



“When You Talk - We Listen!”



MANITOBA PUBLIC UTILITIES BOARD

Re:

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

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

HELD AT:

Public Utilities Board  
400, 330 Portage Avenue  
Winnipeg, Manitoba  
April 30, 2014  
Pages 9365 to 9602

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1	LIST OF EXHIBITS		
2	NO.	DESCRIPTION	PAGE NO.
3	CAC-76	Dr. Higgin's PowerPoint	9373
4	MH-188	Excerpt from ACEE document entitled	
5		"Energy Efficiency Resource	
6		Standards: A New Progress Report	
7		on State Experience."	9581
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1	LIST OF UNDERTAKINGS		
2	NO.	DESCRIPTION	PAGE NO.
3	130	CAC to provide the existing status	
4		quo metric employed by the OPA, the	
5		directive from the ministry to the	
6		OPA in terms of the going forward	
7		plan, and in response to Board member	
8		Kapitany's question, they will provide	
9		an explanation of whether slide 50	
10		from Mr. Dunsky's presentation is	
11		linked to the supply plan for	
12		Ontario	9436
13	131	CAC to review whether there are	
14		other examples, apart from Ontario,	
15		in which there has been direct	
16		mitigation from government, from the	
17		government account as defined by Dr.	
18		Higgin up to a maximum of five	
19		(5) hours to	9518
20	132	CAC to table a note with regards to	
21		proposed changes to the Clean Energy	
22		Benefit and review the budget to	
23		ensure it is current	9530
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1	LIST OF UNDERTAKINGS (Cont'd)		
2	No.	Description	Page No.
3	133	Dr. Higgin to review the ACEE	
4		report and provide a contextual	
5		commentary on the insight that	
6		might be gained from Appendix D	
7		found at page 69	9575
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1 --- Upon commencing at 9:04 a.m.

2

3 THE CHAIRPERSON: Good morning, I  
4 believe that we are ready to begin today's proceedings,  
5 so I think we can turn the microphone -- do you have  
6 any documents we have to acknowledge or...

7 MS. ODETTE FERNANDES: No, we don't,  
8 but Manitoba Hydro did receive a request from Mr.  
9 Hombach regarding some of the plans that are still  
10 coming, the financial analysis. So I will turn the mic  
11 over to Mr. Wojczynski so he can speak to those.

12 MR. ED WOJCZYNSKI: Yes. We provided  
13 the economics of Plan 4 yesterday. And -- and then for  
14 the financials, we are targeting still this Friday to  
15 have Plan 2 DSM Level 2. We expect we will have it  
16 first thing Friday morning at -- for nine o'clock,  
17 unless in their final checking they find any problems,  
18 but there's no reason for them to think they will right  
19 now.

20 And then they have done a lot of work  
21 the three (3) pipeline plans; that was 1, 5, and 14.  
22 And -- and also on Plans 4 and 6 with DSM Level 2, they  
23 are in the middle of checking those and finishing some  
24 of the work on those and expect to have those next week  
25 as discussed.



1                   And as indicated earlier, Plan 12, that  
2 wouldn't be available until after -- after next week.

3                   THE CHAIRPERSON:   Thank you for that.  
4 I don't believe there's any other business to address,  
5 so I'll turn the microphone over to you, Mr. Williams.

6                   MR. BYRON WILLIAMS:   And before I get  
7 to the exhibit and introducing the witness, if the  
8 Board has any updates during the day in terms of  
9 whether we're planning to have the DSM -- the Hydro DSM  
10 panel come back tomorrow afternoon, it would be helpful  
11 to know. We just have to plan on whether we're going  
12 to sleep tonight or not. So it would be -- if we could  
13 get some advice from the Board at sometime during the  
14 day, it would be helpful.

15                   I have one (1) exhibit that I'd like to  
16 introduce, which is Dr. Higgin -- his Power Point, and  
17 I would suggest it be marked as CAC Exhibit 76.

18                   MR. KURT SIMONSEN:   Thank you, Mr.  
19 Williams.

20

21 --- EXHIBIT NO. CAC-76:   Dr. Higgin's PowerPoint

22

23                   MR. BYRON WILLIAMS:   And then I would  
24 ask that Mr. Simonsen allow Dr. Higgin to swear or to  
25 affirm.

1 CAC POLICY PANEL:

2

3 ROGER HIGGIN, Sworn (Qual.)

4

5 QUALIFICATION OF WITNESS:

6 MR. BYRON WILLIAMS: Good morning,  
7 members of the panel. Dr. Higgin, you are the author  
8 of "Policy Observations Related to the Cost Benefit of  
9 the Preferred Plan," the NFAT review?

10 DR. ROGER HIGGIN: Yes, I am.

11 MR. BYRON WILLIAMS: It was prepared  
12 under your direction and control?

13 DR. ROGER HIGGIN: That's correct.

14 MR. BYRON WILLIAMS: And apart from the  
15 errata filed with regard to your evidence, is it  
16 accurate to the best of your knowledge and ability?

17 DR. ROGER HIGGIN: Yes, it is.

18 MR. BYRON WILLIAMS: Dr. Higgin, in  
19 preparing your evidence, you relied upon your expertise  
20 in the assessment of energy policy and energy strategy,  
21 including your experience in the review of capital and  
22 integrated resource plans?

23 DR. ROGER HIGGIN: Yes, that's correct.

24 MR. BYRON WILLIAMS: You also relied  
25 upon your expertise in the assessment of rate and bill

1 impacts, including your experience in balancing the  
2 interests of ratepayers and utilities?

3 DR. ROGER HIGGIN: Yes, that's really  
4 my regulatory experience.

5 MR. BYRON WILLIAMS: And Dr. Higgin,  
6 could you indi -- indicate the nature of your retainer?

7 DR. ROGER HIGGIN: Yes. My retainer is  
8 rather unusual. I've been asked by CAC through Byron's  
9 PILC to provide advice on the NFAT business case and  
10 all of the related evidence updates and the taking into  
11 account, basically, MH, Man -- Manitoba Hydro's,  
12 evidence, updates, and so on, and at least looking at,  
13 at an executive level, the -- the experts retained by  
14 the Board, and also, very importantly, the experts  
15 retained by CAC, from whom you've heard this week.

16 So I've -- those are my -- my main  
17 inputs, I'll call it, to my overview, analysis, and  
18 assessments. Those are the main inputs.

19 MR. BYRON WILLIAMS: Okay. And you  
20 were retained to provide observations to the client,  
21 and you're here in turn to share those observations  
22 with the Board?

23 DR. ROGER HIGGIN: Yes. It's rather  
24 unusual that my role was to provide advice,  
25 observations to the client, and to share those with --

1 with the Board, and -- and that continues to be my role  
2 up to an end of the hearing, including up to the final  
3 argument stage, and so on.

4 So I will continue to provide advice.  
5 As updates, as were just mentioned, come in, I will  
6 look at them and provide advice and as how they relate  
7 to -- the two (2) key things I'm looking are the -- the  
8 energy policy and the strategy that relates to the  
9 development of a resource plan.

10 MR. BYRON WILLIAMS: Okay, thank --

11 DR. ROGER HIGGIN: And that's basically  
12 the two (2) elements.

13 MR. BYRON WILLIAMS: Thank you. You  
14 hold a BSc in fuel science and combustion engineering?

15 DR. ROGER HIGGIN: Yes, I do, from the  
16 -- England, the University of Leeds, and I am also a  
17 professional engineer, yes.

18 MR. BYRON WILLIAMS: You also hold a  
19 PhD in fuel science and applied chemistry?

20 DR. ROGER HIGGIN: Yes, that's right,  
21 again, from the University of Leeds, going way back to  
22 1965, yes.

23 MR. BYRON WILLIAMS: And you do --  
24 subsequently, you obtained a master's degree in  
25 business administration from the University of Toronto

1 in the 1980s?

2 DR. ROGER HIGGIN: Yes. I had the  
3 opportunity from the Ontario Government to join the  
4 Rotman business school, the executive program, and I  
5 did graduate from there with -- on the dean's list in  
6 1986, as you say, quite a way.

7 MR. BYRON WILLIAMS: You and I were  
8 students at the same time, Doctor --

9 DR. ROGER HIGGIN: So I go back a lot  
10 of years.

11 MR. BYRON WILLIAMS: On the subject of  
12 renewable energy, you made numerous presentations  
13 during the 1970s on subjects such as solar heating,  
14 wind power, and biomass?

15 DR. ROGER HIGGIN: Yes, that's correct.  
16 I -- I joined the Ministry of Energy Ontario in 1974.  
17 My initial role was to be a specialist advisor on  
18 renewables. That was my initial role, and so I used to  
19 spend a lot of time analyzing and assessing renewables,  
20 their position, with a view to whether they were close  
21 to market, et cetera, and so on, and when the -- when  
22 they might be so. And I made presentations to a number  
23 of, for example, the Solar Energy Society of Canada,  
24 and those type of presentations during that time.

25 MR. BYRON WILLIAMS: And between 1980

1 and 1984, you were the executive coordinator of the  
2 Alternative and Renewable Energy Group for the Province  
3 of Ontario?

4 DR. ROGER HIGGIN: Yes, within the  
5 ministry there -- there was a small group that used to  
6 do, as we said, mostly the policy review, the technical  
7 analysis of renewables. And so that was the initial  
8 role that I had with -- with the ministry.

9 MR. BYRON WILLIAMS: And from 1984  
10 through 1988, you served as assistant deputy minister,  
11 Programs and Technology Div -- Division for the depart  
12 -- Province of Ontario?

13 DR. ROGER HIGGIN: That's right. I was  
14 ADM, and my division was Conservation and Renewable  
15 Energy. And we ran a \$60 million program on  
16 conservation and renewable energy with eighty-seven  
17 (87) staff. That basically was one of the pioneering  
18 programs in Canada for conservation and renewable  
19 energy. We were -- worked in cooperation with the  
20 federal government.

21 And what happened, basically -- and then  
22 I -- I went to other things, but basically, it was all  
23 based on a -- an oil price that was going to drop to  
24 fifty dollars (\$50) US per gallon. And therefore, all  
25 of these technologies would be viable or, if you now

1 call it grid parity, reached grid parity. But in fact,  
2 that didn't happen. And so basically the government  
3 decided to wind up most of it except for the -- the  
4 conservation programs. And they then were put out to  
5 other parties such as, in those days, Ontario Hydro to  
6 take a lead in and so on.

7                   So the ministry went back to more of a  
8 policy, rather than a program delivery, agency. And  
9 that's when I left there and joined the Ontario Energy  
10 Board.

11                   MR. BYRON WILLIAMS: And you served for  
12 the first time on the Ontario Energy Board between 1988  
13 and 1991?

14                   DR. ROGER HIGGIN: That's right. If  
15 any of you know from history of regulators in Canada,  
16 my boss was Robert Macaulay, and he had quite a  
17 reputation as a regulator. And that was my first stint  
18 in -- in -- at the Ontario Energy Board. And then I --  
19 I guess I deci -- I was --

20                   MR. BYRON WILLIAMS: I'm going to stop  
21 you there.

22                   DR. ROGER HIGGIN: Okay.

23                   MR. BYRON WILLIAMS: In that role you  
24 had, occasion to chair public hearings related to its  
25 electric and gas utilities, including Ontario Hydro?

1 DR. ROGER HIGGIN: Yes, I did three  
2 (3), I believe, Ontario Hydro reviews. The key about  
3 those reviews, as opposed to what we would call real  
4 regulation, was they were rather like the mandate was  
5 to review Hydro's plans and rights capital and  
6 otherwise, and then write a report to the government.  
7 And then the government would decide how to act on --  
8 on that report. Those were the -- the old days of  
9 Ontario Hydro.

10 It's very interesting, a very small  
11 anecdote, we would then be invited to go to Hydro to --  
12 and they would tell us in the boardroom what they were  
13 and weren't going to do with the recommendations that  
14 we had put in our report.

15 MR. BYRON WILLIAMS: And in -- in that  
16 analysis, Dr. Higgin, your advice would involve  
17 consideration of the balancing of ratepayer and utility  
18 interest?

19 DR. ROGER HIGGIN: Oh, yes. That was  
20 really fundamental. And that included the -- the  
21 capital plan and also the cost allocation rate design,  
22 the usual components that you would look at as a  
23 regulator. But it was in the extraordinary, I'll call  
24 it, term of reference that we were working in.

25 MR. BYRON WILLIAMS: Okay.



1 DR. ROGER HIGGIN: Whereas for the gas,  
2 we were regulating.

3 MR. BYRON WILLIAMS: During that time  
4 you were also a co-presenter to the annual meeting of  
5 the Ontario Natural Gas Association on integrated  
6 resource planning?

7 DR. ROGER HIGGIN: Yes, I think  
8 probably that was after I left the board and I went and  
9 headed -- headed up the Gas Technology Canada, which  
10 was an offset of the -- the Canadian Gas Association,  
11 CGA, which ran a small research program on gas  
12 technologies.

13 And also because of conferences and  
14 other things, I had a background and they -- they were  
15 very interested in IRP, as it was called then; and so I  
16 had some background and experience, academic mostly, on  
17 IRP. And so that's what I did.

18 MR. BYRON WILLIAMS: You also presented  
19 to the Canadian Association of Members of Public  
20 Utilities Tribunals, or CAMPUT --

21 DR. ROGER HIGGIN: Yes.

22 MR. BYRON WILLIAMS: -- on the subject  
23 of non-utility generation in Ontario?

24 DR. ROGER HIGGIN: Yes, that's correct.  
25 I -- I was asked to -- to do that when I was with the

1 Board and basically, as you say, made a -- made a  
2 presentation. I think I made a couple of other ones  
3 later. But anyway, that was part of the CAMPUT -- the  
4 old CAMPUT framework, where basically people were  
5 invited outside and inside the regulator group to make  
6 presentations and participate in the -- in the annual  
7 conferences.

8 MR. BYRON WILLIAMS: And --

9 DR. ROGER HIGGIN: I think it's  
10 something you're all familiar with.

11 MR. BYRON WILLIAMS: Indeed. You also  
12 presented on the subject of the regulation of Crown-  
13 owned electric utilities in Ontario to CAMPUT.

14 DR. ROGER HIGGIN: Ah, yes. That was a  
15 very interesting one. I think -- think my -- my  
16 direction was probably appreciated by some of the  
17 electrical group within there. But basically I  
18 suggested, if you want, that they become and operate  
19 like and be regulated like an investor-owned utility.  
20 That was the basic fundamental recommendation that I  
21 made in that.

22 And I think it took till 1998. The  
23 government then looked at how to deal with Hydro and  
24 restructure things, and that's when Ontario  
25 restructured the electricity activity, which included

1 going to that model of -- or -- of investor-owned or  
2 proxy for an investor-owned utility, and setting rates  
3 and so on similar to the investor-owned gas utilities  
4 in Ontario.

5 MR. BYRON WILLIAMS: In -- and just --  
6 we're going to go back to '91 for a moment, because in  
7 that year you served as chairman of the Energy Task --  
8 Task Force as part of the Ontario Roundtable of  
9 Environment and Economy?

10 DR. ROGER HIGGIN: Yes, that's correct.  
11 It's kind of interesting. I was working at the moment  
12 with the ministry at that particular point, and  
13 basically I left the ministry to go to the City of  
14 Toronto as deputy commissioner of public works there.

15 And then as I exited the door, Mrs.  
16 Grier, who was the minister of Environment and Energy  
17 for the NDP government, which had just come in, in  
18 Ontario, asked me to come -- come back and basically  
19 chair this little task force, which had I think seven  
20 (7) members and a budget to do some outside consulting.  
21 And to look at the -- the future outlook and direction  
22 for energy policy in -- in Ontario, and give them  
23 advice for the new government.

24 So I -- I shared -- chaired that task  
25 force for -- for Mrs. Grier, yes.

1 MR. BYRON WILLIAMS: And -- and you  
2 mentioned that ultimately you went to the City of  
3 Toronto. And while you were there, you played a role  
4 as the senior coordinator of the team reviewing the  
5 Demand Supply Plan for the Province of Ontario?

6 DR. ROGER HIGGIN: Yes. City of  
7 Toronto is one of the many Intervenors in the original  
8 Demand Supply Plan in 1990, I believe, as you said.  
9 And so our team had a number of consultants and was --  
10 also had a council, and I was to coordinate all of the  
11 input from the team.

12 And the city's main interests were in  
13 the areas of security of supply to the city, and also  
14 in the areas of conservation, and particularly in the  
15 area as it relates to utility facilities and related to  
16 electrical CDM, we would call it, as opposed to  
17 conservation. So I was part of that team.

18 As we will hear in a minute, I have a  
19 habit to move around sometimes, or used to. And  
20 basically the DSP, Hydro brought in a whole new  
21 evidence and then the government decided to -- to call  
22 it off for a variety of reasons, one of which was, I  
23 believe, the costs were being projected to be very,  
24 very high, given the number of Intervenors and so on.  
25 So in essence the DSP never happened.

1 And the main other driver was, of  
2 course, there was a pro -- new projection that the load  
3 growth in Ontario was going to be much less than was  
4 projected, and therefore there was no real need for new  
5 generation and other resources. So that was the --  
6 that was the other major driver.

7 MR. BYRON WILLIAMS: Dr. Higgin, just  
8 to clarify, when you use the acronym 'DSP', I take it  
9 you're referring to the demand supply plan.

10 DR. ROGER HIGGIN: And if I misstoke --  
11 misspoke myself, it's exactly, the demand supply plan  
12 which Ontario Hydro was -- was tasked to bring forward.

13 MR. BYRON WILLIAMS: Okay. And --

14 DR. ROGER HIGGIN: In fact, my  
15 colleague, Mr. Harper, behind me was -- was part of the  
16 Hydro team.

17 MR. BYRON WILLIAMS: He was on the  
18 other side?

19 DR. ROGER HIGGIN: He was on the other  
20 side, yeah. In fact he was in the other side in the  
21 old Hydro reviews as well.

22 MR. BYRON WILLIAMS: And are you on the  
23 same side now, Dr. Higgin, or are you not sure?

24 DR. ROGER HIGGIN: Most of the time.

25 MR. BYRON WILLIAMS: Sometimes I

1 wonder.

2 DR. ROGER HIGGIN: Yeah.

3 MR. BYRON WILLIAMS: After a number of  
4 years as a senior official both with the City of  
5 Toronto and private sector firms, you rejoined the  
6 Ontario Energy Board and served as a board member from  
7 1996 through 2000.

8 Is that correct?

9 DR. ROGER HIGGIN: Yeah, that's  
10 correct. And I retired in 2000 due to health issues.  
11 And once I got a little more healthy, I became a  
12 consultant on regulatory matters.

13 MR. BYRON WILLIAMS: Just sticking with  
14 the OEB, or Ontario Energy Board, for a moment, you  
15 were involved in numerous facility and rate  
16 proceedings, sir?

17 DR. ROGER HIGGIN: Oh, yes. If you  
18 look at my resume, there's an awful lot on -- of them  
19 on there. I -- I don't have a count, but believe  
20 there's an awful lot. So as -- as a busy regulator for  
21 five (5) years in that particular slot, basically I  
22 think you would all know that you -- you kept very  
23 busy. And it was a very active time in Ontario,  
24 particularly because the electricity sector had been  
25 deregulated. And the OEB was given the mandate to

1 start doing reviews of rates and so on for the  
2 electricity sector. So it was a very, very busy time  
3 for -- for us in Ontario.

4 MR. BYRON WILLIAMS: And as you  
5 mentioned, since 2000 you have served as a consultant  
6 on electricity and energy regulatory proceedings in  
7 British Columbia, Alberta, Manitoba, Ontario, and  
8 Quebec?

9 DR. ROGER HIGGIN: Yes, that's --  
10 that's correct.

11 MR. BYRON WILLIAMS: And you've  
12 provided expert testimony or evidence betwee -- before  
13 the Manitoba Public Utilities Board, the Le Regie de  
14 L'Energie Que -- Quebec, the Joint Panel of the  
15 Manitoba Public PUB and Clean Environment Commission  
16 into the proposed Wuskwatim project, and the Alberta  
17 Energy and Utilities Board?

18 DR. ROGER HIGGIN: Yes, that's correct.  
19 I'd just say that in my consulting career I usually  
20 provide more of the advice to the clients, and it's on  
21 occasions where that is insufficient that I will be  
22 asked to prepare testimony and testify. So it's not a  
23 routine thing. I'm not like many of the consultants  
24 that -- that go around the -- the testimony circuit. I  
25 only do it on very rare occasions and where it's

1 required.

2 MR. BYRON WILLIAMS: Okay. And in  
3 terms of the number of natural gas and electricity  
4 proceedings that you've provided advice on, would it be  
5 fair to say that many of them involve the review of  
6 rates and the balancing of ratepayer and utility  
7 interests?

8 DR. ROGER HIGGIN: That's correct.

9 MR. BYRON WILLIAMS: And am I correct  
10 in suggesting that in the midpart of the last decade,  
11 on behalf of the Vulnerable Energies -- Energy  
12 Consumers Coalition of Ontario, you took part in a -- a  
13 -- what started out as the Ont -- Ontario Power  
14 Authority review of its 2007 resource plan?

15 DR. ROGER HIGGIN: Yes, that's correct.  
16 I was one of the team that VECC had used, including my  
17 colleague, Mr. Harper. And -- and so I was given  
18 certain areas of the file to look at and provide -- go  
19 to all the -- the briefing meetings and then provide  
20 advice. But as -- again, that particular review did  
21 not proceed for a number of reasons, which perhaps are  
22 less obvious than they were in the first place, the  
23 first review by Hydro in -- back in the 1990s, yes.

24 MR. BYRON WILLIAMS: And also just  
25 going back to the Wuskwatim proceeding before the Joint



1 Panel of the Public Utilities Board and Clean  
2 Environment Commission.

3                   You provided advice on such matters as  
4 hydro alternatives, such as non-utility generation,  
5 wind power, and DSM?

6                   DR. ROGER HIGGIN:    Yes, that's correct.  
7 Mr. Harper was with me as the -- the other major  
8 consultant, and he looked at more of the economic nuts  
9 and bolts of the whole thing. I was asked to look at  
10 those areas. I think there's -- you're going to expand  
11 into another area as well.

12                  MR. BYRON WILLIAMS:   As well, you  
13 looked at the business partnership arrangement in that  
14 hearing?

15                  DR. ROGER HIGGIN:    I was asked to take  
16 a look at that and make comments and provide advice to  
17 both the client, and also we did testify and provide  
18 that advice to -- to the review -- Joint Review panel.

19                  MR. BYRON WILLIAMS:   Okay. And just  
20 finally, in terms of your clients as a con -- as a  
21 consultant, would it be fair to say that apart from the  
22 Vulnerable Energy Consumers Coalition and obviously CAC  
23 (Manitoba), they have included the Energy Probe  
24 Research Foundation, the City of Calgary, Option  
25 Consommateurs Quebec, and the former Manitoba Society

1 of Seniors?

2 DR. ROGER HIGGIN: That's correct.

3 Just to note that my consulting career has been to  
4 assist public interests entities as opposed to being a  
5 consultant that has a variety of clients, including  
6 utilities and so on. So I've been totally and  
7 absolutely focussed on public interest clients, that's  
8 all I do. That's all I want to do. And so that's my  
9 particular little thing that I -- I enjoy working with  
10 public interest groups.

11 MR. BYRON WILLIAMS: Mr. Chair, members  
12 of the panel, I would ask that Dr. Higgin be qualified  
13 as an expert in energy policy and energy strategy,  
14 which includes his experience in the review of supply  
15 pla -- of capital plans and integrated resource plans.

16 And I -- what I should've said, sir, is  
17 in the -- Mr. Chair, I misspoke. He's -- that he be  
18 qualified as an expert in the assessment of energy  
19 policy and energy strategy, including the review of  
20 capital and integrated resource plans, and also  
21 qualified as expert in the assessment of rate and bill  
22 impacts, including the balancing of the interests of  
23 ratepayers and utilities.

24

25 (BRIEF PAUSE)

1 THE CHAIRPERSON: I'll call upon the  
2 Intervenors to provide their -- their feedback and  
3 questions. Me. Hacaault, s'il vous plait.

4 MR. ANTOINE HACAULT: Oui, M.  
5 President. Good morning, Dr. Higgins (sic). In your  
6 CV, listed under "Energy Prog Research Foundation, 2012  
7 to present," you show on behalf of SPA, Inc., doing  
8 work related to Hydro-Quebec -- and then it's, for the  
9 reporter -- capital 'I', capital 'R', capital 'M', from  
10 2014 to 2019.

11 Could you explain what that's about?

12 DR. ROGER HIGGIN: Yes, SPA, Inc., is  
13 my consulting company, just to position that. That's  
14 what that means. The client in that case -- I have to  
15 pull it up -- I believe that if it's Hyd -- Hydro-  
16 Quebec it would be...

17 Yes, the client, which in this case was  
18 Option Consommateurs, was -- was my client, okay.

19 MR. ANTOINE HACAULT: And what type of  
20 review did you do with respect to Quebec-Hydro? It  
21 wasn't obvious --

22 DR. ROGER HIGGIN: Okay.

23 MR. ANTOINE HACAULT: -- from other  
24 parts of your CV, sir.

25 DR. ROGER HIGGIN: The -- the Quebec-

1 Hydro my -- was a very limited assignment. It was to  
2 assist Option Consommateurs's analyst with two (2) --  
3 two (2) items. One (1) was introduction of what we  
4 call a earnings sharing mechanism.

5                   And probably the panel will remember  
6 'earning sharing' means in an incentive plan, which is  
7 where Hydro-Quebec is going, there is sometimes a  
8 provision that says if the utility earns so much above  
9 or below its allowed return -- now this is regulation  
10 based on the model of an investor-owned utility, where  
11 equity is basically one of the components in the  
12 capital structure -- then there is a mechanism that  
13 they share that with the ratepayers. That's in  
14 essence, reducing the rates going forward. They can  
15 sometimes give a rebate, but setting the rates.

16                   So that was my first assign -- part of  
17 the assignment. I can go into more -- more detail.  
18 I'm very familiar with ESMs, as we call them. And they  
19 needed somebody that was familiar with ESMs to give  
20 them advice and input. But I didn't testify. I just  
21 provided reviews and input to their analyst, who  
22 provided testimony on behalf of Option Consommateurs.

23                   The other component was to comment on  
24 the evidence that Hydro bring -- brought forward on the  
25 matter of capital structure and the thickness of the

1 equity of -- that was being proposed. They were --  
2 they were proposing to change the capital structure.  
3 And along with that, because of the -- the concepts  
4 being risk and the equity risk premium, they were  
5 looking for a higher return on equity.

6                   And so my input to this was to share  
7 with them the experiences we've had in Ontario. But  
8 just to be very clear, they hired Laurence Booth as an  
9 expert to, I'll call it, offset or provide a different  
10 view to Concentric Advisors from Boston who had been  
11 hired by -- by Hydro-Quebec. So my -- I had nothing to  
12 do with that. I was just bringing the experience we  
13 had on how ESMs should be structured, how they worked  
14 and so on. And, in fact, one of the -- one of the  
15 experts that was hired by Hydro-Quebec was from  
16 Concentric, and one of his topics was ESM.

17                   So that -- that's -- I'm sorry, I can go  
18 on a long time, if that happens.

19                   MR. ANTOINE HACAULT: Thank you. That  
20 helps me better understand your role in those  
21 proceedings, or behind those proceedings.

22                   Sir, were you involved at all in the  
23 major review that was done of energy in Quebec, leading  
24 to a report late in February which commented, amongst  
25 other things, about the impact of, I'm going to call

1 it, the merchant plants building for export on  
2 ratepayers?

3 DR. ROGER HIGGIN: I'm only very --  
4 because I -- I sort of monitor the -- the network.  
5 But, no, I had no involvement at all in that  
6 proceeding. So as I said, I -- because I have clients  
7 in Quebec, I monitor what's going on in terms of the  
8 applications on the -- on the Regie site and -- and  
9 just sort of keep a note.

10 MR. ANTOINE HACAULT: It's a fairly  
11 lengthy report au Francais. Have -- are you able to  
12 read French reports, sir?

13 DR. ROGER HIGGIN: I can read them.  
14 But to put me on the stand, I can't -- couldn't say  
15 more than a few words: bonjour, et cetera. Sorry. But  
16 I can -- I can read. But when I am trying to provide  
17 expert advice to my client, I do ask for translations.  
18 And often in Quebec, IGUA, or the Quebec version, takes  
19 a lead in actually doing the translations to English  
20 for those proceedings.

21 MR. ANTOINE HACAULT: Have you actually  
22 read that February report, February 2014?

23 DR. ROGER HIGGIN: No, I have no  
24 familiarity and I have not read it. Thank you.

25 MR. ANTOINE HACAULT: Those are all of

1 my questions, Mr. Chair. I, on behalf of MIPUG, have  
2 no objections to the qualification of Dr. Higgins (sic)  
3 for the two (2) areas that were identified by Mr.  
4 Williams.

5 THE CHAIRPERSON: Merci, Me. Hacault.  
6 Dr. Higgin, just a -- a question. I was reading the La  
7 -- La Presse last night, and I noticed that Hydro-  
8 Quebec is 75 percent owned by the province. I was  
9 wondering who owns the other 25 percent.

10 Do you -- do you know?

11 DR. ROGER HIGGIN: For Hydro-Quebec,  
12 no, I -- I don't remember who was --

13 THE CHAIRPERSON: I was quite surprised  
14 by that, and I -- I expect -- I thought the Province of  
15 Quebec --

16 DR. ROGER HIGGIN: Yeah. I -- I would  
17 have said that it was totally owned by -- by the  
18 province. However, as I said, the -- the Regie and the  
19 government have decided to regulate it more like a --  
20 an investor-owned utility. I -- I use the word -- we  
21 call them quasi-investor utilities as opposed to Crown  
22 corps. You know -- you know what I'm talking about.

23 THE CHAIRPERSON: Thank you for that.

24 DR. ROGER HIGGIN: Thank you.

25 THE CHAIRPERSON: Professor Miller, I'm

1 sorry, I -- I overlooked you, I'm sorry. Go ahead.

2 DR. PETER MILLER: Thank you. You --  
3 you were asked to be qualified, Dr. Higgins (sic), as  
4 an expert in balancing the interests of the utility and  
5 ratepayers. We have a somewhat different criterion in  
6 this proceeding.

7 Does the proposed plan provide the  
8 highest level of overall socioeconomic benefit to  
9 Manitobans, and is it the preferable long-term  
10 electricity development option for Manitoba when  
11 compared to the alternatives?

12 And I'm wondering if you've had any  
13 experience at looking at that wider perspective, not  
14 just the utility and the ratepayers?

15 DR. ROGER HIGGIN: Yes. The -- the  
16 answer would -- in the short term would be that a  
17 component, or an element of the review is to consider  
18 the ratepayer aspects of the proposal. So that's a --  
19 that's a key component. I think I -- I have a chart in  
20 my evidence that shows that's one of the several  
21 components. Therefore, I -- I would say that my  
22 background and experience is applicable to that.

23 Secondly, on the particular area of  
24 ratepayer issues related to the Plan, I did some of my  
25 own direct work, which is in -- in my report and



1 appendices, looking at the issue of affordability,  
2 rates, and bill impacts.

3                   So I -- I believe it is an essential  
4 component of the review, and that is to look at: What  
5 are the impacts on rates, what are the impacts on  
6 consumers of various types, and including my client's  
7 group, which is residential, but also including  
8 industrial, and so on. So I think it's a -- a key  
9 thing to look at it, and if you look at the evidence,  
10 it's in there in the evidence in a number of ways,  
11 perhaps not totally drawn out, but it's there.

12                   DR. PETER MILLER: Thank you. I -- I  
13 would certainly agree those are complements of the  
14 overall socioeconomic well-being, but not the totality.

15                   Would you agree with that?

16                   DR. ROGER HIGGIN: Totally, yes.

17                   DR. PETER MILLER: Thank you. I --  
18 Green Action Centre would accept your expert  
19 qualifications in the areas stated.

20                   DR. ROGER HIGGIN: Thank you.

21                   THE CHAIRPERSON: Thank you, Dr.  
22 Miller.

23                   Mr. Orle, please?

24                   MR. GEORGE ORLE: Thank you, Mr. Chair.  
25 Just one (1) question.

1                   Among the -- the groups of ratepayers  
2   that -- that you reviewed as part of your -- or that --  
3   that were at part of the reviews that you did, did that  
4   include First Nations communities residing on -- on  
5   reserves?

6                   DR. ROGER HIGGIN:    The answer is no,  
7   not specifically. I took a -- a broad approach to  
8   focussing on residential consumers, of which they are  
9   part, but I did not focus specifically. If you read in  
10  my report, there were a couple of comments about  
11  distinguishing the fact that they're -- they are  
12  distinct and have other considerations to be -- rather  
13  than that -- what we would call a regular ratepayer,  
14  but I did not spend any time looking at those  
15  considerations.

16                  MR. GEORGE ORLE:    Okay. But in your --  
17  your past, and the -- the qualifications that have been  
18  held out as -- as different groups that you've been  
19  involved and in different regulatory groups that you've  
20  been involved in, the ratepayers that have been  
21  reviewed in those proceedings have included First  
22  Nations communities?

