regions or --  
19 or comparative regions, the -- the idea is not to look  
20 at, you know, number 4 versus number 3, or number 17  
21 versus number 18, you know.

22 In that level, it's really to look at it  
23 a little bit at a higher level and think of it in terms  
24 of quartiles or deciles. But it is a very useful  
25 exercise so long as -- so long as we're making sure to

1 account for some contextual differences to indicate,  
2 you know, the nature of opportunities.

3                   So the benchmarking that we did, there  
4 was one (1) very quick one (1), and I'll go through  
5 that very quickly, and then the other one (1), far more  
6 important, which is a much deeper dive.

7                   The quick one (1) was to look at  
8 achieved savings in 2010. And why 2010? Just because  
9 that's the most recent year for which we have  
10 information from -- from the series of -- of other  
11 regions. The measure that we used for this is the  
12 industry standard percent of sales measure. So to be  
13 clear about it, it's -- the actual measure is the  
14 incremental savings over -- over sales in a given year.

15                   And so what that means is in any given  
16 year, my Power Smart Program is going out into the  
17 market and generating, you know, let's say, one hundred  
18 (100) new gigawatt hours of savings. We take that one  
19 hundred (100), we divide it by a total demand, and that  
20 provides the -- the benchmark here, which is the  
21 percent of sales.

22                   So there are other ways of benchmarking.  
23 In particular, percent of growth is one (1). But  
24 frankly, we felt that percent of growth in this case  
25 would not be appropriate, primarily -- I mean, for a



1 couple of reasons. First of all, it's just the percent  
2 of sales has become the industry benchmark, so it's  
3 always nice to hang your hat on that.

4                   But -- but beyond that, as we all know,  
5 unfortunately, we've been through some pretty wild  
6 economic times in the past few years, and that's  
7 affected loads in a pretty big way. So if we did a  
8 pure percent of growth, we would start getting some  
9 very strange anomalies. My feeling is that if we did a  
10 percent of growth, it would actually reflect more  
11 poorly on Manitoba Hydro, and that -- that poor  
12 reflection would -- would be undue. So I did not  
13 pursue that approach. So we stuck to the industry  
14 standard benchmark of percent of sales.

15                   We focussed here on energy efficiency  
16 programs. I mentioned before that in some cases you  
17 can have a situation where very aggressive codes come  
18 in and -- and make it tougher to -- to push voluntary  
19 programs. We are focussing here on programs though, so  
20 we're specifically excluding savings from codes and  
21 standards across the board.

22                   In terms of data, we're taking our data  
23 from the most recent ACEEE scorecard. The ACEEE is the  
24 independent industry association for US states. And  
25 we're complementing that with some Canadian provinces,

1 essentially four (4) Canadian provinces that are, you  
2 know, generally recognized as -- as being, you know,  
3 among the leaders in -- in the country. And we've  
4 tried as best we can to make sure that we're doing an  
5 apples-to-apples comparison here, again by removing  
6 non-program savings from the -- from the comparison.

7           Again, this is just on the achieved  
8 savings, 2010 piece. In a couple of moments, I'll get  
9 to the plan savings, which I think is much more germane  
10 to -- to the discussion.

11           So in terms of achieved savings, I put  
12 Manitoba Hydro in -- in red there. So in twent -- in  
13 terms of 2010 savings, savings were at .43 percent of  
14 total demand in that particular year, again from  
15 programs. It puts them essentially in the middle of  
16 the pack, if -- if you look at it that way.

17           If we look at quartiles, you know, the  
18 average of the top quartile had achieved 1.2 percent on  
19 average. The average of the top half of regions had  
20 achieved .94 percent. Manitoba Hydro is right up there  
21 at the top of the third quartile. The other Canadians  
22 in this group, they're not actually pulled out here.  
23 And I don't think that I have a -- I don't think I have  
24 a pointer on this.

25           But the other Canadian ones, if you look

1 at Quebec is -- is, I think, four (4) or five (5)  
2 regions over to the left. British Columbia is much  
3 further over to the left, at over 0.8 percent; so about  
4 double. And to be perfectly honest with you, I'm not  
5 seeing where Nova Scotia is there right now, but we'll  
6 talk about that -- about Nova Scotia later.

7 Over to the right you have, you know, by  
8 and large, places -- largely states -- that -- that  
9 really aren't doing anything of significance in energy  
10 efficiency. You know, you'll notice states like --  
11 like Alabama, Mississippi, Georgia, you know, the sort  
12 of Bible Belt states over to the right where, you know,  
13 honestly, for whatever reason, not for me to judge, but  
14 the energy efficiency is not -- is not a focus of -- of  
15 their -- of their efforts.

16 MR. BYRON WILLIAMS: Mr. Dunsky, just I  
17 guess kind of two (2) questions to you. Have you ever  
18 met a utility that likes benchmarking studies? And --  
19 and then if -- if -- perhaps if you could discuss the  
20 utility or the value of benchmarking studies.

21 MR. PHILIPPE DUNSKY: Vermont likes  
22 benchmarking; they're number 1. No, and, you know,  
23 this is -- unfortunately, it's a very dangerous terrain  
24 for a consultant, because, you know, invariably, anyone  
25 who's benchmarked, if they're any -- anywhere below

1 number 1, it doesn't appreciate the benchmarking  
2 exercise. And, you know -- and I can understand that.  
3 And in the very least, you know, wants to look very,  
4 very carefully at what's behind that and, you know, and  
5 does it take into account their unique characteristics  
6 and whatnot. And so those are questions that come up  
7 regularly.

8                   But, no, it's not something that's --  
9 it's not something that's often appreciated if you're  
10 outside of that -- let's say if you're outside of the  
11 first quartile, at least.

12                   And, I'm sorry, there was a second  
13 question?

14                   MR. BYRON WILLIAMS: And the second  
15 question is: What's the utility of it? What insight  
16 do we expect to gain from benchmarking, if properly  
17 done?

18                   MR. PHILIPPE DUNSKY: Right. And  
19 again, you know, this is really just to -- just to  
20 situate us in 2010, but the next -- the next exercise  
21 is going to be the forward-looking one. And the  
22 forward-looking one, I think, is the one with -- with  
23 the most utility in that it will give us a sense of,  
24 you know, what others are doing, what others are  
25 committed to doing.

1                   And, you know, again, if -- if we're  
2 talking about very, very close numbers, you know, I  
3 would say, Stop the benchmarking and let's just focus  
4 in on, you know, the nitty-gritty of individual  
5 programs. But when a benchmarking exercise identifies  
6 multiples of differences, I think that's extraordinary -  
7 - extraordinarily telling. And, you know, in the --  
8 the minor differences that might exist in context that  
9 -- that a benchmarking exercise can't always perfectly  
10 capture, you know, become far less important,  
11 certainly, again, when you're talking about multiples.  
12 So at the levels of multiples of difference, I think  
13 it's extraordinarily important and useful.

14                   So moving on to the plan savings.  
15 Obviously, this is a forward-looking analysis, and the  
16 future is not necessarily the same as the past. So  
17 we're looking here at voluntary programs or savings  
18 that are being planned to come from voluntary programs.

19                   When I say, "planned," by the way, it's  
20 not planned in -- in some, you know, vague, hopeful  
21 sense. It's, in pretty much every case we're talking  
22 about, very -- very solid commitments; fully funded  
23 commitments, at least in the first years; and  
24 commitments that the program administrator has very,  
25 very strong incentive to achieve and, you know,

1 typically has no history of not achieving their goals  
2 either. So, you know, program savings that are planned  
3 and that are fully expected to come in -- to come in,  
4 in order to keep the lights on, is what we're talking  
5 about here.

6                   What we did, in terms of plan savings,  
7 is -- is look at a smaller group. And looking at a  
8 smaller group allows us to go into greater depth and --  
9 and really sort of dig out some of the -- some of the  
10 explanatory variables. You know, there's the old  
11 saying of more than one (1), less than ten (10). For -  
12 - for this type of benchmarking, we landed on five (5).  
13 We thought five (5) was a reasonable number here, both  
14 in terms of not -- not running up the bill needlessly  
15 and -- and also being able to examine the different  
16 contextual issues.

17                   So -- and actually, you just ask the  
18 question of usefulness that's there. But again -- and  
19 the important thing is to look at variations in  
20 multiples, not variations in, you know, 5 or 10 percent  
21 differences.

22                   So in terms of the -- of the approach  
23 that we took here to the benchmarking exercise, there  
24 are four (4) steps. The first two (2) are to set up  
25 the exercise, and the last two (2) are to verify it ex-

1 ante to make sure that, you know, there's not something  
2 really important that we're missing here.

3                   So the first one (1) is choosing  
4 appropriate metrics. The second one (1) is choosing  
5 appropriate cohorts. So, you know, who are those other  
6 five (5) that we should be comparing with? And,  
7 obviously, that's critical. And the last two (2) are  
8 double-checking the same thing I talked about earlier.  
9 You know, what -- is there an undue impact from other  
10 savings -- let's say from codes or standards -- that  
11 may explain this? And finally, other exogenous factors  
12 that we'll -- that we'll talk about in a minute.

13                   So if I can just go through these step  
14 by step. And, you know, I apologize for taking a lot  
15 of time on this, but I think it's really important  
16 that, when we do this sort of exercise, you know, we're  
17 very clear about how it was done, you know, what the  
18 methodology is, because, as I'm sure you know, you  
19 know, you can get numbers to say whatever you want them  
20 to say. The important thing is -- is being clear about  
21 what's behind them.

22                   So I talked to this very quickly  
23 earlier, in terms of choosing the appropriate metric  
24 here, choosing the appropriate benchmark. We want --  
25 we want a benchmark that is perfor -- performance

1 oriented. So, you know, I've seen benchmarks, for  
2 example, that are around spending. And that can be  
3 very useful in some cases when we're trying to see  
4 who's spending more money than -- than someone else.  
5 But ultimately, this is about savings, not about  
6 spending money.

7                   Obviously, to the extent possible, we  
8 want to stick with the industry standard, and that is  
9 the percent savings benchmark. We want to make sure  
10 that -- that the benchmark is robust in the current  
11 context. And that comes back to the issue I was  
12 mentioning before about the bit of a crazy economic  
13 times that we've had and that many other provinces and  
14 states in particular have hit in the past several  
15 years. And want to make sure it's fair to Manitoba  
16 Hydro. And so, you know, for all of those reasons, we  
17 took the percent savings benchmark for the exercise.

18                   Now, the choice of co -- cohorts is  
19 probably the most important thing here. We could have  
20 said, Let's just take the top five (5) and let's, you  
21 know, compare Manitoba Hydro against the best of the  
22 best and see where it lands. But, you know, my feeling  
23 with benchmarking is it's really important to take into  
24 account a number of contextual differences, so we went  
25 through a few important ones.



1                   The first is DSM leadership. We don't  
2 want to be doing a benchmarking exercise that  
3 benchmarks Manitoba Hydro against Alabama, for example.  
4 That would defeat the purpose. We want to be  
5 benchmarking against those that are pursuing this, you  
6 know, relatively aggressively.

7                   The second is a history with DSM. We  
8 want to make sure that our cohorts -- you know, not  
9 every single one (1) of them is going to meet every  
10 single criteria, but we want to make sure that at least  
11 some of them have a good, strong DSM history, as does  
12 Manitoba Hydro, so that we're sure that we're not --  
13 you know, that we are comparing apples -- apples with  
14 apples.

15                   There are some places that have no  
16 history. And one might say, Well, you know, then  
17 there's pent-up demand. And so they can -- they can  
18 really take off because they're so inefficient to begin  
19 with. And someone else might say, Well, you know,  
20 someone who doesn't have a lot of DSM history will have  
21 a much longer and much harder time to ramp up because  
22 they're not used to this, they don't have relationships  
23 in the market, et cetera.

24                   The important thing here is just making  
25 sure that within our cohorts we've got both, because of

1 course Manitoba Hydro does have a long history with  
2 DSM. And so in this case, three (3) of the regions  
3 that we've chosen have a very long history with DSM.  
4 One (1) I'd call -- I'd say qualify as a medium history  
5 and one (1) is pretty new to the territory.

6 In terms of national context, obviously,  
7 we're not the US here. It doesn't necessarily make a  
8 big difference, but it might make a difference in some  
9 cases. So we wanted to make sure that we were bringing  
10 in some Canadian provinces to the mix, even though it's  
11 a lot easier to benchmark with US states just because  
12 the data is so much more readily available. So we have  
13 two (2) Canadian provinces, three (3) US states.

14 In terms of organizations, Manitoba  
15 Hydro, of course, is a utility, not an independent  
16 agency. We wouldn't want to be benchmarking them  
17 strictly against independent agencies. So in our group  
18 we've got three (3) utilities and two (2) third-party  
19 administrators.

20 In terms of climate, you have a uniquely  
21 cold climate, as I was reminded of again yesterday,  
22 stepping off the plane. It's really cold here. And so  
23 among our cor -- our cohorts, we -- you know, we didn't  
24 quite go to Antarctica for this, but we did make a  
25 point of choosing regions that are, you know, I'll say,

1 cold dominated to a -- to a certain extent, at least:  
2 you know, Minnesota, Nova Scotia, Vermont,  
3 Massachusetts and -- excuse me -- and British Columbia.  
4 Obviously, British Columbia is a lot more temperate  
5 than -- than Manitoba is, but nor is it California, nor  
6 is it Florida, nor is it Texas. And I think that's the  
7 important thing here.

8                   In terms of size, you know, Manitoba  
9 Hydro is not a particularly large market. And one  
10 might argue that, you know, being -- not being a large  
11 market, you have less ability to influence market  
12 decisions. You know, head offices of -- of large  
13 retail stores, for example, might not be here, so it  
14 might make it tougher to -- to work with stores to get  
15 your product, you know, in the right shelf space, for  
16 example.

17                   So again, we tried to make sure that our  
18 cohorts were -- were reasonable along those lines.  
19 We've got a couple of small ones, small market cohorts.  
20 And we've got three (3) mid-sized markets; so, you  
21 know, again, not California, not Texas, not Ontario.

22                   And finally, in terms of rates, you have  
23 very low rates. "Extreme" is probably not the right  
24 qualifier, but you have, you know, some of the lowest  
25 rates around. And so we wanted to make sure that at

1 least a couple of our cohorts also had, I'll say, low  
2 or low-ish rates - in this case, Mi -- Minnesota and  
3 British Columbia.

4                   So, you know, that's the process that we  
5 -- that we went through to -- to choose the cohorts.  
6 And you cannot do a benchmarking exercise that, you  
7 know, perfectly, you know -- that finds five (5)  
8 regions that are exactly Manitoba Hydro. Otherwise,  
9 we'd be comparing Manitoba Hydro against themselves.

10                   But I do think that we did a pretty  
11 reasonable job at trying to make sure, to the extent  
12 possible for a benchmarking exercise, you know, we're  
13 comparing apples to apples. So --

14                   THE CHAIRPERSON:    Could you explain why  
15 Quebec was excluded from the cohort?

16                   MR. PHILIPPE DUNSKY:    I remember some  
17 time ago, I was having a conversation with someone at  
18 Hydro-Quebec, and -- and we were talking about a fridge  
19 program. And -- and I said, You know, a fridge program  
20 would be great here. And they said, Oh, you know, I  
21 don't think so. You know, we're not like other places.  
22 You can't compare us with other places. Our fridges  
23 speak French. That's not why Quebec isn't here. They,  
24 by the way, went on to have the most successful fridge  
25 program in North America.

1                   But, no, Quebec wasn't here for a couple  
2 of reasons. You know, first, just because we had to,  
3 you know, choose some and not others. But one (1) of  
4 the reasons is that Quebec right now is facing a very  
5 difficult situation. And it's one (1) that, you know, I  
6 don't wish on Manitoba Hydro at all. And that's a  
7 situation where they are in extraordinarily deep  
8 surplus. And -- excuse me -- and so with  
9 extraordinarily deep surplus -- deep surplus comes the  
10 issue of, Well, do we pursue DSM in an aggressive way  
11 anymore or not? There -- there's a lot of discussion  
12 and debate going on. There's a policy process that  
13 will be launched any day now. So it -- it's kind of up  
14 in the air.

15                   In other words, you know, 1) it's a  
16 moving target. But more importantly, I wouldn't place  
17 it among the leaders, coming back to the very first  
18 criteria today.

19                   MR. BYRON WILLIAMS:     Mr. --

20                   MR. RAYMOND LAFOND:     Extremely deep  
21 surplus. Can they not export to the US like Manitoba  
22 does?

23                   MR. PHILIPPE DUNSKY:     They -- they  
24 export everything they can, but they have a couple of  
25 problems; first of all, the inter-tie capacity

1 limitations. So they are exporting what they can, but  
2 it still doesn't cover it.

3 And b) the -- the Northeast US is still  
4 reeling off of the economic crisis of the past few  
5 years. So their own demand has plummeted, and  
6 therefore the export prices have plummeted as well.  
7 Hydro-Quebec is -- is not getting half of what it used  
8 to get on the export market for their current --  
9 current sales.

10 Does that answer that -- yeah.

11 So in terms of the -- the benchmarking,  
12 this is essentially what we found. The cohorts that we  
13 looked at are largely and continuing to increase their  
14 planned savings over time, despite much higher starting  
15 points. If you -- let's see.

16 Well, if we look to the graph, the red  
17 line is Manitoba Hydro's planned savings from the Power  
18 Smart plan. And I -- I put a box around 2015 year just  
19 to be able to focus the mind on -- on a single time  
20 frame. And so you see that by 2015, Manitoba Hydro is  
21 looking at about 0.3 percent savings. At -- in that  
22 same year, BC Hydro is expecting to be at 1 percent.  
23 Nova Scotia is expecting to be at -- I believe that's  
24 1.3 percent, Minnesota will be at 1.4 percent, Vermont  
25 will be at two point one (2.1), and Massachusetts at

1 2.6 percent.

2                   So those are the -- the plan savings of  
3 each of those cohorts. And over on the table on the  
4 left there I just, you know, put those same numbers  
5 again, in terms of the 2010 savings and the 2015  
6 savings. You can see both the starting points and --  
7 and in those cases the -- the end points, or at least  
8 the 2015 point, and the multiples that they represent  
9 over Manitoba Hydro's planned savings for 2015.

10                   Just a little note if you're, you know,  
11 let's say, looking at -- at, you know, Vermont at -- at  
12 2 percent -- or, sorry, at 2.1 percent versus Manitoba  
13 Hydro at zero point three (0.3), you would think that  
14 means a multiple of seven (7). The six point four  
15 (6.4) is just due to rounding. So obviously, very  
16 large differences here. It's coming back to those  
17 multiples that I was talking about before. We're not  
18 talking about 5, 10, 15, 20 percent here. We're  
19 talking about 100, 200, 300, 500, you know, 800 percent  
20 differences, in terms of plan savings.

21                   Now, when we then go to step 3 and look  
22 at the question: Well, you know, is there any risk  
23 that this is again coming back to the crowding-out  
24 concern that I mentioned earlier? Perhaps Manitoba  
25 Hydro is planning on -- or per -- perhaps Manitoba is -

1 - is counting on some, you know, very aggressive new  
2 codes and standards that could make it more difficult  
3 to achieve savings on a voluntary basis. And that does  
4 actually have an impact.

5                   And if you look at -- and I'm sorry, but  
6 just to explain the two (2) graphs here, the graph on  
7 the top is the same thing that we saw before, but  
8 adding savings from codes and standards. And the graph  
9 on the bottom is the same thing, but adding on top of  
10 that savings from changes to rate structures as well as  
11 -- as self-generation.

12                   So if we -- you know, if you look at  
13 either of them, actually, Manitoba Hydro's savings  
14 trajectory changes somewhat. It kind of stabilizes  
15 because of the introduction -- or the -- the  
16 anticipated introduction of new codes and standards.  
17 But the anticipated savings in the other regions also  
18 increase.

19                   And when we look at the increases, we  
20 find that, almost to a 'T', they're the same. By and  
21 large, Manitoba Hydro's savings increase by about .4  
22 percent. BC's -- or BC Hydro's planned savings  
23 increase by about .4 percent. And Nova Scotia's  
24 planned savings increase by about -- by about .4  
25 percent.



1 I don't think that, you know, it's not -  
2 - it's not that they, you know, work together to make  
3 it that way. It just so happens that, you know, I  
4 suspect they're looking very much at the same sorts of  
5 opportunities to lock in savings through codes and  
6 standards.

7 So in other words, it changes the  
8 numbers. It doesn't change the trajectory, and it  
9 doesn't change the presence of multiples of difference.  
10 I -- I thought I might actually just integrate the two  
11 (2), just to give us a -- a sense of direction here.

12 And so what I've done in this slide --  
13 and I'm sorry, this is the concern I had about  
14 presenting -- putting a -- putting a -- a Windows slide  
15 deck into a Mac computer. You get some funny things  
16 over on the left, but I think the important thing can  
17 be seen here.

18 What I've put here is the original 2010  
19 savings benchmark and then overlaid the planned savings  
20 -- or the changes in those savings as they're planned,  
21 going out in time. And so, you know, if we look at  
22 each of those cohorts -- if you look at Nova Scotia,  
23 for example, the orange one, Nova Scotia in 2010 was at  
24 .8 percent. They're looking to go up to one point  
25 three (1.3). You know, BC was at point eight (.8);

1 they're going to be up at one (1). Minnesota, one  
2 point two (1.2), going up to one point four (1.4).  
3 Vermont, which was, you'll recall, leading the pack in  
4 this benchmarking, the only state that unabashedly  
5 loves benchmarking exercises, is nonetheless continuing  
6 to increase its planned savings. Massachusetts is  
7 increasing from just over 1 percent to 2.6 percent over  
8 that time frame. So it -- just indicating, again, the  
9 same sort of information in a different way.

10           And I should mention, you know, this is  
11 not unique to the five (5) cohorts that we chose here.  
12 You know, I was just -- just reviewing Connecticut's  
13 plan the other day. They're not specifically called  
14 out here, but I think they're somewhere in between the  
15 green -- the green and blue line there. They're at  
16 about, you know, 1 percent or so right now. They  
17 intend to be up at 1.8 percent in the next few years  
18 and holding. In fact, averaging 1.8 percent over the  
19 next decade is their -- is their commitment, and that's  
20 what's built into their planning process in order to  
21 keep the lights on.

22           So there's a direction here. Frankly,  
23 you know, it's not a surprise. It's the reason that my  
24 company exists and -- and, you know, has been growing  
25 over the past several years. There's a lot more

1 activity going on in the past several years than there  
2 was in the past.

3                   You know, by and large, with some  
4 exception, you know, regions throughout North America  
5 are placing more and more emphasis on energy efficiency  
6 and are increasing their savings goals. And what we  
7 find, coming back to that initial analogy with the --  
8 the oil rigs is the more people or the more states, the  
9 more provinces, do DSM, the more they get comfortable  
10 with it, the more they plan to do even more still.

11                   By and large, the picture, again, with  
12 some exceptions. And obviously, Manitoba Hydro is,  
13 unfortunately, from my perspective, going in -- in the  
14 opposite direction.

15                   MR. BYRON WILLIAMS: Mr. Dunsky, if I  
16 could just stop you for a moment.

17                   Mr. Chair, we still have a fair bit to  
18 go. I don't know what would be an appropriate break  
19 for the -- that the Board would desire. It's about  
20 quarter to 11 right now.

21                   THE CHAIRPERSON: I think we should --  
22 I think we should take a break now. So let's do ten  
23 (10) minutes, and we'll come back and continue with the  
24 -- the presentation.

25

1 --- Upon recessing at 10:43 a.m.

2 --- Upon resuming at 10:56 a.m.

3

4 MR. BYRON WILLIAMS: My apologies to  
5 the court reporter. Mr. Chair, I just wanted to flag  
6 that we'll -- it's a lengthy presentation, but  
7 certainly our clients -- our client, and also GAC,  
8 believes it's important to go into some detail. And  
9 we're going to propose a break at around slide 40.

10 It's an important break, because we -- we -- there's an  
11 area of miscommunication or misunderstanding between  
12 ourselves and Manitoba Hydro that we -- we wish to  
13 discuss with Manitoba Hydro over -- over lunch. So  
14 that -- that's why I would propose that around there,  
15 hopefully, we'll -- we will be granted the -- the  
16 opportunity to stand down for a little bit.

17 THE CHAIRPERSON: Mr. Dunsky, I'm  
18 looking at this slide. You mentioned that you looked  
19 outside -- you also looked outside the cohort, or at  
20 least you -- you have some sense of what's happening to  
21 the -- the jurisdictions that are not part of the  
22 cohort.

23 I guess the question is: Quebec, based  
24 on what you earlier said about the re-examinations  
25 going on, is it your belief that Quebec will be moving

1 in the same direction as Manitoba?

2 MR. PHILIPPE DUNSKY: If I had a  
3 crystal ball... I -- it's a really tough call, to be  
4 perfectly honest with you. There -- as you know,  
5 there's a new government in Quebec. That government  
6 has -- the Minister of Energy there is just about to  
7 launch a process to revise the energy policy. And that  
8 would include, normally, targets for energy efficiency.  
9 The minister has indicated clearly that her priorities  
10 are, first, energy efficiency; second, renewable  
11 energy. So from that perspective, I would anticipate  
12 that it would go in the same direction.

13 On the other hand, there is this -- this  
14 reality of very large surpluses. So I'm not sure how  
15 that will work itself out. I'm actually meeting with  
16 them next Tuesday, so I might have a better sense of it  
17 next week, but...

18 THE CHAIRPERSON: But in that  
19 jurisdiction, DSM is managed by the utility or -- or by  
20 some other entity?

21 MR. PHILIPPE DUNSKY: Boy, you're  
22 asking tough ones. DSM is managed by both in Quebec.  
23 Not an ideal situation and, really, the result of  
24 historical tugs of war, if I may.

25 But right now, Hydro-Quebec is

1 responsible for a lot of the electric savings but  
2 nothing to do -- to do with -- or little to do with  
3 building envelope. And the government agency that is  
4 now part of the government ministry is responsible for  
5 -- primarily responsible for all non-electric savings,  
6 other than gas, as well as all envelope-related  
7 savings; so, you know, home retrofits, new construction  
8 programs, as well as some innovation.

9           The truth of the matter is, there's some  
10 grey areas there that can lead to friction between the  
11 two (2). So it's a bit of a mixed bag.

12

13 CONTINUED BY MR. BYRON WILLIAMS:

14           MR. BYRON WILLIAMS: Mr. Dunsky, we  
15 just -- on that point and before you proceed, in terms  
16 of the magnitude of the surplus, can -- can you give  
17 any insight to that?

18           MR. PHILIPPE DUNSKY: Well, the -- the  
19 last analysis that was done -- and -- and please don't  
20 hold me to this exact number -- but, you know, plus or  
21 minus a couple of years, I think we're looking out to  
22 something like 2025 or -- or further for deep  
23 surpluses. It's -- it's a pretty unique situation  
24 where, you know, because of the economic -- a couple  
25 things happened. And it's actually a very interesting

1 story perhaps for -- for Manitoba. We went forward  
2 very quickly with -- with plans to build new dams. And  
3 those plans, you know, to be honest, took on a bit of a  
4 life of their own politically as well.

5           So the projects were brought forward at  
6 the same time we were engaging in new contracts with  
7 independent power producers that were also -- I don't  
8 want to say politically motivated, but -- but they were  
9 -- they were requir -- required by regulation.

10           So there was a bit of a building spree  
11 in the past several years. And -- and at just about  
12 the same time, we had the economic crisis that hit, and  
13 it hit some of our large industrial customers very,  
14 very heavily. We had a number of large industrials  
15 close or dramatically reduce their output and,  
16 therefore, their consumption of electricity. At the  
17 same time, in the Northeast the same thing happened.  
18 So our -- our export customers faced the same  
19 situation.

20           And so, you know, essentially, we -- we  
21 were extremely optimistic in building. And then  
22 reality hit us, and we're now stuck. And, you know,  
23 there's, you know, big front-page headlines in the  
24 papers, you know, on a pretty regular basis. There was  
25 another one just this week about, you know, the

1 literally billions of dollars that it's going to cost  
2 us because we have to pay for this -- for this energy  
3 that we don't need.

4                   There's one (1) -- one (1) case in  
5 particular where we -- we literally signed an IPP for a  
6 new power plant -- or signed a contract for a new power  
7 plant from an independent power producer. We're  
8 committed to buying all of the output to it -- or of  
9 it, but it -- the power plant has never actually  
10 produced a single kilowatt hour, because we haven't  
11 needed a single of its kilowatt hours. So we just have  
12 to keep paying money to Can -- TransCanada Pipelines,  
13 who are the power plant owners and operators, for power  
14 that they're not producing.

15                   MR. BYRON WILLIAMS: Thank you. And  
16 I'm -- I'm sorry to sidetrack you. Please proceed.

17                   MR. PHILIPPE DUNSKY: So once we -- you  
18 know, so we looked at the -- at the plan savings  
19 benchmarking. And -- and now we move to the fourth  
20 step, which is looking at, you know, what might explain  
21 this? Is -- is there anything that is specific to the  
22 context of Manitoba and the cohort regions that might  
23 explain these differences?

24                   We -- we wanted to take a bit of a  
25 deeper dive into -- excuse me, into four (4) issues in



1 particular: Manitoba Hydro's, again, cold climate. I  
2 was talking with people over the break. You know, I'm  
3 exaggerating the shock a little bit. I do come from  
4 Montreal. It's not exactly warm and balmy weather.  
5 But -- but nonetheless, you know, your -- your climate  
6 here and your heating degree days are higher than --  
7 than any of the other cohorts.

8                   We also wanted to look more closely at  
9 the issue of market size, of electricity rates, and the  
10 share of industrial loads. So I don't want to go into  
11 these in any tremendous detail. There's a bit more in  
12 the -- in the testimony.

13                   But just going piece by piece, starting  
14 with the climate question, the cold question, this can  
15 really go two (2) ways. It's important to understand  
16 how -- how these variables can impact the ability to  
17 achieve energy efficiency savings.