23                  DR. ROGER HIGGIN:    Very much so.

24                  MR. GEORGE ORLE:    Thank you. MKO has  
25  no objection to the qualification of Dr. Higgin as an

1 expert.

2 THE CHAIRPERSON: Thank you, Mr. Orle.

3 And on behalf of the Manitoba Metis

4 Federation, Ms. Saunders, please.

5 MS. JESSICA SAUNDERS: Yes. Good

6 morning, Dr. Higgin.

7 DR. ROGER HIGGIN: Good morning.

8 MS. JESSICA SAUNDERS: The Manitoba

9 Metis Federation has no objections to the

10 qualifications of the expert as presented. Thank you.

11 THE CHAIRPERSON: Thank you, Ms.

12 Saunders. And, Me. Monnin, on behalf of the

13 independent consultants?

14 MR. CHRISTIAN MONNIN: Merci, M.

15 President. We have no objections with the

16 qualifications.

17 THE CHAIRPERSON: Merci, Me. Monnin.

18 Ms. Fernandes, on behalf of Manitoba

19 Hydro, please.

20 MS. ODETTE FERNANDES: Thank you, Mr.

21 Chairman. Manitoba Hydro has no objection.

22 THE CHAIRPERSON: Thank you for that.

23 MR. BYRON WILLIAMS: Mr. Chair, if I

24 might ask one (1) question of re-direct, which might

25 assist Dr. Miller, with the Board's permission?

1 THE CHAIRPERSON: Absolutely.

2 MR. BYRON WILLIAMS: Dr. Higgin, in --  
3 in terms of the criteria at the OEB, would -- would  
4 your mandate also have included looking at the public  
5 interest?

6 DR. ROGER HIGGIN: I think that every  
7 regulator, that's a fundamental component of what we  
8 do, or did, and continue to -- for other people. It's  
9 -- it's fundamental. If you look at the chart that's  
10 in my -- my evidence, what is the top piece of the  
11 elements in that? It is the public interest.

12 MR. BYRON WILLIAMS: Okay. Thank you.

13 THE CHAIRPERSON: Mr. Peters, did you  
14 have any questions of Dr. Higgin?

15 MR. BOB PETERS: No questions. Thank  
16 you.

17 THE CHAIRPERSON: So the panel agrees  
18 that we will accept Dr. Higgin as an expert witness for  
19 the areas outlined by Mr. Williams. So welcome, Dr.  
20 Higgin, to these proceedings.

21 DR. ROGER HIGGIN: Thank you very much,  
22 sir.

23

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

25 MR. BYRON WILLIAMS: And just for the

1 panel's information, Dr. Higgin is much more  
2 technologically adept than I, but we are going to ask  
3 Diana to -- to work the slides for him. He's going to  
4 work off is PowerPoint and -- and notes off his own  
5 version. So if I seem like I'm interrupting a bit more  
6 than usual, it'll just be to make sure that we're on  
7 the -- the same page.

8

9 (BRIEF PAUSE)

10

11 DR. ROGER HIGGIN: Thank you. I will  
12 proceed with my presentation. And perhaps after the  
13 introduction slide, maybe we'll just look at what I'm  
14 trying to cover here. And again, I have a few  
15 introductory remarks, and that relates to what I was  
16 asked to do and why I'm here.

17 Basically, I was asked to do something  
18 different that has perhaps only been asked to do once  
19 or twice past, but really is quite unique. And that is  
20 to provide strategic and policy advice and observations  
21 -- you -- you'll get fed up of me using that word,  
22 because it goes with advice, observations -- on the  
23 NFAT business case to my client, PILC and CAC  
24 (Manitoba), and to provide a summary of those  
25 observations to the PUB review panel as a report. And

1 so basically that's a rather unusual role, for me  
2 anyway, in -- in my consulting experience.

3 The caveats are important to note. And  
4 that is that my client may, given many of the other  
5 inputs that they are getting, can choose to ignore,  
6 reject, or modify my advice and observations. And  
7 obviously, that applies to you without talking.

8 Anyway, at this point I -- where are we  
9 in that advice, in -- in the overall progress of the  
10 case and so on? And perhaps I should summarize it this  
11 way. There's been a lot of changes since I made my  
12 original observations and so on.

13 What I'm trying to do today is to pick  
14 those up and say, Well, how do they affect my original  
15 observations, and so on, from a policy and energy  
16 strategy point of view? And that's the purpose of the  
17 thing. But even that, since my -- since, as you know,  
18 the scope of all of the elements and so on of this  
19 review are so huge. I -- I have focussed on three (3)  
20 particular areas for this presentation. And I'll go  
21 through those now.

22 The first three (3) -- these areas are:  
23 affordability, and that's in the context of the  
24 currently short-listed pathways for the Preferred  
25 Development Plan or a version of that, such as we could

1 talk about Keeyask plus 750 megawatts, plus gas.  
2 That's Plan 5. Or similar other plans, such as Plan 4.  
3 So we're looking at -- within the -- that new context  
4 of short-listed as opposed to the original concept --  
5 con -- framework.

6                   Secondly, I've asked to look at the DSM  
7 impacts and my observations about that, and  
8 particularly as based on the MH 2014 SmartPow -- Power  
9 Program and the related integrated resource planning  
10 that -- how that fits into IRP, into the integrated  
11 resource planning framework that should underpin the  
12 Resource Plan. So that's a key component, how do you -  
13 - how the two (2) fit together.

14                   And in there I mention a couple of times  
15 just some of the newer resources that have been talked  
16 about -- I'll use the word 'talked about' here -- such  
17 as solar, PV, that's the centralized, I think, was the  
18 term used. I -- I use grid connected PV as opposed to  
19 microfit. We use the term in Ontario. That means the  
20 small systems under 10 kilowatts that are often used  
21 just to reduce the electricity bill of a per -- of a  
22 house or an -- an industry and sometimes feeds some of  
23 that power back into the grid. As opposed -- that --  
24 so that's a couple of questions there, some comments.

25                   And finally, in my original observations

1 I tried to address the question of process and outcomes  
2 and so on from the NFAT review. And that was in the  
3 context of the terms of reference. So I felt perhaps  
4 it was a good time to say, Where are we right now and  
5 are my observations still valid, or -- or should they  
6 change? So that's basically the final component.

7 Okay. I'm too -- too close now. Sorry.

8 Okay. So could I have the -- the next slide, please,  
9 which is the slide number 3? That's the demand and  
10 load forecast.

11 MR. BYRON WILLIAMS: And -- and, Dr.  
12 Higgin, could I stop you here for a second?

13 When we see the term 'observations'  
14 here, are you referring to some of your original  
15 observations or your updated observations?

16 DR. ROGER HIGGIN: All right. I've  
17 tried to identify in here those too. These are the  
18 original observations which I've tried to summarize  
19 from my original report. Okay. These are things that  
20 I identified as things that needed to be looked at  
21 more, were -- I won't say areas that perhaps there was  
22 an insufficient evidence and so on. So the -- they're  
23 not criticisms; they're just observations of things  
24 that were perhaps a little bit needed looking at  
25 further.



1                   So in -- in the original forecast, I --  
2 I summarize here. We don't need to spend time on it.  
3 My take -- my summary is not -- is based on the  
4 evidence which is MH's evidence. It's -- it's also the  
5 evidence of the Board's experts, and importantly the  
6 CAC.

7                   And basically, there were some concerns  
8 here that I identified in -- in advice to my client  
9 about the -- the actual one point six (1.6) growth  
10 projection, about whether price elasticity have been  
11 taken into account and how, and then the question of,  
12 how is fuel switching being done? And I don't want to  
13 spend much time on that, because Mr. Chernick will  
14 spend a lot of time on that tomorrow, but basically,  
15 fuel switching, and then DSM.

16                   We were dealing with the 2013 Power Plan  
17 and we were dealing with what I call one point plan or  
18 a projection, or an increase of that of one point five  
19 (1.5) times. So that's -- that's where we were.

20                   So this, then, is dealing with now as we  
21 are in this proceeding, and this deals with -- on slide  
22 4, if we can look at that?

23                   MR. BYRON WILLIAMS:    So when you say,  
24 "This deals with where" -- "now," you're referring to  
25 slide 4?

1 DR. ROGER HIGGIN: Correct, slide 4.

2 Thank you. And first of all, these are the MH  
3 potential updates that have been discussed by Mr.  
4 Wojczynski in his -- I hope we've got your name here  
5 correct, Ed. I call him Ed. And then, you know,  
6 beyond that -- okay.

7 Anyway, this is from Ed's update, and  
8 basically at the top, and these are some of the  
9 potential updates to -- to the load forecast which may  
10 be included, I use that word 'may', in 2014, so that's  
11 what I've done. I've just listed these out and say,  
12 Oh, well, these do respond in a significant way to some  
13 of those observations that I had. And we could go  
14 through them, but I think you can read them.

15 There -- some of them are positive,  
16 obviously, the new pipeline load wasn't expected, and  
17 some of them negative, meaning that it's been -- that  
18 it they may produce a load reduction, and those are  
19 listed as well. And the important one to just mention  
20 here before we get to DSM is fuel switching.

21 There's been some change in the approach  
22 to -- to fuel switching, which Manitoba Hydro -- and  
23 that was an area that I was quite concerned that people  
24 in gas supplied areas were basically using electricity  
25 for purposes that -- when they could have been using

1 gas and -- and they choose a -- an integrated gas and  
2 electric utility, so they have even more chance, unlike  
3 Ontario, to influence -- I'll call that word influence  
4 those choices and so on, so that was a concern.

5 And they now have put in a -- a change  
6 to their load forecast based on hopefully addressing in  
7 more -- more depth the issue of fuel switching.

8 Okay, so then the next other one (1)  
9 update which we all know has the -- is the new 2014  
10 Power Smart Plan. These are some summary when I read  
11 it about -- I -- I sort of said, Well, how does this  
12 relate to the -- to the original 2013? And these are  
13 some of my observations, to use my word again, as to  
14 what it shows.

15 And basically, then there is the  
16 supplemental report that's -- I -- I think exhibit is  
17 listed here, and these are just at a high level,  
18 because I only looked at the executive summary, to be  
19 honest. It's not a very long report, but these are  
20 some of the things that I -- I pulled out of that --  
21 that report.

22 And so from -- from that, I can say,  
23 Well, Manitoba Hydro has addressed the -- the concerns  
24 to a -- to a -- a significant degree, and I would say  
25 this, that the main thing that's now changed is the

1 Level 2 DSM as provided by Manitoba Hydro, and the  
2 projections and everything that goes with that. That's  
3 the -- that's the major change.

4 And so how much are the gigawatt hours  
5 and megawatt peaks going to actually lower consumption?  
6 There's estimates here, but of course, those are  
7 targets. The next thing is how much will it reduce the  
8 bills for ratepayers? There's a number of  
9 considerations related to that, and MH did provide, I  
10 believe, an exhibit that -- that -- which I read and  
11 looked at that gave some estimates on -- of that.

12 And so basically then, that's MH, and  
13 then we go to my client, okay? And the -- my client  
14 has retained Philippe Dunsky to provide advice,  
15 evidence, and so on. Basically, you heard his  
16 presentation. I've read it in great detail, and I have  
17 a few comments, not on the -- not on that, but  
18 basically, On where do we go from here, given this new  
19 developments, which is: a) Manitoba Hydro and the new  
20 plan and, b) comments from a significant expert on DSM  
21 related to that plan? Okay, so where do we go? So I'd  
22 like to just say a few words about that in a minute.

23 MR. BYRON WILLIAMS: And, Dr. Higgin,  
24 just before you do, so are you personally familiar with  
25 Mr. Dunsky?

1 DR. ROGER HIGGIN: Yes, I am. We ran  
2 each -- to -- into each other in 2006 in Manitoba,  
3 basically, but I -- I had previously run into him --  
4 anyway. In a nutshell, I was testifying in here in  
5 Manitoba on the gas side, suggesting that they needed  
6 to do things, well, more things, with respect to low-  
7 incoming pro -- low-income programming, and I was  
8 addressing at a high level as a regulatory perspective  
9 on that and what the implications of that were, how do  
10 you do that, and so on.

11 So I did that, and I believe, because  
12 Mr. Dunsky told me this, that Manitoba Hydro, in terms  
13 of trying to deal -- when the Board issued its report,  
14 they -- they approached him and he, who I'd already  
15 known, was hired by them to provide advice on that, so  
16 we go back there.

17 And I run into Mr. Dunsky a couple of  
18 times in other proceedings as well, so we know one  
19 another very well. And -- and at large point we -- at  
20 a high level, we're very pro-DSM, conservation, fuel  
21 switching, and so on. You know, there's questions of -  
22 - always of degree, but we're -- we're sort of on the  
23 page -- same page when it comes to that.

24 MR. BYRON WILLIAMS: Okay. And -- and  
25 can you indicate, if you recall, how, if at all -- are

1 you aware of how Mr. Dunsky came to the attention of  
2 CAC (Manitoba)?

3 DR. ROGER HIGGIN: Yes. I believe I  
4 was asked by you to recommend a consultant on DSM, and  
5 I had no hesitation to recommend Philippe. So I -- I  
6 just thought a couple of points that may be helpful  
7 here, and I'll call them 'observations'.

8 First of all, one of the key questions  
9 is -- everybody faces, especially when there's a big  
10 increase proposed for DSM: Is DSM going to be a  
11 reliable resource that can be relied on to provide  
12 kilowatt hours at a lower cost importantly -- of new  
13 generation, either gas or hydro?

14 There's several factors that go into  
15 considering that question. The current Power Smart  
16 Programs have participation rates that some, including  
17 Mr. Dunsky, have some concerns about as being less than  
18 optimum. So participation rates is a -- is a key  
19 factor, and one I'll visit in -- again in a minute.

20 So if DSM is to become a -- a key  
21 resource as part of the Preferred Development Plan or a  
22 version of the plan, then there are a number of other  
23 collateral issues that need to be addressed by Manitoba  
24 Hydro, and these include the accessibility of the  
25 programs, the universality of those, which comes

1 back to including First Nations, and so it's  
2 universality, available everywhere across the province  
3 at the same basis, who are the target groups, and what  
4 do you do about I call -- what I call vulnerable energy  
5 consumers, which are often, but not necessarily, the  
6 same as low-income families?

7                   So those are some of the considerations  
8 that need to be taken into account when you go from an  
9 overall Level 2 -- and in -- in the 2014 plus plan,  
10 there is some evidence and so on, on those issues, but  
11 it's very critical. I think that there's got to be a  
12 comprehensive review of the 2014 plan by, I would  
13 suggest, this -- this tribunal. After this is over,  
14 that's still an outstanding and important thing that  
15 needs to be done.

16                   And that's the point at which you can  
17 assess the questions of degree between Level 2 or the  
18 things Mr. Dunsky's saying we can do more. He's  
19 concerned about a falloff after 2018. And all of those  
20 factors that I've read need to be considered and  
21 addressed so that there is an approved 2014 plus DSM  
22 plan that you think can be relied on to meet its  
23 targets as part of the overall plan going forward in --  
24 in Manitoba. So that -- that's really where I -- I end  
25 up.

1                   Now on this slide, I just wanted to  
2 mention one (1) thing. That is there's some questions  
3 about costs. What are the costs of the new DSM  
4 program? And I -- I saw estimates anywhere around two  
5 (2) to three (3) cents. You know, what are we talking  
6 about, costs? Well, it depends on your perspective.  
7 You're talking -- I believe this is the utility cost.  
8 For people who know a bit about DSM, there's at least  
9 five (5) costs or tests that are looked at from an  
10 economic cost benefit. There's five (5) of them. And  
11 basically the one that's being talked about most is the  
12 utility cost. And this is understandable that the  
13 utility will talk about the utility cost, obviously.

14                   But there are other tests that need to  
15 be considered when looking at the program design, the  
16 impacts, and so on. For example, the participant cost  
17 test: What are the cost of the program to the  
18 participants? Then the much maligned RIM test. What  
19 are the impacts on rates, and so on.

20                   So those are some of the things that  
21 need to be reviewed and considered within the framework  
22 of the proposed 2014 plus plan. And that's basically  
23 where I would leave things, except with a concluding  
24 remark because -- and it says:

25                   "The key is that MH Resource



1 Development Plan should consider  
2 economic DSM."

3 However, you may want to address what  
4 you mean, 'economic'. We can go into that if you want.  
5 And the impact of this will affect the need date for  
6 new generation, number 1, and provide an assessment of  
7 the economics of advancing new generation. It's --  
8 it's a component you have to look at when you're  
9 looking at advancing new generation. As is the case,  
10 as you're tasked to look at in terms of looking at the  
11 economic opportunities from advancing -- advancing  
12 generation. So it's a factor, because in essence  
13 you've got a resource that starting to meet the growth  
14 and load -- that is, DSM -- the domestic load.

15 That then says, well, the -- the new  
16 resources, if we're going to build them, initially  
17 won't be needed to meet that load. And therefore, if  
18 we decide to advance them then, perhaps, that's a  
19 different way we should look at things, at least in the  
20 advancement period. So we'll come back a bit to that  
21 in -- in the -- a little later. The one --

22 MS. MARILYN KAPITANY: Can I just  
23 interrupt you for one (1) minute?

24 DR. ROGER HIGGIN: Sure, no problem.

25 MS. MARILYN KAPITANY: In terms of

1 looking at DSM plans, have you had the opportunity to  
2 work in jurisdictions or advise in areas where DSM  
3 plans have been put in place and then have looked at  
4 how they would continue on in the long term? How they  
5 would go from what their original measures might've  
6 been in the original programs in place, and then built  
7 on those, as some measures would become exhausted, that  
8 others would come into the plan to keep DSM going on an  
9 upward trend or at least flat, like, for a long period  
10 of time?

11 DR. ROGER HIGGIN: Yes; the answer is  
12 yes. There are usually long-term DSM potential studies  
13 done which set out the trajectory -- we'll call it the  
14 trajectory -- going forward. And then what happens is  
15 plans are developed, and they can be anywhere -- I've  
16 seen them as short as one (1) year, or longer, where  
17 the -- the actual implementation is done through those  
18 plans. Now, in -- my recent experience has been in  
19 Ontario with both the electric CDM plans and looking at  
20 them from the utility spect -- perspective, and rates.

21 I am not a practitioner in the  
22 development of DSM plans and so on. However, I have  
23 been, in Quebec, tasked a couple of times to look at  
24 what's going on with some of the plans in Quebec and  
25 what do we do about it. My focus was specifically:

1 Why aren't they reaching the low-income people? Why  
2 aren't they participating? What's going on? And what  
3 can we do about it? And so that was the particular  
4 thing that I looked at, was more of a detail of the  
5 programs.

6 But on the other hand, I think the issue  
7 is, like everything else, DSM is affected by so many --  
8 DSM achievement -- kilowatt hours, megawatt hours -- is  
9 affected by a number of external factors that the  
10 utility can't control, such as a 2009 recession. And  
11 therefore, the targets are just that.

12 Now, in Ontario the other thing that --  
13 why we go into great detail on gas DSM plans is that  
14 the utility gets a very nice, big incentive based on  
15 how much TRC, total resource cost or social cost, they  
16 get through the plan. And the -- that's a shareholder  
17 incentive. So you can imagine there's a lot of time  
18 spent by ratepayers looking at their claims, a very  
19 important word, for kilowatt hours, gigawatt hours, in  
20 those plans.

21 And so I don't know whether that's  
22 totally answered your question, but I -- I'm very  
23 familiar with those aspects. But again, it's at a -- a  
24 regulator's kind of level, as opposed to being a -- a  
25 DSM practitioner.

1 THE CHAIRPERSON: Well, let's talk  
2 about the Quebec experience since you're familiar with  
3 it. What's going on in Quebec in relation to DSM?  
4 They've got a plan. What's happening with respect to  
5 the targets they've set, and -- and why isn't it  
6 happening? I guess -- I'm assuming from your comments  
7 that -- you suggested that they're not hitting their  
8 targets.

9 And I'd -- I'd like to know why, what's  
10 going on?

11 DR. ROGER HIGGIN: First of all, I have  
12 to put this into a historic perspective. I haven't  
13 been retained recently to look at that plan. The  
14 period, I think it's in my -- my CV when I did that,  
15 that would be approximately, I'm going to say, about  
16 seven (7) years ago. And they were having problems and  
17 I was asked to deal with -- with -- to -- to look at  
18 the plan and so on. So at that time --

19

20 CONTINUED BY MR. BYRON WILLIAMS:

21 MR. BYRON WILLIAMS: Dr. Higgin, could  
22 I interrupt? And just -- and just to make sure, you're  
23 looking in Quebec, was that the low-income plans?

24 DR. ROGER HIGGIN: My particular focus,  
25 I think I said that before, was on whether the low-

1 income programs were working, were not working, and  
2 what was wrong with it. And so I did go through and  
3 look at that and there were a number of factors  
4 affecting participation rates. And they rela -- they  
5 related to some very tangible things: that they weren't  
6 promoting and pushing the plans. They were sitting  
7 there and waiting for people to come in the door, not  
8 promoting the plans, pushing the plans. That was one  
9 of the things.

10                   The fact is eligibility criteria were  
11 terrible. They didn't have, like we have in Ontario  
12 now for low income, LICO, Low Income Cut Off, plus 135  
13 percent. So it -- it broadens the base so that they  
14 basically are eligible if the family is not LICO, but  
15 at 135 percent of LICO. And that's been adopted by the  
16 OPA as well, the Ontario Power Authority, who looks  
17 after the electric CDM -- SM -- DSM in -- in Ontario.  
18 I don't know whether that -- that helps you. There's a  
19 huge number of factors that affect par -- participation  
20 rates and --

21                   THE CHAIRPERSON: Well, we try to  
22 understand, you know, your -- the very first comment  
23 you made was that these are estimates, and -- but those  
24 are targets. Let me -- let me repeat that, because  
25 just -- my comment.

1 DR. ROGER HIGGIN: Yes, targets.

2 THE CHAIRPERSON: But you didn't  
3 indicate they are targets, and I -- and I -- I inferred  
4 from that that you're suggesting that it's one thing to  
5 set a target. It's quite another thing to deliver on  
6 the target. And I -- I guess --

7 DR. ROGER HIGGIN: Absolutely correct.

8 THE CHAIRPERSON: We're trying to get  
9 at that. We're trying to understand.

10 DR. ROGER HIGGIN: Because the -- the  
11 programs to meet those targets have to be designed,  
12 developed, number 1, and when you do that, and I'm  
13 doing this right now, excuse me, with low -- low-income  
14 programming for Union Gas. So I'll use that a current  
15 example.

16 The first thing that they're looking at  
17 is they want to extend their DSM programs to what we  
18 would call high rises. We -- we call them multi-family  
19 residential buildings. That's not a component. A lot  
20 of low-income people in Ontario live in those  
21 buildings.

22 So as part of that, we're doing a lot of  
23 analysis and work, and I'm part of their little task  
24 force. And they are saying, We need to estimate on how  
25 we are going to do the participation rates? What will

1 we actually get, and at what cost in terms, in this  
2 case, of -- of M-cubes of gas savings.

3 So similar concepts here have to be  
4 applied, and it's a very, very difficult job to  
5 estimate and project the participation rates and  
6 programs. If you're wrong about it, you may not meet  
7 your targets. That's basically a practical thing.

8 Again, you're stra -- I'm straying a bit  
9 more away from my expertise into that of Mr. Dunskey,  
10 and I think he has a lot more experience in  
11 jurisdictions in terms of, How do you design programs  
12 to get part -- maximum participation rates?

13 THE CHAIRPERSON: No, we wouldn't you  
14 to -- to do that. We're trying to understand though --

15 DR. ROGER HIGGIN: Yes.

16 THE CHAIRPERSON: -- from a -- from a  
17 sta -- from a writ -- from a -- the best way to  
18 describe it would be from a strategic perspective.

19 DR. ROGER HIGGIN: Yes.

20 THE CHAIRPERSON: I mean, you obviously  
21 have exposure there, and we're trying to understand  
22 it's one thing to set a target for DSM. We're trying  
23 to get at whether or not it can be delivered upon.

24 DR. ROGER HIGGIN: Right.

25 THE CHAIRPERSON: And -- and what are

1 the constraints that would -- would cause -- and we'd  
2 try to address that very problem you just described,  
3 which is, you know, it's one thing to say DSM can  
4 deliver on savings, but what happens if it is not  
5 there?

6 DR. ROGER HIGGIN: Well, let's go to  
7 Ontario and let's talk about briefly -- hopefully this  
8 will help. The Ontario Power Authority was taxed by  
9 the government to meet certain CDM, conservation and  
10 demand management, which includes a -- a number of  
11 overlapping areas that go with the Manitoba Hydro,  
12 including demand reduction and so on. Demand reduction  
13 is a particular set of programs and so on in that  
14 megawatt peak reduction.

15 So anyway -- so there are two (2) sets  
16 of targets been developed and given to OPA. They  
17 consulted on it. One is so many gigawatt hours, and  
18 the other is megawatts. And so then OPA was asked to  
19 look at the utilities from how many people, what their  
20 loads are, and so on, and then that -- those set of  
21 macroprovincial targets were given to the utilities as  
22 individual utility's targets. For example, Hydro One,  
23 which is the largest utility in Ontario, was given  
24 certain targets.

25 The OPA, going along with those targets,



1 developed programs, which the utilities can access in  
2 order to reach their utility targets, and the OPA's is  
3 tax -- tasked with moni -- monitoring the progress  
4 towards those targets, reporting, and making  
5 corrections just to get there. So that -- that's a --  
6 a regime in which there is a kind of a, I'll call it,  
7 CDM or DSM boss that's there watching and tasked to  
8 make it happen. Okay.

9

10 CONTINUED BY MR. BYRON WILLIAMS:

11 MR. BYRON WILLIAMS: And Dr. Higgin,  
12 and that's the thrust of some of your recommendations--

13 DR. ROGER HIGGIN: Yes.

14 MR. BYRON WILLIAMS: -- going forward,  
15 is that there needs to be, I'll suggest to you,  
16 additional oversight from the regulator to ensure that  
17 these targets are achieved?

18 DR. ROGER HIGGIN: Yes, the -- the role  
19 of the Ontario Energy Board as the regulator is  
20 primarily simply to ensure that in meeting the targets,  
21 the collateral issues around costs, rates, and so on  
22 are dealt with properly. That -- that's their role.

23 But the OPA is the conservation or DSM  
24 boss in terms of everything. And, very important, the  
25 money for it doesn't come from the rates if it's the

1 OPA programs, it comes from what we call the global  
2 uplift, so there's a certain amount of money that's in  
3 rates to achieve those programs. It's not from the  
4 individual utility rates, only if they, as they're  
5 encouraged to, add supplementary programs, then those,  
6 the costs are done in rates.

7 THE CHAIRPERSON: So -- so there -- so  
8 there's -- it's -- it's in rates though? I mean it --

9 DR. ROGER HIGGIN: Yes, it's --

10 THE CHAIRPERSON: -- from the previous  
11 --

12 DR. ROGER HIGGIN: It's on the -- it's  
13 on the bill.

14 THE CHAIRPERSON: On the bill, okay.

15 DR. ROGER HIGGIN: Yes.

16 THE CHAIRPERSON: There's a line that  
17 says this is the...

18 MR. RICHARD BEL: The -- the targets  
19 are mandated targets?

20 DR. ROGER HIGGIN: Yes --

21 MR. RICHARD BEL: Okay.

22 DR. ROGER HIGGIN: -- for the OPA, and  
23 they're mandated for the utilities.

24 MR. RICHARD BEL: We heard from Mr.  
25 Dunskey that those utilities, in -- in his experience,

1 that were mandated for DSM savings, seem to achieve  
2 them in most cases, and that the lowest achievement was  
3 80 percent of the target. So it would seem then, in  
4 terms of a capacity forecast, in Mr. Dunsky's  
5 experience, there was some certainty.

6 And I'm just -- I'm wondering, in -- in  
7 Canada, have we seen that in -- in any other  
8 jurisdiction?

9 DR. ROGER HIGGIN: Right. I think I  
10 have to put this into two (2) related responses, and  
11 that is you should distinguish quite clearly what we  
12 will call Crown corporations. And, in essence, the OPA  
13 is a Crown corporation. It's -- it's an instrument of  
14 the -- the government, okay, from utilities that are  
15 investor-owned, okay?

16 There's the two (2) different sets of  
17 circumstances, and the incentive, and this is the key,  
18 for those two (2) is different than -- okay. So if  
19 you're an investor-owned utility, you may not want to  
20 be pushing DSM too much unless you have -- want to  
21 avoid certain incremental costs that will make your  
22 rates uncompetitive, because for every kilowatt hour  
23 you lose, then basically, that's revenue that you've  
24 lost, okay?

25 If you're an investor-owned utility,

1 like Ontario, the two (2) gas utilities I think I  
2 cited, they get a shareholder incentive to go out and  
3 do it, and basically, they do very well. In fact, they  
4 exceed the -- the amount -- the target every year.  
5 We've tried to keep them back. So the incentive goes  
6 to the shareholder is better and increased, so they --  
7 they're motivated to do that.

8                   So Crown corporations like Quebec-Hydro,  
9 Manitoba Hydro, what is the incentive? You can't be  
10 looking at them from an incentive point of view, more  
11 that you can say mandate is really -- perhaps if you  
12 want to be dead sure, mandate it, and that is a  
13 government usually, a government versus a Crown corp,  
14 role to mend -- mandate that that's going to happen,  
15 the OPA model, where --

16                   THE CHAIRPERSON: I'm sorry, I just --  
17 I don't know how -- can you explain how the gas company  
18 is incented to apply DSM?

19                   DR. ROGER HIGGIN: Okay. The way it's  
20 done, it's called -- they -- they add up all of the --  
21 so they have targets, and they have a score card. And  
22 the score card says, If you meet 100 percent of your  
23 annual target -- now we're going back to an annual  
24 target and it's reset. They say, 100 percent, then you  
25 get this much incentive. If you get 125 percent, you

1 get a bigger incentive, and it's not just proportional.  
2 They get even bigger proportionally per -- per million  
3 TRCs, they get a bigger incentive.

4                   And that's all done after an audit.  
5 They bring in auditors, DSM auditors. And then  
6 basically they have a committee of ratepayers that  
7 looks at the repor -- audit and says 'yes' or 'no' with  
8 respect to, You're right in terms of the claim --  
9 claims you've made on savings. And then they get the  
10 incentive. So that's the gas utility model for --  
11 again, it only works for a investor-owned utility.

12                   MS. MARILYN KAPITANY: Is the incentive  
13 in the form of bonuses to senior managers, or where  
14 does that incentive go within the utility?

15                   DR. ROGER HIGGIN: It goes to the  
16 shareholder as an increase in its -- their return on  
17 equity above the allowed regulated return. But there's  
18 -- there's a lag, because there's a year -- usually a  
19 year between when the program was delivered and the  
20 results, unaudited, happen. And then there's year in  
21 which the audit is done. And so they get it a year  
22 later. So that's how -- how it works.

23                   So that's for an investor-owned utility.  
24 It doesn't work, that incentive obviously, you know,  
25 for a -- for a Crown corporation. So how to motivate

1 Crown corporations, if you want me to answer that, if  
2 you want to be dead sure, it's the mandatory approach,  
3 like OPA in Ontario.

4 THE CHAIRPERSON: So -- so let's talk  
5 about the Crown-owned utilities and their success in  
6 achieving the mandated targets in Ontario.

7 DR. ROGER HIGGIN: Yes.

8 THE CHAIRPERSON: Are you familiar with  
9 --

10 DR. ROGER HIGGIN: Okay. I am -- I  
11 look at the reports and basically -- overall they're  
12 exceeding the target. There are places obviously  
13 within the -- the utility structure that, for various  
14 reasons, they're behind. They may catch up, and so on.  
15 So within the time frame for the target,  
16 and -- and maybe -- I -- I think it's -- goes from 2012  
17 to 2016. That's my feeling. Right now they're on  
18 target with that. And again, the OPA is tasked with  
19 making changes to make sure those targets are going to  
20 be meet -- met. Those changes are programmatic, et  
21 cetera, et cetera.

22 THE CHAIRPERSON: Now Mr. Dunsky,  
23 beyond some of the things we've been talking about,  
24 incenting and so on, he also suggested that DSM in  
25 certain jurisdictions, because of the innovation

1 that'll be expected to occur, are projecting flat load  
2 growth and, in fact, declining load demand over time --

3 DR. ROGER HIGGIN: Yes.

4 THE CHAIRPERSON: -- as a result of  
5 DSM. Now, looking to the Manitoba situation, you're  
6 suggesting that DSM could deliver relatively load flat  
7 growth -- flat load growth over the next while. Now --

8 DR. ROGER HIGGIN: Right.

9 THE CHAIRPERSON: That's one thing, but  
10 then saying that, You should expect as a Board to be  
11 able to have a flat load demand curve for the future  
12 beyond 2030, I -- I take it you -- have you looked at  
13 that?

14 DR. ROGER HIGGIN: I'm aware of his --  
15 I -- I've read his slide deck just a couple of days  
16 ago, whenever it was filed. And basically there is  
17 some jurisdictions where that's -- has or is being  
18 achieved; Vermont and other places. And in others --  
19 that, in the first place, was never the target; and  
20 secondly, if it was a target, it's -- it's not been  
21 achieved. In other places, like Ontario, there's been  
22 a target, which is not flat load growth, is being  
23 achieved.

24 So the answer is a very difficult one,  
25 because it's a fundamental thing of so many variables

1 as to whether or not that particular target, and the  
2 one you cited, as opposed to Manitoba Hydro's proposed  
3 target, is, quote, "achievable." That -- that's the  
4 question. And that -- that gap, if you look at the  
5 chart there, is the question for debate. It's an area  
6 for debate.

7                   And whether or not different incentives  
8 could push Manitoba Hydro from Level 2 to that without,  
9 again, keeping costs in mind, because cost is very  
10 important. You can't just go from Level 2 to Level 3.  
11 Manitoba Hydro's demonstrated that, that it's not,  
12 quote, "economic DSM."

13                   So basically there are some  
14 considerations. But without increasing the cost, yes,  
15 in some jurisdictions they have been able to go  
16 further. And Mr. Dunsky is the expert in those  
17 jurisdictions. I have two (2) or three (3), which I've  
18 cited that I'm familiar with, but the rest I have no  
19 familiarity with.

20                   MR. RICHARD BEL: The metric -- the  
21 metric for the Ontario target, is -- is that utility  
22 cost metric or the total resource cost metric? Because  
23 Mr. Dunsky seemed to make a big point about using the  
24 proper metric when you're looking at trying to defer  
25 capacity.



1 DR. ROGER HIGGIN: Yeah. As far --  
2 from my reading with the Ontario Power Authority Plan,  
3 they use all of the parameters: the TRC, SCT, et  
4 cetera, et cetera. And one of those there will be in  
5 the plan what they expect to be the utility cost. And  
6 so as to what you're transferring to rates and how the  
7 amount on the bill for customers, I -- I have not  
8 explored which of those they've used.

9 Have they used the utility cost test in  
10 developing that as far as the amount of money that has  
11 to be collected, or have they used something else? I  
12 have not explored in detail the designs of that program  
13 in those sense. Maybe Mr. Dunsky has, but I have not,  
14 sorry.

15 MR. BYRON WILLIAMS: Board Member Bel,  
16 if it's the wish -- or to the panel, if it's the wish,  
17 certainly CAC could undertake to explore the metric  
18 used by the Ontario Power Authority in the design and  
19 assessment of demand-side management programming in  
20 Ontario, if that's of interest?

21 MR. RICHARD BEL: Yes.

22 MR. BYRON WILLIAMS: And I'm making the  
23 undertaking on -- on behalf of CAC (Manitoba). I'm not  
24 sure if it will be the able Mr. Higgin, the able Mr.  
25 Harper, who might even know the answer --

1 DR. ROGER HIGGIN: Thank you.

2 MR. BYRON WILLIAMS: -- or the able Mr.  
3 Dunskey, but we'll -- we'll make sure we provide the  
4 information and also give you the source of who it  
5 comes from, if that is satisfactory to the Board?

6

7 (BRIEF PAUSE)

8

9 MR. BYRON WILLIAMS: Mr. Chair, this is  
10 at -- for the Board. I think Mr. Harper has more  
11 information. This evidence today was -- is Dr.  
12 Higgin's evidence. We brought Mr. Harper, because he's  
13 pretty much memorized the file. And he's here as a  
14 resource to Dr. Higgin. If on this specific fact we're  
15 -- we're prepared to provide him to assist. It wasn't  
16 his intention to speak to the evidence of Mr. -- Dr.  
17 Higgin.

18 So that's -- I leave that to you if  
19 you'd like to hear from him or not?

20 THE CHAIRPERSON: Yes.

21 MR. WILLIAM HARPER: Okay. Excuse me,  
22 actually, the reason why I -- I thought it might be  
23 useful for me to say something is because the -- the  
24 government and the OPA had one (1) set of targets which  
25 basically are ending in 2014. The provincial

1 government, people here may be aware, just issued a new  
2 sort of long-term energy strategy last year. They are  
3 -- and have -- are basically establishing now a new set  
4 of tar -- targets going forward.

5                   And as part of that new set of targets  
6 are -- the OPA is working with utilities and basically,  
7 to some extent, redefining some of their metrics. So I  
8 -- I wanted to sort of say that there -- there was a  
9 set of metrics that was used to design the -- you know,  
10 to look at the -- for the programs that have been in  
11 place. I think the -- and the ground is maybe changing  
12 a little bit in terms, and hasn't really been, I think,  
13 been finalized in terms of the types of metrics that  
14 will be used to assess -- precisely assess programs  
15 going forward in the future.

16                   I know there was a directive issued to  
17 the OPA by the ministry, probably within the last two  
18 (2) months. They are now working through the process  
19 of exactly how they're going to implement that, and  
20 exactly what tests that are going to be used.

21                   So I -- I just want to -- there -- there  
22 to be a caution in terms of perhaps some certainty  
23 about what was used in the past, perhaps some unce --  
24 uncertainty as to what exactly the tests are going to  
25 be in the -- in -- in the future, and I didn't want

1 people to be taking undertakings where -- where maybe  
2 it was a little uncertain as to what -- as to, you  
3 know, maybe unable to precisely respond the -- the way  
4 you're expecting them to.

5 MR. BYRON WILLIAMS: And just to -- oh,  
6 do you have anything you want to add, Dr. Higgin, or  
7 I'll -- like, in terms of the undertaking, we -- if the  
8 Board is -- we could provide the statu -- the status  
9 quo undertaking and then the directive, at least,  
10 indicating from the ministry to the OPA, if that would  
11 be of assistance.

12 THE CHAIRPERSON: I think that would be  
13 useful, both -- both. I -- I suppose there's probably  
14 a -- a policy proposal or there's probably a policy  
15 document.

16 MR. WILLIAM HARPER: Yes, there --  
17 there is a written directive fro -- from the minister  
18 to the OPA saying, as -- as, you know, Go out and do,  
19 if -- if I can put it that way.

20 THE CHAIRPERSON: But it would also  
21 encompass proposed measures?

22 MR. WILLIAM HARPER: Well -- well, no,  
23 it -- it talks about --

24 DR. ROGER HIGGIN: Targets.

25 MR. WILLIAM HARPER: -- it talks about,

1 to some extent, targets and the types of tests, but it  
2 -- it -- I mean, it doesn't go into the formula of the  
3 tests, and I think tha -- that's what some of the sort  
4 of -- you know, to the more detailed discussions are  
5 going now in terms of exactly -- exactly how -- exactly  
6 how are those tests going to be defined and calculated  
7 sort of thing.

8 THE CHAIRPERSON: If that infor --  
9 information is readily -- readily available, I -- yes,  
10 I would -- I would -- you know, we would probably want  
11 to take a look at it.

12 MR. BYRON WILLIAMS: Okay. And I'll --  
13 oh --

14 MS. MARILYN KAPITANY: Mr. Harper,  
15 what's the length of the Ontario long-term energy  
16 strategy?

17 MR. WILLIAM HARPER: Well, it's --  
18 actually the documents propo -- it's a bit awkward,  
19 because it's posted on the ministry website, and it's  
20 posted in sections so that there isn't one (1)  
21 document. You -- you know, you can click on one (1)  
22 link and you get one (1) chapter. You click on the  
23 next link and you get the next chapter. So -- and --  
24 and I haven't added all the -- add -- added all the  
25 links up. You know, it's maybe a couple of hundred

1 pages. I -- but I'd be guessing at -- at that point.

2 MS. MARILYN KAPITANY: It's just  
3 interesting to know, like, how far out can we read --

4 MR. WILLIAM HARPER: Oh, oh, oh, oh.  
5 You mean length in terms of time going out?

6 MS. MARILYN KAPITANY: Yes --

7 MR. WILLIAM HARPER: I'm not -- I -- I  
8 apologize. I thought you meant length in terms of  
9 pages.

10 MS. MARILYN KAPITANY: I should have  
11 said the term of the strategy, sorry.

12 DR. ROGER HIGGIN: I think I can help  
13 you a little bit. If -- if you look at -- at this  
14 reference, which is Mr. Dunsky's slide deck, and I  
15 think -- have -- have I got it right, that's CAC-50 --  
16 62 -- CAC-62, Mr. Dunsky's slide deck. And if you look  
17 at slide 50 of that deck, you will see the projection  
18 of the supply mix going out to about 2033, and it shows  
19 in there -- there it is -- the -- the DSM, but that's  
20 based on, as Mr. Harper said, a projection going  
21 forward.

22 If you do the same program targets and  
23 so on level, as in the history, then that's what it  
24 will look like, or we have to check. It could be that  
25 that is reflecting the new direction, the directive to

1 OPA. We'll have to check on -- on how that basis is  
2 being done.

3 MS. MARILYN KAPITANY: That would be  
4 helpful, just because the term that we're looking at  
5 these things over is -- is quite important to what  
6 we're talking about here.

7 So you -- this Ontario planned supply  
8 mix that we see up on the screen, we don't know if  
9 that's necessarily from the long-term energy strategy  
10 that you referenced?

11 DR. ROGER HIGGIN: I believe the two  
12 (2) are supposed to be linked, yes. There -- there's a  
13 difference between what we call the supply mix and then  
14 the overall plan, which is -- Mr. Harper was talking  
15 about.

16 MR. BYRON WILLIAMS: And if I --

17 DR. ROGER HIGGIN: But we still will do  
18 the undertaking.

19 MR. BYRON WILLIAMS: Yeah, and just for  
20 the reporter, because it's an evolving undertaking, and  
21 the -- the panel will chastise me if I get it wrong, I  
22 -- I hope. But what I am -- what -- my understanding  
23 is that the CAC collective will, first of all, provide  
24 the existing status quo metric employed by the OPA,  
25 number 1.

1                   Number 2, they will provide the  
2   directive from the ministry to the OPA in -- in terms  
3   of the going forward plan.

4                   Number 3, in response to Board member  
5   Kapitany's question, they will -- in -- in -- provide  
6   an explanation of whether slide 51 -- slide 50, excu --  
7   excuse me, from -- from Mr. Dunskey's presentation is  
8   linked to the supply plan for Ontario, and this doesn't  
9   need to be part of the undertaking, but with an  
10   understanding that Board member Kapitany's question is,  
11   How far out are they going, if that's satisfactory to  
12   the Board?

13

14   --- UNDERTAKING NO. 130:   CAC to provide the existing  
15                                   status quo metric employed  
16                                   by the OPA, the directive  
17                                   from the ministry to the  
18                                   OPA in terms of the going  
19                                   forward plan, and in  
20                                   response to Board member  
21                                   Kapitany's question, they  
22                                   will provide an explanation  
23                                   of whether slide 50 from  
24                                   Mr. Dunskey's presentation  
25                                   is linked to the supply



1 plan for Ontario

2

3 MR. BYRON WILLIAMS: Okay. And please  
4 feel free to keep asking questions. When we're done  
5 with the questions, I'm going to suggest that Dr.  
6 Higgin get a -- a break.

7 MR. RICHARD BEL: Last question from  
8 me. Is there any other jurisdiction besides Ontario  
9 that is pursuing an aggressive DSM-mandated policy?

10 DR. ROGER HIGGIN: Honestly, I don't  
11 know. Quebec, I wouldn't know whether it's mandated,  
12 or rather like Manitoba Hydro, it has made a proposal  
13 for the programs, and I believe it's the latter. So at  
14 this point, I couldn't answer that, but we -- if you  
15 want us to do a bit of research, is Ontario unique with  
16 a mandated DSM boss to -- to look after it, we -- we  
17 would be willing to make a response to that -- either  
18 part of that, or as another undertaking.

19 MR. RICHARD BEL: I maybe misspoke. I  
20 understood that in Quebec, they're in a situation of  
21 excess capacity. So why would they be pursuing DSM?

22 DR. ROGER HIGGIN: Why would they?  
23 Well, it's a good thing to do, from a other  
24 perspective, of social and other factors. Greenhouse  
25 gases, do we need to list all of the reasons why DSM is

1 good? But that -- those are the reasons. But you are  
2 -- you -- underlying your question is, Are they really  
3 --

4 MR. RICHARD BEL: Yes.

5 DR. ROGER HIGGIN: -- pursuing DSM? I  
6 think the chair had the same thought. The -- that's  
7 the big question.

8 MR. RICHARD BEL: Thank you.

9 MR. BYRON WILLIAMS: And just so I'm  
10 clear, I'm not volunteering to do another undertaking.  
11 Okay, so the question I've heard, and I just -- if --  
12 if I could ask Board member Bel or the panel, are we  
13 looking at Crowns, or are we looking at jurisdictions?  
14 I -- it just would be helpful to understand.

15 MR. RICHARD BEL: We're looking at  
16 Canada and Crowns, and those jurisdictions served by  
17 the Crowns.

18 MR. BYRON WILLIAMS: Okay. And with  
19 regard to Canada, including jurisdictions served by  
20 Crowns, we're examining whether the Ontario and the  
21 defined mandate for the OPA is unique, or whether there  
22 are other examples within the Canadian context?

23 MR. RICHARD BEL: Right.

24 MR. BYRON WILLIAMS: And you're not  
25 looking for an American context?

1 MR. RICHARD BEL: I -- I think we have  
2 eviden -- I -- I believe we have evidence on it, but if  
3 you can offer something, sure. All right. The more  
4 information, the better, on this issue.

5 THE CHAIRPERSON: I would suggest that  
6 we -- we take a break right now, if you don't mind, and  
7 collect our thoughts, and then we'll -- we'll come back  
8 in about ten (10) minutes.

9  
10 --- Upon recessing at 10:41 a.m.

11 --- Upon resuming at 10:58 a.m.

12

13 THE CHAIRPERSON: Okay. Dr. Higgin, I  
14 just wanted to clarify a couple points. At the very  
15 bottom of the slide, domestic need being pushed back,  
16 that's okay.

17 Funding of DSM rates, that reference is  
18 in relation to what?

19 DR. ROGER HIGGIN: That's a reference  
20 to the fact that that issue or that matter has -- has  
21 still to be addressed. And that is dealing primarily -  
22 - because in rates we're talking about the utility cost  
23 has to be examined as to what that cost is going to be  
24 to the utility, the budgets are going to be. The -- in  
25 looking at budgets, you don't just look at the budget.

1 You look at, we'll call it, a little bit of a parameter  
2 which we use in -- in many jurisdictions, and that is  
3 how many kilowatt hours, or if you want to use TRC or  
4 SCT, you get for a dollar.

5                   You know, that -- that's -- all of that  
6 -- and that's not only specific to the port --  
7 portfolio -- the program, you have to screen every  
8 measure at some level for those considerations, as  
9 well, to make sure -- and then the final one, which of  
10 course is participation rates for each program. Each  
11 program has its own particular characteristics. It's  
12 driven towards a particular group. And it then, if you  
13 like, has almost sub-targets related to that group, in  
14 terms of kilowatt hours and so on, costs and so on.

15                   So those things all have to be put in.  
16 That's standard stuff. Manitoba Hydro has got it in  
17 their Plan, or at least I'm sure it's available in all  
18 of the appendices, working papers, and everything else  
19 that go with the Plan. But it needs to be pulled out,  
20 looked at, and say, Is it -- is this economic DSM?  
21 That's -- that's the question. I hope that answers the  
22 question. Thank you.

23                   So I'd like to go back now to -- go  
24 forward, sorry, to slide -- I have very little to say  
25 on -- on this. This is slide 5. And these were my two

1 (2) main observations. The first one is a matter that  
2 you very much heard about all through the proceeding,  
3 and that is the -- the forecast. And by that I mean  
4 the export price is critical to the economics of the  
5 plans. We don't need to go there, because it's not an  
6 area that my client has got most of the information.  
7 It's your own experts and the CAC that -- that are  
8 doing that.

9                   The bottom one is simply to make a  
10 comment that basically when you're looking at that,  
11 here is a particular, we'll call it, consideration that  
12 is the government policy. And the government policy  
13 that's set out here is a quote from the Clean Energy  
14 Strategy, and what the objective is of the export  
15 contracts. And that is to pay down the cost of the  
16 projects while helping sustain Manitoba Hydro's --  
17 Manitoba, sorry -- Manitoba Hydro's low rates for  
18 decades in the future. That -- that's an important  
19 consideration.

20                   So let's go to what updates. I have  
21 nothing to add new with respect to the export price and  
22 so on. One of CAC's --

23

24 CONTINUED BY MR. BYRON WILLIAMS:

25                   MR. BYRON WILLIAMS: Diana, can we move

1 to slide 6? Oh, you're -- we're there. Sorry.

2 DR. ROGER HIGGIN: One of CAC's  
3 experts, Dr. -- Dr. Gotham, has given you some comments  
4 and -- and observations on that, and I have nothing to  
5 add to his -- his observations.

6 What I note here, for reasons that --  
7 that are clear, that I noticed the press release and  
8 the attachments that talked about the power sales with  
9 WPS and the implication of that, and it flows into the  
10 NFAT, the larger intertie, and also has an impact on  
11 pathways plans with smaller interties.

12 I know that you and others are looking  
13 for those economic and financial updates to several  
14 plans that have a 750 intertie, and also plans that do  
15 not, like Plans 2 and 4.

16 So basically that's all I know, that  
17 it's a -- a -- I advised my client this is a major  
18 change to the original business plan and so on, this --  
19 this component of it and the need for the seventy-five  
20 (75) -- the seven-fifty (750). And I'm sure you and  
21 many others better than me will be considering its  
22 implications.

23 So the next area -- this is from my  
24 original one (1) and I have very little to add  
25 personally to -- on this slide. And I just made a few

1 notes that when I looked, from my experience, at the --  
2 the framework for sustainability, that there were these  
3 particular touch points. And secondly that the plan,  
4 in my view, should be assessed in an integrated  
5 resource planning framework.

6 MR. BYRON WILLIAMS: Actually, I think,  
7 Dr. Higgin, you might have moved past your capital --

8 DR. ROGER HIGGIN: Oh, I -- I'm sorry.  
9 I -- I should have said slide 8.

10 MR. BYRON WILLIAMS: But I -- I'm not  
11 sure you addressed slide 7.

12 DR. ROGER HIGGIN: Okay. I missed it.  
13 So I apologize. Can we go back? A very quick update.  
14 The capital costs, remembering that when I -- my  
15 observations were somebody needs to have the authority  
16 to oversee those capital costs and to make  
17 recommendations and so on to the government. In other  
18 jurisdictions, the regulator has that authority to do  
19 that, and he can actually approve or not approve those  
20 capital plans.

21 That's not the case here, but I still  
22 think that some oversight is required and I looked to  
23 the recommendation. It would be that the PUB be gra --  
24 given that oversight to look at the capital for the --  
25 the plan. And assuming that the plan may include a

1 Keeyask as being the next development, that would be  
2 obviously the focus of that review. Thank you. And --

3 THE CHAIRPERSON: So that -- I just  
4 want to make an observation that the -- one (1) of the  
5 recommendations that the Wuskwatim panel made to the  
6 government as part of its review is the combined  
7 CAC/PUB panel --

8 DR. ROGER HIGGIN: Yes.

9 THE CHAIRPERSON: -- that looked at the  
10 Wuskwatim project made that -- did a similar  
11 recommendation to the government. In other words, that  
12 -- that the PUB be given the authority to review the --  
13 to review the evolution of the cap -- of the capital  
14 projects.

15 And I guess the observation I have is --  
16 is assuming that the PUB gets this authority, it  
17 doesn't change the fact that costs will incr -- you --  
18 you know, costs keep increasing. Once you -- once you  
19 get it -- once you get to -- to the -- there -- there  
20 is a point where there's no return.

21 I mean, you're -- you're down a slope  
22 and you have to pay the bills as -- as they come due,  
23 and no amount of inquiring will change the reality that  
24 costs are increasing. And so I guess I have some  
25 difficulty with the -- the ability of this review



1 process to alter the -- the reality of the cost  
2 evolution of the -- of the project.

3 DR. ROGER HIGGIN: No, I think you're  
4 quite correct. The -- the trajectory of the project is  
5 going to happen however it happens as to cost. One of  
6 the, perhaps, things that needs to be considered is how  
7 -- what do you do about that? Do you say, We just pay  
8 the bills regardless. People are hurt. Or do you do  
9 something else, as I am talking about in my  
10 presentation now -- talk to it in a minute. You look  
11 at some sort of mitigation with respect to that.

12 And that's, I think, an important thing  
13 to consider, that you people, in my view -- sorry --  
14 the Board is -- is probably in a role to influence  
15 that, even if the money doesn't come directly out of  
16 Manitoba Hydro, but from the government. Then you are  
17 in a position to advise on what mitigation, if any, is  
18 needed, if an, and what sort of mitigation may be  
19 appropriate.

20 And so that's what I would suggest. I  
21 put those two (2) pieces together. I -- I agree. I  
22 think we did recommend in our closing argument that you  
23 would be given that oversight for Wuskwatim. And I'm  
24 still saying that would be appropriate in this case,  
25 and for the reason I just said. Thank you.

1                   So what I'd like to do now is to move to  
2 a graphic and then just say a few points about the  
3 graphic on slide number 9. This is one of Manitoba  
4 Hydro's graphics. And I believe when -- I -- I read  
5 when it was introduced and the -- the slide pack and  
6 the -- and the transcript -- that this is intended to  
7 depict Manitoba Hydro's IRP process.

8                   And the comments I would have is that --  
9 primarily is that -- and I've expressed this to my  
10 client -- that the business case didn't appear to me to  
11 have used this type of IRP process. And we can debate  
12 whether or not and whether the -- in the backroom  
13 Manitoba Hydro had done all of that again. I mean,  
14 they have and they file -- the resource plans.

15                  And maybe they use this to look at the  
16 resource plans, in terms of looking at resources,  
17 looking at LUCs and so on, for each of those and  
18 putting them together. I'm not suggesting that there  
19 isn't a process, but I'm just saying in the context of  
20 this, I didn't find it in there.

21                  The other thing, perhaps, to -- to  
22 mention is the elements that are in here I think are  
23 generally appropriate, and maybe it's a graphic issue,  
24 but the -- the thing that's missing here is what we  
25 call a portfolio approach. And that is where between

1 the different resources you create a level of  
2 portfolios which are a mix -- key word -- like  
3 Ontario's mix of DSM that -- and -- and you test them  
4 out as scenarios.

5 So that's another thing that I would say  
6 -- my observation would be. That would be an  
7 enhancement going forward, is to use a portfolio  
8 approach to IRP, and so on. And that's -- so that's  
9 the -- the one (1) thing that comes out of -- that's  
10 why I'm presenting this is as --

11 MR. BYRON WILLIAMS: Dr. Higgin --  
12 sorry, Cheryl -- if I could just keep you on this page  
13 for a second. Just to help us understand what you mean  
14 by a portfolio approach. At the bottom of the -- the  
15 Hydro funnel -- and recognizing you're -- you're not  
16 sure this is what they actually did for the business  
17 case, but you see, I'll to suggest you, one potential  
18 portfolio of a DSM plan mixed with gas and Hydro.

19 Do you see that?

20 DR. ROGER HIGGIN: Yes.

21 MR. BYRON WILLIAMS: And under a  
22 portfolio approach, would you expect to see other  
23 portfolios coming out of that funnel to be compared  
24 against each other, perhaps with different generation  
25 sources and, perhaps, with different levels of energy -

1 - demand-side management?

2 DR. ROGER HIGGIN: So what we have here  
3 are the -- so the inputs -- the resource inputs in the  
4 top of the funnel, and then we have the output -- put  
5 the coffeepot underneath, and we have basically the  
6 plans, okay.

7 What -- what we -- what I'm saying is in  
8 between there develop scenarios, very important, which  
9 are a mix of these, looking at the economics and other  
10 externalities -- particularly externalities have to be  
11 considered -- and -- and examine those from your  
12 planning criteria. And then out come plans that are,  
13 quote, "optimal." That -- that's just a simple extra  
14 step in there. Think of it of being there's another  
15 little -- little filter or something in -- in between  
16 the basket and the coffee cup.

17 MR. BYRON WILLIAMS: And in the little  
18 filter between the basket and the coffee cup, Dr.  
19 Higgin, you would assume that in some of the portfolios  
20 they would have different levels of anticipated DSM.

21 Would that be fair?

22 DR. ROGER HIGGIN: That would be one of  
23 them, and all of them would include externalities is --  
24 that we've talked about the obvious ones like carbon,  
25 but it'll also include all of the other sustainability

1 externalities, as well. There should be -- I think I  
2 was here when Dr. Gibson talked about some of those as  
3 part of his presentation. So basically that's what I  
4 would simply say. Thank you.

5 MR. BYRON WILLIAMS: Oh. Okay. And  
6 just the last thing before we leave this slide, I think  
7 you used an acronym in your testimony, something like  
8 'LUCS'. Would I -- assumed you were using the letters  
9 L-U-C --

10 DR. ROGER HIGGIN: Yes.

11 MR. BYRON WILLIAMS: -- 'S'. Could you  
12 explain what that means, sir?

13 DR. ROGER HIGGIN: Levelized unit  
14 costs. That's the standard normal tool used to screen  
15 resources on short and long term, usually employed with  
16 discounted cash flow analysis, NPV, and so on. So that  
17 -- that's basically what I was talking about.

18 MR. BYRON WILLIAMS: Okay. And I  
19 apologize for interrupting. Please proceed.

20 DR. ROGER HIGGIN: It's okay. So I'm  
21 coming now to the next slide, which is slide 10, and  
22 basically, this is regarding the affordability of the  
23 Preferred Plan, that's the title, but of course, in my  
24 -- my monikerism, a preferred plan means 'a' preferred  
25 plan, not 'the' preferred plan.

1                   So we've -- I went through this at some  
2 -- some detail, and it's the only area that I actually  
3 did a bit of extra work myself, to -- to look at some  
4 of these, and I guess this slide deals with some of my  
5 observations and summarizes some of my work that I did  
6 on this, so I know that others have commented and  
7 provided some information, and specifically for CAC,  
8 Dr. Simpson and Mr. Harvey, and while I referenced some  
9 of their sources, I did my own analysis from a  
10 different -- probably a very simple framework in  
11 looking at that.

12                   This particular chart, this graphic is  
13 taken from my pre-filed evidence, and it tries to  
14 depict the impact on vulnerable consumers. Now, the  
15 first question is, What is the vulnerable consumer?  
16 Well, there are so many definitions. My definition,  
17 and here is the keys on page 28 of my pre-filed report,  
18 it's a -- a group of customers that are usually  
19 families with an income that meets 125 percent of  
20 Statistics Canada after-tax LICO.

21                   That's how I defined income. I also  
22 defined own their own dwelling. That's another part of  
23 a vulnerable one that I looked at, and there are six  
24 hundred (600) and -- one hundred and sixty-seven (167)  
25 residential customers, and out of that -- that group of

1 residential, according to questions I put to Manitoba  
2 Hydro, and -- and I list those in my evidence, but just  
3 if you want the references that I asked and I used,  
4 that would be CAC/MH I-189b. Just to repeat that,  
5 CAC/MH I-189b, was the source.

6 And based on that, I went through an  
7 analysis of what would be bill impacts. Right now, my  
8 propensity is not talking about rate increases.  
9 They're -- it's a very general measure, and I'd like to  
10 look at bill impacts, on bill impacts on different  
11 classes, or groups of customers.

12 And within the classes, customers that  
13 have low consumption, moderate/high consumption,  
14 because customers that may have affordability issues  
15 and so on. So I -- I tend to look at it as less than  
16 its rates -- rate increases. I look at bill impacts.  
17 I think bill impacts are the key. Manitoba Hydro  
18 provided some information. I can't remember, maybe Ed  
19 can help us, on the impacts on -- of bill impacts.

20 Okay. So that's what I do. I do it  
21 routinely for all of clients, cases, and so on. It's  
22 not something I just conjured up for here. I do it --  
23 so I had a look, and I looked at these and I said,  
24 Well, those are pretty high compared to the historic.  
25 I looked at the historic. In the last five (5) years,

1 it's averaged on average around 3 percent on the bill  
2 impacts. They've been around 3 percent for  
3 residential. That's the number that I came out, and  
4 it's in my evidence. I -- if I've used wrong sources  
5 and so on, but anyway, I -- I have a basis for this --  
6 this characterization.

7                   And then I did a simple analysis of the  
8 change for the vulnerable group, the -- let's go back  
9 to them, the sixty-three thousand (63,000) that have  
10 low income, 125 percent of LICO are electric heat  
11 customers, okay? Those -- and -- and hot water, and  
12 that's the group. And that graphic says, Well, my take  
13 on that, they're facing 46 percent increase in bills  
14 over the next ten (10) years, and I thought, That's  
15 pretty high.

16                   MR. BYRON WILLIAMS: Dr. Higgin, would  
17 I -- do you mind if I just moved you to Appendix B of  
18 your evidence for --

19                   DR. ROGER HIGGIN: I don't have a copy.  
20 Can --

21                   MR. BYRON WILLIAMS: We're going to put  
22 it up on the screen.

23                   DR. ROGER HIGGIN: Right. Okay --

24                   MR. BYRON WILLIAMS: That's page 55 for  
25 a second. Just so the Board can be familiar where you



1 -- where your inputs were. Is this the calculation you  
2 performed?

3 DR. ROGER HIGGIN: These are the inputs  
4 -- yeah, these are the inputs that I used, and there is  
5 a -- there is -- on the LICO issue, I relied on Mr.  
6 Stevens, and his -- his evidence and his analysis using  
7 Stats Can and so on. As you know, he looked at -- at  
8 that with different families, different locations,  
9 habitudes, and they rural, et cetera?

10 So mine is very clear is Winnipeg, and  
11 it is basically a -- a family, as I say here, with an  
12 income of 125 percent. So those -- those assumptions,  
13 it's one (1) look at it. I didn't have a lot of time to  
14 spend a lot of time, but I thought I need to have some  
15 understanding when I make any observations about what  
16 it looks like, and this is what my analysis did, and so  
17 that's -- that's the source.

18 MR. BYRON WILLIAMS: Okay. Thank you.

19 DR. ROGER HIGGIN: Finally, I would  
20 just comment that this analysis is very, very similar  
21 to what was presented by the ratepayer panel where they  
22 started at a thousand dollars (\$1,000) and -- and  
23 showed it going up into the future. It was a longer  
24 term frame, but it's the same escalators, because it's  
25 driven right off of Manitoba Hydro's projected rates,

1 which is in that exhibit that I talked about.

2                   So we've all used -- we've both used the  
3 same Manitoba Hydro projections, i.e., the monthly  
4 charge plus the fixed -- fixed charge, plus the  
5 volumetric charge, and we -- we've come up with very  
6 similar results. So that -- that's the source.

7                   So I say, and this is the conclusion,  
8 that -- that I -- I don't believe these are generally  
9 acceptable, and then I would come -- wow.

10                  As a regulator, I'm very familiar with  
11 what is felt to be, I'll call it, unjust excessive  
12 increases in rates. I'm -- I'm very used to that.

13                  And the Ontario Energy Board has a --  
14 has a -- a criterion which is not explicit. They --  
15 they get concerned if it's more than 10 percent a year  
16 on the bill, so this is way below that. Okay, though  
17 that's one, but we're not looking at that. We're  
18 looking at sustained increases over a long period, and  
19 particularly now, this is the key, in the period where  
20 Keeyask or generation is advanced. Okay?

21                  Now, once it's advanced, once it's in  
22 service, then the revenue from that will obviously  
23 offset the rates. They will have an -- an impact on  
24 the rates. That's been taken into account. So  
25 therefore, I'm still concerned, and I think that's the

1 word, with these -- these increases, so that's why I  
2 went to the next step. I said, Well, should something  
3 be done? And we'll come back to that in a minute.

4                   The other issue was simply here as I  
5 say, The benefits that are coming out of any  
6 development, and this was based on the Preferred Plan,  
7 but you can look at it because it's only the first ten  
8 (10) years, it's really the same as the other plans,  
9 because it's only dealing with the first ten (10)  
10 years. And that is Keeyask plus 750 and so on.

11                   So anyway, that's where I went. And the  
12 other thing is the intergenerational equity, and that  
13 increases if you are advancing generation which is  
14 going to be needed by the next generation. That genera  
15 -- that increases rather than -- it's being built now.  
16 In three (3) or four (4) years, you need it to meet  
17 your current customers' needs. That's totally  
18 different. So there's some intergenerational -- it  
19 changes a little bit the perspectives on  
20 intergenerational...

21                   So that is that comment. Well, what to  
22 do about it? And I -- here, I propose that there are a  
23 number of ways to do about -- something about it. One  
24 of them is simply to say, No, it's okay. We were 3  
25 percent in the last two (2) years. That's been the

1 bill increases. Four percent, four point two-five  
2 (4.25) or whatever, is okay. That's one -- one way to  
3 go. And there's no question that that's -- that's  
4 appropriate.

5 The other one is to say, Well, we're  
6 concerned about it. Yes, go ahead.

7 DR. HUGH GRANT: I take your point  
8 entirely. I would just have a couple comments. One is  
9 focussing on the rate of change and one is on the  
10 absolute level.

11 DR. ROGER HIGGIN: Yes.

12 DR. HUGH GRANT: And so these are still  
13 -- right now, we have fairly low rates; not necessarily  
14 bills, given our cold climate, but some fairly low  
15 rates.

16 The other point I -- I was going to make  
17 and -- because I was scolded by Mr. Rainkie about this,  
18 and I think correctly, we continually talk about  
19 intergenerational equity, about the present generation  
20 and the next one.