18                   On the one hand, colder weather can  
19 actually increase the savings for every dollar that you  
20 put in. Now I'll give you an example. We're doing  
21 work in -- in British Columbia, looking at retrofit  
22 programs. And we face a bit of a challenge because for  
23 the same dollar that we're putting in, let's say, to,  
24 you know, a more efficient heating system, we're really  
25 not getting all that much savings as compared to the

1 amount of savings that one might get from the same  
2 system in Manitoba, because your heating needs are much  
3 greater. But the system, you know, by and large, with,  
4 you know, a little bit of exception, costs -- costs  
5 similar or the same.

6 On the other hand, one could argue that  
7 because, you know, in a region where it's as cold as  
8 Manitoba, your baseline is already more efficient. In  
9 other words, people are not living here, you know --  
10 one hopes, at least -- in -- in cardboard boxes. A lot  
11 of homes are already well insulated. And they're  
12 probably more well insulated than equivalent homes, you  
13 know, let's say, if I jumped to -- to Vancouver Island,  
14 certainly.

15 So it can -- it can go both ways.  
16 Another impact is that colder weather means that you  
17 have more interactive effects, and that's important.  
18 And what that means is that for those customers who are  
19 heating with electricity, and I think there's -- I  
20 don't remember the exact market share, but it's a --  
21 you know, a reasonably substantial number of -- of  
22 residential customers heating with electricity.

23 When -- when you get savings from non-  
24 heated -- heating-related measures -- let's say your  
25 lightbulb is more efficient -- it's more -- when we say

1 it's more efficient, it means that it's releasing less  
2 heat, right. And because it's releasing less heat your  
3 -- your heating needs are going to increase. So a part  
4 of the savings that we get from some of our appliances  
5 and lighting measures, and other things like that, are  
6 actually then lost through increases in electricity  
7 used for heating.

8                   So various effects that -- that really  
9 can go both ways. We wanted to -- to see, you know,  
10 what that looked like and -- and if, in the end, there  
11 appears to be any clear direction. We looked at the  
12 data. The data essentially found no obvious  
13 relationship.

14                   And I'm sorry, I know that -- that graph  
15 to the right is kind of hard to -- hard to read. But  
16 very quickly, the -- the circles, if you will, the  
17 little circles there are the level of planned -- I  
18 believe it's planned savings for 2015. So it's the  
19 benchmark savings. And then the red bar is the amount  
20 of heating needs. So -- and I'm setting aside the blue  
21 bar, because that's cooling needs and it's not a -- not  
22 a huge issue here.

23                   So, you know, if you look at the third  
24 bar there -- that's Manitoba -- obviously, you see by  
25 far the highest heating degree days, so the highest

1 heating loads. And you see the lowest savings ratio.

2 And so one might infer that, you know, maybe that

3 that's what's going on.

4                   If you look at it more closely, you  
5 know, you look at a place like, let's say, Vermont,  
6 Vermont is not as cold as Manitoba but an awful lot  
7 colder than BC and Mass -- and Massachusetts. And yet  
8 their savings ratio is the second highest in the group.  
9 You know, their savings ratio is -- I think it's, you  
10 know, just over two (2) times British Columbia's, even  
11 though they're colder than British Columbia.

12                   So, you know, when you look at this sort  
13 of thing, you understand why, again, the impact goes  
14 both ways. And we really don't see an obvious  
15 relationship between cold and -- or an obvious  
16 relationship that would explain why the colder weather  
17 in Manitoba would lead to a significant impact in its  
18 ability to save energy.

19                   In terms of market size, the same thing  
20 again. The logic can go both ways. Smaller -- a  
21 smaller market means that you have less market power.  
22 On the other hand, a smaller market means that you can  
23 be more -- more nimble and perhaps have closer  
24 relationships. In some cases -- I think in Vermont --  
25 you know, they -- they really -- they have a lot of

1 small communities and -- and they really use that to  
2 their advantage.

3           So it can go both ways. We looked at  
4 the data. The same thing; there's no real  
5 relationship. Vermont is the smallest of the markets.  
6 They have the second-highest savings. Massachusetts is  
7 the second largest of the markets, and they have the  
8 highest savings. There's no obvious relationship.

9           If I move on to the third, which is  
10 industrial loads. So Manitoba Hydro's industrial  
11 loads, as a share of the overall load, are larger than  
12 in other regions. And again, if you look at the -- the  
13 graph here, and Manitoba is again the third bar there,  
14 the industrial is the green part of the bar. And  
15 you'll see that that green part on Manitoba's bar is  
16 somewhat larger than the green bars on the other ones.  
17 It's not a huge difference, frankly, but there's a  
18 little bit of a difference.

19           Again, when we look at the savings  
20 ratios, we don't see an obvious relationship. The  
21 differences are -- first of all, the differences  
22 between the percents of loads are, you know, pretty  
23 negligible in the big scheme of things. And second of  
24 all, we just don't see a relationship between that and  
25 the -- and the savings ratios.

1                   And finally rates; and rates is the  
2 tougher one (1). The logic, again, can go both ways.  
3 If you have low rates, you might expect lower  
4 participation in programs. And that's really important,  
5 because for, you know, for a typical customer, the --  
6 the payback is going to be longer for the same dollar  
7 in.

8                   On the other hand, if you've got low  
9 rates, then one could argue that your baseline is  
10 actually going to be less efficient. This is almost  
11 the exact flip-side to the earlier, you know, the --  
12 it's the other side of the coin to the earlier  
13 discussion around climate.

14                   You know, if rates are low, then one  
15 might expect that businesses would have invested less  
16 than in other regions on their own in energy savings.  
17 So their starting point is going to leave more room for  
18 potential savings. Again, that's the logic. The logic  
19 says it can go both ways. We looked at the data.

20                   When we looked at the data for the five  
21 (5) cohorts we -- we did find that, you know, among the  
22 five (5) and Manitoba, the -- with some exception, the  
23 regions with higher rates had higher savings targets,  
24 the regions with lower rates had lower savings targets.

25                   And so we were curious about that, and

1 we decided to expand the analysis out to get a little  
2 bit more depth to it. And so we brought in -- we sort  
3 of filled in. If you recall on the initial  
4 benchmarking, you know, we have fifty (50) odd -- I  
5 think it was fifty-four (54) or fifty-five (55) states  
6 and provinces. And the ones that we took for the  
7 benchmarking were -- after we used all the different  
8 criteria, were numbers 1, 4, 7, 14, and 17, I believe.

9           So what we did was we -- we in-filled  
10 that. So now we took all of the regions between 1 and  
11 17 so that we had, essentially, the top third of  
12 regions, if you will. When we do that, we really,  
13 again, don't find a significant relationship between  
14 rates and -- and energy savings targets.

15           You know, most of -- most of the regions  
16 here, their savings targets fall within a range that  
17 I'll say is plus or minus, you know, somewhere around  
18 the 1 percent mark. And that applies to, you know, to  
19 states with -- with rates of twenty-five (25) cents a  
20 kilowatt hour or seventeen (17) cents a kilowatt hour.  
21 And it applies to states with -- with rates that are  
22 very similar to Manitoba Hydros, you know, six (6) or  
23 seven (7) cents a kilowatt hour.

24           MR. BYRON WILLIAMS: Mr. Dunsky, if I  
25 could just stop you here and just get you to elaborate

1 a little bit more. Maybe you can use Idaho, Manitoba,  
2 and -- and New York as some -- some examples of that,  
3 or -- there's others.

4 But if you can help us to -- to make  
5 your point here a little more expressly.

6 MR. PHILIPPE DUNSKY: Yeah, that --  
7 that's good. And if -- if you'll allow me, I'm just  
8 going to pull out the paper version, because I'm  
9 realizing that I can't actually -- my eyes aren't as  
10 good as they once were. I'm -- I can't actually point  
11 them on the screen there -- or find them on the screen.  
12 I thought I had a paper version here. Yes.

13 MR. BYRON WILLIAMS: And if the panel  
14 is -- is just looking to kind of try and locate Idaho,  
15 it would be about six (6) from the -- the left.  
16 Manitoba would be another three (3) over, and New York  
17 would be another three (3) -- or -- or four (4) or five  
18 (5) past Manitoba.

19 MR. PHILIPPE DUNSKY: Right. So in  
20 Idaho's case, they are -- their savings are at about 1  
21 percent a year. Their rates are at approximately six  
22 (6) -- six (6) and change cents per kilowatt hour.

23 New York -- New York's savings are just  
24 below 1 percent and their rates are at approximately  
25 seventeen (17) cents per kilowatt hour.



1                   And of course, Manitoba Hydro's -- and  
2 this is 2010 here, of course. Manitoba Hydro's savings  
3 in 2010 were at I believe it was four (4) point -- it  
4 was -- sorry, .43 percent, and -- and rates are at  
5 approximately six (6) -- six (6) cents and change -  
6 average rates, of course.

7                   So, you know, there -- there are  
8 examples -- there's striking examples that -- that do  
9 show, again, that, you know, you have states with very  
10 low rates and states with very high rates, you know,  
11 all being roughly in that same 1 percent range.

12                   So the -- the next question was: Well,  
13 you know, are there other possible factors here? And  
14 again, I -- I said this before, so I won't -- I won't  
15 dwell on it too much. But in practice, Manitoba Hydro  
16 really has some unique characteristics that should, in  
17 fact, give it a leg up on many of these other regions.

18                   Its full territorial coverage, you know,  
19 Massachusetts, Vermont, and Minnesota don't have that  
20 benefit. The gas/electric integration, Vermont, Nova  
21 Scotia, Minnesota, and British Columbia, none of them  
22 have that same benefit. The potential for on-bill  
23 integration, you know, Vermont -- just the potential.  
24 The advantage in Manitoba, of course, is that you're  
25 actually doing it. But if you look at the other

1 states, most of them aren't yet doing it. And Vermont  
2 and Nova Scotia just couldn't do it because they're not  
3 the utility.

4                   So those would tend to suggest to my  
5 mind that Manitoba Hydro might have a bit of an easier  
6 time at it than -- than some of these others would.  
7 And, of course, it shares the strengths that the other  
8 cohorts have: innovative market players, experienced  
9 and capable DSM staff, existing relationships with the  
10 market channels.

11                   So I wasn't really finding anything to  
12 say, You know what, this comparison, there's something  
13 wrong here or there's something that's obviously  
14 explaining the -- the big differences or that's  
15 obviously explaining, you know, that Manitoba Hydro  
16 somehow should not be able to achieve higher savings.

17                   I'll move on to the rebuttal evidence.  
18 So Manitoba Hydro presented rebuttal evidence. And I'm  
19 not meaning to answer every -- every answer, but they  
20 did raise one (1) important point that I think is worth  
21 going through a little bit.

22                   In their rebuttal evidence, they did  
23 suggest several explanations for the -- for the  
24 discrepancy in planned DSM savings. They did talk  
25 about climate and rates and industrial loads, and --

1 and also their - you know, their history of DSM. And I  
2 think I've already addressed those, so I'm not going to  
3 bore you with more unless you -- unless you have  
4 specific questions on that.

5                   One (1) factor that they did raise that  
6 I have to admit I didn't address is their lower  
7 marginal costs. And -- and they were very clear that,  
8 you know, having lower marginal costs means it's  
9 tougher to get cost-effective DSM.

10                   So in practice that's true -- or in  
11 theory, I would say -- I'll say that's true. The  
12 question is: In practice, does it really explain a  
13 significant difference? And I would say the answer is  
14 -- is not, and for four (4) reasons, really. And I'm  
15 going to go through each of these individually.

16                   First, there are very few discreet  
17 measures whose costs are actually greater than Manitoba  
18 Hydro's marginal costs. And I'm going to go through  
19 that.

20                   The second is that the average cost of  
21 DSM is several-fold lower than Manitoba Hydro's  
22 marginal costs, including for the most aggressive plans  
23 anywhere. You know, whether we're looking at -- at the  
24 -- the out-theres of Vermont and Massachusetts or the -  
25 - the - you know, the -- the BC Hydros out there, the

1 average savings from these things are multiples lower  
2 than even that lower marginal cost.

3 Third, measures that failed Manitoba  
4 Hydro's screening are pretty marginal, at least from --  
5 from what I understood from the testimony that we had.  
6 And their inclusion would not materially change the  
7 goals.

8 And fourth comes to this question of,  
9 you know, cost-effective screening. Even if there were  
10 some measures that didn't screen, I think there's an  
11 issue there around the screening process itself. And I  
12 did not get into that in any depth in my -- in my  
13 evidence, but I -- I do flag it. There is an aspect of  
14 the screening process that does appear to be very  
15 restrictive and not quite in sync with best practices.

16 MR. BYRON WILLIAMS: Before you leave  
17 this page, Mr. Dunsky, have -- have you ever performed  
18 an achievable potential study?

19 MR. PHILIPPE DUNSKY: Sure, yeah. We -  
20 - we've done several achievable potential studies. And  
21 -- and, of course, the achievable potential study is --  
22 is a bit of a misnomer. It's a cost-effective and  
23 achievable potential study, so a study that -- that  
24 goes through every possible measure, its costs, its  
25 associated savings, and its potential within each

1 particular market segment for different building types  
2 across the entire province or state. We've done  
3 several of those and been involved in -- in several.

4           We just recently completed -- completed  
5 one (1) for -- actually, we just recently completed one  
6 (1) for -- for a client whose marginal costs were  
7 actually somewhat lower than Manitoba Hydro's, and I  
8 can -- you know, the results of that potential study  
9 are confidential, but I think I can -- I can safely say  
10 that the potential was -- you know, let's say in the 1  
11 to 2 percent range achievable, despite those lower  
12 marginal costs.

13           MR. BYRON WILLIAMS: Thank you.

14           MR. PHILIPPE DUNSKY: So just starting  
15 with the -- with the first one, you know, the -- the  
16 issue of -- of are there a lot of measures that would  
17 normally get screened out when you have lower marginal  
18 costs? And it was a little bit serendipitous. When --  
19 when I received the rebuttal evidence, like I said, we  
20 had just been finishing up work on a potential study,  
21 and someone on my team had just put together what we  
22 call a "supply curve" -- it's a DSM supply curve -- in  
23 this case for -- for residential sector. And I thought  
24 I would actually just take that supply curve and  
25 overlay Manitoba Hydro's marginal costs.

1                   So if you'll bear with me on this, the -  
2 - the supply curve, you know, the -- the vertical axis  
3 is achievable savings, and the horizontal axis is the  
4 unit cost, and each little point there is another  
5 measure. So, you know, you'll see the very first  
6 measure can generate some pretty substantial --  
7 sometimes they're buckets of measures by the way -- but  
8 the very first one (1) can achieve some substantial  
9 savings at about two (2) cents a kilowatt hour.

10                   You know, the next one adds a little bit  
11 of savings, and it's -- I'll just call it at something  
12 like two point one (2.1) cents, and onward and onward.  
13 And up we go along that curve, and at some point we hit  
14 the point where we say, All right, we're not taking  
15 anything beyond this.

16                   Now, one (1) thing I should be very  
17 clear about is just because we put a line of -- of  
18 marginal cost, doesn't mean that we screen out all  
19 sorts of measures that might actually in some cases  
20 cost more. The way we do it in other -- in other  
21 jurisdictions we will often go far beyond that point  
22 but while making sure that the average of all of our  
23 measures fits -- falls well below the marginal cost,  
24 but that's a bit of an -- a bit of an aside.

25                   What I did here was I overlaid Manitoba

1 Hydro's marginal costs of eight point five-two (8.52)  
2 cents a kilowatt hour, and that's the first vertical  
3 red line there. And then I said, Well, you know, what  
4 would happen if this were Manitoba Hydro? And it's not  
5 and so there's a big caveat there, right? But, you  
6 know, if -- if this region's marginal costs were eight  
7 point five-two (8.52) cents per kilowatt hour, we would  
8 be seeing, you know, the first box up there, I think it  
9 reads something like 190-odd gigawatt hours of savings  
10 that fall below that -- that line of marginal cost.

11                   What if we increased those marginal  
12 costs by 50 percent? Would we get a lot more? We'd  
13 get 3 percent more savings. What if we doubled them?  
14 And -- and by the way, none of our clients have  
15 marginal costs that are double. But what if we doubled  
16 them? You know, we increase the savings by 3.6  
17 percent.

18                   Now, you know, this is just one (1)  
19 supply curve, and -- you know, and I do promise that I  
20 took it literally because it's the first supply curve  
21 that came in front of me after having seen the  
22 rebuttal. I thought I'd just put a couple more that  
23 were literally in front of me at the time when I was  
24 looking at that.

25                   This is -- this is a different one here.

1 This is actually a firm -- a competitive firm -- a  
2 competitor firm of ours, sometimes we compete,  
3 sometimes we work together, and it happened that that -  
4 - I think about two (2) hours after I received their  
5 rebuttal evidence I happen to get an email on another  
6 project with -- with this -- this supply curve from  
7 another project.

8                   And again, pretty much the same thing.  
9 You know, the bulk of measures that you have, the bulk  
10 of savings that you have, are, in that first chunk,  
11 below five (5) cents a kilowatt hour. After that  
12 there's a little bit of growth but doubling the  
13 marginal costs wouldn't have changed very much here at  
14 all.

15                   Now, that's not always the case. I have  
16 here one (1) that I picked out, I think this is from  
17 Connecticut if I'm not mistaken, where, you know,  
18 increasing the marginal costs by 50 percent would add 2  
19 percent to the potential. That -- and I apologize, I  
20 don't remember which sector that is. It might be  
21 residential or commercial.

22                   I have one (1) below where increasing  
23 marginal costs by 50 percent would increase the  
24 potential by a quarter. So that's much more  
25 substantial. And you might -- you can cease -- you can



1 see that happen as well, so I don't want to -- I don't  
2 want to exaggerate this. I don't want to say, In every  
3 case, In Manitoba Hydro's case, you know, there would  
4 be no change. There might be. On occasion, there is.  
5 But in the very worst of cases that happened to me in  
6 front of me here, in one (1) sector, you're looking at  
7 25 percent more potential; in the others you're looking  
8 at somewhere between 1 and 3 percent. These are not  
9 things that explain multiples.

10 So the second point I want to make is  
11 that the average cost of DSM is several-fold lower than  
12 the marginal cost. And, you know, this could lead to a  
13 debate about marginal costs versus average costs, but I  
14 think with -- with DSM, it's important to take it as a  
15 whole package.

16 These, you know, dots here are the very  
17 same dots -- and I apologize, it's presented in a  
18 slightly different graph. It's the same numbers as was  
19 in the evidence. These are the cent per kilowatt hour  
20 costs of each of those 54 odd states and provinces for  
21 their 2010 savings. The coloured ones are the -- the  
22 Canadian ones.

23 And what you see is, with very rare  
24 exception, the average cost of -- of their energy  
25 savings lands somewhere in the range of, I'll say, 1

1 1/2 to 4 percent -- sorry, one and half (1 1/2) to four  
2 (4) cents per kilowatt hour. And, again, this includes  
3 not -- this isn't just, you know, for a few kilowatt  
4 hours here and there; this includes the Massachusetts  
5 of the world, the Vermonts, the Minnesotas. As much,  
6 the strongest performers, the most aggressive ones, the  
7 ones that are going as deep as they possibly can, and  
8 so, in theory, going as far up that curve as they can  
9 as everyone else, they're all falling in that range.

10 If -- so if I overlay here, you know,  
11 Manitoba Hydro's marginal costs of eight and a half (8  
12 1/2) cents, there's not a single place whose DSM  
13 portfolio as a whole costs more than that marginal  
14 cost. There's one (1) place that comes close, and I'm  
15 trying to remember -- I think it's something like  
16 Mississippi, and it's essentially because they're just  
17 not doing DSM, so they probably, you know, have some  
18 fixed costs and basically not getting any savings. But  
19 they're at the very tail end of that -- of the  
20 benchmarking chart.

21 The average cost of savings in this  
22 group is two point three (2.3) cents a kilowatt hour.  
23 The top half most aggressive is one point nine (1.9).  
24 The top quartile most aggressive is one point eight  
25 (1.8) cents a kilowatt hour against, you know, marginal

1 cost of eight and a half (8 1/2) cents in Manitoba  
2 Hydro's case, and sometimes more in other cases.

3 One (1) thing I should say that on the  
4 paper version that you have, and I apologize for this,  
5 there's -- there is an error there. And I just had the  
6 chance this morning I noticed it and I took it off of  
7 the slide here. So Manitoba Hydro's average cost is  
8 not two point nine (2.9) cents. In fact, if I recall  
9 correctly, it's one point eight (1.8) cents per  
10 kilowatt hour, as the average cost of savings from  
11 Power Smart.

12 MR. BYRON WILLIAMS: Mr. Dunsky, just  
13 on -- on that point, and just to assist the record, so  
14 if we were looking at CAC/GAC Exhibit Number 4, slide  
15 32, there's -- there's a red dot with a two point nine  
16 (2.9) cents per kilowatt hour there.

17 And what number are you suggesting that  
18 we -- you're suggesting we should strike out the two  
19 point nine (2.9) cents and replace it with what?

20 MR. PHILIPPE DUNSKY: Yeah. That  
21 should actually be one point eight (1.8) cents.

22 MR. BYRON WILLIAMS: Okay. Thank you  
23 for that.

24 MR. PHILIPPE DUNSKY: So the third --  
25 and this, I have to admit, I'm a little bit -- not

1 entirely clear on. I know that one (1) of the  
2 interrogatories that was asked to Manitoba Hydro was  
3 around any measures that were screened out; in other  
4 words, any measures that cost more than the marginal  
5 cost and, therefore, for that reason, were not included  
6 in the plan. And in the answer, they indicated seven  
7 (7) measures that were screened out. The seven (7)  
8 measures were, I'll say, you know, largely negligible  
9 items in terms of overall energy savings. They had  
10 things like commercial griddles as the -- the piece  
11 that stuck in my mind, but they were largely, again,  
12 marginal items.

13 Now, since then I understand that there  
14 may have been a suggestion that there may be some other  
15 measures that weren't in that initial list. I'm not  
16 sure, so I'm just going with what I -- what I had there  
17 in the -- in Manitoba Hydro's response.

18 And then finally there is this issue of  
19 benefit cost. The -- it's been a little bit difficult,  
20 I have to admit, pinning down exactly how Manitoba  
21 Hydro does its -- its DSM cost-effectiveness screening,  
22 but I certainly have come to understand that the RIM  
23 test plays a very important role in the -- in the big  
24 picture, as does the levelized utility cost.

25 Now, when you look at benefit cost

1 analysis, there are really three (3) -- three (3) legs  
2 to the stool, if you will. Excuse me. One (1) is  
3 which test should be used as the prime -- as the prime  
4 screener.

5                   The second is what inputs go into that  
6 test. And that, by the way, is something that often  
7 gets lost sight of. Testing is kind of like a big  
8 black box and -- and often times we just assume that,  
9 you know, whatever in the -- whatever goes into it is  
10 right and -- and whatever comes out of it is right.  
11 And when we actually -- we've done work for clients  
12 recently -- really digging deep into what different  
13 regions use as inputs and assumptions feeding into  
14 their tests and there are all sorts of things in there.  
15 You know, there's no two (2) regions -- I'm  
16 exaggerating just slightly, but by and large, so many  
17 regions we look at, you know, think that they're using  
18 the exact same test, think they're using the exact same  
19 assumptions, and in fact are using radically different  
20 approaches for the inputs going into those tests. So  
21 inputs is -- is a really important issue. And then the  
22 application level, as well.

23                   So how do you use these tests to screen  
24 your DSM? Are you making sure that your portfolio, as  
25 a whole, passes the test? Are you screening things at

1 -- on the opposite end of the spectrum, the individual  
2 measure levels? So, you're saying, you know, a given  
3 measure, if it doesn't pass my test, it's -- it's out?  
4 Those are really important things.

5                   Now, you know, when we looked at it --  
6 and admittedly, we did not do a deep dive analysis of  
7 Manitoba Hydro's screening approaches. So what we were  
8 able to see was that, in terms of the test, our  
9 understanding is that the RIM either is, or may -- may  
10 increasingly be the primary screen. That is certainly  
11 going to restrict the value of DSM more than anything  
12 else.

13                   There was a survey that was done  
14 recently of US states and the tests that they use as  
15 their primary screen. Of the forty-three (43) states  
16 that participated, one (1) out of forty-three (43) used  
17 the RIM as their primary test. It's -- it's something  
18 that was used more in the late '80s to early '90s, and  
19 since the early '90s has really fallen out of favour,  
20 for good reason.

21                   The -- the inputs, frankly, I -- I don't  
22 know, because we didn't, as I said, take a really deep  
23 dive into how Manitoba Hydro does its screening and  
24 what inputs are -- are used. I know certainly there  
25 are some things that I'm aware of that I think are

1 worth taking a second look at. There are other things,  
2 by the way, where Manitoba Hydro, I think, does a good  
3 job, does a better job than -- than some others, in  
4 terms of accounting for -- for some benefits. So it's  
5 a mixed bag and I just can't -- can't speak to it in  
6 all honesty.

7                   The level of screening, on the other  
8 hand, as I understand it -- as I understand it there's  
9 some exception to it, but by and large the measures are  
10 screened individually. And frankly, that's something  
11 that really ought to be avoided. There's all sorts of  
12 interactions between measures. It's -- it's  
13 approaching DSM in a way that's not really adequate for  
14 the way DSM operates in the market. And so we always  
15 recommend, from a best practices standpoint, that  
16 screening occur either at the program level or  
17 preferably at the sector level.

18                   THE CHAIRPERSON:    Could I -- could I  
19 stop you there for a minute, because I'm -- I'm not  
20 sure I understood your point about how DSM measures  
21 could interact?

22                   MR. PHILIPPE DUNSKY:    Sure. You know,  
23 if you step out of the murky world of DSM for a second  
24 and you think of sales --

25                   MR. BYRON WILLIAMS:    I'm happy to.

1 MR. PHILIPPE DUNSKY: It gives me a  
2 little bit of a break, too, sometimes.

3 You know, if you think about selling any  
4 product, you know, you've got -- you know, let's say --  
5 let's say I'm a corporation and -- and I'm selling a  
6 vast array of products and, you know, let's say I'm a  
7 Home Depot, right, and -- you know, and in the Home  
8 Depot, you know, maybe I'm going to be putting some  
9 things on sale that are loss leaders, right. And it's  
10 important for me to have some loss leaders because  
11 maybe it's critical to -- to bring customers -- bring  
12 customers into the store and get them looking at other  
13 -- other products that -- that may be more profitable  
14 for me. So a common strategy is to, you know, sell  
15 some things at a loss in order to pull people in, bring  
16 them toward -- toward a higher profit product.

17 You know, the very same is true with  
18 DSM. Sometimes you want to be incenting let's say  
19 appliances; appliances, light bulbs, things that  
20 customers have a very frequent touch on, even though  
21 they're not going to be your biggest savings  
22 generators. In -- in fact, they may not even pass your  
23 screening test. But they'll reinforce your brand.  
24 They'll reinforce your Energy Star brand or your -- or  
25 your Power Smart brand, as the case may be.



1                   The -- there are other cases where,  
2   excuse me, you're doing programs. Let's say you're  
3   doing a residential retrofit program; the cost to get  
4   into the home can be rather substantial, and you don't  
5   want to then, once you're in the home, or once you've  
6   got the customer, you know, looking at your -- at your  
7   product if it's a not a home retrofit program, you  
8   don't want then to limit yourself to the marginal cost.  
9   You want to get as much of your product as you can once  
10  you've sunk that initial capital cost.

11                   So, you know, it -- it's not unlike  
12  other businesses where you have different market  
13  strategies. You have loss leaders, you have capital  
14  costs, and then, you know -- and then you try to  
15  maximize your sales afterwards. Ultimately, if it's to  
16  be treated as -- as a resource, you know, you want to  
17  treat it as a packaged resource.

18                   MR. BYRON WILLIAMS: It sounds like a  
19  pretty entrepreneurial approach to -- to energy  
20  efficiency. Are -- are great big utility corporations  
21  capable of that, Mr. Dunsky?

22                   MR. PHILIPPE DUNSKY: I think it  
23  depends on -- on which great big utility corporation  
24  we're talking about. First of all, I mean, you're  
25  absolutely right: You know, this is not -- this is not

1 building a dam. This is not building a power plant.  
2 This is not, you know, managing and -- and building up,  
3 you know, transmission lines. It's not asset  
4 management. It's sales.

5           And you've got to be very aggressive at  
6 sales and you've got to be, you know, in there getting  
7 your -- you know, getting your hands dirty and -- and  
8 selling product. Can a utility do that well? I think  
9 they can. You know, I think sometimes -- sometimes  
10 it's good for them to get some help, as well.

11           You know, there's some utilities, for  
12 example, that do it all internally. There's some  
13 utilities who will manage the whole thing but contract  
14 out some of the implementation to firms that might be  
15 more nibble. And I'm not talking about mine; we don't  
16 do this sort of thing, but...

17           So there are different models. But, you  
18 know, there's nothing that leads me to believe that --  
19 that Manitoba Hydro's Power Smart Department in  
20 particular, you know, that wouldn't have that ability  
21 to go out there and sell if -- if that's the direction  
22 that's given.

23           MR. BYRON WILLIAMS: Thank you.

24           MR. PHILIPPE DUNSKY: So the question  
25 then becomes, you know, what else might explain these

1 discrepancies. And the one that comes -- that seems to  
2 me from everything that I've read as the most important  
3 comes down to this: And -- and it's a transcript that  
4 was sent to me from December 10th from Mr. Thomson  
5 where he says, you know:

6 "It's important, particularly given  
7 our current financial position, that  
8 any new DSM programs have a sound  
9 business case."

10 And, of course, I wholly agree with  
11 that. And said:

12 "I believe that DSM should reduce the  
13 upward pressure on rates, not  
14 increase it. This is the approach  
15 that we're taking."

16 Now, you know, far from me to want to  
17 read anyone's -- anyone's mind. But what I infer from  
18 this is that as long as DSM can reduce rates, or at  
19 least not put any upward pressure on them, it's good.  
20 Anything after that is not good.

21 And this comes back to the RIM test I  
22 mentioned earlier that is, you know, now used by all of  
23 one (1) out of forty-three (43) jurisdictions as the  
24 primary screen, as the primary objective. DSM is a  
25 little bit different than new generation. The

1 difference with DSM is that new generation must --  
2 might cost eight (8) cents a kilowatt hour, DSM might  
3 cost two (2) cents a kilowatt hour, but DSM also  
4 reduces revenue.

5                   And so the fundamental question is: Is  
6 reduced domestic revenue a good thing or a bad thing?  
7 If dom -- if reduced domestic revenue -- which means  
8 Manitobans paying less on their bills -- is seen as a  
9 negative, then clearly DSM is not a good thing. And,  
10 you know, frankly, I think, if I can sort of step out  
11 of the weeds and -- and try to see the big picture here  
12 -- and I've -- I've been trying to understand what the  
13 real driver is. This strikes me as the driver.

14                   It's not my -- it's not my take on  
15 what's important, in terms of the public interest. My  
16 take of what's important, in terms of the public  
17 interest, is lowering everyone's costs. And sometimes  
18 that, oddly enough, means adding a little bit to -- to  
19 rates but decreasing consumption much more such that  
20 Manitobans' bills are lower.

21                   When we talk about all those other  
22 places that are spending two (2) cents a kilowatt hour  
23 to save eight (8) or more, that's the perspective that  
24 they're taking, that reduced revenue -- in other words,  
25 reduced consumption, reduced spending for -- for waste

1 domestically, they're viewing that as a good thing.

2 I'll -- you know, I can go a little step  
3 further, facetiously, you know. If you believe that  
4 domestic revenue increases are a good thing and that  
5 domestic revenue decreases are a bad thing, then, you  
6 know, saying this all facetiously, maybe we should  
7 launch campaigns to encourage energy waste, because the  
8 more we encourage energy waste domestically, the more  
9 Manitobans will be increasing their bills and  
10 increasing Manitoba Hydro's revenue.

11 Ultimately, I think that is the key  
12 question here, is: Increased -- are increased bills in  
13 Manitoba a good thing or a bad thing? That's my -- my  
14 step back, big picture take on it.

15 MR. BYRON WILLIAMS: Can I stop you  
16 there --

17 MR. PHILIPPE DUNSKY: Sure.

18 MR. BYRON WILLIAMS: -- for -- for a  
19 second and perhaps play devil's advocate? Because you  
20 -- you spoke of reduced bill impacts even if -- if  
21 rates go up. But what if those reduced bill impacts  
22 aren't shared equitably? What if the -- they're not  
23 available to apartment dwellers, single moms in  
24 apartments, or senior citizens in all-electric  
25 communities, or low-income persons in all-electric

1 communities or elsewhere, or low-income persons living  
2 on reserves?

3 How is a reduced bill impact for some  
4 but the exclusion from a reduced bill impact for many  
5 others, how is that in the public interest?

6 MR. PHILIPPE DUNSKY: If we don't  
7 design our programs in a way to ensure access by pretty  
8 much every market segment, then I think you're  
9 absolutely right. You're creating a problem. You're  
10 creating an equity problem.

11 So if we -- if we try to, you know, play  
12 it fast and loose and just go for the -- you know, the  
13 cheapest -- the cheapest opportunities out there which  
14 are going to be, you know, not, let's say, with  
15 apartment dwellers, because multifamily is -- is tough,  
16 then you could be creating an equity problem.

17 You know, I've been -- I've been doing  
18 this for twenty (20) plus years. And -- and for a --  
19 you know, a lot of that, I've been -- you know, I've  
20 worked with consumer organizations. I mean, you know,  
21 you'll notice this is one (1) of the rare cases where I  
22 step out of my utility and agency world because I  
23 believe it's very important, this issue of equity.

24 You know, I've been very deeply involved  
25 in designing appropriate programs to make sure that

1 access is there and that this is effectively something  
2 that's universal. If it's universal, then you're  
3 providing ratepayers the ability to offset the impacts  
4 of the rate increases that you're currently projecting.  
5 As I understand it, you're currently projecting  
6 something like 3 1/2 percent rate increases every year  
7 for quite some time, and that's -- that's a big hit.

8                   And so, you know, the option is either -  
9 - and I'm just going to throw out a number here, but  
10 let's say -- you know, we say Option A is everyone gets  
11 3 1/2 percent rate increases and that's it. Or Option  
12 B, everyone gets three and three-quarter (3 3/4)  
13 percent rate increases, but they get a real chance and  
14 real access to reduce their consumption by 5, 6, or 10  
15 percent, and therefore lower their bills. You know, I  
16 think the important thing is making sure that Option B  
17 is done in a way that is as accessible as possible.

18                   And, again, you know, Manitoba Hydro  
19 does have a low-income program right now. And, you  
20 know, frankly, in Canada, they were one (1) of the  
21 first to do that. So, you know, I'm sure this is  
22 nothing new to -- to their ears.

23                   MR. BYRON WILLIAMS:     Okay. Thank you.

24                   MR. RAYMOND LAFOND:     I want to further  
25 this question, please.

1 I -- I understand the reasoning;  
2 however, what comes to my mind is this: We are not  
3 here in Manitoba in a static position. In other words,  
4 I would argue, at first sight, that any measure will  
5 hate -- will -- will help anyone in terms of the rate  
6 impact because we, in Manitoba, are looking over the  
7 next ten (10) years or so of essentially tripling the  
8 debt of Manitoba Hydro due to expansion, expansion  
9 which is more costly to generate than what customers  
10 are currently paying.

11 So, therefore, even though a certain  
12 group of people would not participate in the DSM  
13 program for whatever reason, if that was the case, they  
14 would benefit because we would delay expensive projects  
15 which are going to be the major reason for increased  
16 costs. So I wonder how you react to that.

17 MR. PHILIPPE DUNSKY: Well, I think --  
18 I think what you're doing is stepping out of the trees  
19 and looking at the forest. And -- and I think, if I  
20 can sort of summarize what you just said. This is very  
21 simple. There's two (2) cents or there's eight (8)  
22 cents. That's what it is. There's resource --

23 MR. RAYMOND LAFOND: I think it's  
24 probably two (2) cents or ten (10) or eleven (11)  
25 cents.



1 MR. PHILIPPE DUNSKY: And possibly  
2 that's right. And I understand that the eight and a  
3 half (8 1/2) cents is not necessarily the avoided costs  
4 of the next generation plant and that may be slightly  
5 different. You're right. But ultimately, that's what  
6 this is about.

7 We had -- if we come back to the very  
8 first slides, you know, we spent a lot of time arguing  
9 about, you know, are we going to build a dam or build a  
10 windmill or build a gas plant or -- ultimately, energy  
11 efficiency is a resource, as is new supply, to make  
12 sure that the two (2) are -- are matched and that the  
13 lights stay on. And if one (1) of them costs two (2)  
14 cents and the other costs eight and a half (8.5) cents,  
15 two (2) cents is probably your best bet. So yes, I  
16 would certainly agree.

17 MR. RAYMOND LAFOND: Merci.

18 MR. PHILIPPE DUNSKY: Merci a vous.

19

20 EXAMINATION-IN-CHIEF BY MR. WILLIAM GANGE:

21 MR. WILLIAM GANGE: Mr. Dunsky, good  
22 morning. Mr. Williams had mentioned that -- that my  
23 involvement in this would -- would come up at some  
24 point. And -- and I'm sorry I'm not able to give you  
25 the transcript reference, but during the presentation -

1 - and we had presentation from the Manitoba Industrial  
2 Power Users group, and one (1) of the questions that --  
3 that arose during that was the cost of -- of -- the  
4 increasing cost of electricity in Manitoba. And one  
5 (1) of the suggestions made by one (1) of the  
6 representatives of the Manitoba Industrial Power Users  
7 group was demand response options as an alternative.

8                   And I wonder if you could comment upon  
9 demand response.

10                   MR. PHILIPPE DUNSKY:     Sure.  So demand  
11 response typically refers, as we were saying before, to  
12 -- to measures that are fundamentally about shifting --  
13 it can be one (1) of two (2) things.  It -- it could be  
14 just literally reducing a needle peak or -- or reducing  
15 it by shifting that demand to another time so that  
16 you're avoiding a needle peak.  So demand response can  
17 be, to my mind, a very useful tool to reducing peak  
18 demand issues.  You know, if you're in a particularly  
19 peak-constrained situation, you know, it's a very good  
20 tool.

21                   Now, there is a lot of -- and we just --  
22 I think I mentioned before, you know; we just completed  
23 a Demand Response Achievable Potential Study.  We're  
24 currently actually designing an energy efficiency plan  
25 that's meant to integrate demand response and energy

1 efficiency.

2                   So we see, you know, those two (2).  
3 They're very different beasts and they've got, you  
4 know, different costs and different benefits. There is  
5 some very cost effective demand response out there that  
6 can be used, again, if you have a real, you know,  
7 needle peak issue.

8                   The disadvantage of demand response  
9 compared to energy efficiency of course is that it only  
10 moves peak; it doesn't actually save customers any  
11 money, except in so far as they happen to have a really  
12 high peak charge, and I'm not sure what -- you know,  
13 how -- what the rate structure is here in those terms.

14                   So it doesn't give the benefit of  
15 sustained reduced bills, but, you know, if you're  
16 looking to build a plant because of a particular peak  
17 need and not so much and energy need then it's part of  
18 the mix and I shou -- you know, and it ought to be part  
19 of the mix of things that are looked at within the  
20 broader realm of demand-side management.

21                   MR. WILLIAM GANGE:    Thank you.

22                   MR. PHILIPPE DUNSKY:    You're welcome.

23                   MR. BYRON WILLIAMS:    Mr. Chair, I think  
24 this might be an opportune time to -- to break. It's a  
25 bit early, but we'd certainly be happy to come back

1 early, whether at a quarter to or otherwise, but it's  
2 important that we have our little chat with -- with  
3 Hydro. So with -- with your permission, I'd suggest  
4 that this -- subject to any questions the Board might  
5 have, this would be a good time.

6 THE CHAIRPERSON: Do you expect to need  
7 a lot of time at lunchtime?

8 MR. BYRON WILLIAMS: I'm going to guess  
9 twenty (20) minutes or a half an hour, at most.

10 THE CHAIRPERSON: So my preference  
11 would be to -- to adjourn a little bit earlier today  
12 rather than at -- at the 4:30, so I'd rather compress  
13 the lunchtime if that's okay. So why don't we -- could  
14 we agree that we would resume at 12:30, if that's  
15 possible?

16 MR. BYRON WILLIAMS: I want to be fair  
17 to Hydro. Certainly from our perspective that's fine.  
18 I just note if -- if I were on the other side, I might  
19 want to be chatting with my -- my consultants over --  
20 in terms of preparation of cross. And I leave that to  
21 Ms. Ramage. But we're prepared, but I don't want to be  
22 unfair to My Friend.

23 I think she's still My Friend.

24 THE CHAIRPERSON: Ms. Ramage --

25 MS. PATTI RAMAGE: We're all on the

1 same team, Mr. Williams.

2 I am a little concerned. I have two (2)  
3 people on either side of me poking away trying to tell  
4 me something and I'm telling them not to talk to me, so  
5 --

6 THE CHAIRPERSON: Would you --

7 MS. PATTI RAMAGE: -- I would prefer an  
8 hour.

9 THE CHAIRPERSON: Okay. Let's -- let's  
10 -- so let's resume at one o'clock. And I -- just for  
11 the sake of making sure that Mr. Dunsky gets his plane  
12 -- are you leaving tonight, or?

13 MR. PHILIPPE DUNSKY: No.

14 THE CHAIRPERSON: Okay. Thanks. Let's  
15 -- let's adjourn then and -- I'm sorry, recess and then  
16 at one o'clock we will see each other again.

17 MR. BYRON WILLIAMS: And, Mr. Chair, if  
18 -- if I might beg your in -- indulgence. Our client --  
19 he'll -- he'll probably be bitter for me mentioning his  
20 name on the transcript, but Mr. Schroeder, the -- the  
21 former Chair of the Hydro Board, our client's aware,  
22 has had some recent health diff -- difficulties, but is  
23 -- is well on the way to a -- a good recovery. And --  
24 and my client did ask me to -- Mr. Sch -- Mr. Schroeder  
25 is someone who is quite dear to some of us, so we

1 certainly wish him the best in his recovery.

2

3 --- Upon recessing at 11:52 a.m.

4 --- Upon resuming at 1:08 p.m.

5

6 THE CHAIRPERSON: I believe we're ready  
7 to -- to resume the proceedings. Hearing no  
8 objections, I turn it over to you, Mr. Williams.

9 MR. BYRON WILLIAMS: Thank you, Mr.  
10 Chair. And good afternoon, Mr. Chair and members of  
11 the panel.

12

13 CONTINUED EXAMINATION-IN-CHIEF BY MR. BYRON WILLIAMS:

14 MR. BYRON WILLIAMS: Mr. Dunsky, I  
15 believe we're on pages 36 or 37 of your presentation.  
16 Please proceed.

17 MR. PHILIPPE DUNSKY: Thank you very  
18 much. So the -- we went through the benchmarking  
19 exercise and -- and some of the concerns around  
20 marginal costs. Let me talk a little bit now about the  
21 implications for Manitoba Hydro customers.

22 So, first of all, it may be worth just  
23 reminding, you know, the -- the value of DSM. DSM is a  
24 resource, compared to other resources, that typically  
25 offers the lowest utility cost -- that's again that,

1 you know, the two (2) cents versus eight (8) cents, if  
2 you will -- the lowest utility risk, lowest  
3 environmental impact.

4           It's also the only resource that can  
5 actually reduce customer bills, although it can also  
6 have, as an impact, an increase in customer rates.  
7 Now, by definition the bill reduction is going to be  
8 several-fold greater than any upward pressure it may  
9 have on rates. I say, "by definition," because that  
10 again is the, you know, eight and a half (8 1/2) cents  
11 to two (2) cents. Those are -- that's the -- you know,  
12 the stepping back from the trees and looking at the  
13 forest, that forest remains.

14           It's the only resource that adds -- that  
15 actually provides added customer value, you know, again  
16 whether it's providing customers in addition to bill  
17 savings, additional comfort, productivity on the  
18 business side, functionality. Often times, energy-  
19 efficient appliances or technologies come with  
20 additional functionalities, and they're kind of bundled  
21 in together.

22           Whether it's -- you know, for a certain  
23 part of the population, you know, helping them to, if  
24 you will, live by their values. You know, there's --  
25 there's always a share of the population that buys

1 green these days.

2                   So all of those things, as well as  
3 higher macroeconomic benefits -- again, the things that  
4 we talked about earlier -- which just means that not  
5 pursuing the full opportunity for DSM means multiple  
6 lost opportunities.

7                   So I'm just going to talk about the very  
8 first benefit, which is the lower utility cost. I'm  
9 not going to address the rest. It's really not part of  
10 my evidence, and -- and frankly, I think the cost part  
11 is the -- is the key one. So the -- let me see what's  
12 happening here.

13                   MR. RAYMOND LAFOND:    May -- can I  
14 intervene before -- because you're not going to be  
15 covering every line on that previous slide?

16                   MR. PHILIPPE DUNSKY:    Please.

17                   MR. RAYMOND LAFOND:    The fourth one,  
18 only resource that can reduce customer bills -- I  
19 alluded to that a bit this morning -- though it can  
20 increase customer rates.

21                   If it is possible for Manitoba Hydro to  
22 export its energy, then why should it increase customer  
23 rates? Because every -- every kilowatt hour saved can  
24 be exported.

25                   MR. PHILIPPE DUNSKY:    Right. So if --



1 how can I put this? If you're spending two (2) cents a  
2 kilowatt hour -- two (2) cents to save that kilowatt  
3 hour and then exporting that kilowatt hour for eight  
4 and a half (8 1/2) cents, let's say, you'd think you're  
5 gaining -- you know, on the margin, you're getting six  
6 and a half (6 1/2) cents.

7                   But the truth is that because you've  
8 helped a customer to save that energy, they are not  
9 sending you their revenue now for that same kilowatt  
10 hour. So take that margin of six and a half (6 1/2)  
11 that you've made on the export and remove the revenue  
12 that you've lost from your domestic customer, which may  
13 be in the range of six (6) point-something cents. And  
14 so in that particular case, you'd end up with even.

15                   MR. RAYMOND LAFOND: I want to go  
16 through that example again if you can export at the  
17 same rate the customers are currently paying, which is  
18 close to seven (7) cents.

19                   MR. PHILIPPE DUNSKY: Right. Well,  
20 then it becomes -- it becomes moot in that, again,  
21 you're paying two (2) cents in order to reduce your  
22 revenue for se -- by seven (7) on one end and gain an  
23 additional seven (7) on the other end. Net, you've  
24 paid out two (2) cents. The difference is that  
25 Manitobans are paying -- instead of -- instead of

1 paying seven (7) cents now, they're only paying you two  
2 (2) cents, and they're actually saving a lot of money.

3                   So I'm sorry this is -- I don't know  
4 what's going on here, but... Well, that's too bad.  
5 Well, I think everyone has the paper version of this.  
6 So this is just something that's being --  
7 unfortunately, the animation isn't working.

8                   But the fundamental, again, coming back  
9 to the forest from the trees, seeing the whole forest  
10 is very simple. You've got savings in the range of --  
11 thank you -- in the range of eight and a half (8 1/2)  
12 cents per kilowatt hour that's Manitoba Hydro's  
13 marginal cost. You've got a cost of DSM that is less  
14 than three (3) cents. We might argue about where  
15 exactly that will end. Again, right now, Manitoba  
16 Hydro's Power Smart plan is at one point eight (1.8)  
17 cents. You know, that could -- that could go up over  
18 time. But let's say we're being conservative, and we,  
19 you know, bring it all the way up to three (3) cents.

20                   The bottom line is, we've got a cost of  
21 eight and a half (8 1/2) -- or, sorry, you've got a  
22 cost of three (3). You've got savings of eight and a  
23 half (8 1/2). You've got a net savings of five and a  
24 half (5 1/2) cents for every kilowatt hour that you can  
25 save. And that is the net savings for all of

1 Manitobans.

2                   The -- the three (3) cents, again,  
3 keeping in mind the current Power Smart cost of one  
4 point eight (1.8) cents. And that, again, is coming  
5 back to the same change that I noted earlier, where  
6 initially -- and I think on the printed version, it may  
7 read two point nine (2.9), and that is a mistake. It's  
8 one point eight (1.8) for Manitoba Hydro's Power Smart  
9 cost.

10                   So currently, Manitoba Hydro's at one  
11 point eight (1.8). So in other words, our three (3)  
12 cent example is assuming that that cost per kilowatt  
13 hour increases by two-thirds (2/3s), trying to be  
14 conservative, you know, and similar numbers that we see  
15 from the other regions that we benchmarked.

16

17 CONTINUED BY MR. BYRON WILLIAMS:

18                   MR. BYRON WILLIAMS:     Just, Mr. Dunsky,  
19 to make sure for the court reporter and the exhibit,  
20 per se, what you're telling us is that in CAC/GAC  
21 Exhibit 4 on slide 38, there -- in terms of the red dot  
22 in the middle of the table, which has a number of two  
23 point nine (2.9) cents per kilowatt hour, you would  
24 recommend that that -- that -- that two point nine  
25 (2.9) be struck out and one point eight (1.8) be

1 inserted?

2 MR. PHILIPPE DUNSKY: Yes, that's  
3 correct. As -- as well as the line in the -- the  
4 bulleted line that would have indicated two point nine  
5 (2.9) as well, that should be one point eight (1.8).  
6 My apologies.

7 Okay. So -- so that's the bottom line,  
8 right? The lost -- the lost opportunity of not  
9 pursuing more aggressive DSM is going to be, I'll call  
10 it, at least five and a half (5 1/2) cents per kilowatt  
11 hour of unrealized savings for every kilowatt hour of -  
12 - of potential energy efficiency that is not being  
13 pursued.

14 That can be unrealized from -- from two  
15 (2) sources or in two (2) ways. It may be a question  
16 of the ability to defer capital projects, as -- as Mr.  
17 Lafond was referring to earlier. It may be a question  
18 of increasing your exports. And there's some caveats  
19 here.

20 You know, the deferring capital  
21 projects, I've been assuming, for the purposes of this  
22 analysis, that those capital projects might come in at  
23 about eight and a half (8 1/2) cents a kilowatt hour -  
24 in other words, at about the Manitoba Hydro stated  
25 marginal cost.

1                   You know, my understanding is that the  
2 marginal cost is not strictly unavaoided new generation  
3 cost. And so the actual -- the actual cost of that  
4 capital may be somewhat different. It may be a little  
5 bit higher. It may be a little bit lower, I'm not  
6 sure. But it's going to be in that range.

7                   The other caveat here is around the  
8 exports where, you know, it could free up electrons for  
9 exports, notwithstanding any system constraints -- and,  
10 you know, I obviously haven't done a system planning  
11 analysis here, so I'm not sure on that -- or some  
12 combination of both. Again, the forest from the trees,  
13 I think that the important thing is to keep in mind,  
14 one way -- through one way or another, this is where  
15 the savings comes from.

16                   MR. BYRON WILLIAMS: Mr. Dunsky, just --

17                   MR. PHILIPPE DUNSKY: Yes.

18                   MR. BYRON WILLIAMS: -- on -- on this  
19 page, if I were to play devil's advocate or -- and --  
20 or perhaps take a variation, Board member Lafond's  
21 question, you're saying it's the difference between  
22 eight point five (8.5) cents and -- and three (3) --  
23 three (3) cents is a five point five (5.5) cent  
24 unrealized opportunity cost.

25                   But let me argue that you're not taking

1 into account lost domestic revenue.

2 MR. PHILIPPE DUNSKY: Right. Well, so  
3 again, lost domestic revenue equals -- equals increased  
4 bills for Manitoban customers. So, you know, again, it  
5 comes back to this question of, if the goal is to  
6 increase domestic revenue -- in other words, if the  
7 goal is to increase customer bills -- then absolutely I  
8 would not recommend pursuing DSM. But if -- if the  
9 goal is to minimize Manitoba costs -- or Manitoba's  
10 costs system wide, then this absolutely holds, because  
11 at the very fundamental level it's very simple.

12 Manitoba Hydro is going to be paying two  
13 (2) or three (3) cents to liberate that kilowatt hour,  
14 to free up that electron from domestic needs, and then  
15 selling -- either selling it at eight (8) whatever  
16 cents or -- or deferring capital, which will save it  
17 roughly the same.

18 MR. BYRON WILLIAMS: Thank you.

19 MR. PHILIPPE DUNSKY: So -- and by the  
20 way, I should say, on the question of deferral, I'll  
21 get back to that in a second. But -- but since having  
22 done this analysis, I've -- I've learned something that  
23 I hadn't understood fully before, and so I'll try to  
24 address that in a couple minutes.

25 So what we did, you know, initially, in

1 response to a -- in re -- in response to an IR from --  
2 from the Public Utilities Board, we had developed a  
3 scenario to assess the -- the opportunity to defer new  
4 capital investments associated with more aggressive  
5 DSM.

6                   Since then, and based on -- a little bit  
7 on rebuttal from Manitoba Hydro and a little bit on --  
8 on a problem that I noticed in the analysis, quite  
9 frankly, I expanded the scenarios and modified them a  
10 little bit in -- among other things, to allow for a  
11 ramp-up of those savings.

12                   So we put together three (3) scenarios  
13 for energy efficiency savings here. In Scenario 1,  
14 programs were ramped from the current .43 percent --  
15 that's in 2010 -- to 1 percent by 2015 -- in other  
16 words, to the level at which BC Hydro is roughly at  
17 today and plans on being there, as well -- and then  
18 holding that 1 percent steady thereafter.

19                   In Scenario 2 we -- we use that very  
20 same ramp-up, but we continue the program's ramp-up all  
21 the way until it hits 1.5 percent by 2018 and then hold  
22 that steady. So there we're -- we're getting at,  
23 essentially, the level at which Minnesota is at or is  
24 planning on being at, but about four (4) years after  
25 them.

1                   And then in Scenario 3, we're taking a  
2 little bit of a different approach here and we're  
3 saying, Forget about just looking at programs.  
4 Specifically, let's look at all of the savings  
5 combined, whether it be programs, codes and standards,  
6 rate structures, whatever it is. And -- and let's ramp  
7 up the all-inclusive savings to 1.5 percent by 2017.  
8 And that's roughly the equivalent levels at which Nova  
9 Scotia and British Columbia will be at.

10                   MR. BYRON WILLIAMS:    Mr. Dunsky, before  
11 we move to the next series of slides, you'll recall  
12 being asked a -- a question from the Public Utilities  
13 Board, in terms of deferral.

14                   Do you recall that?

15                   MR. PHILIPPE DUNSKY:    Yes.

16                   MR. BYRON WILLIAMS:    And based upon  
17 your -- your review of Manitoba Hydro's rebuttal  
18 evidence and also the -- Mr. Miles's cross-examination  
19 by counsel for the Public Utilities Board, Mr. Peters,  
20 and any other sources of information, do you have any  
21 observations about the differences in analyzing the  
22 issue of deferral that -- that we might see in your  
23 evidence as -- as compared to what we might see in  
24 Manitoba Hydro's evidence?

25                   MR. PHILIPPE DUNSKY:    Yes.   And I'm



1 just wondering if it would -- if it might make sense to  
2 wait a couple of slides to get there, but --

3 MR. BYRON WILLIAMS: Fair enough. Hold  
4 that question.

5 MR. PHILIPPE DUNSKY: Okay. Okay, but  
6 we'll definitely address that. So as -- I just wanted  
7 to lay out, so we're clear, these are the three (3)  
8 scenarios that we -- that we assessed. I -- I believe  
9 these scenarios are realistic for Manitoba, though  
10 certainly the -- the second scenario in particular is  
11 going to be an aggressive one (1) for Manitoba.

12 On the whole, you know, we're looking at  
13 average -- average annual savings of, you know, between  
14 .9 and 1.3 percent per year over the -- over the whole  
15 period. And again, just as a -- as a way of -- by  
16 comparison, I think I mentioned earlier, you know,  
17 Connecticut, for example, just -- just adopted a new  
18 plan that -- that requires 1.8 percent on average over  
19 that same period, eight (8) year period. So, you know,  
20 we think these are not unrealistic scenarios.

21 Now, when we look at those scenarios --  
22 and we -- and we make a bunch of assumptions, and those  
23 assumptions are listed out here. So let's assume that  
24 the cost of achieving those savings is three (3) cents  
25 per kilowatt hour. And again, that's -- it says

1 they're 50 percent higher. Actually, it's about 60-  
2 some percent higher than Manitoba Hydro's own Power  
3 Smart plan. So again, I'm just trying to be  
4 conservative and assume a higher cost. And it's about  
5 65 percent higher than the average cost of the top-  
6 quartile performers.

7                   So we assume three (3) cent per kilowatt  
8 hour cost. We assume a value of eight and a half (8  
9 1/2) cents a kilowatt hour for Manitoba Hydro, per  
10 their marginal cost analysis. We use Manitoba Hydro's  
11 discount rate, although there are discussions we have  
12 around that, but for another time. So we just -- we  
13 used the discount rate that Manitoba Hydro has provided  
14 and -- and used itself. And then we just assumed that  
15 -- that the savings of increased DSM are borne from,  
16 you know, either capital deferral or additional  
17 exports, or some combination of -- thereof. And for  
18 this purpose, it really doesn't matter, but I'll get  
19 into the details later.

20                   And so the graph on the right shows the  
21 impact of these different three (3) -- these three (3)  
22 different scenarios. Below the zero you've got the --  
23 the present-value costs of DSM spending along those  
24 scenarios for the eight (8) period, 2013 to 2020. And  
25 above the zero mark you've got the present-value

1 benefits, that being very simply Manitoba Hydro's  
2 marginal costs times the kilowatt hours avoided --  
3 lifetime discounted kilowatt hours avoided.

4           So in Scenario 1 you're looking at a net  
5 savings of approximately five hundred (500) -- excuse  
6 me -- net savings of approximately \$550 million. In  
7 Scenario 2, the most aggressive one, you're looking at  
8 a net savings of about \$780 million over the period.  
9 And Scenario 3, you're looking at a net savings of just  
10 over \$600 million; again, present-value dollars, of  
11 course. And keeping in mind, you know, Scenario 1 is  
12 essentially increasing to BC Hydro's level, just by way  
13 of comparison.

14           Now, here's where I come to -- to the  
15 notes on deferral. So -- excuse me -- in Manitoba  
16 Hydro's rebuttal evidence, they raise two (2) concerns  
17 about the analysis that we had done there. One was a  
18 concern around the accuracy of the energy forecast or  
19 the energy analysis, and -- and the other concern was  
20 around the absence of any capacity analysis. So I just  
21 want to address those here.

22           As to the first point, I completely  
23 understand why -- well, the -- the concern that  
24 Manitoba Hydro had is that they -- they basically did  
25 an analysis of the deferral impact, assuming that our

1 savings actually stop in 2020. And we were not  
2 assuming that they stop in 2020; we were assuming they  
3 hold constant thereafter.

4                   Now, the -- I have to admit, that wasn't  
5 clear in my -- in my evidence, I think, in -- in my  
6 response to the interrogatory in question. I put a  
7 table that just put it -- put it out eight (8) years  
8 because that's when the spending is -- is happening,  
9 but I failed to indicate that that's assumed to  
10 continue to hold. So I just want to clarify that. The  
11 assumption is that these levels of savings continue to  
12 hold afterwards, with their associated costs, of  
13 course.

14                   On the capacity deferral, Manitoba Hydro  
15 was absolutely right. As I indicated in my -- in my  
16 evidence, we simply ran out of time to do a capacity  
17 analysis. So we subsequently did that now. And we did  
18 that -- and, really, I mean, you know, I want to call  
19 this a preliminary analysis, because what we did was we  
20 simply used Manitoba Hydro's own ratio of megawatt over  
21 megawatt hour from their pow -- their own Power Smart  
22 plan.