21 But there's also a reason for saying,  
22 What about the present generation and the past one? So  
23 I've certainly benefited. My generation has clearly  
24 benefited from past investments that have yielded very  
25 low rates. And there is an argument to pay it forward

1 a bit, potentially, isn't there?

2 DR. ROGER HIGGIN: Yeah, yeah. Oh,  
3 absolutely. I wouldn't disagree. The issue I'm trying  
4 to -- perhaps didn't -- is not Limestone, Wuskwatim.  
5 It's not those. It's the issue of when you advance  
6 generation, specifically advance it ten (10) years or  
7 so, that, I think, is -- is why it heightens the  
8 concern, if I could put it -- that -- that's I'm --  
9 we're concerned about, okay.

10 It makes it -- not worse, but you should  
11 be more concerned about it when -- when you're  
12 advancing generation ten (10) years. That -- that's  
13 the point. I'm not going to the -- to use the, quote,  
14 "merchant plant issue" yet, but that certainly is one  
15 way to look at the advancement. You're, in essence,  
16 building a merchant plant.

17 And then ten (10) years from now the  
18 ratepayers will get -- should get the depreciated value  
19 of that plant be available, assuming the contracts have  
20 expired, for their purposes. And so there's -- there's  
21 another consideration there in terms of the  
22 advancement. It's -- putting those together is perhaps  
23 the key. I hope that's helpful. Thank you.

24 So I have some examples on one of the  
25 issues that -- to be very -- I -- I read the

1 transcript, Dr. Grant, and I read the exchange with Mr.  
2 Stevens and so on. So I did put together an example.  
3 But perhaps, if it becomes relevant in your questions,  
4 I will use the example I've put. But I -- I won't  
5 float it out now because I don't think that's my  
6 purpose to be here. It's to give you my observations.  
7 And so I won't do that.

8                   So the main conclusion is that within  
9 the question of rates, you can't just look at rates.  
10 You have to look at bills. You have to look at  
11 vulnerable consumers. There's a number of  
12 considerations that you have to bring together before  
13 you can make a decision where the mitigation is  
14 required and, if so, what mitigation.

15                   Now, I've listed here on the bottom of  
16 this slide my mitigation options that I've -- there are  
17 many others. I've looked at, and it's in the evidence,  
18 the Clean Energy Benefit for Ontario. The CEB was,  
19 amongst other things, put in place policy-wise because  
20 Ontario is getting rid of coal and we're moving to  
21 clean, renewable energy. That's what it's called the  
22 Clean Energy Benefit.

23                   Unfortunately, the -- when we went away  
24 from coal and we went to renewables, there was a boost  
25 in rates. So that's what it was about. It was a -- a

1 specific direct -- I'm going to use that word --  
2 direct, I mean, a rebate on rates direct for a select  
3 group: 3,000 kilowatt hour residential customers and so  
4 on.

5 I'm sure you're familiar with the -- the  
6 Ontario CEB today. They're making changes to that, are  
7 proposed in the budget. So read the budget in Ontario  
8 and they're making changes to that. If you want, ask -  
9 - ask me questions and I'll tell you my knowledge about  
10 it. But anyway, so that's the first one.

11 The other one is that it's important to  
12 put in the mitigation aggressive DSM programs, because  
13 they can and will reduce ratepayers' bills. But -- and  
14 there's always a but -- it does that for participants  
15 in the programs not the non-participants. So that  
16 comes back to the question of participation in the  
17 rates -- in -- in DSM programs. You have to get to  
18 high levels of participation. Otherwise a lot of  
19 people are facing the bills which may now include a --  
20 a little extra money to be collected for the DSM  
21 programs and they're not getting the benefit. So tha -  
22 - that's another factor here that needs to be  
23 considered. It's not always a simple answer.

24 Then we come to MH. And I read the  
25 evidence. And MH has made a couple of proposals.

1 There are what I would call indirect -- you mean, you -  
2 - the utility does things that will smooth the rates.  
3 The -- the most simple one, and I'll give you the  
4 current one that's in -- before others, and I'm in the  
5 case in Ontario.

6 Ontario Hydro distribution has put  
7 forward a five (5) year multi-year revenue requirement  
8 plan which has at the front, in year 1, which starts in  
9 2015, a huge bump in the revenue requirement and,  
10 therefore, in rates. To be very specific, a 13 percent  
11 increase in rates. In subsequent years, the revenue  
12 requirement doesn't grow so fast. It's driven by the  
13 rate base in that case of that utility. The rate base  
14 is the assets that are in service.

15 And so they are now going to have it --  
16 lower ones in the subsequent years and they're going to  
17 smooth that through a deferral account. And that  
18 mechanism is being proposed. A deferral account means  
19 that you defer some of the -- the revenue that you  
20 would collect in rates. You don't collect it, and you  
21 put it in the deferral account and use that to smooth -  
22 - smooth the rates.

23 Now, that mechanism is not something  
24 that would work within this environment, and I just  
25 wanted to mention that as being as option.



1                   The one that I read from Manitoba Hydro  
2 is that they are proposing -- this is from the  
3 transcript. I think I've given the reference there  
4 that I'm using, just to be clear, 2773/2776. I don't  
5 know if you want to look at that. But anyway, I think  
6 the main thing is under this option Manitoba Hydro  
7 agrees to smooth the rate bill increases to a certain  
8 level by measures such as rate smoothing and basically  
9 extending the time for reaching financial targets and  
10 the debt -- letting the debt-equity ratio change from  
11 its optimal 75:25. Also probably there's some concern  
12 -- more concerns, but the revenue about the interest  
13 coverage ratio which should be one point two (1.2) and  
14 letting that go.

15                   The -- the -- so that's the thing, and  
16 maybe that will all work. I call that a very indirect  
17 way of trying to smooth to some other -- some  
18 reasonable level. And I think they're proposal is --  
19 they seem to have a 4 percent number in there as being  
20 what they'd like to -- to get to, you know. That --  
21 that's my interpretation from reading the transcript  
22 and so on.

23                   And so what I'm saying is while there's  
24 some considerations there basically, whether or not  
25 there are enough flexibility, is there enough

1 flexibility to do that, especially in the case of the  
2 other one, that if capital costs for the Development  
3 Plan increase and so on. Those are some of the  
4 considerations.

5                   That's why amongst -- I did offer the  
6 other, we'll call it, direct options, which is, just to  
7 repeat, the idea of a -- some sort of a Clean Energy  
8 Ben -- Benefit plus DSM. Now, I was asked by MIPUG,  
9 Well, the problem with a Clean Energy Ben -- Benefit of  
10 like Ontario is you're targeting one (1) set of  
11 customers. You're basically saying, Well, these are  
12 the ones that are being hurt the most and therefore  
13 we're going to target the -- the benefit to those.

14                   And when are we going to talk about --  
15 what about the poor industrial people and so on? And  
16 therefore, why don't you have a benefit that is more  
17 universal, whatever that is, whether it's government --  
18 it's a government one, but it's applied broad -- more  
19 broadly. I didn't look at that. And that's certainly  
20 not something I'm suggesting shouldn't be considered  
21 and so on if you're starting to look at mitigation.

22                   The problem is as a regulator there's  
23 not much that you, a regulator, can do to deal with the  
24 direct mitigation unless there's a source of funds to  
25 make it happen outside. There has to be -- and that,

1 unfortunately, comes out of the government. And then  
2 you get into the issues around, Well, there's the  
3 taxpayers and the ratepayers and many, many  
4 considerations.

5                   For whatever reason, the Ontario  
6 government chose the route, maybe it was political, to  
7 provide the benefit, okay. That's -- that's a direct  
8 mitigation measure. So I've talked, I think, enough on  
9 this issue. I have some of those observations and --  
10 and things in my evidence. And I did it mainly for the  
11 client, but I hope it will be of some interest to -- to  
12 you.

13                   THE CHAIRPERSON: Dr. Higgin, do you  
14 know what kind of dollars we're talking about in terms  
15 of individual household or...?

16                   DR. ROGER HIGGIN: Yes, I made an  
17 example. And maybe we could turn up my pre-filed  
18 evidence. There's an appendix there. And...

19

20                   (BRIEF PAUSE)

21

22                   DR. ROGER HIGGIN: The -- the Clean  
23 Energy Benefit, and that's page 54. And I provided you  
24 the -- an example based on Ontario. And this  
25 particular example was based on either, for residential

1 customers that qualify, a 10 percent or 5 percent. And  
2 then I did a very rough estimate of how much it might  
3 cost. I make a note here that I only dealt with  
4 customers that are grid connected, in this case, but I  
5 -- my own belief is that it has to be universal in that  
6 sense, that it should include off-grid customers as  
7 well. So that's another important thing.

8 But anyway, this is the example I used.  
9 Now, you may have some -- some questions there. And  
10 then if you look down the page, you just come back to  
11 the fact that that's where I talked about the historic  
12 bill increases. That -- that was my source for that  
13 piece of information.

14 Anyway, coming back to the Clean Energy  
15 Ben - - Benefit, that's the -- that's the proposal.

16

17 CONTINUED BY MR. BYRON WILLIAMS:

18 MR. BYRON WILLIAMS: And just a couple  
19 of questions of clarification. You referenced an  
20 Information Request from MIPUG.

21 And I'm assuming you meant the Manitoba  
22 Industrial Power Users Group?

23 DR. ROGER HIGGIN: Yes, I'm sorry.  
24 Yes.

25 MR. BYRON WILLIAMS: You do not need to

1 apologize, sir.

2                   Secondly, in terms of non-grid con --  
3 connected customers, would I be correct in assuming  
4 that you are referring to individuals and -- and  
5 communities that are served by diesel generation in --  
6 in remote parts of the province?

7                   DR. ROGER HIGGIN: Yes, I think that --  
8 that they should be included in any proposals that --  
9 that are put forward. They should not be left out  
10 simply because they're not grid connected.

11                   Now many communities are grid connected,  
12 so, I mean, obviously they are included. The group that  
13 I analyzed here was just from Manitoba Hydro's  
14 residential customer base. The costs relate to that  
15 residential customer base. Okay? The numbers are  
16 shown in -- in there as to what I did.

17                   So anyway, could I say I felt it was  
18 important to -- I -- I can't talk about mitigation. I  
19 can't talk about a Clean Energy Benefit direct, unless  
20 I do something that at least gives me and my client a  
21 feel for what -- what it going to look like and what it  
22 would cost.

23                   And that -- that's the example, and I  
24 could have given time scenarios, I could -- there are  
25 many ways I could have done this, but I'd had neither

1 the time or any -- or budget, frankly, to -- to do  
2 more, and so that's what I did. I hope that's helpful.

3 MR. BYRON WILLIAMS: Thank you, and I  
4 think we'll be turning to page 11?

5 DR. ROGER HIGGIN: Yes, if we could.  
6 So I think -- subject to -- to questions, I just have  
7 one (1) or two (2) concluding points, very -- very  
8 summary points and I -- then -- then we'll move onto  
9 another area.

10 Just to keep -- any -- any type of  
11 mitigation has to be considered from a customer  
12 perspective as to, Is it going to deal with the problem  
13 that the customer is having as a result of the  
14 Development Plan, because if it isn't, then you have a  
15 whole bunch of other issues around freeloaders and so  
16 on, which you have to concern about.

17 But -- but anyway, so that's -- that's  
18 one (1) point, and I think that the other thing is,  
19 it's very difficult for a tribunal to do that type of  
20 mitigation. It's -- I would say it's impossible, but I  
21 think it is nearly impossible, except for the example I  
22 gave you on Hydro One distribution, where there's an  
23 account set up, you -- you know, and you smooth it over  
24 a longer period. That -- that's certainly a  
25 regulator's way to do it, to -- to make -- to do

1 mitigation.

2 But assuming that's not available, then  
3 you have to look outside for the government, like the  
4 Ontario government, the Clean Energy Benefit, to  
5 provide whatever funds are necessary to make that  
6 mitigation happen, and that's the conclusion of that  
7 section.

8 I hope that's helpful. If you have any  
9 questions? I'm going to move to the next slide, if  
10 that's okay?

11 MR. BYRON WILLIAMS: And the next slide  
12 is slide 12, just for the transcript.

13 DR. ROGER HIGGIN: What is the -- what  
14 this one is, is a -- a reaction to the updates that  
15 Manitoba Hydro provided. The first time I looked at  
16 them, that's the reference, it was put when Panel 2  
17 came forward and basically said, Things are changed  
18 because of the contracts and other factors, and these  
19 are now what we think are the key decision points.

20 And so I -- I said, Oh, yeah, well, the  
21 ground has shifted. That was the first one, and then  
22 the other one was, Well, do we have the information to  
23 answer these questions? At the moment the answer is  
24 certainly no. You and others have asked for  
25 information that will help answer these questions.

1                   So that's all I can say is that right  
2 now, a great deal of uncertainty has been introduced,  
3 and the question is what to do with that uncertainty.  
4 And my -- my approach to this as a strategic approach  
5 is to say, Okay. How does this affect the way in which  
6 we should proceed in this NFAT review with the  
7 information that we hope that's being provided. So  
8 that's it. It's just a purely, I'll call it, a  
9 snapshot. It's that this thing leapt out. Here it is.  
10 What are its implications? That's what I -- I wanted  
11 to do that, because I'm -- where I'm going soon will be  
12 to talk a bit about those implications, okay?

13                   So if we could move on to the next  
14 slide, please? This is a chart that I originally put  
15 together in the evidence, and it's titled, "A summary  
16 of CAC Consultants." And the reason for using that is  
17 the evidence that supports this is largely, but not  
18 totally, from CAC consultants.

19                   So these are the -- I drew out from  
20 their reports and so on strategic policy observations.  
21 I did include, and as I said at the outset, looking at  
22 the expert reports for the -- for the Board, and you'll  
23 see some mention of some of those in here.

24                   So I did not go back and say, well, the  
25 original chart, it's in -- it's in the evidence if we



1 want to look at that. It's page -- we'll give you the  
2 page reference here.

3 MR. BYRON WILLIAMS: Mr. Williams is a  
4 little slow today.

5 DR. ROGER HIGGIN: That's all right.

6 MR. BYRON WILLIAMS: So Diana is -- is  
7 not though.

8 DR. ROGER HIGGIN: Right. It appears -  
9 - actually, the -- the front of my -- it's summarized  
10 at the front, just after the executive summary on page  
11 4. That's the original one, the same structure, sub-  
12 issues, observations, considerations.

13 And now what I've done in this chart, if  
14 we could then go back to this chart that -- that we're  
15 talking about on the slide, is I've made, we'll call  
16 them updated or made additional observations, which  
17 I've tried to summarize in very simple form.

18 I've talked about many of these, but  
19 basically, these are -- we'll call them my updated  
20 evidence, and perhaps the one that leaps out to -- to  
21 everybody will be at the bottom -- as always, in the  
22 bottom, and that is I believe there is no need as need  
23 is defined meeting domestic load, but I do believe  
24 there is an opportunity, and that my concern right now,  
25 where we are in this time frame, do we have enough

1 information regarding that opportunity? And we'll come  
2 to that in a minute.

3 MR. BYRON WILLIAMS: Dr. Higgin, if I  
4 could just stop you for a second.

5 Am I correct in suggesting that some of  
6 your updated notes are -- are captured in the -- the  
7 red ink that appears on this slide?

8 DR. ROGER HIGGIN: That's correct.

9 MR. BYRON WILLIAMS: Okay.

10 DR. ROGER HIGGIN: These -- what these  
11 are, my updated observations in red -- in the red ink  
12 compared to the base chart, and I haven't covered all  
13 of these. I've covered some of them, for example, but  
14 there they are.

15 MR. BYRON WILLIAMS: Could I stop --

16 DR. ROGER HIGGIN: And this is advice  
17 to my client when considering the case, as well, to  
18 address these issues.

19 MR. BYRON WILLIAMS: And I apologize  
20 for interrupting. I see at the top that -- and you'll  
21 accept, subject to check, that in your -- the original  
22 chart that appeared in your evidence, you had the  
23 summary of the strategic policy observations, and in  
24 brackets, the word 'preliminary'?

25 DR. ROGER HIGGIN: Correct.

1 MR. BYRON WILLIAMS: And here we see  
2 the word 'current'?

3 DR. ROGER HIGGIN: Yes.

4 MR. BYRON WILLIAMS: I do not see the  
5 word 'final'?

6 DR. ROGER HIGGIN: The reason for that  
7 was preliminary was because I knew that a lot of new  
8 evidence was going to come in which would have a -- an  
9 influence on my take or may analysis of this strategy  
10 policy, that it was going to come in. And so I -- I  
11 knew that the ground was shift, the -- the yardsticks  
12 would move, so on and so forth. So that's why it was  
13 preliminary.

14 This simply says, Well, as I went  
15 through, things have moved. This is the current look  
16 at it. So, for example, if we pick a -- the load  
17 forecast, then what's happened right now for current,  
18 because many of those other considerations are going to  
19 be in the 2014 -- there's a whole set being in the 2014  
20 load forecast, what's in the current is -- and that  
21 includes DSM, DSM is now on the table. It's appeared,  
22 it's here with us, and what does that do?

23 In my view, whether you believe the need  
24 date was moved to 2027, or whether it's moved to  
25 further back, as some people may suggest, there is now

1 no question that we're looking at an advance of  
2 generation by seven (7) to eight (8) years. So -- so  
3 that would be an example, just -- just to show my  
4 strategic view on things.

5 MR. BYRON WILLIAMS: Thank you.

6 DR. ROGER HIGGIN: Okay. Rather than  
7 go through this, if there are questions, then I'm happy  
8 to spend more time on that, but if we -- I think we  
9 need to move to, perhaps, to the last area, if -- if  
10 that's okay.

11 Now, to make the bridge to where --  
12 which is, How does this affect the whole NFAT review,  
13 the timing, and so on -- that's the bridge. I just  
14 drew out a few, I'll call them planks for the bridge.  
15 They're uncreased -- increased uncertainties from a  
16 strategic point of view.

17 The domestic need issue is now seem to  
18 be saying, Well, we can -- we'll pursue DSM Level 2,  
19 and that's going to get us load reductions that we need  
20 in the short term. The load forecast is likely to be,  
21 when it's actually published, lower than was projected,  
22 average 1.6 percent with DSM, it might -- we know it's  
23 going to go down -- one point four (1.4), one point two  
24 (1.2), you know.

25 Will it go flat, as the Chair -- Chair

1 suggested? That's an issue that needs to be  
2 considered. That's all I'm saying. It's a strategic  
3 issue. It looks like the gods have intercept -- yeah,  
4 okay, they've gone.

5                   Finally, then -- then export  
6 opportunities -- you're taking out those strategic  
7 considerations. I believe it puts more emphasis on the  
8 need that the export price is more critical, because  
9 you're advancing generation for export purposes. I  
10 don't have the answers to that, because we don't have  
11 the data, okay?

12                   We have that of Dr. Gotham and his take  
13 on -- which has been accessible to me on his take and  
14 his comments, which you've read about that issue,  
15 about things such as carbon pricing, such as  
16 congestion, and his comments that he likes, he thinks  
17 reasonable is the Brattle forecast, which is the one  
18 he's had.

19                   But that's all I have, all right? And  
20 so basically, I don't have enough information to -- to  
21 come -- I'm just saying it's a strategic issue that's  
22 more -- more critical when you're advancing generation,  
23 given the -- the -- especially now, the contracts have  
24 been put forward and they're ready to be approved.

25                   And then I put the other thing is that

1 they -- you, I think, need to revisit the  
2 affordability. It's even more critical to look at  
3 that, and as I said earlier, the intergenerational --  
4 rational issues related to the fact that you're  
5 advancing generation, and you're doing that as an  
6 economic opportunity for the Province of Manitoba.  
7 That's the key, and under that scenario.

8                   So -- and I comment that I don't have  
9 enough information, really, at this point to make any -  
10 - any more comments, observations at this point.

11                   So can we move forward to the -- to the  
12 final bit, and this deals my original observations,  
13 which are in my report, and I thought about it, my  
14 observations were that I still believe that phasing of  
15 the review for a whole bunch of reasons, which are in  
16 the report, should be considered, and so that would be  
17 in my original one, a report that addresses the overall  
18 merits and concerns of the Preferred Plan, and I -- and  
19 so that's -- was in -- this is from my original report.  
20 I don't want to spend a lot of time going through that,  
21 but I'm happy to answer any questions.

22                   Then there would be a phase 2 that would  
23 proceed, in this case, in parallel with the development  
24 of Keeyask and the other key short-term elements of the  
25 Preferred Plan, which, of course, would include DSM.

1                   And then to do the next phase, I push  
2   hard towards an integrated resource planning framework.  
3   My counsel -- it's so bad it's upset my cou -- counsel.  
4   He's having some sort of fit, and maybe I should wait  
5   for him. I -- I'm sorry to be -- did I really do that  
6   to you? I'm sorry.

7                   MR. BYRON WILLIAMS: I -- Dr. Higgin,  
8   it had nothing to do with you. I'm sorry.

9                   DR. ROGER HIGGIN: Okay. I thought it  
10   was something I'd said. Okay. So anyway, that -- that  
11   in the original one was that there would be an updated  
12   plan, we'll call it a -- a business case that would  
13   address the longer term, would include more -- a  
14   framework of integrated resource planning, and it would  
15   bring in more on externalities, socioeconomic  
16   considerations, and so on. So that was the original --  
17   original one.

18                   So what do I think now, currently, is --  
19   is the word? Could I move to the next slide, please?

20                   MR. BYRON WILLIAMS: And that's slide  
21   16.

22                   DR. ROGER HIGGIN: Sixteen (16). So in  
23   a -- say, Well, let me go back and have a look at this  
24   and see what, at the current situation, that perhaps  
25   there are three (3) options. One is to proceed with

1 economic DSM as a no-build until the domestic need  
2 date. So I -- that's one strategic option.

3 The other one is to proceed with  
4 economic DSM, and MH come back with an updated phase 1,  
5 if you like, on the infor -- export opportunities, all  
6 of the impacts, and so on of that. That's another  
7 option.

8 And the third would be going back to  
9 nearly what I had in the first, proceed with economic  
10 DSM and Keeyask and the seventy-five (75) -- the 750  
11 intertie, but with conditions.

12 So those were the three (3), and I'm a -  
13 - I could have spent a lot of time and I didn't have  
14 the time, so I went back and said, Well, what guides me  
15 on these issues? And I went back and I looked at the  
16 terms of reference, and we'll come to that in a minute.  
17 And so my rationale for where I'm headed strategically  
18 is based on the terms of reference.

19 So that says, and I've broken into two  
20 (2) simple frame -- two (2) simple things, which are  
21 interrelated. It is meeting the domestic need and  
22 oppor -- export opportunities. It doesn't say, "or."  
23 It says, "and." So let's look at that next on this  
24 slide 17, and this is an extract from the letter of  
25 reference.



1                   And, just as I said, it has these two  
2   (2) important components. They're interrelated, and  
3   there are tradeoffs and so on, but it's asking the  
4   review and the outcomes of the NFAT to comment on  
5   meeting the domestic demand and taking advantage of  
6   export opportunities. They explicitly say it includes  
7   Keeyask and that, thus being part of the plan, which  
8   was then the question. That's not consistent with the  
9   idea of phasing into a Keeyask now and then come back  
10  later.

11                   But nonetheless, I said, Well, okay. If  
12  I was today asked by my client, What does all this mean  
13  and where -- where would you recommend we consent? We  
14  come to the bottom line, and that's the slide 18. So I  
15  would tell my client, I think because of the terms of  
16  reference, the path should be DSM for domestic need,  
17  and Keeyask for export opportunity with the intertie,  
18  with certain conditions to be met in the 2015 period.

19                   And why are those conditions there?  
20  They're there to protect ratepayers and other  
21  stakeholders. They are a DSM program which should be  
22  Level 2 or higher, capital cost reporting, because as  
23  the Chair said, it's not only reporting, but it's also  
24  perhaps what to do if capital costs start to get out of  
25  control. That's perhaps the -- the main consideration.

1                   And thirdly, I still believe that --  
2   that unless the -- the numbers change dramatically,  
3   some form of rate mitigation strategy needs to be  
4   brought forward, whether it's the direct Clean Energy  
5   Benefit, whether it is the indirect, the debt-equity  
6   ratio, interest coverage financial, smoothing, that's  
7   what's to be determined.

8                   The process I'm recommending to my  
9   client to consider was -- that's -- that's who I'm  
10   talking to here. I'm give -- sharing with you my  
11   advice to the client, and she is there -- may reject it  
12   all, throw it out and say, You're -- you're wrong,  
13   basically, and she may come forward and say, No.

14                  Nonetheless, that's my strategic advice.  
15   To the annual review conditions 1 and 2 would be, You  
16   guys would keep an eye on the DSM program, meeting  
17   targets, what the costs are, and so on. You would also  
18   have the capital cost reporting requirement, and more  
19   importantly, what to do. What is it -- what can be  
20   done if the costs get out of line, that's probably in  
21   part mitigation.

22                  And the -- then the other component  
23   that's on the table that has to be provided, and I  
24   think it influences perhaps the next phase more than  
25   this phase, is the cumulative effects study that the

1 CAC has recommended. And my bottom one is a -- an  
2 updated business plan case should be filed prior to the  
3 Keeyask date, including in that, if -- if required,  
4 appropriate rate mitigation -- rate impact mitigation  
5 proposals.

6 So that's -- now, I'll call it -- that's  
7 the new Phase I. Phase II is still a post-Keeyask plan  
8 that's based on the updated business case, looks  
9 forward of where we go next, and so that -- that's what  
10 I would tell my client as the things are today in the  
11 information that I've been given. That's what I would  
12 -- that's my advice. That's my observation.

13 So there we are. I'm sharing it with  
14 you. I think that's appropriate, but don't expect when  
15 the arguments come in that the client is going to say  
16 that, please, and she probably won't. Anyway, thank  
17 you very much. That's all I have to say. I hope I've  
18 been helpful, and run almost to lunch. Thank you.

19 THE CHAIRPERSON: It's probably an  
20 appropriate time to -- to break for lunch, so I would  
21 suggest that -- Mr. Williams, please, before --

22 MR. BYRON WILLIAMS: Just -- my client  
23 has asked me to say this. Dr. Higgin is, of course,  
24 available for cross-examination, but our client did  
25 want to indicate there has been a fair bit of, in the

1 public domain, criticism of the Public Utilities Board  
2 process, and our client is -- is well aware of that.

3                   As we come towards the end of our  
4 client's presentations, they do want to indicate their  
5 appreciation for the process, and the robust support  
6 that CAC has been able to bring forward. So we just  
7 wanted to express our appreciation, both to the PUB,  
8 but to the wider planning process, which you will  
9 certainly hear, and have heard from us, has many flaws,  
10 but it's a process that our client did want to make a  
11 strong point that the opportunity for public  
12 participation is -- is highly valued.

13                   THE CHAIRPERSON: Okay. Thank you for  
14 that -- for that comment. And, you know, I -- I  
15 understood completely the message that this is your  
16 point of view and your recommendation to your client,  
17 and -- and we're not going to accept this as the CAC's  
18 position, so -- but with that, we may have some  
19 questions after lunch, but my intention is to keep  
20 things moving so that we get Intervenors -- give  
21 Intervenors an opportunity to -- to ask their questions  
22 as well, so thank you. Have a good lunch.

23                   I'm -- I'm looking for advice here. We  
24 could go as short as half an hour, three-quarters  
25 (3/4s) of an hour? We have plenty of things to do, so

1 we could go three-quarters (3/4s) of an hour today.

2 MR. BOB PETERS: Mr. Chairman, I had  
3 just a very informal canvassing of the room in terms of  
4 the time, but I'm not expecting the questions for Dr.  
5 Higgin to be lengthy by any party this afternoon, and  
6 if the panel has other business matters they're  
7 discussing over lunch, I would suggest one o'clock  
8 would be appropriate.

9 THE CHAIRPERSON: I agree, one o'clock.  
10 Thank you.

11

12 --- Upon recessing at 12:03 p.m.

13 --- Upon commencing at 1:05 p.m.

14

15 THE CHAIRPERSON: Good afternoon. I  
16 believe that we're ready to resume the proceedings.  
17 Mr. Peters, please.

18 MR. BOB PETERS: Yes, thank you, Mr.  
19 Chairman. This morning I think Mr. Williams grabbed  
20 the microphone first thing and asked if he could be  
21 updated during the currency of the day as to whether  
22 Manitoba Hydro's load forecast and DSM panel would be  
23 recalled on tomorrow, Thursday, afternoon.

24 And we've now received confirmation that  
25 Manitoba Hydro's witnesses will be available tomorrow

1 afternoon, and they will be available to answer  
2 questions of the Intervenors, as well as the Board and  
3 Board counsel. They will follow after the close of  
4 evidence of the GAC witnesses that are on tomorrow.

5 So I hope that helps, Mr. Williams.  
6 Stay away from the hockey games tonight while he's  
7 working.

8 MR. BYRON WILLIAMS: I am so  
9 instructed.

10 THE CHAIRPERSON: Okay. I will call  
11 upon the interveners. I will start with Me. Hacaault,  
12 s'il vous plait.

13

14 CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

15 MR. ANTOINE HACAULT: Merci, M.  
16 President. Good afternoon, Dr. Higgins (sic). I  
17 represent Manitoba Power Industrial Users Group. I  
18 think I presented myself to you off the record.

19 A couple issues that I'll be covering.  
20 The first one is, sir, it'll take it in little bites,  
21 but I take it you agree that there is a difference  
22 between ratepayers and taxpayers in the Province of  
23 Manitoba?

24 DR. ROGER HIGGIN: Yes, in any  
25 province, any jurisdiction, that's the case.

1 MR. ANTOINE HACAULT: So then this  
2 proceeding, although the numbers do change, the  
3 clients I represent, represent approximately 17 percent  
4 of Hydro's domestic revenues. And that's ten (10)  
5 companies.

6 They wouldn't necessarily have the same  
7 interests as taxpayers, correct?

8 DR. ROGER HIGGIN: In -- in what topic  
9 are you talking about?

10 MR. ANTOINE HACAULT: In related -- for  
11 example, rates.

12 DR. ROGER HIGGIN: Oh, in rates, that  
13 context. They, as taxpayers, they would have the same  
14 interest in rates. The rates are set to be just and  
15 reasonable for all customers.

16 MR. ANTOINE HACAULT: But if, for  
17 example --

18 DR. ROGER HIGGIN: I don't -- I don't  
19 think I'm answering your question so try --

20 MR. ANTOINE HACAULT: Let's -- let's  
21 break it down in a little bit detail. If Hydro seeks  
22 to attain a 75:25 debt-equity ratio and it's additional  
23 debt and the Preferred Development Plan is in the order  
24 of \$16 billion to \$20 billion, if they represent 17  
25 percent of the revenues that are going to make it such

1 that that debt-equity ratio is realized, as individual  
2 companies they may bear a higher proportion of  
3 shouldering -- that responsibility than other non-  
4 intensive energy users, correct?

5 DR. ROGER HIGGIN: You're assuming that  
6 the industrial customers that have a high load either,  
7 not per capita, but as a portion of GDP or whatever,  
8 they are taking a lot of the load. And I think the  
9 issue I'm trying to struggle with is are you asking me  
10 to distinguish an industrial customer from a  
11 residential customer? Or are you asking me to comment  
12 on the difference between industrial customers as  
13 taxpayers and...

14 MR. ANTOINE HACAULT: I was taking it  
15 in small bites --

16 DR. ROGER HIGGIN: Okay.

17 MR. ANTOINE HACAULT: -- first it was --

18 DR. ROGER HIGGIN: Which one --

19 MR. ANTOINE HACAULT: -- industrial  
20 customers.

21 DR. ROGER HIGGIN: I'm trying -- I want  
22 to -- I'd like to be helpful, I just want to...

23 MR. ANTOINE HACAULT: So the first was  
24 focussing on industrial customers that -- that may not  
25 necessarily match up as ratepayers for high -- high



1 energy usage companies that their interests match up  
2 and are identical to those same industrials, but from a  
3 taxpayer perspective.

4 DR. ROGER HIGGIN: Yes, I think I would  
5 agree with your premise, yes.

6 MR. ANTOINE HACAULT: And that would  
7 also -- I would suggest be true for certain residential  
8 customers that you've talked about. Some of the lower  
9 income, if they're not on social assistance, may pay  
10 very little or no taxes.

11 But say, for example, if that lower-  
12 income family is all electricity for gas and heat they  
13 may bear a different share of impact as ratepayers as  
14 compared to taxpayers, correct?

15 DR. ROGER HIGGIN: Yes. There's also  
16 the question, I think, that within a particular  
17 ratepayer class, whether that be residential or  
18 industrial, then there is -- there is diversity amongst  
19 them in -- in many respects, including paying taxes and  
20 so on. The purpose of rate making is to try to put  
21 them into a class where they have similar can --  
22 similar, sorry, characteristics.

23 And that's one of the -- when the costs  
24 are allocated, then they're put in together in a class  
25 that has similar characteristics. That's an approach

1 to rate making. I don't see how -- whether the level  
2 of taxes they pay from a rate-making point of view has  
3 any -- any impact, and the same with the residential  
4 customers.

5 If you're looking at -- if you're asking  
6 about the subsidy that it comes from taxpayers, for  
7 example if it was a government subsidy like the -- the  
8 Ontario Clean Energy Benefit, then I think we're in a  
9 different -- different regime where you have to look at  
10 those aspects of it. Somebody's -- the -- the  
11 government is paying the money, but the money comes  
12 from the taxpayers, and some -- others are getting more  
13 benefit and they're not paying the same taxes.

14 Is that -- have I got it right?

15 MR. ANTOINE HACAULT: Well, I think  
16 you're hitting it as when this panel is going to be  
17 considering the interests of ratepayers --

18 DR. ROGER HIGGIN: Right.

19 MR. ANTOINE HACAULT: -- and the  
20 interests of taxpayers. I was suggesting to you, and I  
21 started with that preface --

22 DR. ROGER HIGGIN: Yes.

23 MR. ANTOINE HACAULT: -- that in fact  
24 they are -- they are not necessarily identical.

25 DR. ROGER HIGGIN: Yeah, I -- and I've

1 agreed with you in -- in that it's two (2) pockets.  
2 You know, it's your left pocket or your right pock --  
3 pocket. If you're a customer of Hydro, your left  
4 pocket is your Hydro bill, and the right pocket is your  
5 tax bill.

6 MR. ANTOINE HACAULT: And, sir, with  
7 respect to the equity that would be built up in  
8 Manitoba Hydro --

9 DR. ROGER HIGGIN: Yes.

10 MR. ANTOINE HACAULT: -- it's a Crown  
11 corporation owned by the province and then indirectly  
12 through all the Manitoba ratepayers. So that 25  
13 percent, you don't split it up according to who  
14 contributed to it as a ratepayer.

15 Is that correct?

16 DR. ROGER HIGGIN: That's correct.

17 MR. ANTOINE HACAULT: And if somebody  
18 moves from this province and over twenty (20) years  
19 paid into the equity, he can't say, Well, I paid twenty  
20 (20) years into Manitoba Hydro equity; I'd like to have  
21 that back before -- when I leave the province.

22 DR. ROGER HIGGIN: No. In fact what  
23 happens is he has to pay his electric bill arrears  
24 before he leaves. It's -- it's -- correct.

25 MR. ANTOINE HACAULT: And I would

1 suggest the same would be true if a mine opened and  
2 they were open for twenty (20) or thirty (30) years to  
3 mine ore, and then it -- for some reason, the resource  
4 became more scarce or more expensive to process, that  
5 company, who, if it's one of the Manitoba Power  
6 Industrial Users Group companies, can't go to Manitoba  
7 Hydro and say, Well, listen, I just paid a billion  
8 dollars into your equity; I'd like to have it back,  
9 please.

10 DR. ROGER HIGGIN: Correct. I think  
11 when you start talking about intergenerational activity  
12 -- equity, I think this is the thing -- there is the  
13 old -- there is the one that, yes, but they benefited  
14 from Limestone and from Wuskwatim. Well, here the  
15 rates would have been higher if it hadn't been for  
16 that. So it's fair then that they should pay something  
17 towards the next generation of generation so that  
18 Manitobans can avoid that.

19 However, that is a judgment of policy  
20 that needs to be something that's considered when  
21 you're looking at that, and that's only one element,  
22 which is intergenerational equity of a development  
23 plan. If customers leave having paid rates, they don't  
24 get the benefits for the long term because hopefully  
25 the Development Plan has a seventy-eight (78) year

1 horizon, correct.

2 MR. ANTOINE HACAULT: And at page 29 of  
3 your report, line 823...

4 DR. ROGER HIGGIN: Yes, I have that.  
5 Thank you.

6 MR. ANTOINE HACAULT: And I'll read  
7 into the record. You state your observation that:  
8 "The finding is that impact on  
9 Manitoba Hydro ratepayers in the  
10 short term, 2015-2025, is not  
11 acceptable [and then you continue],  
12 particularly for vulnerable  
13 consumers."

14 When you said, "on Manitoba ratepayers,"  
15 did that include all ratepayers: residential,  
16 commercial, and industrial?

17 DR. ROGER HIGGIN: If I'm here as here  
18 talking about the three point nine-four (3.94), which  
19 was the original number, then you're -- you are totally  
20 correct. I would apply that -- that it's not  
21 acceptable based on two (2) factors. One is the  
22 historic pattern of rate increases, and the other one  
23 is relative to the cost of electricity -- and this may  
24 be one of the key you're looking to -- as a component  
25 or -- either, in one case, vulnerable consumers,

1 household income. And that's been discussed. Or in  
2 the case of industries, as -- as an input to providing  
3 their goods and services.

4 MR. ANTOINE HACAULT: Now, sir, you  
5 weren't asked to give any observations on what impact  
6 these rates which you consider not acceptable over the  
7 short term might have on the generation of jobs in  
8 industries? You didn't consider that, or did you --

9 DR. ROGER HIGGIN: No, I -- I didn't  
10 consider what I will call the added cost benefits of  
11 affordable electricity. I did not do that either, even  
12 for the vulnerable group. And I hadn't, as I said too  
13 in my IR responses, I didn't do any analysis as to  
14 whether the proposed rate increases were worse or not  
15 for industries from looking at a number of factors:  
16 competitiveness, et cetera. All of the things that  
17 would go into an analysis of what does this mean for  
18 the industrial sector. And the answer is that was not  
19 part of my mandate. I did not do it.

20 I recognize and would accept that that -  
21 - that is valid and is -- is something that should be  
22 done and considered. You don't just consider one (1)  
23 set of ratepayers. You should consider across the  
24 board the ratepayers.

25 MR. ANTOINE HACAULT: Thank you. I'd

1 like to move to slide 16 of your presentation and the  
2 focus of the discussion I'd like to have with you, sir,  
3 is the whole how do we approach the uncertainty, the  
4 risk. And on slide 16 you make some observations. And  
5 after that, I'll turn -- after I've had a discussion on  
6 that slide I'll turn to your last slide of 18.

7 DR. ROGER HIGGIN: So maybe we -- these  
8 are the -- the observations --

9 MR. ANTOINE HACAULT: Yes.

10 DR. ROGER HIGGIN: -- like the flow,  
11 right.

12 MR. ANTOINE HACAULT: So I take it you  
13 thought that there were three (3) options that you  
14 would be considering in giving advice to your client in  
15 a Phase 1 analysis.

16 Is -- is that correct?

17 DR. ROGER HIGGIN: Yes. Because the --  
18 the context I was working in was my original Phase 1  
19 analysis, which was proceed with Keeyask. At that  
20 point, there was no -- there was no definition on the  
21 intertie and that was pretty well it. Of course,  
22 things have changed. So the answer is yes, totally.

23 MR. ANTOINE HACAULT: Now, you just  
24 finished that last thing, but things have changed, and  
25 I'd like to look at your number 2 listed on this page,

1 slide 16.

2 DR. ROGER HIGGIN: Yes.

3 MR. ANTOINE HACAULT: Which indicates:

4 "Proceed with economic DSM, and  
5 Manitoba Hydro return with updated  
6 information on export opportunities."

7 I'd like to understand that a bit  
8 better.

9 To date we have a 250 megawatt deal  
10 signed with Minnesota Power, correct?

11 DR. ROGER HIGGIN: To date. Yeah,  
12 today, yes.

13 MR. ANTOINE HACAULT: Yeah. And we  
14 also have a 308 megawatt deal signed with Wisconsin  
15 Power Service, correct?

16 DR. ROGER HIGGIN: Yes, the one that  
17 was recently been asked, yes.

18 MR. ANTOINE HACAULT: What updated  
19 information do you need on export opportunities? It's  
20 my understanding that those two (2) contracts basically  
21 take up most of what Keeyask might offer.

22 DR. ROGER HIGGIN: Correct. It's not  
23 just the export opportunity, and perhaps this is not  
24 well said, is on what are the costs and benefits  
25 associated with pursuing those export opportunities.



1 Perhaps that -- that's what I was -- that was my  
2 context to look at that.

3 MR. ANTOINE HACAULT: I'll try to  
4 understand that a bit better again, because Hydro does  
5 economic analysis with those contracts included under  
6 various scenarios, one (1) under Plan 14, which  
7 includes Conawapa, and some under, I think I Plan 5,  
8 which excludes Conawapa, and some other plans which  
9 exclude Conawapa, but still have that deal --

10 DR. ROGER HIGGIN: M-hm.

11 MR. ANTOINE HACAULT: -- or those two  
12 (2) deals.

13 What better information do you think the  
14 Board needs on export opportunities? I'm having a  
15 little bit of trouble understanding.

16 DR. ROGER HIGGIN: Yes.

17 THE CHAIRPERSON: Perhaps I can help  
18 you, I -- I'm -- I'm -- take it what you mean here is  
19 the net benefits stemming from those contracts.

20 DR. ROGER HIGGIN: That's correct.

21 THE CHAIRPERSON: That's what you're --  
22 is that what you're talking of, you know --

23 DR. ROGER HIGGIN: Exactly.

24 THE CHAIRPERSON: -- revenues versus  
25 costs?

1 DR. ROGER HIGGIN: That was the -- my  
2 focus. I was just going to respond --

3 THE CHAIRPERSON: Okay.

4 DR. ROGER HIGGIN: -- but that is the  
5 focus. And if you move from the original plan, which  
6 is basically build Keeyask, let's just talk about the  
7 initial stages of that, with or without a two fifty  
8 (250) or seven fifty (750), then all I'm saying is that  
9 you're advancing that generation for, we'll say ten  
10 (10) years or more, and therefore, you should look at  
11 what are the impacts of that with respect to, we'll  
12 call the multi-component analysis that goes with --  
13 with that, as well as looking at the things you are  
14 mentioning, making sure the reasonable economic and  
15 financial projections have been put forward for the  
16 short-listed now. Short-listed pathways and plans, so  
17 I see both as being required.

18

19 CONTINUED BY MR. ANTOINE HACAULT:

20 MR. ANTOINE HACAULT: And if we -- if  
21 the Board has that, either through the CSI sessions or  
22 -- and in combination with the public sessions, there's  
23 nothing else that you feel would be required --

24 DR. ROGER HIGGIN: Well, the piecing --  
25 the -- the big piece that was missing in my overall

1 analysis, and I think I acknowledged this, I didn't  
2 have a mandate time or anything to talk about what --  
3 what you can call either externalities that -- that are  
4 associated with that, advancing that, and -- and I -- I  
5 -- so my only caution is to say I didn't look at those  
6 things.

7                   And that would include actual effects on  
8 the -- on the Nelson River system and all of those  
9 factors which related to advancing Keeyask, and I had  
10 nothing -- so my response is purely looking at the  
11 economic and financial. So that's the only other  
12 thing.

13                   MR. ANTOINE HACAULT:    Okay. Thank you.  
14 If we could move to slide 18?

15                   DR. ROGER HIGGIN:     Yeah. Sorry.

16                   MR. ANTOINE HACAULT:    I'll let you get  
17 a drink of water to clear your throat up, sir.

18                   DR. ROGER HIGGIN:     Thank you.

19                   MR. ANTOINE HACAULT:    You dissect this  
20 process in two (2) phases, correct?

21                   DR. ROGER HIGGIN:     Correct.

22                   MR. ANTOINE HACAULT:    And I don't see  
23 Conawapa anywhere in the first phase.

24                   DR. ROGER HIGGIN:     Correct.

25                   MR. ANTOINE HACAULT:    Why is that?

1 DR. ROGER HIGGIN: Correct. All of the  
2 evaluations and so on that I've seen say, a) it's not  
3 needed for domestic. There is no contracts, no other  
4 purpose for maintaining two twenty-five (225), two  
5 thirty (230). That's all. Simple as that. There has  
6 to be work done that says either we have a domestic  
7 need or we have an -- another export opportunity that  
8 this will incrementally, if we pay all the extra money,  
9 benefit Manitoba on top of Keeyask.

10 The question then is should money be  
11 spent to maintain, I'll call it quotes of readiness,  
12 should something like that happen, maintain Con --  
13 Conawapa development at some level? I think that's  
14 perfectly -- it's -- it's not in here. It's part of  
15 Phase 2, and what would come forward in Phase 2.

16 MR. ANTOINE HACAULT: And if you had  
17 advice to give to your client, and you anticipated my  
18 next question was, Should we even bother continue  
19 protecting Conawapa?

20 DR. ROGER HIGGIN: I -- I -- the  
21 limited sources of input that I'm getting on that, it's  
22 a question that I would -- for me, I'm getting some  
23 advice that seems to say, no, there's no case, shall we  
24 say, for Conawapa, and others are saying, Well -- well,  
25 under certain circum -- circumstances, we might need

1 more generation or we will go to gas.

2 If that happens, then it depends whether  
3 you need that for domestic needs after Keeyask, because  
4 -- I'm going to say if Keeyask contracts are finished  
5 or part of the capacity's available, that's one, you  
6 could then follow -- and that's my Keeyask -- I think  
7 this is Plan -- Plan 5, Keeyask plus 250 plus Gas  
8 later.

9 MR. ANTOINE HACAULT: Perhaps my  
10 question wasn't clear. If you had to give advice to  
11 your client, because you're saying you're giving inputs  
12 to your client, not to the Board --

13 DR. ROGER HIGGIN: Right.

14 MR. ANTOINE HACAULT: -- today, and I  
15 asked you the question, and that's what I tried to ask  
16 last time --

17 DR. ROGER HIGGIN: Yes, I know.

18 MR. ANTOINE HACAULT: -- perhaps not  
19 clear enough.

20 DR. ROGER HIGGIN: No, no, you're very  
21 clear.

22 MR. ANTOINE HACAULT: Do I even spend  
23 today on Conawapa --

24 DR. ROGER HIGGIN: Well, if you want --  
25 want the short answer -- sorry. Short answer, I don't

1 know, the short answer. I -- I haven't thought about -  
2 - enough about Phase 2 except to say I -- I'm a bit  
3 more clear on Phase 1 and how -- what should go down,  
4 and that there needs to be a new updated business case  
5 for Phase 2 that would look at all of the options  
6 again, would include Conawapa, obviously, and it would  
7 include Gas, et cetera, all of the other resources.

8 So to answer the question whether we  
9 should protect Conawapa, I -- at this point, if my  
10 client asked me, yes or no, I'd say protect it.

11 MR. ANTOINE HACAULT: And --

12 DR. ROGER HIGGIN: And I'm not looking  
13 at the Nelson River impacts and so on, but all of  
14 those, like, those things. That's what I would say.

15 MR. ANTOINE HACAULT: Just from an  
16 economic and financial perspective --

17 DR. ROGER HIGGIN: Yes.

18 MR. ANTOINE HACAULT: -- you would say  
19 protect it. Now I'm going to try and push you a bit  
20 further on this.

21 At what level do we protect it, because  
22 there's different levels? It can be --

23 DR. ROGER HIGGIN: Well --

24 MR. ANTOINE HACAULT: -- very nominal  
25 protection, or it can be a protection which gives you

1 flexibility to embark on construction, you know, on --  
2 within certain time parameters.

3 DR. ROGER HIGGIN: Well, as -- to go  
4 back to my initial take on this, there has to be a  
5 reason to build. Equally well, there has to be a  
6 reason to protect it. To protect it, you need to have  
7 some future benefit for Manitoba that you think it may  
8 be lost if you don't protect it.

9 And so that tends to be, say, Where am  
10 I? I think I'm at a low level, this particular point,  
11 based on the information I have.

12 MR. ANTOINE HACAULT: Okay. Thank you.  
13 That's helpful. Oh, the other thing I want to clarify  
14 is that am I correct in understanding your view that it  
15 would be appropriate to actually have an independent  
16 panel conduct a review of whether or not Conawapa is  
17 needed in the future?

18 Or did I incorrectly understand that,  
19 and it would be appropriate to leave that to the  
20 Utility to decide when to proceed with that project?

21 DR. ROGER HIGGIN: In either case,  
22 Phase 1 or up to date, that is key. The words 'public  
23 review' that are on this slide are fundamental to the  
24 recommendation. So, yes, a public review.

25 MR. ANTOINE HACAULT: So a public

1 review prior to making a commitment to Conawapa?

2 DR. ROGER HIGGIN: Definitely as part  
3 of Phase 2. If it was a component of that then that  
4 would be, in essence, a new NFAT. So we -- so we take  
5 away that and just say it would be a new NFAT. In my  
6 original slide, I tried to keep the two (2) things  
7 together, Phase 1 and Phase 2, in a single NFAT, right?  
8 That -- that was -- that was my original one. So it  
9 was go away and then do some more work on Phase 2. Go  
10 away and do -- get Keeyask under way and so on. Now, I  
11 see it as a separate NFAT.

12 MR. ANTOINE HACAULT: Okay. Let me try  
13 to understand that statement a bit better, sir. You'll  
14 agree with me, firstly, that any of these projections  
15 into the future are uncertain?

16 DR. ROGER HIGGIN: Correct.

17 MR. ANTOINE HACAULT: And that there  
18 are -- if we sit here and I'm asking questions and four  
19 (4) years from now in a new NFAT, there will continue  
20 to be uncertainty?

21 DR. ROGER HIGGIN: Very much.

22 MR. ANTOINE HACAULT: Now, am I to take  
23 it that some elements of that uncertainty might be  
24 eliminated, such as additional signed contracts for  
25 dependable power?



1 Is that your point, sir, as to why it's

2 --

3 DR. ROGER HIGGIN: Certainly that --  
4 that would be one driver for bringing forward a case, a  
5 business case, to proceed with the next generation. My  
6 business case could be, however, not only gener -- new  
7 generation. It could include gas, include a whole  
8 bunch of other resources. But, yes, if that's a  
9 component, that business case has to come forward and  
10 make that case. We haven't seen a business case, I  
11 believe, at this point for Conawapa.

12 MR. ANTOINE HACAULT: And, sir, I'm  
13 trying to be fair to you. I'll try to pick both sides,  
14 too. As -- as another item that might -- we might know  
15 a little bit more about is the whole discussion that  
16 we've had this morning with the panel on DSM, and is it  
17 a reliable load reduction. Manitoba Hydro has decided  
18 to invest quite a bit more into DSM, which some of the  
19 experts have welcomed.

20 Would another reason to have another  
21 NFAT be to see what's happening to the load as a result  
22 of DSM programs?

23 DR. ROGER HIGGIN: Implicit in my -- in  
24 my Phase 1 recommendations here, it implies -- when you  
25 say, "DSM program," we're not looking at -- at just the

1 implementation of the -- the program within this  
2 immediate 2014 plan on, 2015, 2016. We're also going  
3 to look at what the savings are in gigawatt hours and -  
4 - and megawatt hours and how do they project -- how do  
5 they stack up against the original targets and projec -  
6 - projections? So that's implicit here, that you would  
7 have to look at least at that aspect.

8                   The load forecast, as I understand it in  
9 any event is updated every time the GRA happens and so  
10 on. And therefore there would be another set of  
11 information as well from that source. But, yes, it's  
12 implicit to look at what impact DSM has on the load  
13 front, what is fuel switching.

14                   There's another key element happen --  
15 and all the other factors that -- that Ed had on his  
16 slide about looking at the 2014 load forecast and going  
17 forward. All of those things would have to be looked  
18 at together with the -- the impacts and successes of --  
19 of Level 2 DSM.

20                   MR. ANTOINE HACAULT: Okay. Thank you,  
21 sir. Continuing along the theme of uncertainty and  
22 whether or not -- sorry, you seemed to...

23                   DR. ROGER HIGGIN: I was just  
24 distracted. I'm sorry, there was a bit of a --

25                   MR. ANTOINE HACAULT: We'll just wait.

1 DR. ROGER HIGGIN: Yeah. On your --  
2 you look over your right shoulder and you'll see  
3 there's a little distraction. I'm sorry.

4 MR. ANTOINE HACAULT: We'll just wait  
5 for a bit.

6 DR. ROGER HIGGIN: Thank you, sorry.

7

8 (BRIEF PAUSE)

9

10 MR. ANTOINE HACAULT: In your  
11 presentation, sir, you indicated that these were your  
12 current observations and not your final observations,  
13 correct?

14 DR. ROGER HIGGIN: That is correct.

15 MR. ANTOINE HACAULT: And you, as I  
16 understood it, premised that on the basis that we were  
17 awaiting further financial information from Manitoba  
18 Hydro, both from an economic analysis and financial  
19 analysis perspective, correct?

20 DR. ROGER HIGGIN: Correct. And now  
21 perhaps we have another new little -- new -- new input  
22 coming because I don't know, but the DSM panel might  
23 come up and may have some -- some interesting and  
24 useful things to say about -- about DSM Level 2, et  
25 cetera. So those inputs, I mean, it's like you need to

1 get the -- the latest information before the clock --  
2 before the stock market closes at five o'clock. You  
3 know, basically that's it.

4 MR. ANTOINE HACAULT: Now, let me just  
5 try to understand that a bit better. If the  
6 government, in its wisdom, and I'm -- it's just a  
7 hypothetical -- the government in its wisdom had had  
8 this NFAT six (6) months ago and had requested a report  
9 in September or October of last fall -- so you with me  
10 so far?

11 DR. ROGER HIGGIN: Yes.

12 MR. ANTOINE HACAULT: The most current  
13 information we would have had would have been in the  
14 filing which Manitoba Hydro did, unamended by all these  
15 new pieces of information.

16 DR. ROGER HIGGIN: In the business  
17 case, yes.

18 MR. ANTOINE HACAULT: The business  
19 case. That would have been the best information,  
20 correct?

21 How do we deal with the uncertainty  
22 which clearly exists?

23 DR. ROGER HIGGIN: Yes.

24 MR. ANTOINE HACAULT: Over a four (4)  
25 to six (6) month period, we've seen the business case

1 from an economic perspective go from about \$1.7 billion  
2 to somewhere around 100 million, or maybe less,  
3 depending on what scenarios we look at. What's the  
4 answer? I mean, we don't even seem to be able to  
5 predict with good information within a six (6) month  
6 time frame.

7                   How do we, as ratepayers and as a PUB,  
8 approach a problem when we can see that six (6) months  
9 can make that much difference?

10                   DR. ROGER HIGGIN: It's the planner's  
11 dilemma. You always have insufficient information,  
12 number 1. Number 2, infor -- new information is coming  
13 all the time and the last forecast plan, whatever, is  
14 then out of date. The question I think is: Is it  
15 material?

16                   You've -- you've identified to me that  
17 there's been quite material changes if you look, for  
18 example, at the -- the NPV for each of the plans, or  
19 even if you just take that to what is now the short-  
20 listed plans. But there were some unknowns, other than  
21 those things that were in the business case. The  
22 negotiations, particularly, on the WPS contract, the  
23 intertie, all of those things were still ongoing. So  
24 those were pretty large additional uncertainties.  
25 Those have been reduced. Whether you like the result -

1 - and that is there's the contracts and now we have to  
2 have, according to Hydro, a 75 -- 750 megawatt thing --  
3 that's another question.

4 But basically, that's the type of thing.  
5 So the question I think is: In an ideal world, plans  
6 are -- like -- like the Resource Plan of Hydro, are  
7 updated frequently to catch all of that new  
8 information. But when you're making a -- a massive  
9 decision that's going to influence things for seventy-  
10 eight (78) years, the lifetime of a new hydro dam, then  
11 those are the very, very difficult questions and things  
12 to do.

13 And so there are, I guess, methods, and  
14 Hydro's applying those, to try to deal with those  
15 uncertainties to the maximum.

16 MR. ANTOINE HACAULT: And when you say  
17 Hydro has chosen some methods, one of the methods it's  
18 chosen, sir, is to pick a low parameter and a high  
19 parameter with respect to what it considers to be the  
20 three (3) most important variables?

21 DR. ROGER HIGGIN: Correct. They've  
22 used three (3) of the main variables they think have  
23 the most economic financial impacts, yes.

24 MR. ANTOINE HACAULT: So if we're  
25 proceeding along, is it fair to expect that the

1 reference case --

2 DR. ROGER HIGGIN: Yes.

3 MR. ANTOINE HACAULT: -- is going to  
4 vary somewhere hopefully within, I'm going to call it,  
5 that cone of high and low.

6 DR. ROGER HIGGIN: Right.

7 MR. ANTOINE HACAULT: Is that a fair  
8 way to look at the problem and see how robust the plans  
9 are if we hit in that low area and if we hit the high  
10 area?

11 DR. ROGER HIGGIN: I think also you  
12 have to bring in a risk analysis into the picture when  
13 you're -- when you're making those assessments. I  
14 haven't done any detailed analysis, but with some other  
15 plans I think that's another component, not only  
16 taking, Here is the low, medium, high, or in this case,  
17 med -- reference, but also all the risk analysis that  
18 goes into what happens to those directionally and if  
19 you -- to the maximum, you can estimate those -- those  
20 changes.

21 So -- but I don't think there's any  
22 other planning thing. You can use other tools for some  
23 of those elements. For example, use Monte Carlo  
24 methods if those -- linear programming. And these are  
25 sometimes used in planning processes like this.

1 However, I think right -- right now in most Canadian  
2 jurisdictions, it's the way you've just described it.  
3 The -- come up with the high, low, and medium  
4 estimates, maybe apply risk analysis to those, see what  
5 the -- develop scenarios, and then give it your best  
6 shot when you've got all that.

7 Assuming you're not able -- you're not  
8 able to redo it again in two (2) years' time, because  
9 the -- the decision has to be made.

10 MR. ANTOINE HACAULT: So your advice to  
11 your client would be, with respect to the risk  
12 tolerance issue and whether it's high interest costs,  
13 high capital costs, or low export prices, it doesn't  
14 necessarily mean the high and lows are -- have the same  
15 impact?

16 DR. ROGER HIGGIN: Correct.

17 MR. ANTOINE HACAULT: What's your  
18 advice on the risk tolerance if we're advancing?  
19 Because you did make that distinction.

20 DR. ROGER HIGGIN: Yes.

21 MR. ANTOINE HACAULT: If we're  
22 advancing generation as opposed to deciding what  
23 alternatives are required for our domestic needs,  
24 what's your advice on -- do we approach the problem  
25 differently if we're advancing for non-domestic needs?



1 DR. ROGER HIGGIN: In general terms,  
2 based on other plans, you don't approach it any  
3 differently, but you may want to look at maybe more --  
4 more -- even more scenarios, particularly as to the  
5 risk profiles, the S-curves associated with those. And  
6 then it comes to a question of tolerance. That's  
7 perhaps the -- the fundamental thing. Do we have the -  
8 - the tolerance or robustness in the analysis that we  
9 can still proceed without a disaster?

10 And that's perhaps the only way you can  
11 do. But perhaps because it's being advanced, what I'm  
12 saying is not only that may be a factor, but also  
13 there's perhaps a way you should consider somehow the  
14 distributional aspects as well.

15 MR. ANTOINE HACAULT: Okay. So we've  
16 heard some evidence, sir, with respect to in other  
17 provinces -- I believe it was Newfoundland, if my  
18 recollection is correct -- that the -- it's built in  
19 part for export, and the government is kind of  
20 insulating the ratepayer from the downside risk that  
21 those export opportunities, if we can call them that,  
22 or export risks, some people might look at it.

23 Is that what you're talking about, sir?  
24 Is that a policy decision that would be open to -- to  
25 make as to who bears the risk if the province wants to

1 proceed with export opportunities?

2 DR. ROGER HIGGIN: In this  
3 jurisdiction, I wouldn't say that was an option that  
4 would be considered. There are other jurisdictions  
5 where it has been done, where they create a hydro  
6 export corporation. And basically, it provides all of  
7 the power, both the domestic and -- and the exports  
8 from that corporation, by purchasing power or running -  
9 - running the generation assets.

10 There are many, many models within the  
11 electric industry. I don't see those -- those are so  
12 fundamental shifts of government policy, direction, and  
13 so on that I don't see them being on the table or even  
14 in the range to be considered here.

15 MR. ANTOINE HACAULT: So that -- that's  
16 your assessment. Thank you, sir. The last question or  
17 ques -- two (2) or three (3) questions, sir, relate to  
18 your mitigation strategy.

19 DR. ROGER HIGGIN: Yeah, m-hm.

20 MR. ANTOINE HACAULT: There has been  
21 some evidence that -- with respect to the guarantee  
22 fee.

23 DR. ROGER HIGGIN: M-hm.

24 MR. ANTOINE HACAULT: It used to be  
25 charged at a rate of .5 of a percent instead of 1

1 percent, which might make a difference on the economics  
2 and financials of particular plans.

3 Is that the type of concept that you're  
4 talking about, sir, where there's some flexibility that  
5 has been previously shown and some changes in  
6 government policy as to how much it charges that could  
7 be used to make some plans look better?

8 DR. ROGER HIGGIN: Yes. If we -- we  
9 look at the government account and what are the -- the  
10 inputs going to that government account -- and I think  
11 we have to look at it in two (2) time -- time frames.  
12 There's a time frame which is during the development  
13 phase if -- if the new generation goes, where the  
14 ratepayers are still paying those extra costs but there  
15 is no additional government revenue from -- very  
16 little, except from the capital taxes, the water  
17 rentals. So they are, more or less, what they are at  
18 the -- currently.

19 And then, as you say, if there are other  
20 mechanisms, and I honestly don't know how much would be  
21 available from changing the debt guarantee fee, what  
22 that has with respect to the -- the consideration of  
23 the borrowing, the huge amount of borrowing that's  
24 being done and the bondholders now and future, that's a  
25 certain consideration that would have to be thought

1 about and something that -- advice from rating agencies  
2 and others would have to be obtained before considering  
3 that.

4 But that's a government policy issue.  
5 It's -- certainly, if I was to distill it down, I only  
6 see the one (1) mitigation external -- that's the --  
7 that's the direct -- is from the government account in  
8 some way. And then there's time issue because we just  
9 discussed that. Once the revenues from export start  
10 appearing, we can then at least see -- we can use some  
11 of those to mitigate. And so it's that interim period.

12 The revenues go into, anyway, Manitoba  
13 Hydro. And they should have an effect. It's quite  
14 clear from the Clean Energy Strategy. That's pointed  
15 to quite clearly in that, to maintain the rates low or  
16 reasonably. And that's also part of the Affordable  
17 Energy Act, as well.

18 So basically, come back to try and  
19 finish this. I only see really the major place to find  
20 the kind of money I was talking about is a government  
21 account.

22 MR. ANTOINE HACAULT: Thank you.  
23 Capital tax is another one where the government used to  
24 not charge any capital tax and put capital tax -- that  
25 would be a policy decision that would be available to

1 the government to -- to make plans look better?

2 DR. ROGER HIGGIN: They could defer.

3 That is a rate issue. I mean, the -- the rate they  
4 collected at now, but then they could say, Well, later  
5 on we will -- we will increase the rate. Or they could  
6 simply defer capital taxes on the new generation.

7 MR. ANTOINE HACAULT: And the last one  
8 that would take away impacts from -- I shouldn't say  
9 it's the only one, but the only one I want to deal with  
10 unless you want to raise other ones is the Manitoba  
11 Hydro Electric Board could change its policy on debt  
12 equity back to what it to be to protect for two (2)  
13 years of flood. And that would not be a 75:25 debt-  
14 equity ratio, but a lot lower rate a -- rate -- rate  
15 for debt-equity ratio.

16 That would be another way to smooth out  
17 the rates and not require this huge investment into,  
18 I'll call it, equity portion of the dams?

19 DR. ROGER HIGGIN: I've not looked at  
20 that in -- in any -- any way at all. What I -- I'm  
21 aware of is the new information that's been provided by  
22 Manitoba Hydro about what would happen if we were to  
23 relax -- I'll call that word -- the -- the debt-equity  
24 ratio and the one point two (1.2) ICR coverage. Could  
25 that be used to smooth the rate increases? That --

1 that's the only thing that I -- where the other one  
2 I've not considered, looked at, or anything. Thank  
3 you.

4 MR. ANTOINE HACAULT: Yes, thank you  
5 very much, Dr. Higgins, for trying to answer my  
6 questions to the best of your ability. Those are all  
7 my questions, members of the panel.

8 DR. ROGER HIGGIN: Thank you.

9 THE CHAIRPERSON: Merci, Me. Hacault.  
10 Now, we've spoken about rate mitigo -- mitigation  
11 strategies at the provincial level. And I know you are  
12 familiar with the ones that exist in -- and the -- the  
13 one program you mentioned is the one in Ontario.

14 Are you familiar with other strategies?

15 DR. ROGER HIGGIN: No, in -- in this  
16 case I -- I am aware of others have happened. But I --  
17 that's the only one in the time frame that I -- I took  
18 a look at as a potential model as being. But I believe  
19 there are other jurisdictions. If you like, we could  
20 look. But the only one that -- and that I -- the one  
21 that I've used in my evidence is the Clean Energy  
22 Benefit in Ontario, right? That's the only one.

23 THE CHAIRPERSON: Could you give us a  
24 sense of how much work would be involved in determining  
25 other provincial rate mitigation strategies that might

1 be available?

2 DR. ROGER HIGGIN: Well, we're talking  
3 -- are you now, Mr. Chair, talking about what I call my  
4 terminology, the direct. That is, outside of the --  
5 the normal rate making. It's a government -- call it a  
6 government subsidy or funds from outside to mitigate.  
7 Whether -- whether this was said, is that the -- that  
8 the frame --

9 THE CHAIRPERSON: That's exactly what  
10 I'm --

11 DR. ROGER HIGGIN: -- that's --  
12 Canadian. Are you --

13 THE CHAIRPERSON: That's exactly what  
14 I'm thinking of.

15 DR. ROGER HIGGIN: Right. I would say  
16 it's not a -- a study that will be -- we would be able  
17 to do tomorrow. But within a week or so, I think we  
18 could give you at least some direction on -- on that.  
19 When we looked at the -- the other jurisdictions, the  
20 only other question is are you looking both for  
21 historic or current -- or current or both? Historic  
22 and...