23                   So this essentially assumed that any  
24 additional savings roughly resemble the same profile as  
25 the savings in their current plan. In reality, it may

1 be different. You may have a slightly higher megawatt  
2 amount. You may have a slightly lower megawatt amount.  
3 So that's why it's important to note, you know, the  
4 term "preliminary" here. So that's in terms of that.

5                   Now, I'll present the results of this.  
6 But subsequently, I just recently learned another  
7 aspect that I had not understood. And that is  
8 regarding the -- if I understand it correctly, the  
9 possibility that -- that Keeyask or any of the hydro  
10 dams essentially opens up the possibility of investing  
11 inter -- in additional inter-tie capacity and the  
12 possibility that Manitoba Hydro in its planning  
13 scenarios, or at least in the preferred scenario, was  
14 counting on additional imports coming in due to those -  
15 - to that additional inter-tie capacity.

16                   So in other words if I can put it  
17 simply, what I understand now -- what -- what I  
18 understood before is that when we defer Keeyask, we  
19 defer Keeyask. What I understand now is that when we  
20 defer Keeyask, we may also be deferring the potential  
21 for additional imports, and so that matters from a  
22 deferral analysis perspective. So the analysis I'm  
23 about to present didn't take that into account.

24                   MR. BYRON WILLIAMS:    And, Mr. -- Mr.  
25 Dunskey, just --

1 MR. PHILIPPE DUNSKY: Yeah.

2 MR. BYRON WILLIAMS: -- it may or may  
3 not be material, but may -- may there be a difference,  
4 in -- in terms of load forecast and in terms of at  
5 meter?

6 MR. PHILIPPE DUNSKY: Yeah. Excuse me  
7 --

8 MR. BYRON WILLIAMS: You'll answer the  
9 question better than I asked.

10 MR. PHILIPPE DUNSKY: You know what,  
11 let me -- let me get to that here. So let me just  
12 present the analysis, and -- and I'll address that very  
13 quickly.

14 So what you have here is the grey line -  
15 - the grey dotted line is the domestic load forecast  
16 without any Power Smart, without any energy efficiency  
17 whatsoever. If -- if you actually -- if we actually  
18 think back to the original slides, I think my very  
19 first slide, where I presented that slide of, you know,  
20 the historical what -- where demand -- how demand would  
21 have grown without efficiency and then how it did grow  
22 with efficiency, the dotted line is the without  
23 efficiency.

24 The grey line -- the dark grey line, is  
25 the official load forecast that accounts for the 2011

1 Power Smart plan. And then the green, blue, and yellow  
2 lines are the associated -- the associated domestic  
3 loads that would be required if we did these additional  
4 levels of energy-efficient investment -- energy effic -  
5 - energy efficiency investments.

6                   The bottom line on this here -- and  
7 again, notwithstanding the caveat that I just  
8 mentioned before -- is that under the Scenario 1, the  
9 need for Keeyask is deferred for five (5) years; under  
10 Scenario 3, it's deferred for fifteen (15) years; and  
11 under Scenario 2, it's deferred indefinitely. And  
12 "indefinitely" just means it goes beyond the time frame  
13 that way -- that we had a forecast for. So I believe  
14 that's something like 2032 or so. I may be off a  
15 little bit there, but...

16                   And then in terms of Conawapa, Conawapa,  
17 which is scheduled to -- currently scheduled to come in  
18 a bit later, that then becomes deferred indefinitely;  
19 in other words, greater than ten (10) years in all  
20 scenarios.

21                   Now, again, I would just mentioned --  
22 well, a couple of things. So first of all, coming back  
23 to Mr. Williams's question about at meter/at  
24 generation, I just want to point out all the numbers  
25 here are at meter. So, you know, we can talk about

1 things in terms of at generation or at meter. The  
2 reason we distinguish this is only in the world of DSM,  
3 and that's because energy savings happen at the meter,  
4 and energy that we produce at generator, there are line  
5 losses before it gets to the meter.

6           So we can either talk about, you know,  
7 having, let's say, 25,000 gigawatt hours of supply at  
8 the generation side, or we can talk about having 23,000  
9 gigawatt hours of demand on the demand side. They mean  
10 the exact same thing. And the important thing here is  
11 just to state what this is at. So all the analysis  
12 here is at meter, including the DSM scenarios. So it's  
13 consistent. We could produce the same thing at  
14 generator, and the lines wouldn't move one (1) bit.  
15 Just the numbers on the axis would. So that's just one  
16 (1) thing.

17           But the more important thing is this  
18 question of inter-tie. And, indeed, you know, this  
19 doesn't take into account the possibility that, again,  
20 with Keeyask, comes additional resources from import  
21 that -- that this scenario wasn't accounting for.

22           I've taken a very cursory look at the  
23 numbers that -- when they do account for those imports.  
24 When I say, "cursory," I mean over lunch, so to be  
25 taken with a grain of salt. But the numbers that I did



1 see over lunch would not, from what I can see quickly,  
2 would not materially change the direction of this. The  
3 number of years of deferral may change ever so  
4 slightly. But directionally, it looks to me, at first  
5 glance, that we're talking about the same thing. But  
6 again, that's at first glance, and -- and, you know,  
7 good night's sleep and closer look may -- may bring a  
8 different -- a different view. So I want to admit that  
9 right up front.

10 MR. BYRON WILLIAMS: Mr. Dunsky, in  
11 terms of the no due -- new generations system analysis  
12 as -- as compared to the approach you took, would you  
13 be prepared to revisit your analysis using that  
14 approach?

15 MR. PHILIPPE DUNSKY: Yes, absolutely.

16 MR. BYRON WILLIAMS: And how long would  
17 that take, sir?

18 MR. PHILIPPE DUNSKY: Just a couple of  
19 days. If you give me a couple of days, let's say to --  
20 to Monday, I think we can get that to you, so long as,  
21 you know, we're clear on the numbers. But I think we  
22 are.

23 MR. BYRON WILLIAMS: So you're offering  
24 to -- to redo it, taking that -- that approach into  
25 account?

1 MR. PHILIPPE DUNSKY: I can absolutely  
2 do that.

3 MR. RAYMOND LAFOND: Can I intervene  
4 here? And I -- I think I understand this. On the  
5 other hand, when -- when you look at deferring  
6 capacity, and especially when it's -- well, not  
7 indefinitely, but at least -- as long as we're looking  
8 at it. There's also -- yes, I -- I can understand that  
9 you'd lose the revenues on impor -- or you -- you'd --  
10 you'd possibly reduce your import cost. But on the  
11 other hand, when you build -- build capacity,  
12 especially a larger plant like Conawapa, these come in,  
13 in big chunks.

14 So therefore, you may need within the  
15 first five (5) years, for domestic purposes, maybe only  
16 20 percent of it.

17 MR. PHILIPPE DUNSKY: Right.

18 MR. RAYMOND LAFOND: And so -- so  
19 there's a cost there for capacity that's not being used  
20 for -- for a while --

21 MR. PHILIPPE DUNSKY: Right.

22 MR. RAYMOND LAFOND: -- and offset by  
23 exports that are lower than the cost. So doesn't that  
24 -- that's also a cost that's not taken into  
25 consideration?

1 MR. PHILIPPE DUNSKY: So it's a very  
2 good point that you -- that you raise. We don't know  
3 what the cost of the new generation plant is. And so  
4 we've had to assume that the cost of the new generation  
5 is equal to the marginal cost, eight and a half (8 1/2)  
6 cents.

7 So -- and as we understand it, the  
8 marginal cost of eight and a half (8 1/2) cents is  
9 essentially based on what Manitoba Hydro expects it can  
10 get from export, as I understand it. So in other  
11 words, when you put all those assumptions together, it  
12 ends up moot, because we're essentially assuming that,  
13 yes, you're paying for it up front, but you're getting  
14 that back in the -- in the exports that you're selling  
15 in the interim while you're waiting for demand to catch  
16 up. But that is -- that's a function of the assumption  
17 that we're making, that the cost of new supply is eight  
18 and a half (8 1/2) cents.

19 If the cost of new supply is, you know,  
20 more than that or different than that, then indeed  
21 there may be an additional -- an additional savings  
22 that's not been accounted for here.

23 MR. RAYMOND LAFOND: But again, if the  
24 cost -- marginal cost is eight and a half (8 1/2)  
25 cents, you know, there's a loss here with the

1 transmission lines, et cetera, that means your export  
2 prices would have to be more than that eight and a half  
3 (8 1/2) cents at the final end. And that's assuming a  
4 perfect world -- world whereby you're exporting all you  
5 need three hundred and sixty-five (365) days a day -- a  
6 year, like the whole capacity, assuming -- assuming no  
7 other efficiencies.

8 Am I correct?

9 MR. PHILIPPE DUNSKY: Absolutely.

10

11 (BRIEF PAUSE)

12

13 MR. BYRON WILLIAMS: Well, I'm not sure  
14 we can make an undertaking to ourselves. It's -- I --  
15 I so we are certainly committing on behalf of -- of Mr.  
16 Dunsky, given our revitalized understanding of Manitoba  
17 Hydro's approach, to present an analysis based on our  
18 understanding of the pro -- of that approach if the  
19 Board would like us to do so.

20 And -- and we certainly would strongly  
21 recommend it, because our -- our clients are anxious to  
22 be -- to -- to present the -- the var -- a variety of  
23 perspectives to assist the Board's deliberations.

24 THE CHAIRPERSON: I'd like to hear from  
25 Manitoba Hydro on this matter.

1 MS. PATTI RAMAGE: No, Manitoba Hydro  
2 would appreciate receiving that so that it could  
3 examine it itself and address it if necessary.

4 MR. BYRON WILLIAMS: And, Mr. Chair, if  
5 I could have one (1) moment with My Friends. We --  
6 we've had a bit of discussion on this. And I -- I just  
7 didn't want to speak for Hydro. But I'll -- if I could  
8 just have one (1) second with Ms. Fernandes and Mr.  
9 Ramage, I'll be more clear about it. And I thank the  
10 court reporter for her advice.

11

12 (BRIEF PAUSE)

13

14 MR. BYRON WILLIAMS: Mr. Chair and  
15 member of the Boards, we really are on the same team.  
16 And -- and the -- the proposal of CAC/GAC and supported  
17 by Manitoba Hydro is that Mr. Dunsky will -- will redo  
18 the analysis so that the -- the Board has the benefit  
19 of both approaches so -- and that -- and that if  
20 Manitoba Hydro wishes to respond to his renewed  
21 analysis, they will have -- we would propose that they  
22 have the opportunity to do so through redirect evidence  
23 and...

24

25 (BRIEF PAUSE)

1 THE CHAIRPERSON: I've consulted the  
2 other panel members and they are supportive, so please  
3 proceed.

4

5 CONTINUED BY MR. BYRON WILLIAMS:

6 MR. BYRON WILLIAMS: Okay. And -- and  
7 it's not an undertaking. But just to clarify the  
8 record that the -- the analy -- the analysis that  
9 appears on page -- on slide 43 of GAC -- CAC/GAG  
10 Exhibit 4, Mr. Dunsky and his team will also recreate  
11 it using the no new generation system approach.

12 Is that your understanding, Mr. Dunsky?

13 MR. PHILIPPE DUNSKY: That is, yes.  
14 And -- and very specifically, if I -- if I may, just to  
15 be absolutely sure that we're talking about the same  
16 thing, I will base this on the numbers that are in  
17 Manitoba Hydro's 2012/2013 Power Resource Plan on page  
18 17, Table 3, which is titled, "Changes to Supply Demand  
19 Balances in the Last Three (3) Years." So just to be  
20 absolutely sure.

21 MR. BYRON WILLIAMS: And, Mr. Dunsky, I  
22 -- I thank you for that, and -- and our -- our clients  
23 thank Manitoba Hydro for their cooperation as well.  
24 Please proceed.

25 MR. PHILIPPE DUNSKY: Thank you. So

1 with -- with the caveats, of course, that come with --  
2 with this, the -- the next slide addresses the second  
3 concern that Manitoba Hydro had -- rightly so -- which  
4 was that you can look at energy, but if you haven't  
5 looked at capacity, you know, we may still need it.

6           And so we -- we conducted the very same  
7 analysis for the capacity side of things. And here,  
8 what we find is Keeyask being deferred between eight  
9 (8) years under Scenario 1 -- and I'm sorry, that  
10 should read, "Scenario 1," not, "Scenario A," on the  
11 slide -- and again, indefinitely or at least beyond the  
12 -- the time frame of the forecast for Scenarios B and  
13 C, and no change to Conawapa. Again, that's deferred  
14 past the horizon of the forecast.

15           And of course, this I'm just assuming  
16 implicitly will be part of the re-analysis that we will  
17 conduct.

18           So just to -- you know, summing --  
19 summing this up, if I may, the lost opportunity costs  
20 from not -- from not pursuing additional levels of --  
21 of demand-side management at the levels, for example,  
22 of other cohorts, would be an increased net costs,  
23 apparently, in the range of 550 to \$750 million of net  
24 present value due to DSM underfunding over the coming  
25 eight (8) years alone. So this is really based on

1 eight (8) years' worth of DSM programming.

2                   And obviously, that implies more rapid  
3 capital expansion and/or reduced export revenue. And I  
4 want to mention too, you know, it also has a couple of  
5 other implications for Manitoba Hydro: loss of DSM  
6 expertise. I mean, you can't -- you can't shut down  
7 half your programs and -- and retain the DSM expertise.  
8 And there really is some tremendous expertise on DSM at  
9 Manitoba Hydro. And I -- you know, I -- I don't say  
10 that lightly, as well as leadership, quite frankly.

11                   And then there's also the value of time,  
12 which I think is important, even though it's  
13 qualitative. And that's the loss of the ability to  
14 benefit from added time, the added time that you get  
15 when you can actually defer capital.

16                   What is the benefit of that added time?  
17 We don't know exactly, but it could be an awful lot of  
18 things. It could be better options that appear in two  
19 (2) or three (3) or four (4) or five (5) years' time,  
20 in terms of new supply.

21                   We -- you know, there might be cheaper  
22 options that -- that come to fruition. There might be  
23 options that are preferred from an environmental  
24 standpoint. You know, it may be that -- that, you  
25 know, buying some time allows us to -- to choose a



1 different order of -- of resources, an order that is  
2 preferable for other reasons. So the value of added  
3 time, from my perspective, really is -- is something  
4 not to neglect entirely.

5           From a ratepayer perspective, the lost  
6 opportunity costs from not pursuing this additional DSM  
7 is essentially that ratepayers end up with a very  
8 limited opportunity for assistance to reduce their  
9 consumption and, therefore, to reduce their bills at a  
10 time when rates are otherwise projected to increase  
11 quite significantly. Obviously, fewer customers will  
12 be able to participate, and savings for those who do  
13 participate will be shallower, if I can say. And, of  
14 course, there are the other benefits that I've  
15 mentioned previously, whether macroeconomic or  
16 environmental.

17           Now, one (1) question I think is really  
18 important to ask is, you know: Is the opportunity  
19 truly lost? At what point does an opportunity become  
20 lost? Or is it just a matter of, you know, we can plan  
21 for this now, and if we find more savings in future  
22 years, we'll pursue those more savings.

23           And this is again where, you know,  
24 you're looking at someone who comes from one (1) of the  
25 only other regions in North America that plans large

1 scale, long lead time hydro plants. This is pretty  
2 unique, you know? Hydro plants in -- in -- nothing  
3 against hydro plants; renewable resource and -- and  
4 absolutely worth pursuing, compared with other options.  
5 But certainly one (1) of the difficulties that we have  
6 with hydro plants is the long lead time. It takes a  
7 long time to build these things. And once we commit to  
8 building them, it becomes exceedingly difficult to pull  
9 back from that commitment.

10                   This is, in part, why we have the  
11 problem that we do in Quebec of these massive surpluses  
12 that are costing us so much money. It's not because we  
13 did anything fundamentally wrong. It's just that when  
14 you're building hydro, your crystal ball has to look  
15 ten (10) years down the road, whereas when you're  
16 looking at other resources, you might only have to look  
17 two (2) or three (3) or four (4) years down the road,  
18 and get it right. And obviously, the more we have to  
19 look into the future, the greater the risk of us  
20 getting it wrong is. Again, that's no criticism of  
21 forecasters. Things happen, you know? Sudden --  
22 sudden worldwide economic crises happen, and we can't  
23 forecast them.

24                   So the -- the important thing about  
25 hydro is you need to commit very early on. If there's

1 any chance at all of deferral, if -- if there's any  
2 agreement that there's value to the deferral, you can't  
3 simply say, Well, we'll plan for this and then over the  
4 next few years if we see new opportunities for energy  
5 efficiency, we'll pursue them. Because you won't get  
6 the deferral. You'll already be locked in to your  
7 capital expansion plans. And that's not to say that,  
8 you know, theoretically it's not impossible to, midway  
9 point, you know, start -- start pushing them off. But  
10 it certainly gets tough. Organizationally,  
11 directionally, you get locked in pretty fast.

12 So the value of DSM from a deferral  
13 standpoint is really intimately linked to its ability  
14 to be built into the planning at the outset. If it's  
15 not in the planning, in all likelihood, it's not going  
16 to happen.

17

18 (BRIEF PAUSE)

19

20 MR. PHILIPPE DUNSKY: I mentioned  
21 before growing demand from gadgets. I am no doubt --  
22 and my wife would agree -- the absolute worst example  
23 of creating this growth and demand. I have about every  
24 socket in my home, something's plugged into it. I  
25 apologize for that interruption.

1                   What about the issue of rates? And --  
2 and this has been brought up a couple of times now. At  
3 the very highest level, customers pay bills, not rates.  
4 The -- the bill is what matters, and the bill has two  
5 (2) components to it. It has the rate, and it has the  
6 level of consumption. And you can play with one (1)  
7 side or the other side, but you'll still get to the end  
8 goal, which is bills.

9                   Now, that doesn't address the question  
10 of equity. And this comes back to -- to the questions  
11 that -- that Mr. Williams was asking previously,  
12 because the truth of the matter is that there are  
13 winners and there are losers. The current policy, I  
14 would call it a no-losers policy. And, you know, maybe  
15 that's not the best qualifier for it, but I think the  
16 point is that it is absolutely focussed on making sure  
17 that, come hell or high water, no one loses. In other  
18 words, there's no upward pressure on rates due to DSM.

19                   But the problem of course is that that  
20 guarantees the fewest winners possible. Why? Again,  
21 because you've got a two (2) cent option and an eight  
22 (8) cent option, and we're choosing the eight (8) cent  
23 option. So customers get the 3 1/2 percent annual rate  
24 increase, and they get little to no opportunity to  
25 reduce their consumption. Fundamentally I think that's

1 the problem.

2                   And again, the eight and a half (8 1/2)  
3 cents to the two (2), or two (2) -- two (2) to three  
4 (3) cents is what's critical here. This is not a zero-  
5 sum gain. We're not talking about exchanging a 1  
6 percent rate increase for a 1 percent consumption  
7 decrease. If we were, I wouldn't be here. We're  
8 talking about a consumption decrease that's looking  
9 something like four (4) times whatever pressure it may  
10 put on rates. And that creates an awful lot more  
11 winners than losers.

12                   So I think the real question here is:  
13 Can Manitoba Hydro afford not to pursue this low-cost  
14 resource in as aggressive a manner as possible within  
15 the confines of those eight and a half (8 1/2) cents?

16                   Coming to recommendations here, I think  
17 I've only got a couple more slides and then I'm done.

18                   The first question is: What would  
19 Manitoba Hydro need to do to make those -- those three  
20 (3) -- you know, either -- any of those three (3)  
21 scenarios that I indicated previously actually happen?  
22 I mentioned at the very beginning, my mandate here was  
23 not to do a detailed analysis or detailed review of --  
24 of every aspect of every program of -- of the  
25 portfolio. So I'll just say -- I'll just speak at a

1 very high level.

2                   There are four (4) things that matter.

3 There are four (4) things that can bring this plan up  
4 to a much higher level. The first is sales, sales,  
5 sales. Again, you know, it -- it's not quite like  
6 building a plant. You've got to go out there and sell  
7 and market and sell hard and put feet on the ground.  
8 And -- and you need to, you know, double-check that you  
9 have enough FTEs in there, and pounding the pavement,  
10 going to meet with customers, going to meet with  
11 suppliers, going to meet with architects and  
12 engineering firms, working upstream efforts, providing  
13 appropriate incentives. Whatever it is, sales is the  
14 first thing.

15                   The second thing is possibly adding new  
16 measures or services or programs to the portfolio. I  
17 gave a few examples in my testimony: CFLs, for example.  
18 CFLs may be -- may have increased market share in -- in  
19 a certain segment in Manitoba, but I can't, for the  
20 life of me, imagine that the CFL market is transformed  
21 forever in the province. Ductless heat pumps are a  
22 very interesting opportunity for this province, in  
23 particular for those who heat with electricity.

24                   Home energy reports, which is  
25 essentially allowing customers to sort of benchmark

1 their own energy performance against others can be a  
2 very powerful tool as well. There are a number of  
3 others. Different strategies. I -- I just learned  
4 recently this morning there's no new homes program  
5 currently so, you know, there ought to be a program to  
6 encourage higher efficiency new homes beyond the  
7 existing code.

8                   But I also want to be really clear about  
9 this. Simply adding products is not what's going to  
10 make the difference. It -- it's not a checkmark  
11 thing, all right? I've seen -- I've seen fantastic  
12 programs that achieve very deep savings and that  
13 address most opportunities. I've seen some portfolios  
14 that address every single opportunity and really don't  
15 get much savings at all. And that's because of the  
16 selling side. They're just not selling hard.

17                   So, you know, when I work with clients  
18 who have aggressive goals that they have to meet and  
19 they're committed to meeting, you feel that in the --  
20 and -- and by the way, I'm not saying anything to  
21 Manitoba Hydro because, you know, I hadn't looked at  
22 all at their -- at their Power Smart plan here.

23                   But I'm saying generally, you know, when  
24 I go into -- when I go to a client who is working hard  
25 at achieving high savings, you know, the first thing I

1 see when I go in there is the -- the dashboard of where  
2 we are. And that dashboard is showing savings against  
3 goals, and it's showing it for that month. And we are  
4 constantly tracking this -- constantly tracking this --  
5 and constantly pushing ourselves harder, re-evaluating  
6 options, looking at new tools, you know, using  
7 Facebook, using social media, using Groupon for -- for  
8 coupons. It's not a -- it's not a -- how can I put it?  
9 It's not a static thing. It's very much a sales job.

10 A couple of other things that are  
11 important, of course I mentioned earlier --

12 MR. BYRON WILLIAMS: Could I -- could I  
13 just stop you just here for second --

14 MR. PHILIPPE DUNSKY: Sure.

15 MR. BYRON WILLIAMS: -- Mr. Dunsky?  
16 You probably don't need to turn there, but the Board  
17 may have pages 31 and 32 of Hydro's rebuttal evidence,  
18 or it may not. I'm not sure if still does or -- or  
19 not. But, Mr. Dunsky, you'll be aware that if we --  
20 just one (1) second.

21

22 (BRIEF PAUSE)

23

24 MR. BYRON WILLIAMS: Pages 31 and 32 --

25



1 MR. RAYMOND LAFOND: Exhibit 8.

2 MR. BYRON WILLIAMS: -- of Hydro's  
3 rebuttal evidence. Thank you, Board member Lafond.

4

5 CONTINUED BY MR. BYRON WILLIAMS:

6 MR. BYRON WILLIAMS: And you -- you've  
7 made this point, Mr. Dunsky, but perhaps let's...  
8 You'll see on -- on page 31 there's a checklist of  
9 Manitoba Hydro's program offerings as compared to other  
10 jurisdictions, in terms of residential customers. On  
11 page 32 you'll see a similar checklist compared to  
12 commercial.

13 Why isn't that -- that checklist enough?

14 MR. PHILIPPE DUNSKY: Well, sir, just  
15 for the -- for the reasons I was just saying. You  
16 know, it's -- it's not a checklist thing. I mean, it's  
17 -- it's important to cover all the bases. And don't  
18 get me wrong. You know, if there are, you know, big,  
19 gaping holes, we want to make sure that we're filling  
20 those holes, you know. And that's why I raised the  
21 example of -- of CFLs, for example, or of heating  
22 equipment. But -- but it's not just about ticking off  
23 a box. It's about how hard you drive in the market.  
24 It's about what types of incentives you're putting into  
25 the market.

1                   You know, I -- I think I understand now  
2 the way the -- the internal program optimization works  
3 with the screening, using the levelized utility costs  
4 as -- as a driver for optimization. I have some real  
5 concerns about that. And I -- I suspect that that may  
6 lead to programs that, you know, we can tick off but  
7 that are not going to be driving as deep, as hard, not  
8 going to be digging, if you will, as deep as one  
9 otherwise could.

10                   MR. BYRON WILLIAMS:     Thank you.

11                   MR. PHILIPPE DUNSKY:     You're welcome.

12 And then, finally, evaluation. And I think this is an  
13 important -- important point. It's not -- I won't say  
14 it's absolutely critical. But evaluation really  
15 matters, and getting independent evaluation really  
16 matters.

17                   I can certainly say I've worked with a  
18 lot of clients both doing evaluations, and also on  
19 their side when receiving evaluations. When  
20 evaluations are done independently, they tend to bring  
21 surprises. It's kind of the nature of evaluations.  
22 And those surprises, the initial reaction is always  
23 negative. But if they're done independently, we know  
24 that we will get those surprises clear to us, and  
25 they'll be clear to everyone as well, and they will

1 push us to address whatever concerns came out in those  
2 evaluations.

3 I can -- I can just say from experience,  
4 I've seen the impact that independent evaluations have  
5 on management. It scares management to death to have  
6 an independent evaluation, of course. And, you know,  
7 it would scare me to death too. Luckily I -- no one's  
8 evaluating me, independently anyhow, or at least  
9 publishing it. But -- but they really can -- they  
10 really can matter. They really can help to -- to  
11 address any -- any issues and -- and achieve higher  
12 savings. Ultimately, of course, it's about managing to  
13 goals.

14 And I'm hoping I haven't misplaced the--

15 MR. RAYMOND LAFOND: So, M. Dunsky,  
16 you're saying that engineers and marketing people need  
17 to be evaluated just like Mr. Warden and Mr. Rainkie  
18 need to be audited?

19 MR. PHILIPPE DUNSKY: So I -- I don't  
20 know Mr. Warden and Mr. Rainkie.

21 MR. RAYMOND LAFOND: Oh, they're --  
22 they're the financial -- they're the financial people  
23 who need external auditors like everyone else.

24 MR. PHILIPPE DUNSKY: Right, like  
25 everyone else.

1                   In answer to the question of what might  
2 -- might -- what might the Public Utilities Board wish  
3 to do here -- and I'm venturing out a little bit -- I -  
4 - I want to start with what I would urge you not to do.  
5 And that is, if I can put it in a single word, not to  
6 micromanage.

7                   I think Manitoba Hydro has tremendous  
8 internal capacity to figure things out and -- and get  
9 it right. I have no doubt that if given the direction  
10 of significantly higher goals, higher -- you know,  
11 goals that are more in line with what others have, I  
12 have no doubt that they will achieve it. And I have no  
13 doubt that they will achieve it in the best, most  
14 efficient way possible, given their intimate knowledge  
15 of the measures, the markets, you know, notwithstanding  
16 any disagreements that we may have on -- on specific  
17 measures and specific markets. But they'll be able to  
18 pull it off.

19                   And so I would strongly encourage the  
20 Board not to, you know, order that a specific measure  
21 be -- be pursued or a specific strategy. I -- I think  
22 it's -- it's much more important that they have the  
23 leeway to -- to achieve goals.

24                   I also think, of course, it's -- it's  
25 important -- you know, I just want to be clear. I'm --

1 I'm not suggesting here, based on a preliminary  
2 analysis, that generation plans be shelved. You know,  
3 I don't think that would be prudent, and I think a  
4 board is all about prudence.

5                   It's a preliminary analysis. I just  
6 learned something today that's going to lead me to  
7 revise that analysis. And, you know, so I think what's  
8 important is to understand that directionally there's  
9 an issue here, directionally there's a clear -- clearly  
10 a very large opportunity here. But the very specifics  
11 of it are probably worth digging into a little bit  
12 deeper.

13                   So on the other hand, I -- I would  
14 really encourage that the status quo, even temporarily,  
15 not be considered your best option. And again, that  
16 comes back to the lost opportunity cost that I was  
17 talking about before. If -- if the answer is, Well,  
18 let's wait and see, you know, let's wait a year or two  
19 (2) or -- or three (3) and we'll see if more  
20 opportunities arise, I really think you will have  
21 forgone some of the -- some of the economic  
22 opportunities that you have in front of you here.

23                   And so the question then is, you know:  
24 What's the -- what's the reasonable middle way? I put  
25 up a chart here just to -- just to simplify what we've

1 seen before, again using the same metric of percent  
2 sales. So, you know, Manitoba Hydro currently is  
3 achieving .4 percent; BC is 1 percent; Nova Scotia and  
4 Minnesota, let's say, roughly one point three (1.3);  
5 Vermont and Massachusetts, on average, two point four  
6 (2.4).

7                   If we look at that, you know, I might  
8 say that I would have pretty high confidence in  
9 Manitoba Hydro's ability to achieve the smaller of  
10 those scenarios, the BC one, the green one. The -- the  
11 other ones, you know, going higher than that, going to  
12 the level of Nova Scotia, and especially going to the  
13 level of Vermont and Massachusetts, I would not have  
14 the confidence today to say that that's absolutely  
15 achievable. I'm not sure. You know, there can be all  
16 sorts of, you know, unique differences in the market  
17 that I haven't captured here. So, you know, again, we  
18 need to be prudent.