23 THE CHAIRPERSON: Well, I think that it  
24 would be useful to -- to have a -- as complete a list  
25 as possible if that -- if that can be done.

1 DR. ROGER HIGGIN: M-hm.

2 MR. BYRON WILLIAMS: Could I just --

3 DR. ROGER HIGGIN: My counsel's telling  
4 me, Don't make any commitments until I talk to you,  
5 sir.

6 MR. BYRON WILLIAMS: If we could just  
7 put Dr. Higgin off mic and myself as well and we'll  
8 huddle with --

9 DR. ROGER HIGGIN: He's cutting me off.

10 MR. BYRON WILLIAMS: No, no. We'll --  
11 we'll huddle with Mr. Harper and then I'll check on all  
12 their bills today. Just --

13 THE CHAIRPERSON: Well, before we make  
14 a formal undertaking, why don't we -- you -- we leave  
15 that until after the break and you'll have an  
16 opportunity to consult your -- your advisors. In the  
17 meantime, we'll -- we'll continue with the process. So  
18 with that, I -- I would call upon Mr. Gange on behalf  
19 of the Green Action Centre, please.

20 MR. WILLIAM GANGE: Mr. Chair, because  
21 I was away all morning in court -- not very happily, I  
22 might add, but would I -- could I have five (5) minutes  
23 with Professor Millers before I -- I commence my cross-  
24 examination?

25 THE CHAIRPERSON: Yes, you can.



1 MR. WILLIAM GANGE: Thank you, sir.

2

3 --- Upon recessing at 1:55 p.m.

4 --- Upon resuming at 2:05 p.m.

5

6 THE CHAIRPERSON: I believe that we're  
7 in position to resume the proceedings. Mr. Williams,  
8 please.

9 MR. BYRON WILLIAMS: I -- I was  
10 checking with part of our research department, Ms.  
11 Menzies and Ms. Gange. In terms of in -- inquiring  
12 into whether -- an undertaking to inquire into whether  
13 there are other examples of whether direct mitigation,  
14 as defined by Dr. Higgin, has been undertaken in  
15 Canadian jurisdictions, we -- we will agree to do that.

16 What I'm -- I'm suggesting is that we do  
17 a preliminary literature review after five (5) hours  
18 and if -- that might be enough and that we may say  
19 there's none or -- or there are -- are some examples.  
20 If we think we'll need to do anything more than that,  
21 we would report back afterwards.

22 THE CHAIRPERSON: I think that would be  
23 wonderful. Could you frame that as an undertaking?

24 MR. BYRON WILLIAMS: CAC (Manitoba)  
25 will undertake to review whether there are other

1 examples, apart from Ontario, in which there has been  
2 direct mitigation from government, from the government  
3 account as defined by Dr. Higgin up to a maximum of  
4 five (5) hours to. And in the event that CAC  
5 (Manitoba) determines that additional research is  
6 required, it would report back before doing any further  
7 research.

8 THE CHAIRPERSON: Thank you for that.

9  
10 --- UNDERTAKING NO. 131: CAC to review whether there  
11 are other examples, apart  
12 from Ontario, in which  
13 there has been direct  
14 mitigation from government,  
15 from the government account  
16 as defined by Dr. Higgin up  
17 to a maximum of five (5)  
18 hours to

19  
20 THE CHAIRPERSON: Mr. Gange...?

21  
22 CROSS-EXAMINATION BY MR. WILLIAM GANGE:

23 MR. WILLIAM GANGE: Thank you, Mr.  
24 Chair. Dr. Higgins (sic), hello, my name is Bill  
25 Gange. I am counsel to the Green Action Centre.

1 I have a few questions for you. And in  
2 your presentation you've -- you've talked about  
3 advancing Keeyask or -- and -- and so making  
4 considerations of advancing Keeyask, in terms of  
5 domestic need, or looking at Keeyask as a merchant  
6 plant.

7 Are -- are there different  
8 considerations that go into that analysis, and if so,  
9 sir, what would they be?

10 DR. ROGER HIGGIN: First of all, at  
11 this point in time I'm not saying that Keeyask, based  
12 on the information, is required to meet the domestic  
13 need up until 2027 or beyond. So that's -- but that --  
14 that's correct.

15 But if you're asking me if that wasn't  
16 the case and Keeyask, as originally filed, was to be in  
17 service in 2019 and meeting by 2020 -- making a --  
18 meeting the domestic load early in -- in the '20s, then  
19 that would be a different scenario. But that's not  
20 what we have. I understand that it's being advanced to  
21 meet the WPS and the American -- American contracts  
22 primarily. Correct?

23 Is that -- so you want me to try to --  
24 how do I frame this to help you with this answer?  
25 That's the question.

1 MR. WILLIAM GANGE: The -- the -- what  
2 I'm -- what I'm interested in is -- is knowing whether,  
3 in your analysis, it makes a difference in -- in terms  
4 of -- of building Keeyask from the perspective of using  
5 it solely as -- as a merchant plant.

6 DR. ROGER HIGGIN: Yes, okay. What is  
7 the difference? It is in the more subtle aspects of  
8 the analysis related to the costs and benefits and how  
9 those should be apportioned. It still has an overall  
10 NPV for that particular scenario with a high, low,  
11 medium risks, and so on. The question is mostly the  
12 distributional aspect.

13 MR. WILLIAM GANGE: Okay. Thank you.

14

15 (BRIEF PAUSE)

16

17 MR. WILLIAM GANGE: Okay. Thank you  
18 for that, sir. In terms of the material that has been  
19 filed, and your analysis of -- of the required needs  
20 and -- and the potential required needs, is there -- or  
21 would there be an advantage in separating the -- the  
22 expected in-service date of Keeyask and Conawapa,  
23 making that -- that -- the -- the difference between  
24 those two (2) in-service dates greater in order for a  
25 better analysis of the need for Conawapa?

1 DR. ROBERT GIBSON: Which -- which plan  
2 are we trying to look at? Are you saying, If we have a  
3 plan such as -- I was just looking at this, the  
4 K19/C25/750 with or without WPS? That's one plan.

5 MR. WILLIAM GANGE: Yeah, that -- so --  
6 so that's the scenario, sir. You -- you've got --

7 DR. ROGER HIGGIN: Okay.

8 MR. WILLIAM GANGE: -- you've got a --  
9 a six (6) year difference in --

10 DR. ROGER HIGGIN: Yes.

11 MR. WILLIAM GANGE: -- in that.

12 DR. ROGER HIGGIN: So maintaining and -  
13 - see, with -- it doesn't matter if it was '25, but  
14 with a mid -- mid-'20s date. Is that what you're  
15 saying?

16 MR. WILLIAM GANGE: Yes.

17 DR. ROGER HIGGIN: Yes. And the  
18 difference in terms of what you're asking me to comment  
19 on is a --

20 MR. WILLIAM GANGE: The -- the --  
21 rather than -- than the Conawapa being a twenty-five  
22 (25) year -- 2025, extending that backwards so that it  
23 was, say, 2030.

24 Would -- would there be an advantage  
25 from a policy perspective in looking at that scenario?

1 DR. ROGER HIGGIN: I'm just trying to  
2 look at that from the perspective. I think we have to  
3 answer it, because if we start diverting away from  
4 certain plans, and then we're going to create another -  
5 - more scenarios, then this gets everything very  
6 complicated, because -- so I think I'd rather try to  
7 answer the question, say, on Plan 12 and say, What  
8 happens at some point in the future between now and --  
9 and '25, or the date where we have to commit Conawapa?  
10 We keep it -- we keep -- we protect it. What would  
11 happen at that point?

12 You have to -- because of the lead  
13 times, you will have to protect Conawapa any '25. So  
14 basically, what you do -- can you stop the -- stop the  
15 development if that happens?

16 I honestly don't know the answer. I  
17 have not looked at that where -- all the plans have had  
18 a later date for Conawapa, other than '25 in Plan 10 --  
19 in Plan 12, so I haven't -- I haven't looked at that.  
20 I'm sorry.

21 Is that -- I would like to help, but I  
22 don't know if there's anything else that I can -- but I  
23 don't think my -- from what I took to my colleague, I  
24 don't see a scenario -- in essence, you're asking --  
25 creating a scenario which is K19/Conawapa31-32/750 when

1 we assume maybe 750 is needed up front, and do we have  
2 WPS or do we have other contracts?

3 That's a scenario that I haven't seen, I  
4 haven't thought about, that's all.

5 MR. WILLIAM GANGE: Fair enough, sir.  
6 If you haven't thought about it, then -- and -- and  
7 that -- that's fair enough.

8 DR. ROGER HIGGIN: All right.

9 MR. WILLIAM GANGE: Thank you. You  
10 made the comment that Crowns must be mandated, whereas  
11 private companies -- private utilities can be  
12 incentivized.

13 Is that correct?

14 DR. ROGER HIGGIN: You're now referring  
15 to demand-side management?

16 MR. WILLIAM GANGE: Yes, that's  
17 correct, sir.

18 DR. ROGER HIGGIN: In -- that has been  
19 my -- my experience about what works best. To use the  
20 word 'must' would -- would be more than I would go. I  
21 think they are responsive to incentives if you're a  
22 Crown -- if you are investor owned, particularly if  
23 those incentives directly have -- go to the  
24 shareholder. If you are a -- a Crown, then sometimes  
25 it's clear that -- that mandating is the -- is the most

1 likely approach that will -- will achieve the objective  
2 of an aggressive DSM program.

3 MR. WILLIAM GANGE: I believe that you  
4 also mentioned that the Ontario Crowns are -- are  
5 achieving better results than their mandate?

6 DR. ROGER HIGGIN: If we look at the --  
7 the recent -- the OPA programs, the reports I've seen -  
8 - just I -- I don't, you know, excuse me, I do not  
9 follow this on a day-to-day. I sort of surf on some of  
10 -- particular areas or if I get emails, however, it  
11 seemed to me that on a high level, the plan was doing  
12 pretty close to target.

13 There were some utilities that had  
14 exceeded, and some within the eighty (80) -- so utility  
15 spectrum in Ontario and others that were -- were well  
16 above their targets. So overall, it seemed to be that  
17 the -- that they were on -- on target.

18 MR. WILLIAM GANGE: And you -- you may  
19 have -- you may have said -- well, you mentioned that  
20 you don't -- you don't study this in particular, but do  
21 -- do you have any thoughts around why it is that some  
22 of the utilities actually do better than the mandated  
23 numbers?

24 DR. ROGER HIGGIN: I think there are  
25 many factors that go into that. Even though the



1 targets are set, for example, on the number of  
2 customers being one of the main inputs, that's a  
3 logical thing, or the load, which is another thing.  
4 The targets are set. The -- there are a number of --  
5 of other factors that necessarily aren't included in  
6 setting those targets, for example, geographic  
7 distribution, demographics and -- and no on -- and so  
8 on, that tend to affect things like the costs of  
9 delivering the programs, and also affect participation  
10 rates.

11                   Participation rates are a fundamental  
12 variable that is very difficult. Even with the same  
13 program delivered, as OPA's programs are across eighty-  
14 six (86) utilities, participation rates are different  
15 across those utilities for the same programs with --  
16 and then you -- those include those considerations of  
17 demographics, including income, geogra -- geography,  
18 where people live, and so on, yes.

19                   MR. WILLIAM GANGE: And I understand  
20 that, sir, that there may well be those kinds of  
21 extrinsic factors, but I was kind of wondering if -- if  
22 you have an ability to say, what intrinsic factors are  
23 there within those utilities that, from your  
24 perspective, lead them to outdo the mandate?

25                   DR. ROGER HIGGIN: Okay. I -- I

1 cannot, within that context, tell you that answer. I  
2 can't answer that question. I have experience in other  
3 areas where what are, I'll call them, the critical  
4 success factors that go into DSM programs in general,  
5 and whether those are -- are present is a factor.

6                   And this goes to -- back to, for  
7 example, promotion of the programs, the access,  
8 usability, easy access. The other one could be  
9 universality issues across areas that are different --  
10 how can we put -- different mix of residential  
11 programs, different building types, for example,  
12 vintage. Vintage of buildings would be one variable  
13 that is variable amongst them, so old houses versus all  
14 new houses, bigger houses, small houses.

15                   Even though it's the same program, there  
16 are different participation rates, and there are  
17 different amounts of energy and savings that you can  
18 realize, so there's a whole bunch of variables.

19                   So I think you have to bring it back to,  
20 the fact is, that as long as the programs are good and  
21 they are well promoted, and leaving aside those intr --  
22 those extra factors, then you will have a range -- a  
23 range of success, if you like, or -- or meeting the  
24 targets and it should be fairly narrow if the program  
25 is well designed -- designed. It should be rela --

1 relatively narrow, you know, a band with, say, plus or  
2 minus 10, 20 percent each side of the target.

3 And I haven't done that analysis, but  
4 that would be something that would -- you would judge  
5 as OPA, I will call it DSM boss, and see whether or not  
6 people are doing good or bad, and then as the -- the  
7 boss, you would hopefully go and talk to them and see  
8 what they can do to try and get up to the target,  
9 because I think that's another element here in having,  
10 quotes, "the DSM boss," OPA. I don't know if that  
11 helps.

12 MR. WILLIAM GANGE: Thank -- thank you,  
13 sir. That -- that does help. I'm -- I'm going to move  
14 on to another issue, and that is affordability for  
15 vulnerable customers. You mentioned the Ontario Clean  
16 Energy Benefit.

17 DR. ROGER HIGGIN: Yes.

18 MR. WILLIAM GANGE: Correct, sir? Is  
19 that benefit available to all, or is it available to  
20 vulnerable customers only?

21 DR. ROGER HIGGIN: It is all -- the  
22 Clean Energy Benefit in Ontario is only avail -- is  
23 available to all residential customers with a  
24 consumption of 3,000 kilowatts or less. That's -- is  
25 that correct? Yes, sorry, kilowatt hours. I meant

1 kilowatt hours as opposed to -- so that's -- that's it.

2                   There is -- if you look to the Ontario  
3 budget today, which is being tabled, there's some  
4 proposals that are made in that budget to remove that  
5 program when it expires at the end of 2015.

6                   And -- but at the same time, for those -  
7 - for a residential sector to -- to also remove the  
8 debt charge from the bill. So there -- there's a --  
9 there's a debt retirement charge on the Ontario bill,  
10 and that it will be removed. That's the proposal of  
11 the current lib -- liberal government to sort of  
12 compensate them. By taking away the benefit, we're  
13 taking away also the -- the debt retirement charge, but  
14 only, again, for the residential sector. It stays --  
15 the -- the debt retirement charge stays for the  
16 industrial customers, the larger customers.

17                   Lastly, they're saying -- they're asking  
18 -- they're going to ask the OEB to quarterback  
19 developing a replacement program for low-income  
20 customers. There is no details on that at -- at this  
21 point, but that would be because removing the debt  
22 retirement charge does not fully compensate for the  
23 Clean Energy Benefit, and so there's still a gap. And  
24 therefore, they're asking the OEB, in this proposal, to  
25 take a -- to act on that.

1                   Now simply my understanding is it's  
2 budget day. It's a minority government. We don't know  
3 whether it will get the support of the NDP, which is  
4 required to go forward with this, and therefore, these  
5 changes are -- are proposed.

6                   If -- if every -- anybody's interested  
7 in that, I am -- based on press releases and so on, I  
8 have a short note that I -- I could table with these  
9 changes to -- subject to the caveat that was what was  
10 happening four (4) days ago, and it -- it may differ  
11 from what is actually announced in -- in the budget.

12                   So if that would be helpful, I -- I can  
13 put that note on the -- on -- on the record.

14                   THE CHAIRPERSON:    Yes, that would be  
15 useful.

16                   DR. ROGER HIGGIN:   Okay. So I have an  
17 undertaking to do that. Thank you.

18                   MR. BYRON WILLIAMS:   And my hands are  
19 getting a little sore here. It's all good. We will --  
20 we are -- Dr. Higgin is undertaking to table a briefing  
21 note prepared with regard to the -- regards to proposed  
22 changes to the Clean Ener -- Energy Benefit.

23                   And I'm going to modify the undertaking  
24 very slightly and say that he will review the budget  
25 and just ensure that it's current. If -- if he -- if

1 he's going to do all that -- if -- if he's going to  
2 make us do the undertaking, he can read the budget.

3 DR. ROGER HIGGIN: That means we will  
4 be tomorrow.

5

6 --- UNDERTAKING NO. 132: CAC to table a note with  
7 regards to proposed changes  
8 to the Clean Energy Benefit  
9 and review the budget to  
10 ensure it is current

11

12 CONTINUED BY MR. WILLIAM GANGE:

13 MR. WILLIAM GANGE: Thank you, Mr.  
14 Higgins (sic). But -- but with the current Ontario  
15 Clean Energy Benefit, when you -- when you said it's  
16 for three thousand (3,000) for -- for homes with 3,000  
17 kilowatt hours, did you say, "or less"?

18 DR. ROGER HIGGIN: Or less.

19 MR. WILLIAM GANGE: So if -- if a -- if  
20 a home uses more than that, Byron, do you want to...?

21 MR. BYRON WILLIAMS: I might -- hold --  
22 Roger, hold on. Mr. Harper might have a fact...

23 MR. WILLIAM HARPER: I -- I believe if  
24 -- if a home uses more, they get the benefit for up --  
25 up to -- for up to that up -- for up -- for up to that

1 level of consumption.

2 MR. WILLIAM GANGE: I -- I see. Okay.

3 So -- so there's -- it's not that you --

4 MR. WILLIAM HARPER: For up to that  
5 level of consumption, but not for covering the portion  
6 of their bill that's for consumption over and above  
7 that.

8 MR. WILLIAM GANGE: Thank you, Mr.  
9 Harper. That -- that clarifies that.

10 THE CHAIRPERSON: Just to clarify,  
11 though, it applies to everybody, then?

12 DR. ROGER HIGGIN: It applies to all  
13 residential customers regardless of income, domicile or  
14 any -- anything else, as long as they have -- and it's  
15 paid up to 3,000 kilowatt hours, correct. All right?

16 And now that -- just to be clear, this  
17 is Phase 2 of the -- of the benefit. It started off in  
18 2011, with more people being eligible and higher  
19 consumption and included what we would call small  
20 commercial establishments with higher loads.

21 But that was modified in 2012, and this  
22 is very clearly a money issue, you know, basically that  
23 -- that you have to do something to avoid this, because  
24 the other thing in the budget, I expect, every -- the  
25 press -- press says that instead of being 13 billion

1 deficit, the Ontario deficit is going to be forecast at  
2 15 plus billion, and therefore, you're going to have a  
3 -- have a fiscal problem to try and deal with.

4

5 CONTINUED BY MR. WILLIAM GANGE:

6 MR. WILLIAM GANGE: Thank you, Dr.  
7 Higgins. The -- you also, near the end of your  
8 evidence, made a comment that we haven't seen a  
9 business case yet for Conawapa.

10 Do you recall making that statement,  
11 sir?

12 DR. ROGER HIGGIN: Yeah, I think what  
13 I'm perhaps saying is that the current base -- business  
14 case talks about Conawapa, but the focus, in my view,  
15 is still towards the early years, simply because as you  
16 go further forward to, we'll call -- we'll use your  
17 number C25, then the uncertainties increase, et cetera,  
18 et cetera.

19 And basically, the plan that's coming  
20 forward also is meant for unidentified, at this point,  
21 exports and -- and a number of factors. So that's what  
22 I would say are pieces that are missing in the current  
23 -- current plan. I think that Hydro itself has  
24 acknowledged this. I've seen testimony that says  
25 basically, We acknowledge that we will need to deal



1 with the -- the business case for Conawapa once we have  
2 more information on -- on many of the things.

3 That could be, in their case of view, an  
4 update, or -- or it could be significant, depending on  
5 what happens. So that's what I'm saying. Now if we  
6 say we're going to maintain Conawapa, but we're going  
7 to deal with my, quotes, "Phase 1," only, then that  
8 becomes something that is a tangible and doable thing  
9 to bring back that business plan in two (2) or three  
10 (3) years' time. That -- that's all -- that's what I'm  
11 saying.

12 MR. WILLIAM GANGE: And are you saying  
13 that you're satisfied with the business case that's  
14 been presented for Keeyask?

15 DR. ROGER HIGGIN: That's a very  
16 interesting question. I -- I would say I shouldn't be  
17 recommending proceeding with Keeyask. When I was asked  
18 to do my bottom line with conditions, if I didn't think  
19 the business case was at least adequate, so basically,  
20 that's the case.

21 MR. WILLIAM GANGE: Thank you. And  
22 when you're saying that that business case is adequate,  
23 is that taking into account the flat load scenario that  
24 is being presented? Not -- not by Hydro, but -- but by  
25 my client and CAC?

1 DR. ROGER HIGGIN: The business case  
2 for Conawapa is now to meet export opportunity. That -  
3 - that is what I'm saying. It's being advanced and  
4 will eventually meet domestic load, of course. So it's  
5 the advancement that is what I'm talking about when I  
6 say the business case.

7 The contracts are there. This Pathway  
8 4, the intertie, those type of, I'll call them,  
9 prerequisites. The economics, I think MIPUG asked me -  
10 - it's -- it's considerably less from an NPV, but it's  
11 still positive.

12 MR. WILLIAM GANGE: And sir, I -- I  
13 just want to make sure that -- that I heard you right  
14 and that you spoke it right, because we had -- my  
15 question had -- had moved to the business case for  
16 Keeyask, and in that last answer, you -- you used  
17 Conawapa.

18 So my question had been, Assuming a flat  
19 load scenario with respect to Keeyask, when you say  
20 that the business case for Keeyask has been made out,  
21 is -- are -- are -- was your answer in reference to  
22 Keeyask?

23 DR. ROGER HIGGIN: Yes, as being  
24 advanced to meet export opportunities.

25 MR. WILLIAM GANGE: Yes, thank you.

1 And I think --

2 DR. ROGER HIGGIN: That -- that --  
3 that's really what I was -- that's the context. That's  
4 the whole thing that I'm saying to my client. I -- I  
5 think there's a case there for that, and basically,  
6 there are others who will disagree that if the load's  
7 flat, you don't need it for the -- for the domestic  
8 load, and then you shouldn't bother pursuing the export  
9 opportunity.

10 My reading of the terms of reference, it  
11 asked Hydro to look at both -- both components of the -  
12 - so Hydro asked the PUB to -- sorry, to look at both.

13 If you were to put in 'or', and that's  
14 perhaps the question, that would be a very different  
15 question.

16 MR. WILLIAM GANGE: Okay. Well, put in  
17 the word 'or', and perhaps you could answer that if you  
18 -- if you could, sir.

19 MR. BYRON WILLIAMS: And -- and just --

20 MR. WILLIAM GANGE: I'll -- I'll take  
21 you up on your -- on your -- your request.

22 MR. BYRON WILLIAMS: And -- and just  
23 one (1) second before Dr. Higgin does, and I -- I have  
24 no objection to him taking you up on the request. Just  
25 -- one of your previous questions was premised on a

1 flat load for Keeyask, and I don't see evidence in the  
2 record that would allow Dr. Higgin to -- to answer that  
3 in terms of we have the -- what we are -- we would  
4 consider the flawed Scenario 3 analysis, and -- and we  
5 have the -- the Scenario 2 analysis, but we don't have  
6 a -- a Dunskey-like flat DSM in -- in our view. So that  
7 would -- that would be just my objection to that  
8 premise to the question.

9

10 CONTINUED BY MR. WILLIAM GANGE:

11 MR. WILLIAM GANGE: And, Mr. Williams,  
12 I was just -- I was really trying to ask Dr. Higgin,  
13 assuming the Dunskey scenario of a flat load, not -- not  
14 the evidence that's been presented by Manitoba Hydro.  
15 That's -- that was what I was trying to -- to put to  
16 him.

17 DR. ROGER HIGGIN: Well, I -- I will  
18 comment on that. The change in load under the --  
19 regarding Keeyask is that it changes the number of  
20 years advancement that -- that is available --  
21 required. Whether or not a -- a flat -- flat load, and  
22 the Chairman asked me this, is something that I would  
23 advocate.

24 I haven't done the analysis. I said,  
25 basically, Let's start with Level 2, and now there's a

1 concern about Level 2 that you're aware of that Mr.  
2 Dunsky's made about sustained savings after 2018, but  
3 nonetheless, start with Level 2.

4 Can you go further? I said, That's one  
5 of the main issues when you look at that -- that  
6 component of the -- the load forecast and DSM that is  
7 making a call, a judgment, about -- about that, because  
8 it's -- it has major impacts on the question of how you  
9 treat advancement of -- of Keeyask, the number of years  
10 that it's going to be advanced, and so on.

11 That, I think, is -- if that's helpful,  
12 I can try again, but that -- if that helps.

13 MR. WILLIAM GANGE: That's helpful. Do  
14 -- do you want to make any other comments about the  
15 'or' question?

16 DR. ROGER HIGGIN: Which is, sorry,  
17 the...?

18 MR. WILLIAM GANGE: When -- when --

19 DR. ROGER HIGGIN: 'Or'? I haven't --  
20 I haven't analyzed that, except because, as I said,  
21 when looked at my original phasing issue, I -- I said  
22 to myself, Let's see what's going to guide me to look  
23 at the question of which way I would recommend to my  
24 client, and I came to the conclusion that the terms of  
25 reference didn't say, "and," they said, "or," and that

1 -- my -- my advice to the client was, for that reason,  
2 I am recommending my proposed pathway to be considered.

3 As I said, you weren't here, sir, so I  
4 better say it to you again, my client may very well  
5 throw that one out on its ear, and I'm certainly not  
6 speaking for her and definitely not for the panel.

7 MR. WILLIAM GANGE: Thank you, Mr.  
8 Chair. Those are my questions. Thanks very much.

9 THE CHAIRPERSON: Thank you. Mr. Orle,  
10 any questions on behalf of MKO?

11 MR. GEORGE ORLE: Yes, I do, Mr. Chair.  
12 Thank you.

13

14 CROSS-EXAMINATION BY MR. GEORGE ORLE:

15 MR. GEORGE ORLE: Sir, my name is  
16 George Orle. I represent MKO. I believe you  
17 understand that that's a -- an organization of First  
18 Nations in Manitoba, Northern Manitoba?

19 DR. ROGER HIGGIN: Yes, sir, I do.

20 MR. GEORGE ORLE: Okay. I'd like to  
21 refer to, first of all, to your main report. That's  
22 CAC Exhibit number 27, and if I could have page 27 of  
23 that brought up, please? And if you'd go down to the  
24 bottom of the page for the footnote?

25 DR. ROGER HIGGIN: M-hm.

1 MR. GEORGE ORLE: In your slide show  
2 you -- you refer to vulnerable consumers, and then you  
3 refer back to your report for the definition of that,  
4 and I see the definition is in footnote number 42.

5 Where did you get that definition from,  
6 sir?

7 DR. ROGER HIGGIN: It was developed by  
8 me based on several factors. They are as follows.  
9 Income, and I used LICO, low income, and I used, to be  
10 clear, not the Ontario number which defines, for  
11 example, for programs and so on, one thirty-five (135).

12 Mr. Stevens had an imp -- appendix,  
13 which provided, and I think I provided some information  
14 on that, the income levels in Manitoba in certain  
15 rural, urban, and other settings, and I chose the --  
16 the one that has for Winnipeg, okay?

17 The -- though -- so income was that  
18 times 125 percent of LICO, so that's -- that was the  
19 first component. You could say, to some degree, it  
20 would be characteristic of a lower -- low or lower  
21 income customer, okay?

22 The next thing that I -- I looked at and  
23 said, Well, who pays most for their electricity in this  
24 -- this group of residential customers? And then -- so  
25 I looked at and I've listed the -- the references in

1 the appendix, not here, as being customers that -- so  
2 out of the hundred and sixty-seven thousand (167,000)  
3 residential customers, sixty-seven thousand (67,000) of  
4 those have both electric heat and hot water, so they  
5 are the ones that are consuming most of the residential  
6 electricity.

7                   So that was the second characteristic.  
8 So that's my definition from my analysis, saying, Well  
9 -- and the reasons for it are there's a combination  
10 there of two (2) things. One is low -- a lower income  
11 and the other is high, or high end consumption of  
12 electricity.

13                   So those are the people that I said  
14 would be more vulnerable to -- to rate, or in this  
15 case, bill increases. And that's why I chose them.

16                   MR. GEORGE ORLE: Okay. If you go up  
17 to line 779 on that same page, you talk about  
18 vulnerable consumers' impact. And in that area you  
19 include cost of power as a percentage of income for  
20 seniors and low-income Manitobans. So that you use a  
21 very general phrase of 'seniors'. And I -- I would  
22 think that what you meant is seniors on low fixed  
23 incomes.

24                   DR. ROGER HIGGIN: That is totally  
25 correct. However, this was the sort of initial



1 screening of -- of affordability, defi -- defining it,  
2 but what was used was the more -- more defined, more  
3 constrained that I -- that I just outlined to you.

4 But, yes, you are correct --

5 MR. GEORGE ORLE: Okay.

6 DR. ROGER HIGGIN: -- in that respect.

7 MR. GEORGE ORLE: And -- and I think  
8 that your -- your definition of 'vulnerable consumers'  
9 would in fact include anyone that was on a fixed income  
10 that was at a low level?

11 DR. ROGER HIGGIN: Yes, perhaps the --  
12 the only difference there would be the question of the  
13 level of consumption. A family of one (1) to seven  
14 (7), yes, that's the one. A family of seven (7), you  
15 have higher consumption, obviously. So that would be  
16 perhaps the only one. Therefore, their bill may very  
17 well be lower, because there's only one (1) person  
18 living in the house --

19 MR. GEORGE ORLE: Okay.

20 DR. ROGER HIGGIN: -- or two (2) if --  
21 we hope, man and wife, kids gone, and that would be bas  
22 -- basically one of the factors.

23 MR. GEORGE ORLE: All right. If I  
24 could now refer you to slide 10 of your presentation.  
25 And under observations, you indicate that the impact on

1 Manitoba Hydro ratepayers' bills in the short term,  
2 2015 to 2025, is not acceptable. And you stop with a  
3 semicolon and then you qualify, "particularly for  
4 vulnerable consumers."

5 I read that as being your opinion that  
6 the rates -- the increase in the rates is not  
7 acceptable in general for all ratepayers and then in  
8 particular for vulnerable consumers.

9 Am -- am I reading that correctly,  
10 or...?

11 DR. ROGER HIGGIN: Yes, you are.

12 MR. GEORGE ORLE: Okay. And in terms  
13 of the -- the fact that you -- you feel it's not  
14 acceptable, I'd just like to go over the reasons again  
15 why you find the rate increases to be not acceptable.

16 And I believe you -- you had two (2)  
17 reasons, one being that the past rate increases were at  
18 a limited amount?

19 DR. ROGER HIGGIN: I wouldn't call it  
20 limited; 3 percent is --

21 MR. GEORGE ORLE: Okay.

22 DR. ROGER HIGGIN: -- reasonable, yeah.  
23 Yes.

24 MR. GEORGE ORLE: Yes. And I believe  
25 the second reason was the intergenerational aspect of

1 the -- of the increases?

2 DR. ROGER HIGGIN: No, I would say that  
3 was a factor. The -- the other factor was sustained  
4 and that -- rather than a one (1) year blip or a short-  
5 term blip, sustained long-term increases.

6 MR. GEORGE ORLE: Right. And the fact  
7 that there had been lower rate increases in the past  
8 doesn't mean that we, as consumers or as ratepayers,  
9 have a right to think that we're always going to be  
10 paying the same amount for electricity?

11 DR. ROGER HIGGIN: Absolutely not, no.

12 MR. GEORGE ORLE: It's more of a factor  
13 that, as consumers, we budget for what we are going to  
14 do and we budget it based upon what we feel might be  
15 our income and our income level?

16 DR. ROGER HIGGIN: Right. We -- we  
17 look at last year's -- if you're a budgeting person,  
18 you look at last year and you say, Okay, well, it's  
19 going to be the same, or we'll add 2 percent. We'll  
20 add 4 percent for this component. One of the issues  
21 with electricity that for some households it's a  
22 relatively -- in Manitoba compared to Ontario, it's  
23 relatively a small component of -- of an average  
24 family.

25 That brings us back to some questions

1 about people who are not the average family, with a --  
2 an income of a hundred thousand, you know.

3 MR. GEORGE ORLE: There's not too many  
4 people that can guarantee that they are going to have a  
5 raise in their income for the next twenty (20) years of  
6 2 percent above the -- the cost of living.

7 DR. ROGER HIGGIN: I would say that's  
8 quite likely, and there's also the question whether  
9 they are all going to be employed for twenty (20) years  
10 either.

11 MR. GEORGE ORLE: And with people on  
12 fixed incomes or incomes that are fixed by government,  
13 whatever level --

14 DR. ROGER HIGGIN: Yes.

15 MR. GEORGE ORLE: -- there's also more  
16 of a reason to feel that there'll be cutbacks as  
17 opposed to guaranteed increases of 2 percent for the  
18 next twenty (20) years.

19 DR. ROGER HIGGIN: History, from just  
20 my general knowledge, is that, yes, we'll call it,  
21 assistance programs do not, unlike government pensions,  
22 be indexed to 2 percent. They tend to be going up at  
23 lower -- at a lower rate.

24 MR. GEORGE ORLE: Okay.

25 DR. ROGER HIGGIN: On the assistance

1 programs. So if their other income is not in -- not  
2 keeping up with inflation, then, yes, that would be the  
3 issue of a scenario where these people will gradually  
4 fall into the vulnerable class, I would suggest to you.

5 MR. GEORGE ORLE: Okay. I'd like now  
6 to move a little further down that -- the same page and  
7 -- and deal with mitigation options. And you set out  
8 that there's a series of mitigation options, some of  
9 them dealing with Manitoba Hydro's ability to deal with  
10 them.

11 And I believe you deal with that with  
12 the rate of smoothing of the 3.95 percent?

13 DR. ROGER HIGGIN: I'm interpreting,  
14 that seemed to be, quote, "a desirable target" for  
15 Manitoba Hydro to look at as a -- on -- just under 4  
16 percent, thereabouts. And there is a bit of history  
17 around that as well. So that was why the three point  
18 nine-five (3.95) was the original average long-term  
19 increase due to the Preferred Plan. But there's a -- a  
20 bit of history around other tar -- periods where  
21 Manitoba Hydro seems to have been looking at somewhere  
22 around a -- a 4 percent. So the two (2) tend to come  
23 together as a number which is something to -- at least  
24 to look at.

25 MR. GEORGE ORLE: That's what I was

1 getting at, sir. I -- I understood the evidence to be  
2 that the smoothing would be to deal with the increases  
3 that might be over and above 3.9 percent that have been  
4 predicted.

5 DR. ROGER HIGGIN: Certainly that's  
6 Manitoba Hydro's, and that's why, as I said here, there  
7 may be limitations to what can be done with respect to  
8 that, in terms of debt-equity ratio, in -- interest  
9 coverage, and so on, depending on the number of years  
10 and so on. There may be limitations with respect to  
11 that.

12 MR. GEORGE ORLE: Okay.

13 DR. ROGER HIGGIN: I haven't done the  
14 analysis. I just know there's been a few filings  
15 recently that show some scenarios what would happen if  
16 you did relax the DE and if you did relax the one point  
17 two (1.2). There's been some of that provided.  
18 Whether or not those are viable things, I haven't read  
19 the testimony of Manitoba Hydro to say, Oh, those are  
20 wonderful things that we can do easily and we don't  
21 have a problem. You know? I don't know.

22 MR. GEORGE ORLE: Okay. And one of the  
23 other ones that you talked about, in terms of  
24 mitigation of rates, was a -- a change in the debt-  
25 equity ratio over a period of time?

1 DR. ROGER HIGGIN: Yeah, that's in  
2 essence the same one I just -- just referred to.

3 MR. GEORGE ORLE: Yeah. And that --  
4 that's also a Manitoba Hydro initiative. That --  
5 that's not something that the consumer or the -- or the  
6 -- or anyone else is going to be able to control?

7 DR. ROGER HIGGIN: Certainly not the  
8 consumer. I think that there are some other people  
9 that need to be involved in -- in a strategy like that.  
10 It would be including the Board. It would have to be  
11 able to consider that from the financial aspects of the  
12 Utility and whether the government would be willing to  
13 do that with respect to the overall financial  
14 requirements of the province. And the impact, if any,  
15 on debt ratings. All of those factors are in play  
16 here.

17 MR. GEORGE ORLE: The third mitigation  
18 option that you -- you dealt with in your testimony was  
19 DSM programs?

20 DR. ROGER HIGGIN: Yes.

21 MR. GEORGE ORLE: And in your slide you  
22 -- you qualify that again with -- with a word, and you  
23 use 'aggressive' DSM programs.

24 DR. ROGER HIGGIN: Correct. That's  
25 relative to the history.

1 MR. GEORGE ORLE: I'm not sure whether  
2 you had an opportunity to review the evidence we  
3 received from Mr. Dunsky, but in his evidence he talked  
4 about some of the difficulties in preparing or having  
5 DSM programs that are geared towards First Nations  
6 communities?

7 DR. ROGER HIGGIN: To be honest, I  
8 skimmed through his slide deck but I did not pick that  
9 up and did not -- I'm not really in a position to  
10 answer. I know from my own experience of -- in  
11 Ontario, and including the utilities there that have  
12 First Nations communities, the increased difficulties  
13 of developing and implementing DSM programs in those  
14 communities. So from my own experience, but I didn't  
15 pick that particularly up in Mr. Dun -- Dunsky's slide  
16 deck.

17 MR. GEORGE ORLE: But your own  
18 experience is -- is similar to what I'm telling you  
19 here, you --

20 DR. ROGER HIGGIN: Yes.

21 MR. GEORGE ORLE: -- you said? Okay.

22 DR. ROGER HIGGIN: There's a whole set  
23 of additional barriers to implementing DSM programs in  
24 those communities.

25 MR. GEORGE ORLE: Okay.



1 DR. ROGER HIGGIN: And they come to  
2 language, communications, income, condition of the  
3 housing stock, et cetera, et cetera. There are a whole  
4 bunch of additional barriers that need to be addressed.  
5 I -- in a standard residential DSM program, just to  
6 illustrate that, one of the conditions that has to be  
7 there is that there are no substantial structural or  
8 other integrity issues with the house before you start  
9 to do the retrofits, whether it be basement insulation,  
10 attic insulation, whatever. If that's there, then  
11 you're off the list. You're done.

12 The gas utilities, we've -- we've fought  
13 with them over that and they now have instituted in  
14 their programs for residential an up to one thousand  
15 dollar (\$1,000) health and safety ben -- installation  
16 cost that can be in -- to get people over to the  
17 threshold where they would become eligible for the  
18 program.

19 MR. GEORGE ORLE: Okay.

20 DR. ROGER HIGGIN: So --

21 MR. GEORGE ORLE: And -- sorry, sir.  
22 And I think you would say it's fairly common knowledge  
23 throughout Canada that the housing stock on First  
24 Nations reserves is either poor, substandard, or -- or  
25 not of the same quality as you would find in Southern

1 communities.

2 DR. ROGER HIGGIN: That's correct, sir.

3 DR. HUGH GRANT: Before you leave this  
4 slide, could I ask --

5 DR. ROGER HIGGIN: Sure.

6 DR. HUGH GRANT: You're on safe ground  
7 here, because a CAC consultant testified yesterday that  
8 all consumers are irrational, so I just --

9 DR. ROGER HIGGIN: I didn't hear him.  
10 I've had --

11 DR. HUGH GRANT: I just want to go back  
12 to this rate of change in a rate versus the absolute  
13 rate. So if you were in Ontario -- if Ontario were to  
14 freeze their rates for ten (10) years so that at the  
15 end of ten (10) years they'd be at about what these  
16 Manitoba rates projected forward would look like, would  
17 you describe that as unacceptable?

18 DR. ROGER HIGGIN: Absolutely not.

19 DR. HUGH GRANT: So it's more the --  
20 it's the fact that we're used to the low prices, and so  
21 the fact -- it's the rate of increase that we focus on  
22 more than the absolute?

23 DR. ROGER HIGGIN: I would add one more  
24 factor, and that's called the affordable energy or ORA  
25 in Manitoba. Isn't that an objective of the

1 government, to maintain those lower rates more to be  
2 the most competitive in -- in Canada? So there is that  
3 additional factor here.

4 I mentioned that -- if you want to read  
5 my little take on this, it's in the appendix to my  
6 report. And the gap actually, in my analysis from  
7 responses from Hydro, actually does close a bit to  
8 Quebec. You're still the leader in low prices, but it  
9 closes a bit.

10 DR. HUGH GRANT: Okay. You've got me  
11 there. I didn't read your appendix, so. But I will  
12 say that another CAC consultant said we should price  
13 energy at the appropriate rate and not --

14 DR. ROGER HIGGIN: Well, there's been a  
15 long time -- I've -- I've been a practitioner if you  
16 like on the rate side and so on of DSM. And there's  
17 always been the group that says, Raise the prices and  
18 then conservation will happen.

19 DR. HUGH GRANT: Can I get one (1) more  
20 point in? And when say this I'm only doing this  
21 because I know you were completely sincere, but  
22 sometimes, you know, other people aren't. And do think  
23 it's --

24 DR. ROGER HIGGIN: Sorry.

25 DR. HUGH GRANT: -- but that I'm

1 doubting your views at all. But it is always curious  
2 how the middle class discovers the poor when it's in a  
3 sort of opportunistic way. And so is it possible that,  
4 oh, the Consumers' Association of Canada, for example,  
5 would argue that, Oh, no, don't touch my rates, it's  
6 okay for me -- I'm just doing it for the poor people,  
7 so the vulnerable group, so.

8                   Is -- have you heard that sort of  
9 argument before?

10                   DR. ROGER HIGGIN: Well, yes, because  
11 those groups are represented in other places by others  
12 than CAC. But CAC -- and my understanding is --  
13 because I went to the gas here in 2006 for CAC and said  
14 to your Board, Guys, you've got to do more about low-  
15 income programs. Go and find the testimony. It's in  
16 my -- it's in my resume.

17                   So the answer is I'm a pusher for trying  
18 to get to remove this disparity, not only on rates, but  
19 also in accessibility and being able to benefit from --  
20 from DSM programs. And that leads to a whole category  
21 of low-income programs.

22                   Manitoba Hydro has acted on that in the  
23 last how ever many years. They've developed an  
24 impressive, in -- in Canadian standards, low-income  
25 programs. But still nothing's perfect, but they have

1 done a good job. I don't why Mr. Dunsky is criticizing  
2 them, because he was hired initially to help him dev --  
3 help them develop them, but anyway.

4 DR. HUGH GRANT: Would you agree with  
5 Dr. Simpson that the best way to address the  
6 affordability issue is through some other mechanism  
7 than keeping prices lower than the other ones might be?

8 So in other words, some sort of Clean  
9 Energy Benefit or some other mechanism like that  
10 outside of the pricing mechanism, per se?

11 DR. ROGER HIGGIN: I think it's -- I --  
12 I think that's an important option to look at. And  
13 subject to the budget, that seems to be where Ontario's  
14 going to head. That they're going to say, We're going  
15 to divide that residential class and we're going to  
16 focus our assistance to the low-income families. That  
17 seems to be the way to go.

18 There are whole bunch of reasons why  
19 low-income DSM programming is needed. DSM program can  
20 help everybody. It depends on whether the people want  
21 or can participate. The barriers are simply that the  
22 low-income people have higher barriers to  
23 participation, and you need to overcome those barriers.  
24 That -- that's the main thing. I hope that helps.  
25 Thanks.

1 THE CHAIRPERSON: Mr. Orle, please --

2 MR. GEORGE ORLE: Yes.

3 THE CHAIRPERSON: -- if you don't mind,

4 I have a --

5 MR. GEORGE ORLE: And I --

6 THE CHAIRPERSON: -- few questions

7 before you change --

8 MR. GEORGE ORLE: -- I wasn't -- sorry.

9 THE CHAIRPERSON: Before you change  
10 slides, I just wanted to ask a question about this  
11 slide. I can't help thinking, you know, looking at  
12 this slide in particular, you know, to your thesis that  
13 the rate increases are not acceptable.

14 You know, looking at the All Gas Plan  
15 versus the -- the other plan, I mean, there's not much  
16 difference there, you know. And if you start from the  
17 premise on which this was originally based, that gas  
18 plants are going to be built to meet need -- local need,  
19 domestic need, consumers would've been facing  
20 significant increases irrespective of a plan that was  
21 chosen.

22 DR. ROGER HIGGIN: Yes, that is the  
23 point I -- you -- I believe -- I -- as I say in my  
24 evidence, I not -- don't feel happy with All Gas being  
25 the -- the reference case for bill comparisons. That -

1 - that's -- but having -- taking that aside, what's --  
2 that's what Ontario -- or, sorry, Manitoba Hydro has  
3 done. The difference here between, as you -- as we  
4 say, the Preferred Plan as it was then and All Gas is  
5 not large. It's 40 percent versus 46 percent, correct.

6 THE CHAIRPERSON: I grant you that --  
7 that most people would prefer to not have rate  
8 increases, but the -- the harsh reality, if you start  
9 from the premise that you need to have generation in  
10 '23/'24, you were facing rate increases irrespective of  
11 the poli -- option that's selected. And that perhaps  
12 is something that I think we need the panel to convey  
13 to people, is that if you start from -- you know, there  
14 are -- we're facing rate increases at some point  
15 because domestic load requires that it be supported by  
16 generation. And...

17 DR. ROGER HIGGIN: The -- the only  
18 caveat there, Mr. Chair, is the fact that what domestic  
19 load or load level needs to be met by new generation.  
20 Are there ways in which you can reduce that load by  
21 measures, such as DSM, fuel switching, and so on, while  
22 recognizing at the same time there's economic growth.  
23 There's even load growth amongst the population due to  
24 population growth and so on.

25 So we're talking about, okay, well,

1 maybe 1.6 percent, we don't -- we'll need generation in  
2 -- quite early. But if we can knock it down to one  
3 point two (1.2) realistically, then we'll need it  
4 later. That -- but other than that, it's only a  
5 question of time. And my focus here, as you see, is  
6 that first ten (10) -- ten (10) year period related to  
7 the plan.

8 I think you heard from the ratepayer  
9 panel that that seemed to be the area that they had the  
10 most concern about, was the -- was the -- simply  
11 because it's so immediate, it's so near, and most  
12 ratepayers and customers think about, if not the next  
13 year, they think about that -- that period, ten (10) --  
14 ten (10) years from now, so that's why I picked that,  
15 so.

16 But I have no disagreement with your  
17 scenario, assuming that you have 1.6 percent growth in  
18 load. That's the issue.

19

20 CONTINUED BY MR. GEORGE ORLE:

21 MR. GEORGE ORLE: Thank you, Mr. Chair.  
22 And -- and I won't be leaving this slide yet, Dr.  
23 Higgins (si), so --

24 DR. ROGER HIGGIN: May I should have  
25 only brought one (1). That would have made things



1 better for everybody.

2 MR. GEORGE ORLE: Well, this one seems  
3 to cover a lot of the areas that we really need. And I  
4 -- and I might preface my remarks, Dr. Higgin, with --  
5 with my -- my clients are not opposed to the Preferred  
6 Plan. Our -- our questions and our -- our intent here  
7 is to deal with what the socioeconomic impact will be  
8 in terms of rates upon my clients and the -- the direct  
9 impact of rates upon my clients.

10 And to the extent that mitigation is a  
11 matter than can be taken into consideration or -- or  
12 proposed as part of the acceptability, that -- that is  
13 where we're directing our questions, okay.

14 DR. ROGER HIGGIN: Thank you.

15 MR. GEORGE ORLE: Now, when we talked  
16 about mitigation, also you had a discussion about  
17 direct mitigation, and -- and you framed that in  
18 payments out of the government account.

19 And in terms of the -- the manner in  
20 which that is done, and I'd like you to use Ontario as  
21 an example, is that done by direct payment to  
22 ratepayers, is it done by a tax deduction to  
23 ratepayers, or is it an actual deduction off the -- off  
24 the bill?

25 DR. ROGER HIGGIN: It -- it appears on

1 the customer's bill as a line that says, CEB minus 10  
2 percent. On the bill also there is the debt retur --  
3 retirement charge and other things we generally group  
4 togo -- gether as the global adjustment. Some people  
5 call it the uplift. So basically, that's where it  
6 appears on the bill.

7 MR. GEORGE ORLE: Okay.

8

9 (BRIEF PAUSE)

10

11 MR. GEORGE ORLE: Okay. Members of the  
12 panel, I -- I wonder if I might just have five (5)  
13 minutes to -- to confer with my colleagues in respect  
14 to maybe shortening some of the questions.

15 THE CHAIRPERSON: Absolutely.

16 MR. GEORGE ORLE: Thank you.

17

18 --- Upon recessing at 3:03 p.m.

19 --- Upon resuming at 3:16 p.m.

20

21 THE CHAIRPERSON: I believe that we're  
22 ready to resume the proceedings.

23 MR. BYRON WILLIAMS: Mr. Chair, if we -  
24 - if we right -- if we had one (1) second, there's a --  
25 a clarification Dr. Higgin would like to just make.

1 THE CHAIRPERSON: Thank you.

2 DR. ROGER HIGGIN: Thank you. I just  
3 wanted to be clear that -- when I was talking about the  
4 clean energy benefit and 3,000 kilowatt hours, it was  
5 per month, so therefore it is not just what you would  
6 consider to be a residential consume -- consumer.

7 In Ontario, the average is 800 kilowatt  
8 hours per month for residential. It does extend into  
9 some of the -- the multi-families, such as duplexes,  
10 low rise, and all -- in the -- in the residential, and  
11 a few small -- or the small businesses.

12 So that -- the benefit where -- whereas  
13 perhaps I was talking about residential, it is a bit  
14 broader at the moment. It -- it's three thousand  
15 (3,000) per month up to that level. Okay? Thank you.

16

17 CONTINUED BY MR. GEORGE ORLE:

18 MR. GEORGE ORLE: Thank you, Mr. Chair.  
19 Dr. Higgin, just a follow-up on that, and it was going  
20 to be my next question anyways, but I think you've  
21 crystalized it somewhat, and it -- it follow ups on  
22 part of what Board member Grant was talking about.

23 And it -- it seems to me that this clean  
24 energy benefit is a fairly wide net that's thrown out  
25 to capture what I would assume is a smaller group than

1 you intend to benefit. Why would you be benefiting  
2 vulnerable consumers by actively providing scarce funds  
3 to those that might not need the benefit, and capping  
4 the amount that you might have available for vulnerable  
5 consumers?

6 DR. ROGER HIGGIN: Is this -- my -- my  
7 proposition was based on the Ontario, but the example I  
8 used was the vulnerable consumer and the impact on the  
9 -- on those. The quest -- if the question is, Should  
10 it be broader, i.e., should it cover all residential  
11 customers, should it include small commercial --  
12 multifamily, commercial, the answer is, I didn't look  
13 at that simply because I didn't have the database  
14 available to me to do a quick calculation.

15 And I was particularly interested in  
16 what I would consider a vulnerable -- so I -- I -- for  
17 my analysis, I focussed it on vulnerable. To ask the  
18 question, Should it be broader? Certainly, that is an  
19 option that should be considered, and the collateral  
20 issue is -- is -- where does the money come from,  
21 because you're then going to reach more customers, or  
22 commensurably, should the benefit be lower? In other  
23 words, instead of 10 percent it should be 5 percent.

24 MR. GEORGE ORLE: Okay.

25 DR. ROGER HIGGIN: Because you've got a

1 budget issue with it.

2 MR. GEORGE ORLE: Okay.

3 DR. ROGER HIGGIN: Those are some  
4 collateral considerations.

5 MR. GEORGE ORLE: Okay. May I suggest  
6 one (1) other mitigation, and I'd just like you to  
7 comment upon it. If there is an identifiable group  
8 that we would consider as vulnerable, and I'll use my  
9 clients as an example, the First Nations ratepayers, is  
10 not another way of mitigating -- setting them up as a  
11 separate class of ratepayer that would have a specific  
12 rate applied to them?

13 DR. ROGER HIGGIN: Yes, that's  
14 certainly -- from a rate making perspective, there have  
15 been special classes created that don't fit the normal  
16 rate design class criteria, and rates are designed for  
17 them. The issue there, as all regulators know, is,  
18 Does that lead immediately to real or perceived, mostly  
19 real, cross-subsidies from the other rate classes?

20 In other words, what -- what costs  
21 should be allocated to that class, and what revenues,  
22 and what is the revenue-to-cost ratio for that, whereas  
23 a rate making perspective you are aiming for a one (1)  
24 revenue-to-cost ratio. So there's that other  
25 collateral question once you do that, but, yes, you can

1 do it.

2 MR. GEORGE ORLE: Yes, you can. All  
3 right. Those are all the -- the questions that I had,  
4 and Mr. Chair, rather than channelling Mr. Hacault  
5 through me in the questions, I believe that he's going  
6 to just ask permission to reopen on one (1) small area,  
7 and I'm prepared to give him the balance of my time  
8 that's set out in the timetable.

9 THE CHAIRPERSON: Me. Hacault, s'il  
10 vous plait.

11

12 RE-CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

13 MR. ANTOINE HACAULT: It's with respect  
14 to slide 10 and the statement in -- under the graph  
15 that talked about moderate rate increases after the  
16 first ten (10) years, and I just wanted to point out to  
17 Dr. Higgins (sic) some of the information in Exhibit  
18 104-12-4 at pages 13 and 61, and know whether he had  
19 considered that particular exhibit in making his  
20 comments on moderate rate increases. There's been a --  
21 an exchange between the panel and him on the first ten  
22 (10) years.

23 So, sir, in the first slide...

24

25 (BRIEF PAUSE)

1 MR. ANTOINE HACAULT: Sir, this is the  
2 Preferred Development Plan, Level 2 DSM, and there are  
3 different rate submissions being made by Hydro now, but  
4 the rate submission methodology that was used for all  
5 the plans is the one shown in this particular  
6 evaluation.

7 Were you aware, firstly, if I look at  
8 the number 2032, which has been highlighted, that the  
9 additional general consumer revenue obtained would  
10 increase if we look at 2022 from 572 million to 1.806  
11 million?

12 DR. ROGER HIGGIN: Yes, I see that,  
13 sir.

14 MR. ANTOINE HACAULT: Were you aware of  
15 that when you made these comments in your slide, sir?

16 DR. ROGER HIGGIN: No, I was relying on  
17 -- on the net on this exhibit. As you see, I did look  
18 at, what was -- was it, twelve point one (12.1)? I was  
19 relying on testimony from Manitoba Hydro that -- that,  
20 in essence, said the -- the same thing, and that is,  
21 for the Preferred Plan, that the -- the rate -- rate  
22 increases would be high in the -- in the earlier years,  
23 but would then moderate in the later years.

24 That was what I was relying on --

25 MR. ANTOINE HACAULT: Okay.

1 DR. ROGER HIGGIN: -- is a qualitative  
2 rather than a quantitative review of this, or a similar  
3 chart.

4 MR. ANTOINE HACAULT: Okay. So let's -  
5 - if we can just keep that number in mind, sir, and I  
6 know it goes down, as you said, after, and I'm not  
7 minimizing that. It -- it goes down to \$902 million of  
8 additional consumer revenue in 2033. That's the  
9 Preferred Development Plan.

10 If we can go to -- I had page 61, the  
11 All Gas, Level 2 DSM? So under 2022, we see that in  
12 that shorter timeframe, the additional customers'  
13 revenue is \$451 million.

14 Do you see that, sir?

15 DR. ROGER HIGGIN: I see that.

16 MR. ANTOINE HACAULT: And that was the  
17 metric that you used for your slide is comparing the  
18 All Gas to the Preferred Development Plan?

19 DR. ROGER HIGGIN: Correct.

20 MR. ANTOINE HACAULT: In making your  
21 comments, sir, were you aware that under this  
22 methodology, as of 2032, there would be 1.33 billion  
23 instead of the one point eight (1.8), so not quite, but  
24 pretty close to half a billion dollars' difference --

25 DR. ROGER HIGGIN: Yes, I see that.



1 MR. ANTOINE HACAULT: -- in that  
2 particular year, that consumers would have to pay more  
3 under the Preferred Development Plan under this  
4 methodology?

5 DR. ROGER HIGGIN: Yes, and I think  
6 that reflected, to a degree, in the -- in the bill  
7 increases that were presented. The thing, perhaps, to  
8 note is the two (2) average revenue increases that are  
9 shown there, the additional general consumers' revenue  
10 percent increase and underneath that, the cumulative  
11 numbers.

12 So -- and between the two (2) there is a  
13 difference, as you've said.

14 MR. ANTOINE HACAULT: Okay. So if we  
15 look firstly under 2032, by the time we reach 2032  
16 under this particular methodology we have a total  
17 increase of some 82 percent.

18 DR. ROGER HIGGIN: That's right.

19 MR. ANTOINE HACAULT: And in 2033 it  
20 goes down to a total of 46 percent?

21 DR. ROGER HIGGIN: Right.

22 MR. ANTOINE HACAULT: So let's keep  
23 those numbers in mind. And let's flip back to the  
24 other slide, please. At the total cumulative increase  
25 under the Preferred Development Plan under this

1 methodology, it would be up to a 111.61 percent.

2 DR. ROGER HIGGIN: Yes.

3 MR. ANTOINE HACAULT: Going down not to  
4 forty-six (46), but 55 percent in the following year.

5 DR. ROGER HIGGIN: Yes.

6 MR. ANTOINE HACAULT: Do you see that?

7 DR. ROGER HIGGIN: I do.

8 MR. ANTOINE HACAULT: Does this  
9 information make any difference in your -- your view,  
10 sir?

11 DR. ROGER HIGGIN: Okay. I -- I had  
12 some difficulty with Manitoba Hydro's use of the All  
13 Gas Plan to compare the billing rates and -- and that  
14 was on a number of factors which are less -- less --  
15 but anyway, your point is valid that the differences  
16 are -- are diff -- quite different, and perhaps I  
17 should have used these numbers.

18 The only other thing to note is my time  
19 frame, just so we -- we're looking at the same time  
20 frame, is the first ten (10) years, and that under the  
21 deferred -- Preferred Plan the -- the cumulative is  
22 45.25 percent. It's very close to my bill increase --  
23 there is a difference -- bill increase, because the  
24 bill increase is calculated differently. It's from  
25 Manitoba Hydro's exhibit what will be the fixed charge

1 and the variable charge over the period that we're  
2 talking about. But the -- the result is -- obviously  
3 should be similar and consistent, all right?

4 So does that...

5 MR. ANTOINE HACAULT: I thank you, sir,  
6 and I thank the panel and all parties present for their  
7 indulgence. I know I asked the question out of line,  
8 but I thought it might be useful information, given the  
9 exchange of questions between the panel and Dr. Higgins  
10 (sic) on the impact of consumers on general revenue and  
11 the rate differences. We hadn't looked at that  
12 information yet.

13 THE CHAIRPERSON: Thank you, Me.  
14 Hacaault. Ms. Fernandes, please.

15

16 CROSS-EXAMINATION BY MS. ODETTE FERNANDES:

17 MS. ODETTE FERNANDES: Thank you, Mr.  
18 Chairman. Good afternoon, Dr. Higgin. Based on some  
19 of the questions that came from the panel, it has  
20 shortened my cross somewhat, so there's just a few  
21 areas that I'd like to canvass with you.

22 This morning I heard you observe that  
23 Manitoba Hydro load growth in the forecast is robust  
24 despite only minor load growth in recent years. And  
25 you referenced the time period 2007 to 2012.

1 Did I paraphrase that correctly?

2 DR. ROGER HIGGIN: Yes, I -- perhaps we  
3 could look at the load forecast slide and that may be -  
4 - thank you. That's -- yes.

5 MS. ODETTE FERNANDES: Okay. And would  
6 you agree with me that this period from 2007 to 2012  
7 encompasses the global recession which began in 2008?

8 DR. ROGER HIGGIN: Certainly, yes.

9 MS. ODETTE FERNANDES: And would you  
10 agree that the recession would contribute to reduced  
11 load growth?

12 DR. ROGER HIGGIN: Yes, I would. In  
13 fact it's been quite dramatic, yes.

14 MS. ODETTE FERNANDES: And would you  
15 also agree that it's reasonable to expect that business  
16 cycles will continue with upswings and downswings?

17 DR. ROGER HIGGIN: Yes.

18 MS. ODETTE FERNANDES: And all other  
19 things being equal, would you agree that as business  
20 cycles continue and the economy recovers, that load  
21 growth will increase from what it was during the  
22 recession?

23 DR. ROGER HIGGIN: Did you say during -  
24 - will recover from the time of the recession? Yes.

25 MS. ODETTE FERNANDES: Okay.

1 DR. ROGER HIGGIN: Perhaps the only  
2 other caveat is to say will it resume to grow? Will  
3 the GDP grow at levels that preceded that recession, or  
4 will they be at lower levels because there's quite a  
5 lot of concern as to whether GDP, for example, will  
6 recover to the levels that occurred before the  
7 recession.

8 MS. ODETTE FERNANDES: Thank you. Now,  
9 this morning you commented that DSM achievement is  
10 affected by a number of factors that a utility can't  
11 control.

12 Is that correct examples of those? I  
13 believe you referenced geographic distribution, income,  
14 older houses versus new houses, for example?

15 DR. ROGER HIGGIN: Those were some  
16 examples, yes.

17 MS. ODETTE FERNANDES: I'm going to ask  
18 Mr. Wojczynski to hand out a document that I just  
19 provided you at the break, so I understand that you  
20 haven't had time to review it in any great detail. But  
21 my questions will be more general in nature and not the  
22 specifics related to any of those states referenced in  
23 there.

24 MR. BYRON WILLIAMS: And I can indicate  
25 that CAC (Manitoba) does not object to the filing of

1 the exhibit. And certainly Dr. Higgin will be  
2 available to comment as he feels able, and that'll be  
3 up to him.

4 MS. ODETTE FERNANDES: Absolutely.  
5 Thank you.

6

7 (BRIEF PAUSE)

8

9 CONTINUED BY MS. ODETTE FERNANDES:

10 MS. ODETTE FERNANDES: Okay, this  
11 document is entitled, "Energy Efficiency Resource  
12 Standards: A New Progress Report on State Experience."  
13 And it's an assessment of how well the different states  
14 are doing in terms of state targets and savings. And I  
15 will note that there is a copyright at the bottom from  
16 the American Council for an Energy Efficient Economy.  
17 And we do -- did receive consent at about noon today to  
18 file this page on the record today, so.

19 DR. ROGER HIGGIN: M-hm.

20 MS. ODETTE FERNANDES: Now, if we turn  
21 to the second page, which is Appendix D, quantitative  
22 data on state targets and savings.

23 Now, would you agree with me, subject to  
24 check, that out of the twenty-six (26) states in 2011,  
25 thirteen (13) states did not meet their targets that

1 were set?

2 DR. ROGER HIGGIN: Subject to check.

3 MS. ODETTE FERNANDES: And then if we  
4 move over to 2012, eleven (11) states didn't meet their  
5 targets?

6 DR. ROGER HIGGIN: Subject to check.

7 MS. ODETTE FERNANDES: Now, if I, for  
8 example, go down to New York --

9 DR. ROGER HIGGIN: Yeah.

10 MS. ODETTE FERNANDES: -- for 2011 the  
11 target was 2.7 million megawatt hours, correct?

12 DR. ROGER HIGGIN: Megawatt hours?

13 Yes, m-hm.

14 MS. ODETTE FERNANDES: And then their  
15 actual savings for 2011 was 1.8 million megawatt hours?

16 DR. ROGER HIGGIN: Yes.

17 MS. ODETTE FERNANDES: And then if we  
18 move over to 2012 targets, you'd agree with me that  
19 it's 1.8 --

20 DR. ROGER HIGGIN: M-hm.

21 MS. ODETTE FERNANDES: -- megawatt  
22 hours, correct?

23 DR. ROGER HIGGIN: Yes.

24 MS. ODETTE FERNANDES: And then the  
25 2012 savings was 1.3 million megawatt hours, correct?

1 DR. ROGER HIGGIN: Correct. The -- the  
2 main thing now just from a overview is that missing  
3 information would be why is the '12 -- 2012 target so  
4 much lower than the 2011 target. In a DSM program, one  
5 would expect the target to be the same or trying to go  
6 up, so that -- that would be a question.

7 Is it -- is it on a ramp down? Let's  
8 call it that way. Is it a ramp down in New York period  
9 because the program's expiring and it's on ramp down?  
10 That has a different dynamic than if it was, for  
11 example, on a ramp up, where the 2012 target will be  
12 higher. I have no information on that. But as a  
13 qualifier, I would recognize in trying to make any  
14 sense out of that particular -- those particular  
15 numbers.

16 MS. ODETTE FERNANDES: Yes. And I can  
17 tell you we don't have that information either. But  
18 just bringing it back to percentages, for 2011, subject  
19 to -- subject to check, would you agree that New York  
20 only achieved about 67 percent of the actual savings  
21 compared to its target?

22 DR. ROGER HIGGIN: Yes, in 2011.

23 MS. ODETTE FERNANDES: And then in  
24 2012, they achieved about 74 percent of their target.

25 DR. ROGER HIGGIN: Yes. But, of



1 course, if you look at the kilowatt hours, the change  
2 year over year, it -- that's the other major  
3 consideration is the fact there's -- that the 2011  
4 savings were one point seven-nine-three-o-two (1.79302)  
5 megawatt hours, and then it's gone down again. So  
6 there's -- it's -- the -- the trajectory of this  
7 particular set of numbers is very puzzling, and  
8 something that's very difficult to -- to comment on,  
9 particularly on that line.

10 What would be more -- more informative,  
11 I believe, would be to take all these numbers and  
12 either assume that the programs are in -- not in a ramp  
13 up or -- take out those that are in a ramp up or run  
14 down mode and then say, Okay, what does the average  
15 achievement look like for those -- for the -- the for  
16 balance, or some other analysis, plus some statistical  
17 analysis in terms of -- and this -- the time frame --  
18 anyway.