19                   My suggestion is start immediately with  
20 a base -- a base expectation. A base expectation might  
21 be something like ramping up to the level of British  
22 Columbia in three (3) years from now. So on average,  
23 over the next three (3) years, hitting 0.8 percent. I  
24 -- I would have a hard time believing that that would  
25 not be achievable. The real question to my mind is:

1 What's achievable beyond that? But start with that.

2 And then maybe it's conduct a hearing,  
3 maybe it's -- maybe it's through some other process,  
4 determine whether and to what extent the realistic  
5 targets for Manitoba may be higher. Maybe they're at  
6 the -- the Nova Scotia level or the Minnesota level.  
7 Maybe -- maybe they can be at -- up at the Vermont or  
8 Massachusetts level. I'm not sure.

9 Take your time to look at that more  
10 carefully. Start with the achievable potential study  
11 that -- that Manitoba Hydro is -- is finalizing right  
12 now, but don't wait needlessly to at least start the  
13 process at a level that we'd be pretty confident about  
14 achieving.

15 And I believe that's it.

16 MR. BYRON WILLIAMS: Mr. Dun --

17 MR. PHILIPPE DUNSKY: Thank you very  
18 much. Merci beaucoup d'avoir m'ecouter.

19 MR. BYRON WILLIAMS: Thank you, Mr.  
20 Dunsky. And I believe we have one (1) room logistical  
21 matter, at least, to take care of, which is Mr. Dunsky  
22 is going to re -- return to his proper place in the  
23 world. And I'm not sure if Mr. Gange is going to join  
24 me up here or not, but if we could just take a couple  
25 minutes to rearrange the room, Mr. Chair.

1 THE CHAIRPERSON: Let's do that.

2

3 --- Upon recessing at 2:07 p.m.

4 --- Upon resuming at 2:13 p.m.

5

6 MR. BYRON WILLIAMS: With the court  
7 reporter's permission, I just wanted to note, while Mr.  
8 Dunsky's setting up, we've got our own back row this  
9 time. Professor Miller -- Ms. Desorcy is here. And  
10 then to Professor Miller's left is Johanna Willows, a  
11 University of Ottawa law student who is doing some  
12 course work with our -- with our centre this term. So  
13 we're -- we're pleased to have our unique back row.

14

15 (BRIEF PAUSE)

16

17 THE CHAIRPERSON: Are we ready to -- to  
18 recommence the proceedings? And if so, I'll turn it  
19 over to you, Mr. Williams.

20 MR. BYRON WILLIAMS: There's nothing  
21 more from me. We're -- Mr. Dunsky -- except for to say  
22 that Mr. Dunsky is prepared for cross-examination.

23 THE CHAIRPERSON: Before we do that, I  
24 wonder if I could ask a few questions. And I wonder --  
25 I'm not sure if the other panel members have any, but I



1 just wanted to -- to ask a few clarifications.

2 In terms of behaviour of consumers  
3 without DSM, and very specifically in jurisdictions  
4 where there's not a great deal of -- of DSM  
5 programming, does the evidence -- is -- I'm assuming  
6 there is evidence.

7 Does the evidence show that they are  
8 adopting DSM measures on their own?

9 MR. PHILIPPE DUNSKY: So the evidence  
10 suggests that -- that they adopt some DSM measures on  
11 their own, but to a far lesser extent. And so when I  
12 spoke earlier -- excuse me.

13 When I spoke earlier about independent  
14 evaluations, the -- what an independent evaluation  
15 tries to do, among other things, is quantify the net  
16 impact of the program. And in order to do that, what  
17 we do is, you know, we just -- we -- we -- we assess  
18 what the rest of the market is doing when it's not  
19 participating in these programs -- coming to your  
20 question, I believe -- and then what's happening when  
21 these programs are in play? And it's only the net  
22 difference that we really care about.

23 So we're pretty positive, because in  
24 just about -- in 95 percent of jurisdictions in North  
25 America that are doing DSM aggressively to any degree,

1 we do independent impact evaluations. In all of those  
2 cases, the savings that we're talking about are purely  
3 net over and above what might be happening in the  
4 market already.

5 THE CHAIRPERSON: Now, Manitoba Hydro  
6 sells into the MISO area, and I know there's some  
7 information in the presentation in respect to  
8 Minnesota, North Dakota, and so on -- South Dakota.

9 But do you have evidence for all of the  
10 states that are part of the MISO operators' group?

11 MR. PHILIPPE DUNSKY: Well, in terms of  
12 our benchmarking, so we've got all of the US states in  
13 the 2010, you know, achieved savings. So all -- all of  
14 those would be in there. But in terms of the planned  
15 savings, you know, we only looked at -- at, I guess,  
16 Minnesota from that -- from that particular group.

17 I'm -- I'm certainly, you know, somewhat  
18 aware of Wisconsin, because Wisconsin has historically  
19 -- although it's a little bit up and down -- but  
20 historically done a fair bit of energy efficiency. But  
21 I wouldn't be able to speak to, for example, North  
22 Dakota, South Dakota.

23 THE CHAIRPERSON: But to follow your  
24 thinking though, if the states covered by the MISO  
25 footprint are pursuing aggressive demand-side

1 management strategies or programs, then that would take  
2 the edge off the demand that those states would have  
3 with respect to energy from any source, including that  
4 from Manitoba Hydro?

5 MR. PHILIPPE DUNSKY: Absolutely. And  
6 -- and so Minnesota, for example, is -- they are  
7 actually committed to achieving 1.4 -- 1.5 percent  
8 annual energy savings. Typical -- you know, typical  
9 demand growth -- and I can't speak to Minnesota  
10 specifically -- is going to be in the range of 1 1/2 to  
11 2 percent before DSM. So, in other words, their DSM is  
12 cutting their growth forecast down by, my guess would  
13 be, in the range of -- somewhere from three-quarters  
14 (3/4s) to 100 percent of the forecast load growth is  
15 being address through their own DSM.

16 THE CHAIRPERSON: I was having trouble  
17 understanding how DSM measures would have -- be able to  
18 impact capacity demand so dramatically.

19 Could you explain that to me?

20 MR. PHILIPPE DUNSKY: Absolutely. So  
21 DSM measures -- it really depends which measure we're  
22 talking about, but let me give you an example.

23 If we're talking about home insulation,  
24 for example, the energy savings that you're going to  
25 get from home insulation are going to happen at a

1 certain period of time, right. They're not going to  
2 happen in the summer. They're not going to happen --  
3 they're going to happen a little bit in the -- in the  
4 shoulder seasons, more in Manitoba than elsewhere. But  
5 they're primarily going to happen in the heating  
6 season. So their -- their peak coincidence is going to  
7 be very high. And so the savings that you're going to  
8 get from increased insulation are going to happen at  
9 the very time that you have your peak need in the  
10 winter.

11                   Conversely, if you are looking at, let's  
12 say, industrial efficiency, unless you're looking at --  
13 at process efficiency in -- in an industry, that's  
14 going to be more spread over time, spread throughout  
15 the entire year somewhat evenly. And so the time at  
16 which those savings are going to impact the system,  
17 some of it will happen during peak, but a lot of it  
18 will happen off peak as well.

19                   And so every measure actually has its  
20 own, we'll call it a peak coincidence factor. It -- it  
21 has its own ratio of the savings that generates that's  
22 on peak or that's off peak.

23                   Your -- by the way, if I can just add,  
24 one (1) thing I -- I noticed when I was doing the  
25 analysis is that the -- the peak savings for Manitoba

1 Hydro's Power Smart plan -- or let me put this  
2 differently. The -- the savings from Manitoba Hydro's  
3 Power Smart plan are actually disproportionately more  
4 on peak than -- than off peak. So they have a higher  
5 megawatt over megawatt hour ratio than the average load  
6 does. And that's a very good thing. It gets extra --  
7 extra bang for the buck, if you will.

8 THE CHAIRPERSON: And finally, I wanted  
9 to just mention that there was a bit of an inference --  
10 and I -- I wanted to comment on it -- an inference that  
11 the PUB is in a position to shelve generation plans.  
12 And so I wanted to make sure that we clarified that  
13 we're not in a position to shelve generation plans.  
14 That, fortunately, belongs to other parties to -- to  
15 do, because that's a considerable responsibility.

16 In any case, I don't think there's any  
17 questions from the -- the panel members, so I'll turn  
18 it --

19

20 CROSS-EXAMINATION BY MS. PATTI RAMAGE:

21 MS. PATTI RAMAGE: Thank you, and good  
22 afternoon, Mr. Dunsky. I'll try to slide down here so  
23 I can use my right hand.

24 Mr. Dunsky, the -- the question -- the  
25 burning question is: Have you recently moved?

1 MR. PHILIPPE DUNSKY: I recently moved  
2 both my home and my office.

3 MS. PATTI RAMAGE: So would that  
4 explain why somebody in the DSM business of twenty (20)  
5 years is just now retrofitting their home with energy-  
6 efficient measures?

7 MR. PHILIPPE DUNSKY: There -- there's  
8 an expression that -- that M. Gosselin and Lafond will  
9 -- will understand. I am a tragic cordonnier mal  
10 chausse, which means that I am the equivalent of a  
11 shoemaker who has very -- who has holes in his shoes.  
12 I -- I was, for a very long time, in that position un -  
13 - until recently. And I did a very extensive home  
14 energy retrofit and reduced my bill about 75 percent.  
15 But for a very long time, I was a very poor example.

16 MS. PATTI RAMAGE: Out of curiosity,  
17 were there any programs offered by Hydro-Quebec that  
18 incited you to make the move at long last?

19 MR. PHILIPPE DUNSKY: Well, I -- I  
20 benefited -- now, you might -- you might call me a  
21 free-rider, but I did benefit from -- from programs  
22 from the -- from the federal government, from the  
23 provincial government, and from Hydro-Quebec, all --  
24 all three (3) of them.

25 I have to say honestly, the -- I wanted

1 the geothermal system. I'd say without the incentives  
2 that were provided by -- by the different parties, I  
3 don't think I would have convinced my wife to put in  
4 the geothermal system. That was the toughest part.  
5 The incentives helped us get over that -- that hurdle.

6 MS. PATTI RAMAGE: Thank you, Mr.  
7 Dunsky. If energy efficiency is two (2) to three (3)  
8 times cheaper than other supply options, as you've  
9 indicated on slide 6 of your presentation, would --  
10 would it not be more effective for governments, rather  
11 than utilities, to mandate energy efficiency through  
12 more stringent standards? Here I'm thinking of  
13 standards related to appliances, insulation, lighting,  
14 buildings, transportation, that sort of thing.

15 MR. PHILIPPE DUNSKY: Well, more  
16 efficient? Yes. More effective? Certainly. More  
17 equitable? I'm not so sure. The problem, of course,  
18 is that when you -- when you mandate something, you  
19 require everyone to do it. You require everyone to  
20 take on that additional cost. There's some people in  
21 society who would be able to do that and some people  
22 who wouldn't, and some people for whom that would be an  
23 acceptable burden and some people for whom that would  
24 be a very difficult burden.

25 So, you know, I'm -- I'm very favourable

1 to quos and standards. But, you know, at the same  
2 time, you have to be -- you have to be reasonable and  
3 take that into account as well, whereas programs don't  
4 require it. Programs incent it and -- and encourage  
5 and provide the opportunity for everyone to benefit  
6 from those savings, as opposed to making it an  
7 obligation.

8 MS. PATTI RAMAGE: So it'd be fair to  
9 say customer choice then is important to you?

10 That's...

11 MR. PHILIPPE DUNSKY: Yes. I mean,  
12 it's hard to argue with -- with that.

13 MS. PATTI RAMAGE: Mr. Dunsky, you  
14 indicated that Massachusetts -- that's a word I have  
15 trouble with -- has one of the most effective DSM  
16 programs in North America; I think number 1, so.

17 Do you happen to know the average retail  
18 rate of electricity in Massachusetts?

19 MR. PHILIPPE DUNSKY: I've got that  
20 in... So I don't remember it offhand. It's one (1) of  
21 my many faults, my memory. But obviously, we did have  
22 it in the analysis. And I just presented that, I won't  
23 say a few moments ago, but I believe it was this  
24 morning. I'll have to just find it here. Here we go.

25 Yes, so Massachusetts's average rate is



1 one (1) of the highest among the cohorts and one (1) of  
2 the highest anywhere, at about fourteen (14) cents a  
3 kilowatt hour.

4 MS. PATTI RAMAGE: And what about  
5 Vermont? Is -- just if you could help me to read the  
6 graph. It's awfully small.

7 MR. PHILIPPE DUNSKY: Vermont is  
8 roughly thirteen (13) cents.

9

10 (BRIEF PAUSE)

11

12 MS. PATTI RAMAGE: Mr. Dunsky, you're  
13 aware that the average retail price of electricity in  
14 Manitoba is five point six (5.6) cents per kilowatt  
15 hour? That's, I believe, depicted in your graph?

16 MR. PHILIPPE DUNSKY: Yeah, something  
17 like that.

18 MS. PATTI RAMAGE: Would you be  
19 prepared to go as far as to say you would advocate  
20 higher electricity rates in Manitoba to encourage  
21 energy conservation?

22 MR. PHILIPPE DUNSKY: No, I would not.  
23 It doesn't mean the reverse either. It just means it's  
24 a really complicated question. It deserves a  
25 complicated answer.

1 MS. PATTI RAMAGE: Mr. Dunsky, what is  
2 the comparative projected load growth for each of your  
3 five (5) cohorts?

4 Do you have that information?

5 MR. PHILIPPE DUNSKY: I do not.

6 MS. PATTI RAMAGE: Do you have access  
7 to that information?

8 MR. PHILIPPE DUNSKY: I'm not sure.

9 MS. PATTI RAMAGE: Could I maybe ask an  
10 undertaking for you to check and determine if you're  
11 able to find that information for the utilities that  
12 you've used as -- identified as the five (5) cohorts?

13 MR. PHILIPPE DUNSKY: I can certainly  
14 look into it. It's a question of time and resources,  
15 that's all, but I can certainly look into it. Just to  
16 be clear now, do you want their -- their load forecast  
17 before DSM or after DSM?

18

19 (BRIEF PAUSE)

20

21 MS. PATTI RAMAGE: I -- I -- it would  
22 be before DSM.

23 MR. PHILIPPE DUNSKY: Okay. That might  
24 be a little tougher to -- to find, but I'll give it a  
25 shot.

1 MR. BYRON WILLIAMS: And my  
2 understanding is that Mr. Dunsky has undertaking --  
3 undertaken to explore the possibility of identifying  
4 the load forecast for the five (5) comparative cohorts  
5 before DSM, and that's as I understand it.

6 MS. PATTI RAMAGE: You have it correct,  
7 Mr. Williams, but my back row has also asked for "and  
8 after", if you could add that to the advisement.

9 MR. BYRON WILLIAMS: And -- and so he  
10 will explore both before and after, if that's  
11 satisfactory for the reporter.

12

13 --- UNDERTAKING NO. 88: Mr. Dunsky to explore the  
14 possibility of identifying  
15 the load forecast for the  
16 five (5) comparative  
17 cohorts before DSM and  
18 after DSM

19

20 CONTINUED BY MS. PATTI RAMAGE:

21 MS. PATTI RAMAGE: Mr. Dunsky, at one  
22 (1) point in your evidence you suggested that Manitoba  
23 Hydro should promote loss leaders, I think is how you  
24 referred to them -- appliance giveaways, for example --  
25 to reinforce the energy efficiency brand.

1 Did I understand that correctly?

2 MR. PHILIPPE DUNSKY: Well, I'm -- I'm  
3 certainly not prescribing what Manitoba Hydro should  
4 do, but I was providing examples of why one might not -  
5 - one might want to be careful about applying a  
6 screening process at the marginal measure level.

7 And so, yeah, I would als -- I won't  
8 speak to Manitoba Hydro in particular, but it's -- it  
9 may well be valuable in some cases to encourage loss  
10 leaders where there's an opportunity for increased  
11 savings from other products, yes.

12 MS. PATTI RAMAGE: And -- and who pays  
13 for the loss leaders?

14 MR. PHILIPPE DUNSKY: Who pays for the  
15 loss lead -- well, the DSM program would pay -- if, for  
16 example, we're talking about -- you can do it in  
17 different ways, right. So, for example, some programs  
18 will simply promote -- provide information. Some  
19 programs will provide a small incentive, let's say a --  
20 a SPIFF, you know, a salesperson incentive for floor  
21 sales. So that five dollars (\$5) or whatever it is  
22 would come from the program.

23 Is that -- is that answering your  
24 question?

25 MS. PATTI RAMAGE: Well, let's back up

1 a little bit. The -- the program itself then, would  
2 you agree it's -- it -- the costs of that program then  
3 are borne by ratepayers generally, not those who  
4 received the specific benefit?

5 MR. PHILIPPE DUNSKY: Absolutely, as  
6 with any DSM program.

7

8 (BRIEF PAUSE)

9

10 MS. PATTI RAMAGE: Going back to our --  
11 the reference to customer choice, in your view, is it  
12 fair that -- for customers who have been practising  
13 responsible DSM -- perhaps paying for it themselves,  
14 for example, in a -- purchasing a -- a Power Smart  
15 home, but they've been practising, responsible DSM  
16 measures -- is it fair that they then re -- are  
17 required to pay for those loss leaders in that type of  
18 -- of measure?

19 MR. PHILIPPE DUNSKY: I'm not sure how  
20 to characterize it exactly. It's -- it's unfortunate  
21 to the extent that it mig -- it may happen on a given  
22 measure. I think the very important thing here is that  
23 if you've got a portfolio that is wide and deep enough,  
24 those same people may, you know, may not benefit from -  
25 - from one (1) measure but may be able to partake in a

1 different measure.

2 MS. PATTI RAMAGE: Mr. Dunsky,  
3 something I've -- I've heard today and yesterday that's  
4 puzzled me is your evidence regarding your  
5 understanding of Manitoba Hydro's use of RIM as a  
6 screening test.

7 And I'm wondering if you have read --  
8 had an opportunity to read Manitoba Hydro's evidence or  
9 rebuttal -- evidence-in-chief or rebuttal evidence  
10 regarding the use of RIM?

11 MR. PHILIPPE DUNSKY: Absolutely have.

12 MS. PATTI RAMAGE: If I could perhaps -  
13 - and there's no need to turn to it, but page 27 of  
14 Manitoba Hydro's rebuttal, Manitoba Hydro indicates  
15 that there are two (2) high-level processes undertaken  
16 in developing an overall DSM program: a screening  
17 process and a program design process.

18 Would you agree that these two (2)  
19 processes are general two (2) separate processes  
20 involved within the DSM world?

21 MR. PHILIPPE DUNSKY: Two (2) separate  
22 processes?

23 MS. PATTI RAMAGE: A screening process  
24 as opposed to a program design process.

25 MR. PHILIPPE DUNSKY: Well, I'll tell

1 you, when we -- when we design programs, we do them  
2 together. I think it's really important to do them  
3 together. So I don't care which program we're looking  
4 at, you know. Any program that we look at, we are --  
5 we're designing it and simultaneously screening it --  
6 screening its, you know, with different components to  
7 make sure that we are, you know, designing the most  
8 effective program possible within cost-effective --  
9 cost-effectiveness bounds. So, no, I would -- I would  
10 say those are more commonly done together.

11

12 (BRIEF PAUSE)

13

14 MS. PATTI RAMAGE: Mr. Dunsky, you'd  
15 agree, though, that it's still important to look at  
16 cost-effectiveness? We don't just -- for example,  
17 Manitoba Hydro's evidence has been it uses a modified  
18 total resource cost test. You wouldn't recommend that  
19 that -- what I'll refer to as a high-level screening  
20 test -- be the only analysis you use when you're --  
21 you're deciding on your programs.

22 Is that correct?

23 MR. PHILIPPE DUNSKY: So -- so you're  
24 asking if -- if I would - I just want to make sure I'm  
25 clear on this -- if I would disagree that that should

1 be the only screening test?

2 MS. PATTI RAMAGE: No. I think I'm  
3 asking if cost-effectiveness is something you want to  
4 look at.

5 MR. PHILIPPE DUNSKY: Absolutely.

6 MS. PATTI RAMAGE: You don't ignore  
7 that?

8 MR. PHILIPPE DUNSKY: Absolutely, yeah.  
9 Systematically.

10 MS. PATTI RAMAGE: Mr. Dunsky, you  
11 mentioned that DSM costs are much less than alternative  
12 supply solutions.

13 Would you agree that the numbers you --  
14 you referred to in the range of two (2) to four (4)  
15 cents per kilowatt hour only include investment made by  
16 the utility and exclude the financial contributions of  
17 participating customers?

18 MR. PHILIPPE DUNSKY: Yes, absolutely.

19 MS. PATTI RAMAGE: And would you agree  
20 that the financial contributions made by customers are  
21 significant relative to the utility's investment in DSM  
22 plans?

23 MR. PHILIPPE DUNSKY: Depends on the  
24 plan and program, but yes.

25 MS. PATTI RAMAGE: If we could perhaps



1 turn to page 30 in your slide presentation.

2

3

(BRIEF PAUSE)

4

5

MS. PATTI RAMAGE: Okay. And graphs  
6 are not -- and charts are not my strong point. They  
7 don't teach us this in law school. But if the line  
8 with all the little dots on it that goes around, if I  
9 understand the -- that line, that would be the total  
10 cost of implementing DSM measures that you've charted  
11 there, not just the utility's costs?

12

MR. PHILIPPE DUNSKY: I'm trying to  
13 remember, to be honest with you. I believe that this  
14 is just the utility cost, subject to check, if I can  
15 say that. I can double-check that. But I'm pretty  
16 sure this is just the utility cost.

17

18

(BRIEF PAUSE)

19

20

MS. PATTI RAMAGE: Let's just flip back  
21 to slide 32 for a second. And this might help. When  
22 we look at slide 32, I see all the little circles  
23 ranging -- it appears to me, hovering around a two (2)  
24 cent to four (4) cent cost.

25

And it's my understanding that this

1 graph is utility costs?

2 MR. PHILIPPE DUNSKY: Yes.

3 MS. PATTI RAMAGE: And then if we look  
4 at the -- the graph on slide 30, we're looking at  
5 utility costs up in the -- it's in the eight point five  
6 (8.5) range.

7 MR. PHILIPPE DUNSKY: No.

8 MS. PATTI RAMAGE: If we start at the  
9 number -- there's a line that it -- it goes vertically  
10 straight --quite straight up, and then it starts to  
11 cross over on the horizontal. Sir, it -- it -- where  
12 it starts to cross appears to be at the -- I would say  
13 at the three (3) cent mark and then carries up towards  
14 the box that you have. I think it's where your red  
15 line is for eight point five-two (8.52) cents, and it -  
16 - it sort of levelizes there.

17 Is that not what that means?

18 MR. PHILIPPE DUNSKY: Yes.

19 MS. PATTI RAMAGE: And does that not  
20 suggest that the -- that the cost of those programs are  
21 in the -- are approaching the eight point five-two  
22 (8.52) cents cost?

23 MR. PHILIPPE DUNSKY: No. So -- so  
24 just to be clear, what this is -- the important thing,  
25 I think, to -- to look at is the -- is the vertical

1 axis here. So first of all, these aren't programs;  
2 these are measures or -- or measure bundles. What it  
3 says is there is a measure, or a measure bundle, at  
4 about eight and a half (8 1/2) cents that adds next to  
5 nothing to the potential for savings in the region.

6 What it says is that majority of savings  
7 -- you know something like 80 or 85 percent of all  
8 savings on this curve are, just looking at it visually,  
9 in the range of two (2) to two and a half (2 1/2) cents  
10 a kilowatt hour.

11 MS. PATTI RAMAGE: Just to back up  
12 again, each dot is an opportunity. Is that correct?

13 MR. PHILIPPE DUNSKY: Yes. And its --  
14 its savings -- there's -- there's a cumulative curve,  
15 right. So its savings is just relative to the previous  
16 dot. It's a -- it's a typical DSM supply curve.

17

18 (BRIEF PAUSE)

19

20 MS. PATTI RAMAGE: Okay. We're going  
21 to set that graph aside for a minute. It appears we  
22 misunderstood what the -- the meaning was. But if we -  
23 - I'm just going to go back to the point.

24 We have -- as I understand, we have  
25 utility's contributing costs in the two (2) to four (4)

1 cents range. We have customers contributing some other  
2 cost, some other degree of cost. If we could assume in  
3 the three (3) to four (4) cent range, would that...

4 MR. PHILIPPE DUNSKY: Sorry. It  
5 depends. I might say, on average, they might be about  
6 equivalent contributions. Sometimes more, sometimes  
7 less.

8 MS. PATTI RAMAGE: So if -- it could be  
9 as little as zero if it was a low-income program, as  
10 much as -- I don't know what the amount could go up to.  
11 It -- it could be as high as -- as customers were  
12 prepared to take on.

13 Is that correct?

14 MR. PHILIPPE DUNSKY: In essence, yes.

15

16 (BRIEF PAUSE)

17

18 MS. PATTI RAMAGE: And if customers are  
19 prepared to take on that -- those additional energy-  
20 efficient opportunities, and if we account for both of  
21 those -- the customer contribution and the utility  
22 contribution -- we would not be looking at a difference  
23 between two (2) cents and eight point five (8.5). We  
24 would be looking at -- at a much narrower difference  
25 for many programs.

1 Is that not correct?

2 MR. PHILIPPE DUNSKY: Well, not  
3 exactly. The -- the two (2) to four (2) would be  
4 higher, absolutely. But the value to customers would  
5 also be higher, depending on the measure.

6 So, you know, customers do this for all  
7 sorts of reasons. You know, I'm pretty sure that in  
8 your market efforts, marketing literature, whatever it  
9 is, you're not selling energy efficiency exclusively on  
10 bill savings, all right? You're probably selling it on  
11 some combination of bill savings, comfort, noise  
12 reduction, additional features, green, whatever it is.  
13 Those are all the values that -- that drive customers  
14 to adopt an energy efficient measure.

15 So when we actually look at that more  
16 carefully, those values, there's been a lot of work  
17 done on assessing on the value of what we call "non-  
18 energy benefits," which are just, you know, these other  
19 things that are -- that are valued by customers.  
20 Depending on the program, I'll say by and large, often  
21 times, we find that they value these other things in  
22 roughly the same proportion as they value the bill  
23 savings.

24 So if I -- if I pull out all the studies  
25 of NEBs you'll see a range that, you know, falls

1 somewhere on average around one (1) to one (1). So,  
2 you know, to be -- to give you an example, all right,  
3 I've talked about my geothermal system, all right? So  
4 my geothermal system affords me several things, and  
5 several things drove my decision to purchase it. I get  
6 some really nice energy savings.

7 I also get central air-conditioning. I  
8 didn't have that before. I also get to boast that I  
9 have the greenest system anywhere. I even have an  
10 application that I pull out sometimes and show people  
11 how, you know, I can control my geothermal system in my  
12 phone. It's a bit of a show-off thing. That's got  
13 value to me though.

14 It gives me greater comfort than other  
15 systems. The heat that comes out of that is -- is  
16 actually much nicer heat than the pulsed really hot.  
17 It's actually more level. So I get all these benefits.

18 And those are all a series of reasons  
19 why I invest the extra money that I invest for the  
20 geothermal system. So if we're to say, well, let's  
21 take the holistic view; let's take the view of Manitoba  
22 Hydro and the participants, then, yes, add those costs,  
23 but also add those benefits. Otherwise, it's not --  
24 you know, it's just not an apples to apples comparison.

25 MS. PATTI RAMAGE: So would it be fair

1 then, when you're looking at -- at these DSM programs -  
2 - and -- and here I'm going to talk about economics,  
3 we'll jump to that -- we need to look at it from  
4 different perspectives, from the customers'  
5 perspective, the Utility's perspective and an  
6 integrated perspective regardless of who pays?

7 Is that fair?

8 MR. PHILIPPE DUNSKY: Yes.

9 MS. PATTI RAMAGE: And in assessing the  
10 economics from a customer perspective, could a simple  
11 analysis be used, such as just -- as a payback period?

12 MR. PHILIPPE DUNSKY: It would really  
13 depend on which customers you're talking about and  
14 which measures you're talking about. I -- I would say  
15 there are some measures that would lend themselves well  
16 to that, excuse me, within some customer segments.

17 So, for example, you know, the more you  
18 climb up toward the larger customers, especially larger  
19 industrial, if you're looking at a measure that really  
20 has no other value than just pure energy savings, then  
21 what matters is -- is often payback; not always, but  
22 often that's going to be their -- their decision  
23 driver.

24 I've met with some larger customers who  
25 actually MPV as their decision driver and certainly

1 something I encourage, but not always the case. So it  
2 really depends on each -- on each customer; and, again,  
3 each measure, because some measures really provide a  
4 whole series of additional benefits, whether it be, you  
5 know, my geothermal system or a large industrial  
6 process change that matter an awful lot to them.

7 MS. PATTI RAMAGE: So in assessing the  
8 economics from a utility perspective of any business  
9 decision, would you agree that to undertake a proper  
10 economic analysis consideration should be given to both  
11 the costs and the revenues involved?

12 MR. PHILIPPE DUNSKY: Well, I guess it  
13 depends which perspective you're trying to reflect. If  
14 -- if I'm looking at it from purely a utility  
15 perspective, you know, your revenues are -- your --  
16 your revenues are going to hold, all right? As I  
17 understand it, Manitoba Hydro, essentially your rates  
18 are designed to cover your costs, so your revenues are  
19 going to be there no matter what. The -- the question  
20 is, is your cost, you know, one hundred (100), or  
21 eighty (80), or fifty (50)? If the revenue were there  
22 then no mat -- in both scenarios, then I think what  
23 matters is the cost.

24 MS. PATTI RAMAGE: In your presentation  
25 that we heard this morning, one (1) of the things that



1 struck me was the focus on cost. At page 6 you  
2 provided a comparison of the cost of energy efficient  
3 programs to the cost of various resource options. And  
4 then later on I think you -- you had a slide at page 37  
5 that dealt with the value of DSM and you referenced it  
6 being the lowest utility cost.

7                   And what I'm wondering is, would you  
8 agree there's -- there are ultimately revenue  
9 differences from a utility perspective when comparing  
10 and meeting load requirements through supply options  
11 relative to DSM options? I probably made that longer  
12 than I needed to.