19 I don't want to go there, but basically  
20 I have a great deal of difficulty with the data,  
21 difficulty with -- with these numbers. If I -- as  
22 somebody who looks at numbers all the time, they're  
23 very puzzling in many ways, at least on those we picked  
24 through.

25 Now, let's look at another one where we

1 think, the leader. Well, California is a leader. We  
2 would all agree they're a leader, right. But when we  
3 even look at California, it's in kind of a slightly  
4 down or -- or, if you like, flat mode. It's -- right.  
5 They're -- they're one of the leaders in -- in the US.  
6 And let's look at Vermont. Well,  
7 Vermont, they're another leader, right. Ah, there,  
8 look at those guys, right. They're looking good.  
9 They're -- now, why is the 2012 target lower than the  
10 2011, I don't know, but otherwise they exceeded. Yeah.  
11 So the -- I'm just saying it's very difficult for me to  
12 -- to comment on -- on the data.

13 And I don't think that -- if you would  
14 like to send me, I'll call it, the analysis that is the  
15 other thousand pages -- actually sixty-nine (68) of  
16 them, I'd certainly be willing to take a look at it and  
17 -- and then give you some comments via an undertaking,  
18 if you like. So I -- I'll leave that with you. Would  
19 you like that?

20

21 (BRIEF PAUSE)

22

23 MR. RICHARD BEL: Yes. Board Member  
24 Bel.

25 DR. ROGER HIGGIN: Okay.

1 MS. MARILYN KAPITANY: In particular  
2 what's happening in Ohio? Ohio is just rockin'.

3 DR. ROGER HIGGIN: Right. So, yeah, I  
4 -- I would be happy -- the undertaking -- my counsel  
5 will correct it, I'm sure. I would be willing to -- to  
6 examine those data. My biggest problem is -- is if I  
7 have to go into, as I would normally, into statistical  
8 analysis to give you any decent -- decent  
9 interpretation, that's going to be quite a bit. It  
10 will require me to develop spreadsheets and -- and  
11 things like that, and that's another kind of level of  
12 analysis, not just looking.

13 So I think we need to have a  
14 clarification, how -- how far I need to go. Is it a  
15 quick look, or would you like me to, if it's not in the  
16 data, come up with the -- with some statistical  
17 analysis to help?

18 THE CHAIRPERSON: No, I think we'll  
19 just keep it nice and simple for now. Thank you.

20 DR. ROGER HIGGIN: Okay. Thanks.

21 MR. BYRON WILLIAMS: I'm not confident  
22 it's -- it's that simple but I'm assuming -- we're  
23 going to have to get this study from ACEE but I -- I'm  
24 sure that -- that we'll -- I'm hoping that -- I'm --  
25 I'm sure -- I expect it's a public document.

1                   So the undertaking will be for Dr.  
2 Higgin to review the ACEE report and provide a  
3 contextual commentary on the insight that might be  
4 gained from Appendix D found at page 69, and we've  
5 flagged the interest in states such as New York,  
6 California, apparently Ohio is rocking, and -- and  
7 Vermont, so. But I -- I think it's not just to cherry  
8 pick those. We will try and provide some contextual  
9 insight.

10

11 --- UNDERTAKING NO. 133:   Dr. Higgin to review the  
12                   ACEE report and provide a  
13                   contextual commentary on  
14                   the insight that might be  
15                   gained from Appendix D  
16                   found at page 69

17

18                   DR. ROGER HIGGIN:   Just one (1)  
19 clarification. I think the suggestion I would have is  
20 that we need to consider, perhaps -- how can I put  
21 this? We'll leave it there, but in coming back to you,  
22 we may have some -- some comments that relate to this  
23 question of, Are these programs all running in, quotes,  
24 "flat mode," or what is driving the targets? Because  
25 the targets seem to be jumping up and down, whereas in

1 most programs, depending on the length, they often go  
2 first year, second year, third year down, or it's a  
3 five (5) year program, such as a two (2) -- you know,  
4 that's a Manitoba Hydro three (3) year term. So we  
5 need to, perhaps, comment with a -- or caveat that with  
6 some question there, if that -- if that's helpful.

7 MR. BYRON WILLIAMS: And I think that  
8 was what was meant by 'contextual'.

9 THE CHAIRPERSON: Right. We don't have  
10 the luxury of doing an exhaustive review of this  
11 information because of the time that, you know, the  
12 deadli -- the deadlines we're facing, so a contextual  
13 examination, I think, would be adequate, given the  
14 constraints we are dealing with.

15 DR. ROGER HIGGIN: Thank you.

16

17 CONTINUED BY MS. ODETTE FERNANDES:

18 MS. ODETTE FERNANDES: This took on a  
19 bigger life than what I anticipated, but just kind of  
20 bringing it back to my -- my question on this. We did  
21 do sort of the average, and --

22 DR. ROGER HIGGIN: Okay.

23 MS. ODETTE FERNANDES: -- the average  
24 between 2011 and 2012 of the states, it -- it either  
25 met or exceeded the targets, but having said that, you

1 would acknowledge that there is a risk that the actual  
2 savings can be short of targets, correct?

3 DR. ROGER HIGGIN: Oh, absolutely.

4 Yeah, that -- that's a fundamental aspect, but then the  
5 caveat is understanding what created that deficit, and  
6 what actions can be done within the budgets available  
7 to -- to fix that.

8 It could be anything from promotion of  
9 the programs, and so on, so the corrective measures  
10 we'll call them, it -- it is the aspect, m-hm.

11 MS. ODETTE FERNANDES: Thank you. Now  
12 this morning in your oral evidence, you referred to  
13 Limestone and Wuskwatim.

14 Now are you aware that the construction  
15 of Limestone was advanced two (2) years for exports,  
16 and in the Wuskwatim NFAT, the construction of  
17 Wuskwatim was advanced eleven (11) years for exports?

18 DR. ROGER HIGGIN: In the sec -- I was  
19 not in the first place, but I was in second, correct.

20 MR. BYRON WILLIAMS: And Ms. Fernandes,  
21 just on Wuskwatim, in terms of the premise, we will  
22 certainly -- I think the actual number of years it was  
23 advanced might be an issue, whether was eight (8) or --  
24 but certainly, I think Dr. Higgin can accept the  
25 premise that it was advanced considerable number of

1 years, and so we'll accept the premise, but I'm just --  
2 the number of years I would be more careful with.

3 THE CHAIRPERSON: What -- what was the  
4 former -- the former dam -- the advancement date of the  
5 former --

6 MS. ODETTE FERNANDES: Limestone.

7 THE CHAIRPERSON: Limestone and about  
8 how many years?

9 MS. ODETTE FERNANDES: Two (2) years.

10 THE CHAIRPERSON: I'm sorry?

11 MS. ODETTE FERNANDES: Two (2) years,  
12 and Mr. Williams, my question was, like, in the filing  
13 of the Wuskwatim NFAT, and I do have that with me if  
14 you'd like to take a look at it, but...

15 MR. BYRON WILLIAMS: That's fine. We  
16 can accept that.

17

18 CONTINUED BY MS. ODETTE FERNANDES:

19 MS. ODETTE FERNANDES: Now if I get  
20 chapter 12 of Manitoba Hydro's business case on the  
21 screen, please?

22 DR. ROGER HIGGIN: I don't think we  
23 have a copy, but if you can put it on the screen? I'm  
24 sorry.

25 MS. ODETTE FERNANDES: And I'm looking

1 at page 10, Table 12.3.

2 DR. ROGER HIGGIN: M-hm.

3 MS. ODETTE FERNANDES: Now if I look at  
4 the Keeyask23/Gas Development Plan, the Keeyask in-  
5 service date is 2023 under this plan.

6 DR. ROGER HIGGIN: Could you just give  
7 me -- sorry, I missed your -- the -- the number of the  
8 -- of the plan.

9 MS. ODETTE FERNANDES: Number 2,  
10 Keeyask --

11 DR. ROGER HIGGIN: Okay, thank you.

12 MS. ODETTE FERNANDES: -- 23/Gas.

13 DR. ROGER HIGGIN: Thank you.

14 MS. ODETTE FERNANDES: Now the  
15 Preferred Development Plan contemplates an in-service  
16 date for Keeyask to be in 2019, correct?

17 DR. ROGER HIGGIN: Correct.

18

19 (BRIEF PAUSE)

20

21 MS. ODETTE FERNANDES: So that's a four  
22 (4) year advan -- advancement in the Preferred  
23 Development Plan, correct?

24 DR. ROGER HIGGIN: Correct.

25 MS. ODETTE FERNANDES: And if we assume



1 an in-service date of 2027, that is now an eight (8)  
2 year advancement, correct?

3 DR. ROGER HIGGIN: Correct, and that is  
4 your current number that I tried to use was 2027 rather  
5 than the other numbers that have been floating around,  
6 yes.

7 MS. ODETTE FERNANDES: So even in the  
8 situation where Keeyask has an in-service date of 2027,  
9 the advancement of Keeyask for export sales is not  
10 materially different from past advancement, correct?

11 DR. ROGER HIGGIN: Correct.

12 MS. ODETTE FERNANDES: Just one (1)  
13 moment, please.

14

15 (BRIEF PAUSE)

16

17 MS. ODETTE FERNANDES: Mr. Chairman,  
18 that's all our questions for now, but I did neglect to  
19 mark what we filed on the record as an exhibit, and I  
20 believe we are at Manitoba Hydro Exhibit number 188.

21 MR. KURT SIMONSEN: That's correct.

22

23 --- EXHIBIT NO. MH-188: Excerpt from ACEE document  
24 entitled "Energy Efficiency  
25 Resource Standards: A New

1 Progress Report on State  
2 Experience."

3

4 THE CHAIRPERSON: Thank you, Ms.  
5 Fernandes. Mr. Peters, please.

6

7 CROSS-EXAMINATION BY MR. BOB PETERS:

8 MR. BOB PETERS: Thank you. Good  
9 afternoon, Mr. Chairman, panel. Good afternoon, Dr.  
10 Higgin.

11 DR. ROGER HIGGIN: Good afternoon.

12 MR. BOB PETERS: Four (4) areas to talk  
13 about. I, too, want to just start with slide 10, but  
14 only -- only briefly. The one (1) point that I don't  
15 think was discussed further by Mr. Orle was to deal  
16 with the clean energy benefit, and you did talk about  
17 that, and I think to demonstrate to the panel, on page  
18 57 of your pre-filed evidence --

19 DR. ROGER HIGGIN: M-hm.

20 MR. BOB PETERS: -- you prepared and  
21 filed Appendix D?

22 DR. ROGER HIGGIN: Yes, that's correct.

23 MR. BOB PETERS: And the purpose of  
24 your preparing Appendix D was to demonstrate to the  
25 panel perhaps how such a clean energy benefit could be

1 simplified for illustrative purposes?

2 DR. ROGER HIGGIN: Correct.

3 MR. BOB PETERS: And in it, what you  
4 did was you calculated what would be the monthly impact  
5 on residential customers at different consumption  
6 levels.

7 That's in Table A?

8 DR. ROGER HIGGIN: Correct.

9 MR. BOB PETERS: And then in Table B,  
10 you did an estimate of the rebates either at 5 percent  
11 or at 10 percent a month, and then adver -- and -- and  
12 then picked those up over the course of a year?

13 DR. ROGER HIGGIN: That's right.

14 MR. BOB PETERS: So when the Board  
15 looks...

16 DR. ROGER HIGGIN: That is correct.  
17 Thank you.

18 MR. BOB PETERS: And I understood from  
19 your evidence, Dr. Higgin, that in Ontario, the rebate  
20 is simply 10 percent of the -- of the energy charge?

21 DR. ROGER HIGGIN: Yes, it's on -- of  
22 the -- of the -- the bill, the energy charge, yes.

23 MR. BOB PETERS: Just the energy  
24 charge, or does it also apply --

25 DR. ROGER HIGGIN: It's the bill, the

1 bill.

2 MR. BOB PETERS: And it's only 10  
3 percent of the bill up to that 3,000 kilowatt hour a  
4 month threshold that you mentioned?

5 DR. ROGER HIGGIN: That's right.

6 MR. BOB PETERS: And what you've done  
7 in Appendix D is you've tried to show to the panel what  
8 the dollar impact would look like in Manitoba if the  
9 government of Manitoba was inclined to introduce  
10 something analogous to a clean energy benefit?

11 DR. ROGER HIGGIN: That is correct.

12 MR. BOB PETERS: And you're showing the  
13 panel here that all of Manitoba Hydro's fourth -- four  
14 hundred and fifty-six thousand one hundred and thirty  
15 (456,130) customers would be eligible?

16 DR. ROGER HIGGIN: That's the  
17 residential, plus all of the others, yes.

18 MR. BOB PETERS: And if all Manitoba  
19 Hydro customers were eligible for the clean energy  
20 benefit at 5 percent, that would have an approximate  
21 cost of 27.87 million per year to the government of  
22 Manitoba?

23 DR. ROGER HIGGIN: That's correct. M-  
24 hm.

25 MR. BOB PETERS: And was that -- was

1 that number selected based on increased water rentals  
2 or increased capital tax, or any other metric?

3 DR. ROGER HIGGIN: Not -- not directly.  
4 Those factors about inflows to -- to the government  
5 account related partic -- asked -- thinking of the  
6 multiple analysis, was -- was borne in mind between --  
7 for example, I didn't look at anything higher than 10  
8 percent. The -- the numbers were getting very high,  
9 and I looked at 5 and 10 percent as being within a  
10 reasonable range, that -- that was all.

11 MR. BOB PETERS: Is it your suggestion  
12 or recommendation to your client, Dr. Higgin, that a  
13 clean energy benefit be pursued regardless of the  
14 development plan that may be selected for Manitoba  
15 Hydro?

16 DR. ROGER HIGGIN: I think that depends  
17 on the bill impacts associated with it. If the bill  
18 impacts are as projected for the -- for the development  
19 plan, I would still recommend that. If the -- if the  
20 plan proposed has lower bill impacts then one would  
21 have to reassess whether or not those were reasonable.  
22 And again, it's sustained long-term bill increases over  
23 the initial period of ten (10) years. That's what  
24 we're addressing here.

25 So the answer is not necessarily. It

1 depends on the -- if the bill increases are higher,  
2 then it's pretty well an answer that says that would be  
3 my recommendation. If they're lower, then maybe I  
4 would consider -- recommend a reconsideration.

5                   What I've seen now, based on the  
6 increased capital costs and so on, the only direction  
7 we're going to go is higher. So the bill increases  
8 will be higher, the rates are going to be higher than  
9 were projected at the 3.94 percent average.

10                   MR. BOB PETERS: So I take your answer  
11 to mean that any rate increases that are sustained for  
12 over the next ten (10) years at or above three point  
13 nine-five (3.95), in your view, would justify  
14 consideration and -- and -- of a clean energy benefit  
15 credit being given back to customers?

16                   DR. ROGER HIGGIN: Or other type of  
17 mitigation. I think my -- my evidence is this is one  
18 (1) example which is the direct approach to mitigation.  
19 There are other indirect measures, ways to do  
20 that smoothing that Hydro has said, and so on. The  
21 idea is, regardless of the method, is to reduce the --  
22 the rates below what otherwise would have happened  
23 during that period. It's a mitigation -- that's what  
24 mitigation is about. So to say, Am I recommending a  
25 CEB is -- is no. The answer -- to say I am recommending

1 some form of mitigation, that's different.

2 MR. BOB PETERS: I understood that from  
3 your evidence, but the -- the only mitigation option  
4 that you've presented that's external involving the  
5 government account would be the clean energy benefit.

6 DR. ROGER HIGGIN: And that is correct.  
7 That -- and that is only -- the only one (1) I've  
8 actually presented in evidence today, because new  
9 evidence has been talked -- given by Manitoba Hydro  
10 about some other alternatives, which I call the  
11 indirect approaches. Then I haven't analyzed those,  
12 number 1. Number 2, they could be a -- a reasonable or  
13 cons -- option to be considered.

14 MR. BOB PETERS: Would those other  
15 options have to have the end result that the consumer  
16 impact would be 10 percent less than a 3.95 percent  
17 increase?

18 DR. ROGER HIGGIN: It doesn't have to  
19 be any particular number. I -- I would say it's like  
20 this, that if the indirect method could smooth or  
21 mitigate the rate increases from, let's say, a -- a  
22 non-mitigated level average rate, I -- I don't like  
23 rate increases, but we're -- we're using those as  
24 billing prices, then I would say anything is better  
25 than nothing.

1                   The issue there is whether or not there  
2 is enough flex -- flexibility, financially or  
3 otherwise, to -- to do that. So how can I put this?

4                   I think that to be significant, we need  
5 to be looking at a 5 to 10 percent reductions in -- in  
6 bills, and it's a government policy objective, I think,  
7 that drives this. And that's in Manitoba, the Clean  
8 Energy Strategy and the AURA, the -- the Affordable  
9 Utilities Rate Act that -- that are drivers for  
10 maintaining the lowest rates in -- in Canada over the  
11 outlook period. That -- that is another factor here  
12 that says the -- the government options have a policy  
13 basis to -- to go forward with.

14                  The other one, the indirects, don't have  
15 a particular policy. They may have implications  
16 related to the government, the finances of the  
17 province, all of those factors, as well as Manitoba  
18 Hydro. I haven't analyzed those. I don't know whether  
19 it helps to broaden the fact that I think some form of  
20 mitigation, one (1) or more of those should be looked  
21 at. And I suggested a time frame which to come back  
22 with such a mitigation that's two (2) to three (3)  
23 years from now.

24                  I'm not saying we're going do it  
25 tomorrow when we come back. The same time that the



1    ISD, I use that as a number of time, the in-service  
2    date for Keeyask will be good because then the revenues  
3    from water rentals and all of those things would start  
4    to flow. And that would be a good time to bring back  
5    some sort of mitigation strategy.

6                   Does that...?

7                   MR. BOB PETERS:    Yes. Thank you, Dr.  
8    Higgin. That -- let's just stay the 10 percent number  
9    because it's on your -- on the screen here on your  
10   slide, I'm sorry, on page 57 of your evidence. But  
11   sticking -- and it's also the Ontario number, correct?

12                  DR. ROGER HIGGIN:   That's correct.

13                  MR. BOB PETERS:    And did I take from  
14   your second last answer to me that, you know, you were  
15   recommending a 5 to 10 percent reduction in the bills  
16   and that 5 -- that 5 to 10 percent reduction should  
17   come from a combination of or any of the mitigation  
18   measures so long as it was at least 5 to 10 percent?

19                  DR. ROGER HIGGIN:   Correct.

20                  MR. BOB PETERS:    And that was 5 to 10  
21   percent for any customer class or every customer class?

22                  DR. ROGER HIGGIN:   In this -- I have  
23   not analyzed whether or not any -- any classes except  
24   residential. There are many other considerations when  
25   you start looking at industrial and, for example,

1 competitiveness considerations and so on.

2 So that's why my response to MIPUG.

3 Another way to apply it would be -- the available  
4 funds, would be to, in essence, use reduced quotes, the  
5 revenue requirement, and that would have an impact like  
6 -- like revenue from exports would apply across all  
7 classes; that's another alternative.

8 So in case of what I think you're trying  
9 to explore is, I didn't look at that because my mandate  
10 and so on was -- was the residential. And particularly  
11 then within the residential I add the thing.

12 Vulnerable consumers are the ones that you need to  
13 worry about within that class. Those are the people  
14 that you should worry about.

15 MR. BOB PETERS: Well, then let's turn  
16 to page 55 of your pre-filed evidence, in Appendix B,  
17 and look at the vulnerable consumer class.

18 These criteria that you set forward are  
19 how you defined a vulnerable consumer, correct?

20 DR. ROGER HIGGIN: Correct.

21 MR. BOB PETERS: And would I be correct  
22 in reading this to suggest that 50 percent of Manitoba  
23 Hydro's all electric customers are vulnerable  
24 consumers?

25 DR. ROGER HIGGIN: Yes.

1 MR. BOB PETERS: Is it -- and -- and on  
2 this particular Appendix B, Dr. Higgin, the vulnerable  
3 consumer must own their own dwelling to fit the  
4 category that's on this sheet?

5 DR. ROGER HIGGIN: Yes, because it's  
6 going to be a reduction on the bill, the question of --  
7 of landlords, for example, rental accommodation. There  
8 -- I think there are other factors that go into dealing  
9 with landlords who are, in essence, operating a  
10 commercial operation. It's a different -- different  
11 thing.

12 So that's why I chose own their own.

13 MR. BOB PETERS: Even though some  
14 tenants may end up paying their own energy charges.  
15 But --

16 DR. ROGER HIGGIN: Yes.

17 MR. BOB PETERS: -- for simplicity, you  
18 -- you restricted it to owners.

19 DR. ROGER HIGGIN: Yeah, I -- for  
20 simplicity, I used the owned homes, yes.

21 MR. BOB PETERS: And underneath the  
22 chart that's on page 55 there's an asterisk which I've  
23 seen a couple of times in your evidence. And it says:

24 "Do not agree new gas generation is  
25 required until post-2023."

1 DR. ROGER HIGGIN: Yeah, what I was  
2 trying to say -- comment is the only comparison for the  
3 -- is the All Gas case, but I'm looking at a period  
4 from 2013 to 2023, and therefore in that period it's a  
5 bit hypothetical to say, Well, the All Gas case when  
6 I'm looking at billing impacts but nonetheless that's  
7 what Manitoba Hydro used, and that's -- so I said,  
8 Well, that's their -- their base case so I should  
9 present it, and I did. Okay. Not -- but I had some  
10 discomfort with it from -- as being a comparator, but  
11 that was all.

12 MR. BOB PETERS: On slide 4 of CAC  
13 Exhibit 76, you talked about DSM. And I don't want to  
14 go over that ground again but one (1) theme that came  
15 up in the questions even most currently from Mr. Gange  
16 was the mandated aspect of the Crowns and I understand  
17 there's more undertakings in -- in that respect.

18 But the essence of your evidence, as I  
19 understood it, Dr. Higgin, was when the Crown is --  
20 utility is mandated they generally get pretty close to  
21 their targets, and I'll have to take that subject to  
22 Ms. Fernandes's Exhibit 188, but -- but I'm presuming  
23 most of these are probably investor owned but -- but  
24 your experience is with the Crown utilities that are  
25 mandated, they tend to come close to their targets.

1 DR. ROGER HIGGIN: I wouldn't say that.  
2 I'd say they -- they do better than if they're not  
3 mandated.

4 MR. BOB PETERS: All right. So now  
5 let's put your hat on when you were on the Ontario  
6 Energy Board, sir, in either of the two (2) terms you  
7 served, how did you mandate utilities in Ontario to --  
8 to achieve a certain level of a program?

9 DR. ROGER HIGGIN: When I was on the  
10 Ontario Energy Board, the only active programs at that  
11 point were the gas programs. Okay. The OPA programs  
12 happened later, so -- but then you need to -- so that's  
13 up to 2000. So after 2000 perhaps, and I'm not  
14 discounting the question. I'm just simply saying the  
15 context.

16 So after that, I was representing a  
17 number of Intervenor in -- in the development of the  
18 CDM programs, and they did still have in the first  
19 batch of programs two (2) -- two (2) features which  
20 were an incentive for the utility. Let's -- I think  
21 I've covered the -- to a degree the gas, but they --  
22 they did have a potential for lost revenue adjustment  
23 which was to compensate them for the lost adjustment.  
24 And they also had shareholder incen -- a small  
25 shareholder incentive, as well, built into the initial

1 electric programs -- electric CDM programs.

2           These were generation 1, I'll call it,  
3 and they were under -- overseen by the Ontario Energy  
4 Board. And then there was generation 2, and then three  
5 (3) or four (4) late -- years later, and I'll guess at  
6 around 2008 the OPA was given the mandate to put in its  
7 -- put in a comprehensive set of province-wide programs  
8 without any incentives.

9           And, so the Board dropped all of the --  
10 the incentives from the remaining OEB approved programs  
11 at that point. So it -- there was a switch where we  
12 had gas -- gas -- sorry, electric utility programs with  
13 incentive, and then we started up OPA programs in  
14 around 2008 but didn't cancel. And then I think it was  
15 2010 the government said, We're going to go first and  
16 foremost OPA universal programs for all utilities, and  
17 then -- but there is the option for utilities to bring  
18 supplementary programs funded out of their own rates.

19           And basically those programs, two (2) or  
20 three (3) came forward, and they were all judged --  
21 those two (2) or three (3) as being too much  
22 overlapping that they would provide competition and  
23 reduce, actually, the value and take up of the Ontario  
24 prog -- Ontario Power Authority programs.

25           So there wasn't any -- so then that sort

1 of turned the switch off on all of the utility owned.  
2 It's still available to them to do that. And then we  
3 went to the OPA programs with the new targets, which  
4 the OEB was involved with and that's where we are.  
5 We're ending that program, I believe, next year. Am I  
6 right, Bill, next year?

7 End of this year. So I don't know  
8 whether that's helpful, but there were programs that  
9 had incentives in -- in them.

10 MR. BOB PETERS: Dr. Higgin, it is  
11 helpful. Are you able -- or are -- are you of any  
12 understanding as to the relatively recent legislation  
13 in Manitoba and the provincial government's involvement  
14 in energy savings initiatives?

15 DR. ROGER HIGGIN: No, I'm not.

16 MR. BOB PETERS: Maybe I can ask it  
17 this way: From your experience, sir, if there is to be  
18 a mandate to achieve a target, is that mandate better  
19 set by the provincial government, or by the provincial  
20 regulator?

21 DR. ROGER HIGGIN: In Ontario, as we  
22 said for the Phase -- the OPA programs, it was  
23 nominally the OEB and in conjunction with the data  
24 that's there with the OPA. So I don't perceive that --  
25 that -- how can I put this, the role of the regulator

1 is to run and be the big boss for the utility programs.

2 And so, therefore, that's -- the rate  
3 implications, the costing -- cost rate -- cost  
4 implications, the rate implications, then all of those  
5 need to be reviewed and considered by -- by the  
6 tribunal as they are now. But the question I think  
7 you're asking is: Should the -- should the PUB become  
8 the OPA?

9 Now, there's only one (1) utility,  
10 right, and it's both gas and electric. And so in --  
11 there is that potential. And my answer is being a bit  
12 -- because I hadn't thought about it, as about would it  
13 be good for the PUB to take on that role for a mandated  
14 program. It certainly would be one (1) possibility.

15 MR. BOB PETERS: The three (3) -- the  
16 third of my fourth areas for questioning is Appendix C  
17 of your evidence on page 56 of CAC Exhibit 27.

18 And you and Board Member Dr. Grant had a  
19 -- a chat about the Affordable Utility Rates Act here  
20 in Manitoba, correct?

21 DR. ROGER HIGGIN: Yes.

22 MR. BOB PETERS: And under this  
23 legislation Manitoba wants to have the -- the lowest  
24 bundle of utility costs when you consider the  
25 electricity, natural gas, and automobile insurance?



1 DR. ROGER HIGGIN: Correct.

2 MR. BOB PETERS: And what you're  
3 showing in the chart, I suppose all three (3) of those  
4 utilities -- or entities come before this Board.

5 What you're showing the Board, though,  
6 in the chart is that Manitoba is the leader and in  
7 terms of total, it's leading -- I guess British  
8 Columbia and Quebec are the next closest pursuers?

9 DR. ROGER HIGGIN: Correct.

10 MR. BOB PETERS: And your point at the  
11 bottom of the page is when you go forward and analyze  
12 out to 2025, Manitoba is still the leader, although  
13 maybe the relative positions of the different utilities  
14 is different, but at the end result it's still -- still  
15 the leader?

16 DR. ROGER HIGGIN: Correct.

17 MR. BOB PETERS: And in that case,  
18 Manitoba Hydro. you can show it goes from eight hundred  
19 and forty-four dollars (\$844) in terms of the annual  
20 cost that's calculated, to one thousand three hundred  
21 and thirty-seven (1,337)?

22 DR. ROGER HIGGIN: That's right.

23 MR. BOB PETERS: And at that point  
24 Quebec is -- is the lowest on the electricity side, but  
25 not overall?

1 DR. ROGER HIGGIN: You are correct.

2 MR. BOB PETERS: And does that suggest  
3 then that under the Preferred Development Plan, based  
4 on the assumptions that went into this table, out to  
5 2025, Manitoba would still be in compliance with that  
6 goal of maintaining the lowest cost bundle of rates for  
7 -- or bills for electricity, natural gas, and  
8 automobile insurance?

9 DR. ROGER HIGGIN: I think the footnote  
10 is critical to look at on the electricity. The  
11 response to CAC/MH II-2-134b has short-term projections  
12 for the other provinces but doesn't go beyond three (3)  
13 -- three (3) or so years out. It does not go to 2025.

14 So basically, what we're in essence  
15 saying, that after two (2), three (3), or four (4)  
16 years, then the -- the changes in other jurisdictions  
17 would be, quote, "at inflation," for this chart. And,  
18 therefore, the gap, as it's shown here in this one,  
19 will be likely considerably increased. The gap is not  
20 correct.

21 Perhaps only the concern would be  
22 Quebec, what's going to happen there. And basically,  
23 the projections in -- in Quebec are for inflation-based  
24 rate projections. When I say, Where does that come  
25 from, it comes from the latest Quebec Hydro. And then

1 that's been taken to account in the response.

2                   Beyond the short-term, the assumption is  
3 inflation. So, therefore, who knows. All I'm pointing  
4 out, that -- not that there's a gap to Quebec, but  
5 maybe Manitoba and Quebec may be close or very similar  
6 in -- based on this projection.

7                   MR. BOB PETERS: All right. Thank you.  
8 I have your point. And then lastly, turning to page 47  
9 of your pre-filed evidence, I think you actually  
10 referenced it in your direct evidence to -- to the  
11 slides earlier, page 47, and it should be line 1,404.  
12 And underneath that is a pyramid --

13                   DR. ROGER HIGGIN: Yes, m-hm.

14                   MR. BOB PETERS: -- or maybe a  
15 compilation of pyramids.

16                   DR. ROGER HIGGIN: Yes.

17                   MR. BOB PETERS: You had referenced  
18 this in your -- in your initial discussions, I think,  
19 in answer to one (1) of the panel members. The upshot,  
20 as I recall in my notes, is that you said that the  
21 public interest is -- is basically the -- the foremost  
22 consideration?

23                   DR. ROGER HIGGIN: Yes. And it's --  
24 it's part of the pyramid which compo -- these other  
25 important considerations.

1                   MR. BOB PETERS:   And when we come to  
2 defining public interest, what recommendations have you  
3 given your client as to how it should be defined?

4                   DR. ROGER HIGGIN:   Public interest is,  
5 in essence, taking these -- these blocks, that is,  
6 ratepayer consideration, socioeconomic development,  
7 sustain... and environment, and other factors, which  
8 would be the economy and so on, which aren't on this  
9 chart, and decide in the public interest which way we  
10 should go with the proposal, particularly major  
11 proposal, such as is before the panel. That's what  
12 this tries to dictate. It's a conceptual, strategic  
13 policy framework.

14                  MR. BOB PETERS:   So this panel should  
15 be guided that the decision that they make should be in  
16 the public interest and the decision they do make  
17 collectively will be in the public interest because of  
18 all the evidence they've heard, all the considerations  
19 or deliberations that they will do?

20                  DR. ROGER HIGGIN:   Absolutely.

21                  MR. BOB PETERS:   Okay.

22                  DR. ROGER HIGGIN:   That's -- that's all  
23 I'm saying, yes.

24                  MR. BOB PETERS:   All right. I thank  
25 you for that.

1                   And, Mr. Chairman, I want to thank Dr.  
2 Higgin and maybe to a much lesser degree Mr. Harper for  
3 their answers this afternoon. I appreciated that.  
4 Thank you.

5                   THE CHAIRPERSON: Thank you, Mr.  
6 Peters. Ms. Fernandes, any questions on redirect?

7                   MS. ODETTE FERNANDES: Nothing. Thank  
8 you, Mr. Chairman.

9  
10                   (BRIEF PAUSE)

11  
12                   THE CHAIRPERSON: I guess a question  
13 for the panel is the document that was -- the base  
14 document for the exhibit that Manitoba Hydro tabled the  
15 question is whether or not that might be made available  
16 to the panel tonight.

17                   Is it possible to get a copy of that  
18 document?

19                   Okay, that's fine. We got it. We --  
20 Board Member Grant found it, and we'll make it  
21 available to the rest of the panel. So thank you very  
22 much.

23                   I'm looking around the room. I don't  
24 think there's any business to conduct so with that, I  
25 will adjourn the proceedings for today.

1                   And I want to thank Dr. Higgin. Thank  
2 you very much for your contribution to the work of this  
3 panel and -- and --

4                   DR. ROGER HIGGIN: Thank you for  
5 listening.

6                   THE CHAIRPERSON: -- your contribution  
7 yet to come, and I wish you a safe trip home. And the  
8 rest of us will likely be here again tomorrow morning  
9 at nine o'clock, so have a good evening, everyone.  
10 We'll see you again tomorrow.

11

12                   (WITNESS STANDS DOWN)

13

14 --- Upon adjourning at 4:16 p.m.

15

16

17 Certified Correct,

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20 \_\_\_\_\_

21 Cheryl Lavigne, Ms.

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