13                   MR. PHILIPPE DUNSKY: But I understand  
14 the question.

15                   MS. PATTI RAMAGE: I just wanted to let  
16 you know where I was coming from.

17                   MR. PHILIPPE DUNSKY: From a -- from a  
18 regulated utility standpoint, no, I wouldn't quite  
19 agree. And the reason is, again, that you're going to  
20 get the revenue that you need to cover your costs, no  
21 matter what. So the question is, do you get that  
22 revenue from additional -- additional consumption,  
23 because people are wasting more energy than they need  
24 to, or do you get it through a slight upward pressure  
25 on the rate, but -- because people are consuming less

1 and the bill is lower? That I think is the fundamental  
2 question.

3 But either way, you're revenue, I'm  
4 pretty sure -- unless there's a policy of bankrupting  
5 Manitoba Hydro, I'm pretty sure your revenue is -- is  
6 going to be there to cover your costs.

7 MS. PATTI RAMAGE: So if I have it --  
8 make sure we're on the same page as I move forward --  
9 we're going to get our revenue either through domestic  
10 rates or through export rates, but sup -- a supply  
11 option has a revenue component to it, that's correct?

12 MR. PHILIPPE DUNSKY: Sorry, I'm just  
13 thinking that through, because it's not what I said,  
14 but -- but it may -- it may be correct on its own.

15 MS. PATTI RAMAGE: I just thought --  
16 it's what I wanted you to say, maybe.

17 MR. PHILIPPE DUNSKY: Well, can you say  
18 it again?

19 MS. PATTI RAMAGE: That when we're  
20 looking at supply options, there's a revenue side to --  
21 to a supply option. When we build new generation  
22 there's going to be revenue.

23 MR. PHILIPPE DUNSKY: Well, yes, but if  
24 you -- if you invest in DSM there's going to be  
25 revenue, too.

1 MS. PATTI RAMAGE: And the revenue  
2 impact for DSM will be the difference between the  
3 export revenue less the domestic revenue, correct?

4 MR. PHILIPPE DUNSKY: No. So if I can  
5 set aside export for a second, just to simplify. You  
6 know, if we were in a -- in a bubble, the revenue would  
7 be from the -- the pressure -- or the impact that it  
8 might have on rates, because consumption has gone down.  
9 And if consumption has gone down and -- so in other  
10 words, if -- if consumption goes down 10 percent as a  
11 result of what you're doing, and to -- to get that  
12 consumption to go down 10 percent you need to spend, I  
13 don't know, let's say 2 percent more costs, to use a  
14 rough -- a rough ratio, then you're going to have to  
15 recoup that additional 2 percent on a lower -- you  
16 know, on -- on ninety (90) units sold as opposed to a  
17 hundred units sold.

18 So it's not about export or domestic,  
19 it's just about where are you getting the revenue from  
20 and over what base of consumption.

21 I -- I hope I'm not try -- I'm not  
22 trying to be obtuse of this. The -- you know, very  
23 simply put, you're going to get your revenue. The  
24 question is, do you get your revenue on a basis of the  
25 -- of consumption -- high consumption or lower

1 consumption? And if you get it on the basis of lower  
2 consumption, you're still getting that revenue to cover  
3 your costs, all right?

4

5

(BRIEF PAUSE)

6

7 MS. PATTI RAMAGE: I'm struggling with  
8 the -- with what you're saying, and I think from --  
9 perhaps from the Board's perspective also, because if  
10 we accept that logic then it really doesn't matter what  
11 we do because we're going to recover. We're not --  
12 we're not looking at our -- our customers or balancing  
13 the various interests of our various stakeholders,  
14 because no matter what we do we can just throw it out  
15 there and -- and ratepayers will -- will pay.

16

Is that not correct?

17

18 MR. PHILIPPE DUNSKY: Well, I think the  
19 last part of what you said correct. I -- I think the  
20 first part I would strongly disagree with. It does  
21 matter and it matters an awful lot. And that's why --  
22 what matters is that what you do to ensure that the  
23 lights stay on is the lowest cost option possible.

23

24 You're -- it's -- it's true. It's --  
25 it's just a fact that you are absolutely going to get  
the revenue that you need to stay financially sound.

1 The question is -- is -- you know, that holds. The  
2 question is, are you choosing the options that cost  
3 less or that cost more? But ultimately Manitobans are  
4 going to pay that price, whatever it is. That doesn't  
5 mean that you shouldn't care; that means that you  
6 should care even more about making sure it's the lowest  
7 cost option.

8

9

(BRIEF PAUSE)

10

11 MS. PATTI RAMAGE: I'm jumping around a  
12 little bit here. This is going faster than I expected  
13 so that's good.

14 In your deferral scenarios you presented  
15 at slide 43, is it fair to assume you did not consider  
16 the impacts of generation deferral on Bipole 3?

17 MR. PHILIPPE DUNSKY: Yes.

18 MS. PATTI RAMAGE: And would you accept  
19 that with generation deferral there would be no  
20 incremental revenue to offset the investment in Bipole  
21 3?

22 MR. PHILIPPE DUNSKY: First of all,  
23 I'll make an admission. I -- I did not take an in-  
24 depth look at your system planning, so I -- I can't  
25 speak with any -- with any great authority about Bipole

1 -- Bipole 3, in particular.

2                   What I can say, is that if you are  
3 reducing your domestic consumption and therefore  
4 offsetting new capital, you're -- you're saving an  
5 awful lot of money. I -- I'm not -- I'm not sure about  
6 the revenue side of this that you're trying to get at.

7                   MS. PATTI RAMAGE: Well, if -- Bipole 3  
8 is a -- is being put in for reliability purposes. So  
9 if you accept that, that that's going in, and a DSM  
10 program would not assist in offsetting the costs of --  
11 of an asset like Bipole 3, it's not revenue generating?

12                   MR. PHILIPPE DUNSKY: Well, it depends  
13 on the context. So if you're -- if you're deferring  
14 capital then it's not generating additional revenue;  
15 it's just saving money. If you're not deferring  
16 capital, and -- and you are increasing your exports  
17 then you're generating additional revenue.

18                   I mean, ultimately I think it -- I think  
19 it needs to be thought of -- if -- if you imagine DSM,  
20 as some have used, you know, good analogy as a megawatt  
21 power plant. You're building a power plant of  
22 megawatts. You're not producing electrons; you're  
23 freeing up electrons because your domestic load is  
24 lower. So you have more electrons now coming out of  
25 your existing hydro power resources to do something

1 with.

2                   And whether that's -- you know, that  
3 might be meeting domestic load or it might be exporting  
4 more. You might be investing in Bipole 3 and that  
5 increases your -- your export capacity. And freeing up  
6 the electrons today in a big chunk allows you to export  
7 more of that, use that revenue to partly finance Bipole  
8 3. With the caveat, of course, again that -- you know,  
9 I haven't taken an in-depth look at -- at your  
10 planning. But, you know, DSM is really no different,  
11 in that respect, from a new generation plant.

12

(BRIEF PAUSE)

13

14  
15                   MS. PATTI RAMAGE: This is why my  
16 confusion. My notes say page 13, but it's your  
17 evidence, not your chart, which is what I've been  
18 looking through. I think it's good enough to go page -  
19 - now, where was I? Page 19. This is just -- of your  
20 actual presentation today.

21

(BRIEF PAUSE)

22

23  
24                   MS. PATTI RAMAGE: I'm almost done, Ms.  
25 Southall, so that you know.

1                   This graph depicts the planned savings  
2 of Manitoba Hydro compared to the five (5) cohort  
3 regions, correct?

4                   MR. PHILIPPE DUNSKY:    Yes.

5                   MS. PATTI RAMAGE:    And each of the  
6 regions would have a detailed plan and presumably a  
7 budget to go with that plan?

8                   MR. PHILIPPE DUNSKY:    Essentially, yes.

9                   MS. PATTI RAMAGE:    Well, I think I  
10 heard you say this morning that these plans are -- are  
11 concrete. They're not just airy-fairy, hope-we-get-it  
12 things. You felt that they were -- were achievable?

13                  MR. PHILIPPE DUNSKY:    They are -- they  
14 are solid commitments upon which planning is being  
15 built -- around which planning is being built, so, yes.

16                  MS. PATTI RAMAGE:    And British  
17 Columbia's plan extends out to 2020, correct?

18                  MR. PHILIPPE DUNSKY:    British Col --  
19 British Columbia's current draft plan, I should  
20 specify. So this is the most recent version of their  
21 draft plan, and that's undergoing review right now.  
22 And the scenario that's here is the preferred scenario  
23 that BC Hydro has -- has indicated.

24                  MS. PATTI RAMAGE:    And BC Hydro -- Mr.  
25 Williams -- I should begin with -- Mr. Williams had



1 provided counsel, at least, with a copy of BC Hydro's  
2 Power Smart plan at one (1) point. And I'm wondering  
3 if you would accept, subject to check, that their plan  
4 indicates they will be incurring costs in the range of  
5 1.4 billion to achieve this plan?

6 MR. PHILIPPE DUNSKY: It's possible.  
7 But honestly, I -- I don't remember offhand the number.  
8 I trust that if you're saying that, it's probably true.  
9 I -- I would like to double check, just to be sure.

10 MS. PATTI RAMAGE: It's 1.4 bill over  
11 four (4) years, if you'd accept that, subject to check.

12 MR. PHILIPPE DUNSKY: One point four  
13 billion over four (4) years?

14 MS. PATTI RAMAGE: That's correct.

15 MR. PHILIPPE DUNSKY: Again, I would --  
16 I think it would be worth -- worth double checking.

17 MS. PATTI RAMAGE: Fair enough. In  
18 Manitoba Hydro -- or before I go there. The other  
19 regions you've compared to, excepting Manitoba Hydro,  
20 they -- they work off three (3) plans, correct?

21 MR. PHILIPPE DUNSKY: It depends. So  
22 Massachusetts works off of a three (3) year plan.

23 Vermont has -- it's a little -- a little  
24 bit complicated. They have a twelve (12) year -- they  
25 have a twelve (12) year engagement, if you will, a

1 twelve (12) year commitment, and then -- and then they  
2 adjust it every three (3) years.

3 Minnesota, to be perfectly honest with  
4 you, I'm not a hundred percent sure the -- the time  
5 frame.

6 Nova Scotia is currently a two (2) year  
7 plan. They intend to move to a three (3) year plan.

8 And -- and British Columbia is a -- is a  
9 multi-year plan. I don't remember the exact time  
10 frame.

11

12 (BRIEF PAUSE)

13

14 MR. PHILIPPE DUNSKY: With Manitoba  
15 Hydro's plan, we see it here, but you've made a  
16 recommendation to do something different, and that is  
17 to move towards, I think it was the mid-zone of the  
18 graph that you presented earlier, to -- to get this red  
19 line up, and to move to the midrange of -- well, let's  
20 find it, the slide -- the chart on slide 13.

21 Is that correct? Is that where --  
22 that's where you want them to go -- us to go?

23 MR. PHILIPPE DUNSKY: So just to  
24 specify, the suggestion there is to -- is to work on  
25 the assumption of the lowest of those ranges,

1 notwithstanding Manitoba Hydro's itself. The mid-range  
2 would be higher.

3 MS. PATTI RAMAGE: But to get Manitoba  
4 Hydro -- you wanted Manitoba Hydro around the 1 percent  
5 savings ratio?

6 Is that correct?

7 MR. PHILIPPE DUNSKY: Yeah, I'm saying  
8 that I have confidence that Manitoba Hydro is able to  
9 achieve 1 percent, and I think anything beyond that is  
10 -- is something that would really be subject to a much  
11 deeper analysis.

12 MS. PATTI RAMAGE: That would put  
13 Manitoba Hydro in that top quartile, the 1 percent,  
14 correct?

15 MR. PHILIPPE DUNSKY: Just a second. I  
16 believe -- I believe so. The problem, of course, with  
17 the -- with the quartiles, or the -- for that graph, is  
18 that that's 2010, and my suggestion is to have you --  
19 or for you to ramp up to that by 2015.

20 In the interim -- you know, the  
21 goalposts are moving, right, so in the interim those  
22 others -- that quartile is probably moving as well.  
23 That's just a long-winded way of saying, I can't say  
24 for sure that you would still be in that top quartile  
25 at -- by 2015 at 1 percent, but relative to 2010

1 savings, yes, it would put you in the top quartile.

2 MS. PATTI RAMAGE: And do I understand  
3 your everything correctly that you estimate that the  
4 annual budgetary requirement for Manitoba Hydro to  
5 accomplish this would be about \$65 million a year? And  
6 here I'm referring to PUB/CAC and GAC-1D.

7 MR. PHILIPPE DUNSKY: I'm sorry, I  
8 don't have that in front of me, but -- but here's what  
9 I will do is --

10 MR. BYRON WILLIAMS: Just repeat the IR  
11 number, please, Ms. Ramage.

12 MS. PATTI RAMAGE: I'm -- I'm sorry.

13 MR. BYRON WILLIAMS: You don't have to  
14 apologize. I was just --

15 MS. PATTI RAMAGE: It's PUB/ -- I call  
16 then CAC and GAC-1D.

17 MR. BYRON WILLIAMS: We -- we probably  
18 prefer CAC...

19

20 (BRIEF PAUSE)

21

22 MS. PATTI RAMAGE: I thought it would  
23 be easier for the court reporter. Sorry, Mr. Williams.

24

25 (BRIEF PAUSE)

1 MR. PHILIPPE DUNSKY: Thanks. Okay.  
2 Yeah, I'm just -- I'm not looking at it specifically,  
3 because I know -- as I mentioned before in the  
4 presentation, we revised the scenarios. So the  
5 scenario that you're referring to is a scenario that  
6 specifically monetized in here on slide 41.

7 So if you look at slide 41, we're  
8 talking about \$329 million over an eight (8) year time  
9 frame. So you're looking at forty (40) -- you know,  
10 let's call it forty (40) -- well, I think it would be  
11 \$41 million annually.

12

13 CONTINUED BY MS. PATTI RAMAGE:

14 MS. PATTI RAMAGE: Okay. Thank you.

15

16 (BRIEF PAUSE)

17

18 MS. PATTI RAMAGE: If we could just go  
19 back to -- and you don't need to actually go to it, but  
20 the slide at number 30, and I perhaps should have asked  
21 you for an undertaking and I will now, to confirm  
22 whether that is in fact just the utility costs being  
23 charted on that graph, or whether it's utility combined  
24 with customer costs?

25 MR. PHILIPPE DUNSKY: Sure, I'll take

1 that undertaking.

2 MS. PATTI RAMAGE: Thank you.

3 MR. BYRON WILLIAMS: Which slide was  
4 that --

5 MR. PHILIPPE DUNSKY: So that would be  
6 slide 30.

7 MR. BYRON WILLIAMS: Can you repeat the  
8 undertaking --

9 MR. PHILIPPE DUNSKY: I believe -- I  
10 believe the undertaking is to confirm whether the costs  
11 indicated in the graph on slide 30 are utility costs or  
12 total resource costs?

13 MS. PATTI RAMAGE: Yes, that would be  
14 appreciated.

15 MR. PHILIPPE DUNSKY: A pleasure.

16

17 --- UNDERTAKING NO. 89: Mr. Dunsky to confirm if  
18 the costs indicated in the  
19 graph on slide 30 are  
20 utility costs or total  
21 resource costs

22

23 MS. PATTI RAMAGE: Thank you, Mr.  
24 Dunsky, I have appreciated speaking with you and your  
25 answers and we moved along a lot quicker than I had

1 anticipated.

2 MR. PHILIPPE DUNSKY: Thank you. I  
3 enjoyed the exchange.

4 THE CHAIRPERSON: I -- I have some  
5 questions and I -- I wonder if we couldn't ask them  
6 before we recess, or at least take a few minutes. And  
7 I'm -- you know, I'm trying to -- you know, we've been  
8 looking at the -- the world through a lens of the -- of  
9 a utility, that's-- generally speaking. I mean, we  
10 have been talking peripherally about -- about  
11 consumers, but now I want to look at the len -- the  
12 world through the lens of the consumer, and I'm trying  
13 to understand, very specifically, what it means for a  
14 consumer to -- to buy into a DSM program.

15 And -- and, you know, fundamentally,  
16 what I'm getting at is if -- if the Utility spends a  
17 dollar, what's in it for the consumer? I mean, what --  
18 what's in it for me as a consumer that would cause me  
19 to -- to spend my dollar or more? Could you -- could  
20 you talk about that a little bit?

21 MR. PHILIPPE DUNSKY: Sure. So again  
22 it really depends on -- on the individual measure or  
23 program, but -- excuse me -- you know, if I am -- let's  
24 just take an example, all right?

25 I'm -- I'm an individual. I go to Home

1 Depot and -- and I see this -- these new LED lights.  
2 Not the Christmas lights but the -- you know, the new  
3 ones that actually provide full -- full lighting. And,  
4 you know, I'm looking at them, kind of interested but,  
5 my God, you know, thirty-five dollars (\$35) for a  
6 lightbulb. You know, that's -- I have a hard time with  
7 that. There is some enticing things to me about it.  
8 It's -- it's going to save me energy. Probably, it's  
9 going to last me a fairly long time, but I don't really  
10 know much about it.

11 Now, Manitoba Hydro, let's just say, has  
12 a program in the market that's -- that's encouraging  
13 LED lights, and maybe they're doing like some other  
14 regions and offering let's say a ten dollar (\$10)  
15 rebate. So the ten dollar (\$10) rebate does two (2)  
16 things. First of all, it makes it more palatable to  
17 me. Second of all, it catches my attention so I look  
18 at it more closely.

19 The -- the signage around that  
20 particular lightbulb explains all the benefits of it to  
21 me. It's fully dimmable. It saves me a lot of energy.  
22 Most importantly, for someone like me, it's probably  
23 going to last thirty (30) or forty (40) years. It may  
24 outlive me. I may never have to change that socket  
25 again. Now I'm interested.



1                   The -- the incentive really depends on -  
2 - again on the measure and on the specific customer.  
3 Sometimes an incentive is necessary to make the  
4 economics for me work. For example, again my  
5 geothermal system, I don't think I could have passed  
6 that through my, you know, local council without the  
7 incentives. But sometimes it's even more of, how can I  
8 say, a carrot that -- that brings me to look at  
9 something more carefully and understand its fuller  
10 benefits.

11                   So there are different ways in which --  
12 in which an incentive will pull me toward looking at a  
13 measure. But, in terms of what's in it for me, why  
14 would I spend the money on that measure? Because it's  
15 going to reduce my bills.

16                   It's going to reduce my bills, and the  
17 depending on the measure it might also provide me added  
18 comfort, if I'm looking at insulating my home or  
19 weatherizing my home. It might be an awful lot more  
20 quiet. You know, the -- the super-efficient  
21 dishwasher, you're not going to hear it. I have a  
22 super-efficient dishwasher at home. They have a little  
23 light built in that shines onto the floor, and when I  
24 installed it at first I called the company. I said:  
25 You know, there's a problem here. Why is there a red

1 light shining on my floor, and it said to let you know  
2 that the machine is washing, because otherwise you  
3 wouldn't know. That's a value to me. It's completely  
4 silent.

5 So there are all these benefits that I  
6 can get and that justify me putting in a little bit of  
7 my money up-front, and on top of that I'm getting lower  
8 bill.

9 THE CHAIRPERSON: But generally  
10 speaking, it -- it does involve the consumer putting a  
11 -- an investment up-front to get later gains, and --

12 MR. PHILIPPE DUNSKY: Yeah.

13 THE CHAIRPERSON: -- and is that true  
14 for all measures?

15 MR. PHILIPPE DUNSKY: Pretty much.  
16 There are some exceptions; what we call, "behavioural  
17 measures." You know, so switching off my light doesn't  
18 cost me any money when I leave the room, right? Or  
19 drying my clothes in the summertime on a clothesline  
20 doesn't cost me money. They're -- you know, they're  
21 not the biggest parts of a DSM portfolio, but they are  
22 part of it. The majority of the portfolio though, yes,  
23 I have to put my money in.

24 THE CHAIRPERSON: Now, the -- the -- in  
25 terms of a dollar spent by Manitoba Hydro on DSM, the

1 gain on that from -- from DSM investment to Hydro is  
2 not -- is probably not immediate. How much of a lag  
3 effect is there in terms of getting a response?

4 MR. PHILIPPE DUNSKY: Well -- yeah, I  
5 mean, very -- as a very practical matter, it really  
6 depends on the -- on the unique characteristics of  
7 where they are in their planning cycle. But, you know,  
8 realistically, what it means -- in the aggregate, if  
9 you look at a single year's -- a single year's energy-  
10 efficiency programs, you know, that allows you to -- as  
11 I said before, either you free up a whole bunch of  
12 energy that you can sell at export for four (4) times  
13 more than it cost you, and in that case it's absolutely  
14 immediate, or you can defer capital investments.

15 And if you're deferring capital  
16 investments obviously you're not -- you know, you're  
17 not gaining the \$10 billion of capital, but you're  
18 gaining the carrying costs on that.

19 THE CHAIRPERSON: I think it was more -  
20 - it was -- what I'm trying to understand is, you know,  
21 if I spend a dollar on a program today, I expect to  
22 start seeing a return from that dollar when?

23 MR. PHILIPPE DUNSKY: Tomorrow.

24 THE CHAIRPERSON: Tomorrow?

25 MR. PHILIPPE DUNSKY: Immediately

1 tomorrow, yes. I mean, sorry, to -- you know, just to  
2 be clear about that: the benefit is essentially  
3 immediate. I -- you know, I don't want to talk about  
4 hours and days, but, you know, your -- your benefit --  
5 you're -- you're freeing up electrons. And so either  
6 I'm immediately taking that electron and exporting it,  
7 or I'm immediately taking that electron, or -- or that  
8 drop of water, and putting it in the -- in my dam. And  
9 that will prob -- you know, may or not fit into my  
10 accounting.

11                   And then, beyond that, if I'm talking  
12 about deferral, I am not immediately deferring  
13 something unless it happens to be right in front of me  
14 right now. But whatever costs I am committing to, I'm  
15 pushing those off. And so that's where -- if we're  
16 talking about deferral, it's the carrying costs, the --  
17 the borrowing cost of that capital. As soon as I'm --  
18 as soon as I need to start borrowing money for that  
19 capital, right there is where I'm benefiting.

20                   THE CHAIRPERSON: Now, you also  
21 indicated in one (1) of the slides -- and again, I just  
22 want to make sure I understand. I did indicate that  
23 we're not responsible for shelving generation plans,  
24 but notwithstanding the considerable evidence that you  
25 suggested where DSM makes sense, you then say, Don't

1 shelve the generation plans, and I'm trying to  
2 understand what -- why that com -- why are you making  
3 that comment.

4 MR. PHILIPPE DUNSKY: I don't think, to  
5 be honest with you, on -- on the basis of one (1)  
6 analysis, and -- and, in particular, the deferral  
7 analysis that I did -- you know, I -- I was very  
8 specific to call it a preliminary analysis. I -- I  
9 don't think it'd be prudent on the basis of a  
10 preliminary analysis to say, Let's completely, you  
11 know, throw out everything that we've planned.

12 I -- I think what that level of analysis  
13 allows you to do is buy time. And I think what it does  
14 -- if I were -- if I were a decision maker, I would  
15 say, based on the analysis that I did, I now have  
16 comfort that I have more time than I thought. If I  
17 start investing now in DSM I have more time. I don't  
18 need to rush to start, you know, giving the contracts  
19 to start build. It gives me maybe year, maybe a couple  
20 of years, to look more carefully into it and come out  
21 with the exact number, so that my plan is as accurate  
22 as possible.

23 So it's in that sense. I'm -- I'm, by  
24 nature, prudent, so I don't want to say, you know, I do  
25 one (1) analysis and, you know, the whole world should

1 be turned upside down. But I think it gives you enough  
2 time to do an even more careful one.

3 THE CHAIRPERSON: In some of the  
4 evidence we heard, we talk -- they're talking about  
5 ductless systems, ductless geothermal systems.

6 MR. PHILIPPE DUNSKY: Ductless heat-  
7 pumps.

8 THE CHAIRPERSON: Heat pumps. I'm  
9 sorry. Could you comment on that? I mean, we've heard  
10 that they're ineffective in a cold climate. Could you  
11 -- could you comment? Are you in a -- are you -- do  
12 you feel confident enough to comment on that?

13 MR. PHILIPPE DUNSKY: I feel just  
14 competent enough. I've got people who work for me who  
15 are much more technically oriented than I.

16 But ductless heat pumps have -- I mean,  
17 I've looked at, you know, enough now, and -- and we  
18 have the team. Ductless heat pumps have undergone  
19 significant improvements over the past several years,  
20 to the point where now we have inverter-driven models  
21 in the market that have performances that are not quite  
22 to the level of geothermal, but they're getting awfully  
23 close. And they are awfully close at a much lower  
24 cost.

25 You know, I -- I often half-joke in my

1 home that, you know, had I -- had I really given it  
2 more thought, I might have been better off putting in a  
3 ductless heat pump. And I -- I'm a big fan of  
4 geothermal, don't get me wrong. But these things cost  
5 a fair bit less and perform almost as well.

6                   Now, we did an analysis. Recently there  
7 was the most significant analysis that's ever been done  
8 on ductless heat pumps, and it was done in the  
9 northwest US. And so they did two (2) things. They  
10 did -- they did, you know, lab testing of heat-pump  
11 performance at different temperatures including, you  
12 know, well below freezing, and then they did in situ.  
13 So they actually, you know, encouraged the installation  
14 of ductless heat pumps throughout the northwest. I  
15 think they're up at something like eighteen thousand  
16 (18,000) of them installed now. And then they went and  
17 actually tested them and measured them.

18                   And the -- the performance of them in  
19 the field, in peoples' homes, real life, very neatly  
20 matched the performance in the -- in the labs, if you  
21 will. And that performance was extraordinary.

22                   So, you know, to give an example, I was  
23 at -- at the hardware store the other day, and there  
24 was Daiken. I don't know if you're aware -- familiar  
25 with Daiken. Daiken is an HVAC manufacturer, and they

1 had a stand and they were there selling their ductless  
2 heat pump. And I picked up the specs, and the specs  
3 look better than the best specs that I'd seen so far.  
4 They were looking at a COP, which is a coefficient of  
5 performance of four (4). A four (4), meaning in the  
6 climate that they were looking at, 75 percent reduction  
7 in heating loads.

8                   Now, that's for the climate that they  
9 were looking at, which is northern US, not Manitoba.  
10 So when we conducted our analysis, we conducted it very  
11 specifically for Manitoba given the heating degree days  
12 here. And we found, again, very significant potential  
13 savings.

14                   If I recall correctly, we're looking at  
15 savings in the range of 40 percent of an average home's  
16 annual electric consumption for heat, just from a heat-  
17 pump. And, you know, that's a heat-pump that doesn't  
18 require any ducting.

19                   So if you're stuck with baseboard and  
20 you don't have ducts in your home, you don't need ducts  
21 in your home now. It's a tremendous opportunity. I  
22 strongly encourage it -- its inclusion in a lot of  
23 different programs, actually.

24                   MR. RAYMOND LAFOND: Are we going to  
25 break and...



1 (BRIEF PAUSE)

2

3 MR. RAYMOND LAFOND: I just have a  
4 couple of questions. And -- and I'm -- I'm a new  
5 member and I'm not sure about the protocol, but one (1)  
6 of the questions that I would have had is: Why the  
7 blip in 2006 by Manitoba Hydro on slide number 10?

8 MR. PHILIPPE DUNSKY: Are you looking  
9 this way or that way?

10 MR. RAYMOND LAFOND: Well, I'm not sure  
11 what the protocol is. Can -- can I ask anyone?

12 MS. ANITA SOUTHALL: We'd prefer if you  
13 start with the Witness who's currently on the panel.  
14 Thank you.

15 MR. RAYMOND LAFOND: No simple answer.

16 MR. PHILIPPE DUNSKY: I'm sorry. And  
17 so that was on slide -- is that slide 9?

18 MR. RAYMOND LAFOND: Ten.

19 MR. PHILIPPE DUNSKY: Slide 10. Okay.

20 MR. BYRON WILLIAMS: And while he's  
21 looking, Mr. Lafond, I believe PUB counsel, Mr. Peters,  
22 has spoken of recalling Ms. Morrison anyway, so that  
23 might be the -- the opportune time to ask Manitoba  
24 Hydro.

25 MR. RAYMOND LAFOND: Thank you. I

1 appreciate that.

2                   My question is: Looking at the -- one  
3 (1) of the very first pages, namely slide number 5,  
4 where it was indicated that since 1970, growth and  
5 demand was taken care of to the level of 75 percent by  
6 increased efficiency in the US and 85 percent in  
7 Canada. Is this trend -- and that's since 1970. Is  
8 this trend continuing? In other words, was it very  
9 high in 1970 and now lower, or was it -- is it on the  
10 upscale? In other words, is that expected to continue  
11 at that rate of 75 and 85 percent?

12                   MR. PHILIPPE DUNSKY: Well, I won't say  
13 "expected", because, of course, expected is about what  
14 we do. I think that, given what I've seen in the past  
15 several years, with a really increased emphasis on  
16 energy efficiency, if that were to be maintained, I  
17 would certainly anticipate that that would continue;  
18 ballpark, all right? You know, without that, I  
19 couldn't say.

20                   But certainly, if you look at the -- at  
21 the US graph that's there, you know, I don't see any  
22 reduction in -- in the slopes there over time. So in  
23 other words, those savings, you know, if you look in  
24 the '80s or you look in the '90s or you look in the  
25 2000s, the -- the slopes are continuing. The -- the

1 amount of -- the amount of growth that's being met by  
2 efficiency is continuing at that very high level.

3 MR. RAYMOND LAFOND: Thank you. The  
4 other comment I have was, at a point in time -- and I  
5 can't refer to the precise slide, talking of the 6.5  
6 percent discount rate. I understand that from Hydro's  
7 perspective, but from the customer's perspective it  
8 would generally be much lower. And, as an example, if  
9 I can earn 3 percent on a five (5) year term deposit or  
10 a guaranteed investment certificate at a bank, after  
11 taxes it's only 2 percent, so I don't really need 6 1/2  
12 percent to -- to make it valuable.

13 So is there a different approach when  
14 you meet with a customer versus from the perspective of  
15 Manitoba Hydro?

16 MR. PHILIPPE DUNSKY: Well, discount  
17 rates often -- the bane of my existence. I just --  
18 just finished doing a -- a pretty deep analysis of the  
19 question of discounting.

20 So first of all, you're absolutely  
21 right, it depends on the perspective. In Manitoba  
22 Hydro, it's one (1), a consumer's might be another, and  
23 society's might be a third. And society's is likely to  
24 be very different from the individuals, or even from  
25 Manitoba Hydro's.

1                   Now -- so, coming to your specific  
2 question, you know, is it different when you meet with  
3 a customer? When you meet with a customer, absolutely.  
4 When you meet with a customer and -- and you're talking  
5 about DSM -- you know, let's say I'm going into -- into  
6 a large -- a large business, or into a meeting with --  
7 you know, with the -- with the CFO of a large company,  
8 you know, certainly I'm talking their language, not  
9 mine, and that language may involve all sorts of  
10 different expec -- expected return thresholds.

11                   MR. RAYMOND LAFOND:    Merci.

12                   MR. PHILIPPE DUNSKY:    Merci a vous.

13                   THE CHAIRPERSON:    Okay. That's if for  
14 the questions as far as the panel is concerned. I -- I  
15 guess that's -- we -- the Witness can -- oh, I'm sorry.  
16 I'm sorry.

17                   MR. BYRON WILLIAMS:    Could -- could --  
18 Mr. Chair, could I -- I apologize for interrupting.  
19 Could I suggest just a -- a five (5) minute break for  
20 my Witness?

21                   THE CHAIRPERSON:    Let's do that, yeah.

22                   MR. PHILIPPE DUNSKY:    Thank you.

23

24 --- Upon recessing at 3:24 p.m.

25 --- Upon resuming at 3:40 p.m.

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2

3

THE CHAIRPERSON: I believe we're ready  
to -- to recommence the proceedings.

4

Ms. Southall...?

5

6

CROSS-EXAMINATION BY MS. ANITA SOUTHALL:

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11

MS. ANITA SOUTHALL: Thank you, Mr.  
Chairman, I -- I will proceed with my -- what I will  
characterize as a hodgepodge of questions left after  
the comprehensive direct-exam and -- and everyone  
else's questioning.

12

13

14

15

But, sir, starting first with what I  
think is a comparable slide 13 in today's presentation,  
and a similar graph, which I think was Figure 1 in your  
original evidence.

16

17

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This is the comparison's graph of the US  
jurisdictions, with, I believe, four (4) Canadian  
jurisdictions, correct? In addition to Hy -- Manitoba  
Hydro.

20

21

22

23

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25

MR. PHILIPPE DUNSKY: Correct.

MS. ANITA SOUTHALL: And we posed the  
question -- that is, the Board posed an Information  
Request as to why you didn't include Ontario,  
Saskatchewan, and Alberta, and you gave a response.

Sir, could you just -- could you just

1 remind us why those jurisdictions in Canada weren't  
2 included in the comparisons?

3 MR. PHILIPPE DUNSKY: Sure. Jus --  
4 very simply -- very simply: economy. I had all of the  
5 datas (sic) available for every US state. For the  
6 Canadian provinces, it takes some -- some digging. And  
7 since I had already been doing the digging for the five  
8 (5) cohorts that we chose, you know, I brought those  
9 in.

10 I -- it's just a matter of economy.  
11 Again, I could have brought in the others, but it would  
12 have been additional time and I didn't really feel it  
13 was going to add any value to the analysis.

14 MS. ANITA SOUTHALL: And just taking up  
15 that last -- the end of that response, and -- and I  
16 believe it's consistent with what you said in your  
17 Information Request response. You concluded it  
18 wouldn't materially change the results, and I'm  
19 wondering how you were able to come to that conclusion.

20 MR. PHILIPPE DUNSKY: Well, I have a --  
21 first of all, I have a sense of where the different  
22 provinces are; I just can't tell you the exact decimal  
23 point. And -- and second of all, we're looking at -- I  
24 think there are fifty-five (55) -- fifty-five (55)  
25 regions here, so adding another five (5) to the mix,

1 you know -- even if they all came out at the far tail-  
2 end, or at the far high-end, I don't think it would  
3 dramatically change the picture. But in practice,  
4 they're going to be, you know, dispersed through this.  
5 I -- I just can't see how in the world it would  
6 materially change the picture.

7 MS. ANITA SOUTHALL: Well, just on that  
8 point, sir, when you say you have a general  
9 understanding of -- of where the other provinces are,  
10 are you able to identify, as of 2010, was Ontario  
11 better or worse, in terms of its savings ratio? Was  
12 Saskatchewan better or worse? Was Alberta better or  
13 worse?

14 Are you able to comment in those terms?

15 MR. PHILIPPE DUNSKY: You know, not --  
16 not very specifically. I wouldn't want to say specific  
17 to, you know, zero point four-three (0.43). You know,  
18 what I'll say is that in Canada, Ontario is, you know,  
19 reasonably aggressive, maybe not quite as much as BC,  
20 but -- but, you know, maybe close to.

21 Saskatchewan has recently been ramping  
22 up their activities very significantly. They were  
23 essentially at zero a few years ago. Today it's, you  
24 know, much improved. So I'm not sure exactly. Would  
25 they be, you know, just below or just above Manitoba

1 Hydro? I'm not sure. But, you know, it might be in  
2 that -- in that sort of range.

3 New Brunswick's been doing things for a  
4 while, though more on the non-electric side. Now  
5 they're -- we're actually developing for them their --  
6 their first pure-electric plan. So they would probably  
7 be on the right side of that -- of the -- of Manitoba  
8 Hydro on this.

9 It's that -- you know, that level that I  
10 can, you know, safely say that they would be dispersed  
11 about probably not perfectly. You know, I wouldn't  
12 suggest that the other five (5) provinces would be  
13 perfectly spaced along this. They might be a little  
14 bit more toward -- toward the right.

15 I don't -- you know, we don't have  
16 Vermont's and Massachusetts's in here, beyond the ones  
17 that we've looked at. But, again, you know, adding  
18 that five (5) out of -- adding that five (5) out of  
19 fifty-five (55) or sixty (60) wouldn't mater --  
20 materially change the picture.

21 MS. ANITA SOUTHALL: Sir, part of the  
22 response -- and there -- there -- I don't think there's  
23 any need to go there. But part of the response to --  
24 but -- but if you wish, I -- we've made it available in  
25 the book of documents that was circulated yesterday.



1 It was book of -- PUB book of documents 4 at Tab 53.

2 Mr. Williams, I'm not sure...

3 MR. PHILIPPE DUNSKY: I've got it.

4 MS. ANITA SOUTHALL: Mr. Dunsky, you  
5 have that?

6 MR. PHILIPPE DUNSKY: I do.

7 MS. ANITA SOUTHALL: Thank you. So,  
8 sir, this would be the -- the response you provided to  
9 PUB/CAC/GAC number 1(c), where we asked for you to  
10 comment on Manitoba Hydro's relative position to  
11 Canadian peers and the comparability in 2010 as between  
12 Hydro-Quebec's programs. You indicated they were 27  
13 percent greater than Manitoba Hydro's? Sorry, energy  
14 savings is the right -- is the right measure there.

15 Is that -- is that accurate, to your  
16 knowledge, in terms of the differential?

17 MR. PHILIPPE DUNSKY: Yes.

18 MS. ANITA SOUTHALL: And what I'm --  
19 what I'm wanting to get at is, is it -- does it -- does  
20 it, in reality, have that kind of impact? In other  
21 words, when we're saying 27 percent and we're saying a  
22 .55 percent savings ratio versus point four-three  
23 (.43), I'm trying to get an understanding of whether or  
24 not it really is that dramatic in terms of the ultimate  
25 -- the ultimate impact to both the utility and the

1 customers in those jurisdictions.

2                   Twenty-seven (27) percent sounds like a  
3 large number is my point, and I'm just trying to get an  
4 understanding of -- of what that actually translates to  
5 if -- if you're able -- if you understand that  
6 question, if you're able to comment on it.

7                   MR. PHILIPPE DUNSKY:    So I think I  
8 understand the question.  And if you'll allow me a  
9 moment, I think I can consult something here and answer  
10 it.

11

12   (BRIEF PAUSE)

13

14                   MR. PHILIPPE DUNSKY:    Okay.  So 27  
15 percent, just -- just reading off of -- off of slide 9  
16 here, where we actually have the gigawatt hours of  
17 incremental savings for Manitoba Hydro in 2010.  So 27  
18 percent, you'd be looking at something like an  
19 additional 25 gigawatt hours of incremental savings in  
20 that -- in that one (1) year.  So 25 gigawatt hours of  
21 incremental savings -- I just need to do a very quick  
22 calculation in my mind -- pardon me -- for this.  But  
23 two thousand (2,000) -- if I'm not mistaken, I think  
24 what we're talking about is the equivalent of the  
25 consumption of two thousand (2,000) homes in that one

1 (1) year.

2 So in other words, in that one (1) year  
3 if Manitoba Hydro had done what Hydro-Quebec did in  
4 that one (1) year, they would have removed, for quite  
5 some time, the load associated with two thousand  
6 (2,000) Manitoban homes. Does that give a sense of --  
7 a sense of it?

8 MS. ANITA SOUTHALL: Yeah -- yes.

9 MR. PHILIPPE DUNSKY: Okay.

10 MS. ANITA SOUTHALL: And, sir, the --  
11 the 2010 number for Quebec, was that already in the  
12 period of time when they were backing down their DSM  
13 because of the surplus, or did that occur after --  
14 after this point in time?

15 MR. PHILIPPE DUNSKY: Yeah, it's -- I -  
16 - I want to be very careful how I characterize this. I  
17 won't say that they are backing down their -- their  
18 savings. What they are is perhaps revisiting their  
19 future goals.

20 MS. ANITA SOUTHALL: Yes, that was --  
21 that was me putting words in your mouth. So for the  
22 record, we'll note that that was my characterization of  
23 my understanding, and --

24 MR. PHILIPPE DUNSKY: Thank you.

25 MS. ANITA SOUTHALL: -- that's fine,

1 sir. If I could ask you to stay with that point on Tab  
2 53 of the PUB's book of documents. For the record,  
3 it's on that sequential page numbering, 484. Again  
4 just as part of the answer to 1(c), in addition to the  
5 comparison to Hydro-Quebec in 2010, you indicated that  
6 the savings generated in BC and Nova Scotia were nearly  
7 double those of Manitoba Hydro: 92 percent and 96  
8 percent higher, respectively.

9 Is that correct?

10 MR. PHILIPPE DUNSKY: Yes.

11 MS. ANITA SOUTHALL: Sir, just in terms  
12 of considering the numbers in that year, could you  
13 comment on whether or not that is simply a decision in  
14 those jurisdictions to set a more aggressive target for  
15 DSM, or are you able -- is it too complex an issue to -  
16 - to say what are the contributing factors to that?

17 Or is it -- really come down to what the  
18 target is and then working towards the target?

19 MR. PHILIPPE DUNSKY: It -- it does  
20 come down to what the target is. It -- it's about  
21 planned savings. And so, you know, each jurisdiction  
22 is planning different level -- for level -- different  
23 levels of savings, planning for those savings. Hitting  
24 the targets that are being planned, of course, is  
25 critical, because ultimately it's about keeping the

1 lights on. So that's what's driving them.

2 The level of planned savings, if I look  
3 at those -- you're asking specifically about -- about  
4 BC and --and Nova Scotia there?

5 MS. ANITA SOUTHALL: Yes, because those  
6 -- that was the information that you supplied --

7 MR. PHILIPPE DUNSKY: Right.

8 MS. ANITA SOUTHALL: -- in the  
9 response.

10 MR. PHILIPPE DUNSKY: Okay. So I'll  
11 speak to Nova Scotia, because I'm even more involved in  
12 that side of it there. In Nova Scotia they did their  
13 planning exercise in, I believe it was, 2007 and  
14 identified a very large opportunity for reducing  
15 consumption -- a very large opportunity for DSM that  
16 would cost substantially less than their marginal cost.  
17 And -- and for that reason, they -- you know, through  
18 the regulatory process, the regulator set the target.

19 And once the regulator set the target,  
20 Efficiency Nova Scotia -- at the time it was Nova  
21 Scotia Power, and then it transferred to Efficiency  
22 Nova Scotia -- sets out to meet it and -- and are  
23 meeting it. In that particular case, 2010 was an  
24 interim point in their -- in their trajectory. Of  
25 course in the past -- in the past year, even just 2011

1 was significantly higher than 2010.

2 MS. ANITA SOUTHALL: Sir, I'm going to  
3 jump to the -- the concept of the differences between  
4 the jurisdictions and the cohort groups, or a number of  
5 them at least, and Manitoba Hydro's reaction to that,  
6 specifically on that issue of marginal cost values.

7 The -- the concept and part of Manitoba  
8 Hydro's -- pardon me -- testimony were that marginal  
9 cost values are considerably lower in Manitoba than in  
10 British Columbia, Nova Scotia, and Vermont, and taking  
11 the position that more economic opportunities exist in  
12 those jurisdictions than in Manitoba. I know you have  
13 addressed that earlier today in your presentation to  
14 some extent.

15 I'm trying to understand though, when it  
16 comes down to Manitoba, is it still -- is this -- is it  
17 accurate to maintain that it's your position that it  
18 still becomes a difference of -- on a conservative  
19 basis, a 3 percent cost versus an 8.5 percent marginal  
20 cost -- sorry, a 3 percent investment in DSM versus an  
21 8.5 percent marginal cost in Manitoba?

22 Like is that really the answer to the  
23 marginal cost discussion?

24 MR. PHILIPPE DUNSKY: You're -- you're  
25 -- when you said, "percent," you meant cent per

1 kilowatt hour, I'm assuming?

2 MS. ANITA SOUTHALL: Sorry, cents.

3 MR. PHILIPPE DUNSKY: Right, okay.

4 MS. ANITA SOUTHALL: Pardon me. If  
5 said, "percent," I was mistaken. Thank you.

6 MR. PHILIPPE DUNSKY: Okay. So, yes.  
7 I mean, what it comes down to is -- is the cost of DSM  
8 versus -- versus the money that you're saving. So,  
9 yes, currently it's one (1) point-- currently, Manitoba  
10 Hydro's Power Smart Program is -- is costing one point  
11 eight (1.8) and saving eight point five (8.5), or  
12 generating eight point five (8.5) in additional  
13 revenue.

14 MS. ANITA SOUTHALL: And is -- is there  
15 anything more to the issue in terms of there being  
16 lower marginal cost here than in other jurisdictions,  
17 or does it really come down to that? I just want to  
18 make sure that --

19 MR. PHILIPPE DUNSKY: Yeah, it's --

20 MS. ANITA SOUTHALL: -- that you've --  
21 that you've answered that --

22 MR. PHILIPPE DUNSKY: M-hm.

23 MS. ANITA SOUTHALL: -- sort of second  
24 part of the question, in terms of what Manitoba Hydro  
25 identifies as a difference.

1 MR. PHILIPPE DUNSKY: Right. I think  
2 it -- it really depends on -- on -- how can I say it --  
3 on how you're doing your -- your analysis and your  
4 screening. You know, if three (3) cents -- or in that  
5 case, one point eight (1.8) cent is an average. And so  
6 it's a bundled average.

7 So you can say, you know, my DSM  
8 resource costs me one point eight (1.8) cents. That's  
9 my DSM power plant. And when you say it that way, one  
10 point eight (1.8) cents versus eight and a half (8 1/2)  
11 cents, you know, yes, that's -- it's as simple as that.  
12 Obviously, nothing is quite so simple, but by and  
13 large, that's the key point.

14 You know, the one point eight (1.8), of  
15 course, is in reality an average, a weighted average of  
16 all sorts of things. And, you know, within the one  
17 point eight (1.8), for example, you know, Manitoba  
18 Hydro has low-income programs that cost an awful lot  
19 more than that.

20 So -- you know, so the question is: Do  
21 you look at this from -- from a comprehensive view,  
22 looking at DSM as a package? Or do you say, Well, we  
23 take everything, and then each one at the outer ends we  
24 remove, we remove, we remove? I think that's where  
25 conceptually the marginal cost can start to have an



1 effect. But in practice, at eight and a half (8 1/2),  
2 you just don't have all that much that goes beyond  
3 eight and a half (8 1/2) anyhow.

4                   So, you know, you may have measures that  
5 are six (6) cents, that are seven (7) cents. They --  
6 they should fall in. And from my perspective, you  
7 know, sometimes you may have measures that are nine (9)  
8 or ten (10) cents, and they should fall in as well, so  
9 long as the package as a whole is substantially  
10 cheaper.

11                   MS. ANITA SOUTHALL: Sir, I'm going to  
12 be brave and have a go at your slide 30, the... If the  
13 "ha, ha, ha," of the general crowd isn't recorded on  
14 the record, I -- I record it for posterity.

15                   This is the document which you identify  
16 a supply curve of energy savings measures residential,  
17 correct?

18                   MR. PHILIPPE DUNSKY: Yes.

19                   MS. ANITA SOUTHALL: And if we look at  
20 the -- the blue line with the dots on it that are  
21 connected and that moves upwards on the achievable  
22 savings for gigawatt hours per year on that axis are --  
23 are we able to see that between -- well, and obviously  
24 the -- the measurement to the right, or the horizontal  
25 access unit cost, I re -- I think it reflects cents per

1 kilowatt hour, is that correct, the unit costs?

2 I mean you've got it as dollars, but  
3 effectively you're reporting it as cents?

4 MR. PHILIPPE DUNSKY: You're right. It  
5 -- it's correct that it's dollars because the -- the  
6 value, let's say, is point zero five (.05). So that  
7 point zero five (.05) is effectively cents.

8 MS. ANITA SOUTHALL: Right. Okay,  
9 that's what I was trying to understand.

10 MR. PHILIPPE DUNSKY: Right.

11 MS. ANITA SOUTHALL: So -- so the --  
12 the blue line with the dots, as I look at it,  
13 represents that between two (2) and four (4) cents of  
14 unit cost, you're achieving the -- effectively the  
15 maximum value. Mo -- most of the measures or the --  
16 what are represented as the blue dots come in under  
17 five (5) cents.

18 Is that correct?

19 MR. PHILIPPE DUNSKY: Yes, with just  
20 perhaps a slight clarification. It's not that most of  
21 the measures come in --

22 MS. ANITA SOUTHALL: Okay.

23 MR. PHILIPPE DUNSKY: -- it's that most  
24 of the savings come in.

25 MS. ANITA SOUTHALL: Most of the

1 savings?

2 MR. PHILIPPE DUNSKY: Yes.

3 MS. ANITA SOUTHALL: Based on the --  
4 based on the investment at those values?

5 MR. PHILIPPE DUNSKY: Exactly.

6 MS. ANITA SOUTHALL: Okay.

7

8 (BRIEF PAUSE)

9

10 MS. ANITA SOUTHALL: And, sir, one (1)  
11 more bold step. As you invest -- based on the  
12 flattening of the blue line as you continue to invest  
13 above the four (4) cents, or perhaps arguably five (5)  
14 cents, the -- the savings return diminishes.

15 Is that what the flattening of the line  
16 is indicating?

17 MR. PHILIPPE DUNSKY: In a sense. It's  
18 -- and when you say, "savings return," of course the  
19 question is what do we mean by return? But, in effect,  
20 your ability to generate additional savings is  
21 diminishing substantially, yes, as you climb up the  
22 cost curve.

23 MS. ANITA SOUTHALL: Are -- are you in  
24 a position, given the information that's on the record  
25 of the proceeding, or any of the undertaking responses,

1 are you capable of doing this analysis for Manitoba  
2 Hydro's program?

3 I'm not sure if the Power Smart plan  
4 contains sufficient information to -- to provide this  
5 graph.

6 MR. PHILIPPE DUNSKY: I -- I'm not sure  
7 that it does. I -- I mean, certainly it could be done  
8 at the program level, because I do -- I do seem to  
9 recall that the Power Smart plan has program level cent  
10 per kilowatt hours in there as well as savings, so  
11 that's probably reproducible for that plan, yes --

12 MS. ANITA SOUTHALL: I'm going to rely  
13 on you to tell me whether or not that's going to be a -  
14 - a useful analysis. I mean, we've got this supply  
15 curve that you've provided.

16 At a program level, is it going to -- is  
17 it -- is it going to show us some sort of comparable  
18 pattern, or something that we could compare?

19 MR. PHILIPPE DUNSKY: It'll -- my guess  
20 is that the curve will be rather similar with one (1)  
21 important exception. There would be essentially  
22 nothing after the eight and a half (8 1/2) cents and I  
23 -- I don't remember exactly what the highest cost  
24 program is, but it's probably a fair bit below the  
25 eight and a half (8 1/2), so that curve would probably

1 get truncated if we're just talking about the -- the  
2 existing Power Smart program.

3

4 (BRIEF PAUSE)

5

6 MS. ANITA SOUTHALL: I think, sir, if  
7 you've con -- if your preliminary thought is that it  
8 would be similar to what we're seeing in this supply  
9 curve, that it wouldn't be necessary for you to  
10 undertake that process.

11 MR. PHILIPPE DUNSKY: Yeah, and -- and  
12 again, I mean, it's hard to say if it would be -- I'm  
13 not sure exactly what the slope would be, but what I  
14 can say is that, you know, if you look at this curve,  
15 and I think that you understood it correctly in saying  
16 that, you know, the vast majority of savings are coming  
17 in under let's say four (4) cents or so, in this curve,  
18 you know, I might just ballpark guess that you're  
19 looking at an average cost of about two (2) cents a  
20 kilowatt hour.

21 In Manitoba Hydro's programs the average  
22 cost is one point eight (1.8) cents a kilowatt hour.  
23 So from that perspective you're probably not looking at  
24 anything radically different. Specific, you know,  
25 specific details may change, but...

1 (BRIEF PAUSE)

2

3 MS. ANITA SOUTHALL: Sir, is the supply  
4 curve something that the Utility here could easily  
5 produce based on their own information?

6 MR. PHILIPPE DUNSKY: Sure. I mean,  
7 it's -- it's just a matter of sticking it in Excel and  
8 input -- producing the graph. I know that they are --  
9 they're also, I believe, finalizing a -- an achievable  
10 potential study and that might be, you know, more of an  
11 area where -- where one would typically put this sort  
12 of a supply curve and that would be more at the measure  
13 level or at the bundled measure level.

14 MS. ANITA SOUTHALL: I take no credit  
15 for understanding the graph, let me be perfectly  
16 honest. It was advisor Mr. Cathcart who helped me  
17 understand it, so kudos to him.

18 I'm -- I want to go on and ask just one  
19 (1) further question in terms of the characteristics  
20 distinction between the Manitoba jurisdiction and the  
21 other jurisdictions that were part of the cohort group,  
22 and particularly -- and I understood, or at least I  
23 think I understood, your discussions earlier today with  
24 respect to climate and the comparisons you made.

25 The other factor which Manitoba Hydro

1 has addressed in its rebuttal is the distinction  
2 between -- or perhaps it's a combination of factors.  
3 In other words, high -- I'm not sure what the right  
4 term is, high heat degree days, high degree heat days,  
5 one (1) of those things.

6 MR. PHILIPPE DUNSKY: Heating degree  
7 days.

8 MS. ANITA SOUTHALL: -- and the  
9 percentage of electricity used for space heating in  
10 Manitoba, which is higher than any, I believe any of  
11 the comparisons in the cohort jurisdictions. So if you  
12 want to look at it, it's on page 26 of Manitoba Hydro's  
13 rebuttal, lines 16 to 20.

14

15 (BRIEF PAUSE)

16

17 MS. ANITA SOUTHALL: I've recorded --  
18 so I'm not going to turn to the rebuttal. I've  
19 recorded that degree of space heating, Minnesota is 15  
20 percent, BC is 31 percent, and Manitoba has 42 percent  
21 space heating. Does that combination of factors make  
22 this jurisdiction unique in terms of the flexibility or  
23 room that they have to manoeuver in terms of  
24 electricity DSM savings?

25 MR. PHILIPPE DUNSKY: Well, first of

1 all, I wouldn't say it makes them unique. I happen to  
2 come from a province where it's 75 percent electric  
3 space heating. So, you know, this -- this thing  
4 depends on a whole series of contexts. We're doing  
5 work in another province right now that I think it's  
6 around 80 percent or so. So, you know, there's --  
7 there's nothing unique about it. It's -- it's a  
8 different context.

9                   Why that would affect the ability to  
10 generate savings, I really don't see how it would.  
11 Obviously it has an impact, but -- but why that impact  
12 would be negative versus positive, I can't for the life  
13 of me see. So, you know, I gave the example before of  
14 ductless heat pumps, all right? Ductless heat pumps,  
15 new technology out, inverter-driven ductless heat  
16 pumps, extreme -- extraordinarily high performance,  
17 relatively low cost, you know, that applies perfectly  
18 well to -- to places with high electric space heat  
19 loads. You go to a place with a low electric space  
20 heat load, and they cannot benefit from that new  
21 opportunity. Manitoba Hydro can more than others. You  
22 know, same thing with -- with geothermal.

23                   So, you know, what it implies is that  
24 you're probably going to have a different mix of  
25 measures or a different emphasis of measures. So here,



1 you know, we might place more emphasis on, let's say,  
2 ductless heat pumps or geothermal than -- than would  
3 BC. Although, actually, that's -- well, that may not  
4 be the case as a matter of practice but, you know, in  
5 principle, that's what it means. It will orient the  
6 types of measures that you -- that you move toward. It  
7 should not orient, in any substantial way, the -- the  
8 amount of savings that you can achieve.

9 MS. ANITA SOUTHALL: Sir, I wanted --  
10 sorry, go ahead.

11 MR. PHILIPPE DUNSKY: I'm sorry. I'm  
12 just -- I -- I do -- I should say, on that particular  
13 question, there -- there was a time when I felt  
14 differently about that. And, frankly, that was before,  
15 you know, much more advanced heat pumps, in particular  
16 ductless ones, came out. And so, you know, if I go  
17 back five (5), six (6), seven (7) years, I probably  
18 would have argued that it's tougher, it's tougher to  
19 get savings in electrically heated homes. I just don't  
20 think that's the case today anymore.

21 MS. ANITA SOUTHALL: I want to combine  
22 two (2) concepts, sir, with my next question, the first  
23 being to go back to the issue that Manitoba Hydro has  
24 raised in its -- in its evidence before the Board as  
25 well as its rebuttal evidence that given its long-time

1 commitment to DSM, there is a diminishing availability  
2 of economic opportunities. And -- and I know because I  
3 was paying rapt attention to your report earlier today,  
4 that you equated it to there's always innovation,  
5 there's always -- you -- I remember your oil well  
6 slide, actually, so just referring to that.

7                   So -- but -- but I -- so I want to  
8 invite you if there's anything more than the general  
9 concept of innovation that you have in mind in terms of  
10 the response to this particular issue for Manitoba  
11 Hydro, given their -- the length of involvement that  
12 they've had in DSM, and -- but I wanted to combine it,  
13 as well, if you don't mind so bear with me, your  
14 finding at the end of your slide deck that you've come  
15 to the conclusion that a 1 percent target in the short  
16 term for Manitoba Hydro is achievable.

17                   So you must have some basis upon which  
18 you've come to that conclusion as well, so if you don't  
19 mind keeping the first concept in mind in terms of the  
20 experience and history of DSM in Manitoba and Hydro's  
21 position on that, and then the -- the 1 percent  
22 achievability.

23                   MR. PHILIPPE DUNSKY: Perfect. And if  
24 I forget the second one it's just the end of the day  
25 and please remind me. I'll start with the first.

1                   So if you look at the cohorts, if -- and  
2 in particular if you look at slide 19 and I think this  
3 will probably be helpful for that...

4                   MS. ANITA SOUTHALL:    We're just  
5 catching up.   Just a moment.

6                   MR. PHILIPPE DUNSKY:    Not a problem.

7

8                                   (BRIEF PAUSE)

9

10                  MS. ANITA SOUTHALL:    Thank you, sir.  
11 Yes, proceed.

12                  MR. PHILIPPE DUNSKY:    So I mentioned  
13 earlier that Nova Scotia is relatively new to this  
14 game, and so you could, if you're making the argument  
15 that, you know, we've been in this for so long and,  
16 therefore, we've exhausted the -- the possibilities you  
17 could make the argument that, sure, Nova Scotia, it's  
18 easy because you're coming in, you haven't, you know,  
19 done an awful lot in -- in past years and climb up.

20                                But setting aside Nova Scotia,  
21 Massachusetts for example.   Massachusetts -- and -- and  
22 I just -- I just realized actually on this graph, the  
23 graph only goes back to 2005 unfortunately but  
24 Massachusetts has been hitting 1 percent savings year-  
25 in year-out, with some exceptions below, some above,

1 but on average for probably about fifteen (15) years  
2 now. For fifteen (15) years they've been hitting 1  
3 percent. And so if ever there was an argument to say,  
4 you know, after you've done a certain amount after a  
5 certain time you've exhausted it, it would be  
6 Massachusetts, or Vermont because Vermont has been  
7 doing more than 1 percent pretty systematically and --  
8 and up to 2 percent in fact for about the same time  
9 period, about the past fifteen (15) years, nonstop.

10 And they are the ones with the highest  
11 goals. You would think that they would, pardon the  
12 expression, that they would just tank at this point.  
13 They've completely exhausted everything. They've got,  
14 you know, everyone converted. I'm -- I'm exaggerating  
15 here, right.

16 And these savings by the way, I mean,  
17 these are measured, verified independently savings so  
18 these are very real. But it turns out that the more  
19 you do in energy efficiency the more you understand how  
20 to do more. You know, the more you gain expertise, the  
21 more you follow very closely new opportunities, the  
22 more you develop relationships in -- in your markets,  
23 the more you do the more you can get. And that's as  
24 much borne out in these cohorts as in every region that  
25 I know or work with that has a long history with DSM.

1                   You know, if I think of another one,  
2 California, if anyone in this -- on this continent has  
3 been doing energy efficiency systematically for the  
4 longest period of time, California. I mean, this goes  
5 back to energy crisis days. They should have exhausted  
6 things a long -- an awful long time ago. Their plans  
7 continue to increase.

8                   You know, Connecticut has done an awful  
9 lot of energy efficiency over an awful long time  
10 period. They've just decided to double their goals.  
11 All -- nearly double. I think it's 80 percent  
12 increase. So, you know, I don't think that the  
13 evidence supports in any way the idea that once you've  
14 done this for a certain period of time you exhaust the  
15 resource. I think the evidence points to the contrary.

16                   MS. ANITA SOUTHALL: I'll just ask you  
17 to turn to the 1 percent part of the question.

18                   MR. PHILIPPE DUNSKY: Okay. And if you  
19 could just remind the -- the question specifically.

20                   MS. ANITA SOUTHALL: At the end of your  
21 slide deck you identified that as believing to -- it to  
22 be achievable.

23                   MR. PHILIPPE DUNSKY: Right. There --  
24 there are really two (2) reasons why -- why I feel very  
25 comfortable with 1 percent. One (1) is, very

1 specifically, the analysis that we did here where again  
2 we're looking at five (5) other regions. We've chosen  
3 those regions to begin with to make sure that we are  
4 not using regions that are absolutely radically  
5 different from Manitoba.

6           And then we've gone in and looked at  
7 some of the details. And we've not found anything to  
8 materially suggest that they are -- that they are very  
9 different. And simply put, you know, the very lowest  
10 goals in that -- in that entire cohort is 1 percent.

11           And so if you want to think about it  
12 that way, you know, the basis for the 1 percent is  
13 saying, Look, let's at least achieve or plan to achieve  
14 the lowest value in this range. And I think that's a  
15 fair starting point.

16           Now if I set that analysis aside and I  
17 just think of my own experience in this field, having  
18 done the potential studies, having advised the -- the  
19 utilities or agencies who do this and you have these  
20 goals for many years now, I am absolutely comfortable  
21 with 1 percent in Manitoba.

22           And that's not to say it's, you know, a  
23 walk in the park. My daughter says, Easy-peasy lemon  
24 squeezy. It's not going to be easy-peasy lemon  
25 squeezy, but it's absolutely doable. So I -- I feel

1 very comfortable with that.

2                   You know, I'll put it a different way.  
3 You know, if -- and I'm not suggesting this, but, you  
4 know, if someone tomorrow morning said, you know, we'll  
5 offer you a contract, you have achieve 1 percent, we'll  
6 pay you four (4) cents a kilowatt hour for it and  
7 there's a really big penalty for not achieving, I will  
8 take that contract. And I guarantee you one (1) of two  
9 (2) things. Either I will deliver or I will sell that  
10 contract to someone else at a nice profit and they will  
11 deliver. That's absolutely doable.

12                   MS. ANITA SOUTHALL: I'm not the  
13 middleman, sorry about that. So perhaps just tuck that  
14 idea away. Sir, if -- if you could turn to slide 41  
15 from your presentation today.

16

17                   (BRIEF PAUSE)

18

19                   MS. ANITA SOUTHALL: I -- I noted --  
20 and I believe this was an exchange between yourself and  
21 Ms. Ramage in the follow-up questioning, that the --  
22 sorry, first let me refer you to scenario 1, wha --  
23 which I believe is a 1 percent, ramp up to 1 percent  
24 scenario from slide 40, correct?

25                   MR. PHILIPPE DUNSKY: Yes.

1 MS. ANITA SOUTHALL: And the annual  
2 expenditure for that when you broke it down annually, I  
3 -- I noted down as \$41 million annually spending on DSM  
4 to achieve that over the eight (8) years, correct?

5 MR. PHILIPPE DUNSKY: Let me just  
6 clarify that. So first of all, it's 41 million on  
7 average. Of course, there's a ramp-up there, so it  
8 starts off lower, ends up higher. The other thing is  
9 that this is an incremental analysis, so this is both  
10 the additional costs and the additional savings and --  
11 and benefits over and above the current Power Smart  
12 plan.

13 So I'm just looking at added costs and  
14 added benefits here.

15

16 (BRIEF PAUSE)

17

18 MS. ANITA SOUTHALL: So the -- the 41 -  
19 - the average \$41 million annually over that period is  
20 in addition to whatever they're currently spending.  
21 That's what you mean by incremental?

22 MR. PHILIPPE DUNSKY: Exactly. And  
23 same with the -- with the benefits.

24 MS. ANITA SOUTHALL: So I just want to  
25 make sure I -- I clarify. The Board had asked a



1 question associated with what you would recommend, I'm  
2 talking about in the IR process, what you would  
3 recommend to be able to achieve a 1 percent savings.  
4 And I won't -- I won't take you there, to speed things  
5 up, but I believe you identified a number of \$65  
6 million at a -- at a three (3) cent cost to achieve  
7 that kind of savings. So I'm trying to understand what  
8 the difference is between those. And maybe it's that  
9 the -- the -- as you point out, the \$41 million is an  
10 average over that period. I'm not sure.

11 MR. PHILIPPE DUNSKY: Sorry, it's  
12 partly because -- partly, I'm assuming, because it's an  
13 average; partly because we redid those scenarios, and  
14 so -- so those scenarios are a little bit different  
15 than the -- than the initial one was, among other  
16 reasons because we did a ramp-up, but -- but not just  
17 that.

18 So there are -- there are real, you  
19 know, material differences in those scenarios, but the  
20 bottom line, three (3) cents holds.

21 MS. ANITA SOUTHALL: And, sir, are you  
22 able to reproduce slide 41 where you assume in the  
23 analysis that the savings is ten (10) cents a kilowatt  
24 hour and then twelve (12) cents a kilowatt hour?

25 MR. PHILIPPE DUNSKY: I'm sorry, I

1 missed that. Which -- which slide are you on?

2 MS. ANITA SOUTHALL: Sorry, I'm still  
3 on slide 41.

4 MR. PHILIPPE DUNSKY: Okay.

5 MS. ANITA SOUTHALL: So where the  
6 assumption -- I'm asking if you could redo those tables  
7 to show where the savings -- the marginal costs  
8 reflects ten (10) cents a kilowatt hour and twelve (12)  
9 cents a kilowatt hour?

10 MR. PHILIPPE DUNSKY: Absolutely.

11 MR. BYRON WILLIAMS: So the -- the  
12 undertaking is to reproduce the analysis from slide 41,  
13 replacing the savings of eight point five two (8.2)  
14 cents a kilowatt hour with a savings of ten (10) cents  
15 a kilowatt hour and twelve (12) cents per kilowatt  
16 hour?

17 MS. ANITA SOUTHALL: Yes. If you could  
18 also provide your assumptions associated with that in a  
19 -- an accompanying table, please.

20 MR. PHILIPPE DUNSKY: Absolutely.

21

22 --- UNDERTAKING NO. 90: Mr. Dunsky to reproduce the  
23 analysis from slide 41,  
24 replacing the savings of  
25 eight point five two (8.2)

1 cents a kilowatt hour with  
2 a savings of ten (10) cents  
3 a kilowatt hour and twelve  
4 (12) cents per kilowatt  
5 hour; and also provide  
6 assumptions associated with  
7 that in an accompanying  
8 table

9

10 CONTINUED BY MS. ANITA SOUTHALL:

11 MS. ANITA SOUTHALL: I had a number of  
12 questions, sir, associated with the screening tests  
13 that -- that you would recommend. In the interest of  
14 time I don't intend to go through all of my questions.  
15 I -- I do want to -- will rely certainly on the  
16 responses you gave, for example, for the levelized  
17 utility cost test in response to one (1) of the Board's  
18 Information Requests.

19 But are you in a position to comment on  
20 what you understand to be the application of the  
21 modified resource cost test that Hydro refers to in its  
22 rebuttal evidence, as compared to the total resource  
23 cost or societal test that you've elaborated on in a --  
24 in an IR response from MIPUG, for example?

25 I appreciate I'm -- I can point you to -

1 - I've got the materials and -- as reference in the  
2 book, if it -- if -- I want to be fair to you, but I'm  
3 also trying to encapsulate and give you the opportunity  
4 to just make those comparisons based on all of the  
5 evidence that's been filed.

6 MR. PHILIPPE DUNSKY: Sure. Thank you.  
7 So the -- I believe it's called the "Marginal Resource  
8 Cost Test," which is Man -- what Manitoba Hydro uses,  
9 as I understand it, at the measure level.

10 And so I think that if you are --  
11 there's several layers to this, and I hope I won't -- I  
12 hope I won't bore you with details. The -- I think the  
13 -- the first question is: What is the perspective that  
14 you want to reflect? And there, you know,  
15 fundamentally I would argue two (2) -- two (2)  
16 perspectives that most regions try to reflect. One (1)  
17 is a total resource perspective and that is sort of  
18 saying all of Manitoba as a whole. And the other is  
19 the utility perspective.

20 And I think that there are good  
21 arguments for both. There are a lot of regions that  
22 choose one (1), or the other, or they do both. I think  
23 that if you are choosing the -- the first, the total  
24 resource perspective, then the very first thing that  
25 you want to do is make sure that your total resource

1 cost test is fully encompassing all of the benefits,  
2 and that it's -- you know, it's really representing an  
3 apples to apples comparison.

4                   And I won't go too deep on this, but it  
5 -- it really takes some work to make sure that you are  
6 capturing, as much as possible, the full benefits that  
7 Manitobans take from energy efficiency, which as I've  
8 tried to say before is not just bill reductions.

9                   So there are some regions that are  
10 trying real hard to do that, Massachusetts being one  
11 (1) of them. They're investing a lot of time, a lot of  
12 effort into it. I think they're getting close, but  
13 that does take a lot of time and a lot of effort to get  
14 it right.

15                   So that's one (1) option. If you choose  
16 that option, I would say two (2) things. First, go --  
17 you really got to drive hard to really get it right and  
18 really try to capture all the benefits and -- and go  
19 through your inputs and make sure that they're right.

20                   And, you know, just to give you an  
21 example, you know, we just did work for a client where  
22 we looked at their -- at their TRC. We discussed with  
23 them what was go -- feeding into it. You know, to a  
24 certain extent, they weren't even aware of some of the  
25 inputs that were going into it. And so we discussed

1 all of that and came to what we thought would be  
2 appropriate inputs. We re-ran the numbers, and, you  
3 know, the new results came out, I believe it was  
4 something just close to two (2) times the benefit-cost  
5 ratio as the previous numbers, which is just a way of  
6 saying that the inputs really, really matter, so you  
7 want to really spend time on that.

8           If you're -- if you're going down that  
9 road of the TRC, then I think it's perfectly  
10 appropriate to use a marginal cost analysis at the  
11 measure level. That makes sense. You just kind of --  
12 you -- you're doing it on a marginal basis, you're  
13 stripping out the -- the upfront program costs. I'm  
14 absolutely with that. So that's in terms of that  
15 track.

16           The other track is the utility  
17 perspective. And oddly enough, and I, for the life of  
18 me, can't understand it, but the standard test -- there  
19 -- there are five (5) standard tests, and these have  
20 been the standard tests for, you know, going back to  
21 1983, I think it is, and one (1) of them is meant to  
22 reflect the utility perspective. It's called the -- it  
23 used to be called the "Utility Cost Test." Now it's  
24 called the "Program Administrator Cost Test," but it's  
25 the same thing. I think there's a lot of argument for

1 using that test. That test is not currently used at  
2 all in Manitoba.

3 So, either you spend an awful lot of  
4 time to really get your TRC right and you go down that  
5 route, or you go down the route of the utility test. I  
6 think that would be the other approach.

7 It's the -- the RIM where I think that  
8 really, you know, there's a reason why no one's using  
9 this anymore as a primary test as a -- as a real  
10 screener, and that's where I think there's a real  
11 problem.

12 MS. ANITA SOUTHALL: I -- I don't want  
13 to belabour this point, but on slide 34, I think this  
14 is where, in your presentation, you talked about the  
15 kind of inputs that are important to get right.

16 Am I on the right slide, sir?

17 MR. PHILIPPE DUNSKY: Yes.

18 MS. ANITA SOUTHALL: Could you just  
19 tell us what those abbreviations are that you've got in  
20 appropriate -- you've got under bullet number 2  
21 "inputs" and then you've got certain abbreviations.

22 MR. PHILIPPE DUNSKY: Sure. Sorry  
23 about that. We -- we end up in our -- in our little  
24 world of acronyms.

25 So the WACC is the Weighted Average Cost

1 of Capital. If that's -- is that where you're looking  
2 --

3 MS. ANITA SOUTHALL: Sorry. No, I  
4 wasn't looking at the -- at the blue sphere --

5 MR. PHILIPPE DUNSKY: Oh, up there.  
6 Okay. DR --

7 MS. ANITA SOUTHALL: -- sphere, because  
8 it's two (2) dimensional, the --

9 MR. PHILIPPE DUNSKY: Yeah, okay --

10 MS. ANITA SOUTHALL: -- circle. But  
11 the -- the second bullet, "appropriate D.R.EULs," et  
12 cetera.

13 MR. PHILIPPE DUNSKY: So DR is Discount  
14 Rate, EUL is Effective Useful Life, and NEBS is Non-  
15 Energy Benefits.

16 MS. ANITA SOUTHALL: So if I heard you  
17 correct earlier, you were talking -- in a response to  
18 Ms. Ramage, you were talking about the fact that you  
19 would combine the analysis of these benefits and -- and  
20 the actual costs at the program level to determine as -  
21 - as part of the screening process, in terms of  
22 customizing the various components of a DSM plan. That  
23 would all happen, I heard you say, really as part of  
24 one (1) process.

25 Is that right?



1 MR. PHILIPPE DUNSKY: Yes.

2

3 (BRIEF PAUSE)

4

5 MS. ANITA SOUTHALL: Sorry. And just  
6 one (1) last question in this area. Manitoba Hydro's  
7 evidence on the record is that they used a -- what they  
8 call a 10 percent adder for societal benefits as part  
9 of their screening process. I don't know if you had  
10 the opportunity to see that in their testimony. Is  
11 that used in other jurisdictions? Do other  
12 jurisdictions -- like, is that within a -- a range of  
13 appropriateness for -- for that concept?

14 MR. PHILIPPE DUNSKY: Other regions do  
15 try to account for -- some of the regions try to  
16 account for -- for broader societal benefits, and to be  
17 honest with you I can't recall if -- if that is meant  
18 to also encapsulate the participant non-energy  
19 benefits, or if it's just societal. But, assuming its  
20 societal, yes, some -- some do that.

21 There -- there are a whole range of  
22 approaches for -- for these sorts of things. So some  
23 regions -- for example, in BC now they apply a -- they  
24 did a number of things to their cost effectiveness--  
25 effectiveness screening. One (1) of the things that

1 they do is add a 15 percent adder for non-energy  
2 benefits for sort of regular programs, if I -- if I  
3 may, and 30 percent for low-income programs. And then  
4 they also allow BC Hydro to change the 15 percent to  
5 anything else if it's justified. In other words, BC  
6 Hydro can go out and do a non-energy benefit study, and  
7 if they find, as we often do, that it's, you know,  
8 closer to 80 percent or a hundred percent, or 120  
9 percent, argue for that in their cost-effectiveness  
10 screening. So that's just the BC Hydro example.

11 I think Vermont certainly has a societal  
12 adder. I don't remember what it was. They also have a  
13 non-energy benefits adder. They also have a risk  
14 adder, as well; a risk reducer, if you will.

15 Different places have different  
16 approaches.

17 MS. ANITA SOUTHALL: Do -- do you have  
18 access to any literature which gives that kind of  
19 description of those various approaches that you could  
20 provide to the Board?

21 MR. PHILIPPE DUNSKY: Sure. I can -- I  
22 can provide a slide deck actually that we -- that we  
23 have and that we're presenting.

24 MS. ANITA SOUTHALL: Thank you. If  
25 that wouldn't be any additional work that would be

1 appreciated.

2 MR. PHILIPPE DUNSKY: Sure.

3 MS. ANITA SOUTHALL: Thank you. Mr. --

4 MR. BYRON WILLIAMS: So just on that  
5 one, the -- the undertaking is to provide a slide deck  
6 to assist in the -- I'm going to ask Mr. Dunsky to  
7 finish that, just for the...

8 MR. PHILIPPE DUNSKY: So would it be a  
9 slide deck that -- that addresses the issue of cost-  
10 effectiveness screening? Is that --

11 MS. ANITA SOUTHALL: Yes.

12 MR. PHILIPPE DUNSKY: Okay.

13 MS. ANITA SOUTHALL: Thank you.

14

15 --- UNDERTAKING NO. 91: Mr. Dunsky to provide a  
16 slide deck, and one (1) or  
17 two (2) articles that  
18 addresses the issue of  
19 cost-effectiveness  
20 screening

21

22 MR. BYRON WILLIAMS: Ms. Southall, just  
23 -- if I might on this one, there -- there may be a  
24 learned article that Mr. Dunsky has shared with me as  
25 well that might be useful if...

1 (BRIEF PAUSE)

2

3 MS. ANITA SOUTHALL: Could I just ask  
4 you to repeat that, Mr. Williams?

5 MR. BYRON WILLIAMS: I think that we  
6 will -- the undertaking will be to insert a -- the  
7 slide deck and also one (1) or two (2) learnered  
8 articles that -- that may assist, if that's okay for  
9 the Board.

10 MS. ANITA SOUTHALL: Yes, that's fine.  
11 I just honestly didn't want to launch Mr. Dunsky into  
12 another research project. Thank you, Mr. Dunsky.

13 Okay. We -- we are trying to narrow our  
14 -- our further questions here, so I'll just have -- if  
15 I could have just one (1) moment, Mr. Chairman.

16

17 (BRIEF PAUSE)

18

19 MR. RAYMOND LAFOND: Maybe I can ask my  
20 question right away, while Ms. Southall is -- is  
21 looking at her materials.

22 Mr. Dunsky, you indicated that there  
23 was, I guess if I can call it as such, a good future  
24 for ductless heat pumps; and in Manitoba it would  
25 reduce the electrical consumption during the winter

1 which is peak time; and also, during the summer when  
2 we're using, in some weeks more than others, air  
3 conditioning; and where exports are at a premium,  
4 because that's when the US is operating at capacity.

5 Am I correct in stating that -- that in  
6 -- in essence it's probably more valuable than average,  
7 because they affect both peak times?

8 MR. PHILIPPE DUNSKY: Probably to -- to  
9 some extent, and probably not to the full extent. And  
10 the reason -- it's funny, we were actually just talking  
11 about this in the corridor during a break. So a  
12 ductless heat pump is going to provide heating, you  
13 know, most of the time. I -- I actually wish I -- I  
14 believe I have somewhere here -- if you'll bear with me  
15 for just one (1) second I'll actually get a more  
16 intelligent answer to this.

17

18 (BRIEF PAUSE)

19

20 MR. PHILIPPE DUNSKY: All right. So  
21 I'm not sure it's necessary to look at it, but just --  
22 just for -- for these purposes, it's in my Information  
23 Request responses -- in my responses to the Information  
24 Requests from -- from PUB, on page 17 of 40, I did  
25 provide, you know, a graph on the performance of these

1 systems.

2 In essence, the -- the point is that  
3 they work very well up to a certain point. At an  
4 extremely cold temperature, I'm going to say, you know,  
5 maybe around the minus twenty-five (25), minus thirty  
6 (30) mark, they would probably stop performing over and  
7 above baseline resistance heat.

8 So if you've got a real needle peak in  
9 winter, you know, something that happens, I don't know,  
10 twenty-five (25) hours a year, it's probably not going  
11 to add that value there, but the rest of the winter,  
12 yes. And then in summertime you would, of course, add  
13 value throughout with one (1) exception, I should say,  
14 and that is if people who didn't have any air  
15 conditioning installed them.

16 MR. RAYMOND LAFOND: Very quickly, just  
17 from a gen -- very general perspective, is it,  
18 generally speaking, usually economical for -- for  
19 houses who use gas for space and water heating to -- to  
20 install ductless heat pumps?

21 MR. PHILIPPE DUNSKY: Gas is a tough  
22 one these days because --

23 MR. RAYMOND LAFOND: Okay.

24 MR. PHILIPPE DUNSKY: -- gas has gotten  
25 so cheap.

1 MR. RAYMOND LAFOND: Okay.

2 MR. PHILIPPE DUNSKY: I'll say that,  
3 you know, roughly speaking, it might come out pretty  
4 close for --

5 MR. RAYMOND LAFOND: Okay.

6 MR. PHILIPPE DUNSKY: -- for the  
7 household. But the other thing is that if you're -- if  
8 you're a gas-heated household, it means that you have  
9 the duct work. You may as well just put in a normal  
10 high-performance heat pump.

11 MR. RAYMOND LAFOND: My final question.  
12 We -- we've talked about -- a lot about this goal of 1  
13 percent savings. But what we heard somewhat yesterday  
14 was the whole issue of fuel switching, that is from  
15 electricity to gas. There are many electrically heated  
16 homes, and especially the new homes being built, moving  
17 into electricity rather than gas.

18 MR. PHILIPPE DUNSKY: Yeah.

19 MR. RAYMOND LAFOND: And today I did  
20 not hear you talk about the fuel switching in that  
21 regards.

22 MR. PHILIPPE DUNSKY: M-hm.

23 MR. RAYMOND LAFOND: So I'm just  
24 wondering if that 1 percent does include or does not  
25 include fuel switching; that is from electricity to

1 gas?

2 MR. PHILIPPE DUNSKY: Good question.  
3 I'm -- I'm pretty sure that the -- that in BC's case,  
4 at least, it does not include fuel switching. In fact,  
5 I'm just about positive of that.

6 In some regions they do pursue fuel  
7 switching. I -- I don't think it's going to  
8 dramatically change your -- your percentage of overall  
9 sales, but it can have an impact. So, you know, I'd  
10 say it can go either way. It really depends on what --  
11 what you value.

12 There's some regions increasingly that  
13 will encourage fuel switching but only to renewable  
14 resources. So they'll encourage fuel switching, for  
15 example, to pellets but -- but will stop short of gas.  
16 Or some will include gas, but will stop short of oil.

17 MR. RAYMOND LAFOND: I'm not asking you  
18 to comment. It's just that yesterday we heard that gas  
19 here, if you use gas for heating at 90 percent plus  
20 efficiency, versus exporting it to produce electricity  
21 at a 40 or 50 percent electricity, then you reduce  
22 carbon. So, that's just a comment. Thank you.

23 THE CHAIRPERSON: Ms. Southall, have  
24 you got lots more questions to go?

25 MS. ANITA SOUTHALL: I -- I probably



1 need five (5) minutes, at the most.

2 Is that okay, Mr. Chairman? Thank you.

3

4 CONTINUED BY MS. ANITA SOUTHALL:

5 MS. ANITA SOUTHALL: Just for the  
6 record, so I don't lose a bet with My Friend, Mr.  
7 Cathcart, at Tab 60, Mr. Dunsky, the study of the  
8 ductless heat pump you did was on the Mitsubishi Mr.  
9 Slim model, correct?

10 MR. PHILIPPE DUNSKY: Indeed.

11 MS. ANITA SOUTHALL: Thank you.

12

13 (BRIEF PAUSE)

14

15 MS. ANITA SOUTHALL: If I could -- if I  
16 could refer back to your presentation, Mr. Dunsky, you  
17 indicated that you recently undertook an economic  
18 impact study. I'm sorry, I can't give you more detail  
19 than that, I --

20 MR. PHILIPPE DUNSKY: Yes.

21 MS. ANITA SOUTHALL: -- we heard you  
22 speak of that earlier today?

23 MR. PHILIPPE DUNSKY: I -- I'm pretty  
24 sure I know what you're talking about.

25 MS. ANITA SOUTHALL: Could you tell us

1 who that study was for?

2 MR. PHILIPPE DUNSKY: Sure, and -- and  
3 we were only part of the team, and -- and the -- the  
4 project itself was for a combination of the Government  
5 of Canada and the Governments of Quebec, New Brunswick,  
6 Nova Scotia, and PEI.

7 MS. ANITA SOUTHALL: And is that study  
8 confidential or something that we could obtain from  
9 you?

10 MR. PHILIPPE DUNSKY: No, that study is  
11 -- is available publically and I could absolutely  
12 forward it to you.

13 MS. ANITA SOUTHALL: Thank you.

14 MR. BYRON WILLIAMS: So he's  
15 undertaking to provide the impact study for the Federal  
16 Government and associated provinces referenced in his  
17 direct-evidence?

18 MS. ANITA SOUTHALL: Yes, please.

19 Thank you, Mr. Williams.

20

21 --- UNDERTAKING NO. 92: Mr. Dunsky to provide the  
22 impact study for the  
23 Federal Government and  
24 associated provinces  
25 referenced in direct-

1 evidence

2

3 CONTINUED BY MS. ANITA SOUTHALL:

4 MS. ANITA SOUTHALL: Very briefly, sir,  
5 you reference the value of independent evaluations of  
6 DSM.

7 Do you recall that?

8 MR. PHILIPPE DUNSKY: Yes.

9 MS. ANITA SOUTHALL: Do you have any  
10 comment on the frequency? Should that be done annually  
11 if the Utility is doing an annual DSM program review?

12 MR. PHILIPPE DUNSKY: I -- I think it  
13 should be done continuously and -- so I think the best  
14 plan is -- and I'll try to be very brief on this, but -  
15 - but the best evaluation plans will have a  
16 combination.

17 There will be some programs that will be  
18 done maybe every three (3) years, some other programs  
19 that are more strategic they'll be done every year and  
20 -- that's in terms of a full-scale evaluation.

21 And then all of your programs should be  
22 undergoing some form of constant ongoing evaluation  
23 through, you know, systematic survey work, for example.  
24 It just helps to get it right and to adjust in real  
25 time rather than to learn after the fact.

1 MS. ANITA SOUTHALL: And the concept of  
2 a feedback loop is that the information goes back to  
3 the DSM programmers, or the people in the department so  
4 that they can continuously improve.

5 Is that fair?

6 MR. PHILIPPE DUNSKY: Yes, it's -- it's  
7 two (2) things really: One (1) is the continuous  
8 feedback loop internally and the other is for external  
9 stakeholders to -- to be able to follow and understand  
10 clearly what's going on.

11 MS. ANITA SOUTHALL: Thank you for  
12 that. Do you have a position on whether or not an  
13 independent party should set the DSM target for a  
14 utility or a jurisdiction?

15 MR. PHILIPPE DUNSKY: I think it's --  
16 it depends on the circumstances, but it can be -- it  
17 can be very helpful. I think it's -- it's in the  
18 nature of human beings to want to set our goals low and  
19 then exceed them. So I think there's definitely a  
20 value to having, you know, goals be given to us that  
21 perhaps we wouldn't have chosen for ourselves, you  
22 know, perhaps goals that pull us a little bit out --  
23 out of our comfort zone and, you know, that's what  
24 pushes us to -- you know, to exceed our own -- our own,  
25 you know, otherwise performance.

1 So I think there's real value to that.

2 I wouldn't say in every case. I think it really  
3 depends on the circumstance, but there's value.

4 MS. ANITA SOUTHALL: Beyond your  
5 general sort of experience and reflection on that, have  
6 you seen any empirical evidence that suggests  
7 independently set goals are more likely to be achieved  
8 than goals set internally in the organization?

9 MR. PHILIPPE DUNSKY: No, and I  
10 wouldn't expect to either. I think -- I think what --  
11 what you would find empirically is that goals set  
12 within an organization will tend to be far lower. I --  
13 I think they will be achieved, but they'll just be a  
14 lot lower.

15 MS. ANITA SOUTHALL: Sir, you've -- you  
16 indicated that you've done some preliminary analysis,  
17 of course, on the potential for deferral of new  
18 generation based on DSM savings.

19 Do you recall that?

20 MR. PHILIPPE DUNSKY: Yes.

21 MS. ANITA SOUTHALL: What form of  
22 additional DSM analysis should be undertaken to study  
23 that issue? Do you have any specific thoughts on --  
24 not inviting you to talk for ten (10) minutes on that,  
25 sir, just a head's up. I'm on time constraints now,

1 I'm watching the clock.

2 MR. PHILIPPE DUNSKY: Achievable  
3 potential study is -- is the starting point and then a  
4 healthy discussion around that would be the next step.

5 MS. ANITA SOUTHALL: Is -- is the  
6 achievable potential study what you understand Manitoba  
7 Hydro to be doing currently, or is that something  
8 differently -- different, pardon me.

9 MR. PHILIPPE DUNSKY: No, I'm -- I'm  
10 actually a little bit not clear on this. Initially I  
11 had understood it to be just an economic potential  
12 study. And then more recently, I believe I saw  
13 reference to scenarios of achievable in there. So, you  
14 know, really I'd need to see how far down the road the  
15 study goes in terms of realistically determining  
16 achievable. It may well be that.

17 MS. ANITA SOUTHALL: Sorry, those are  
18 my questions, Mr. Dunsky. Thank you. Thank you, Mr.  
19 Chairman.

20 THE CHAIRPERSON: I don't believe there  
21 are any other matters to attend to before we -- we  
22 adjourn for the day. So, Mr. Dunsky, merci beaucoup.  
23 Merci d'etre venu vous rencontrer pour nous parler de  
24 la gestion de la demande. Bon retour. A la prochaine.

25 MR. PHILIPPE DUNSKY: Merci beaucoup.

1 Merci a vous.

2

3

(PANEL STANDS DOWN)

4

5 --- Upon adjourning at 4:43 p.m.

6

7 Certified correct,

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13 Cheryl Lavigne, Ms.

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