

**BRITISH COLUMBIA UTILITIES COMMISSION**  
**IN THE MATTER OF THE UTILITIES COMMISSION ACT**  
**S.B.C. 1996, CHAPTER 473**

**and**

**An Application by British Columbia Hydro and Power  
Authority (BC Hydro) for the Approval of the  
2008 Long-Term Acquisition Plan (2008 LTAP)**

**Vancouver, B.C.**  
**March 6, 2009**

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**PROCEEDINGS AT HEARING**

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**BEFORE:**

<b>A. J. Pullman,</b>	<b>Chairperson</b>
<b>B. Milbourne,</b>	<b>Commissioner</b>
<b>M. Harle,</b>	<b>Commissioner</b>

**VOLUME 14**

## APPEARANCES

G.A. FULTON, Q.C.	Commission Counsel
C. GODSOE K. THRASHER	British Columbia Hydro and Power Authority
D. CURTIS	British Columbia Transmission Corporation
M GHIKAS	Terasen Gas Inc., Terasen Gas (Vancouver island) Inc., Terasen Gas (Whistler) Inc.
F. WEISBERG	Columbia Power Corporation
E. WALKER	Pristine Power Inc.
C. BOIS	NaiKun Wind Energy Group Inc.
D. AUSTIN	Independent Power Producers of British Columbia
B. WALLACE K. SEYMOUR	Joint Industry Electricity Steering Committee
C. WEAVER	Commercial Energy Consumers of British Columbia
J. QUAIL L. WORTH	B.C. Old Age Pensioners' Organization, the Active Support Against Poverty, B.C. Coalition of People with Disabilities, Council of Seniors' Organizations of B.C., End Legislated Poverty, Federated Anti-Poverty Groups of B.C., and the Tenants' Rights Action Coalition
W. ANDREWS	B.C. Sustainable Energy Association; Sierra Club Of Canada, B.C. Chapter
R. GATHERCOLE	Peace Valley Environmental Association
L. BERTSCH	Horizon Technologies Inc./Energy Solutions for Vancouver Island Society; Okanagan Environmental Industry Alliance; Island Transformation.Org; Rental Owners and Managers Society of BC
M. OULTON L. WINSTANLEY	COPE 378
P. COCHRANE	City of New Westminster
R. FLETCHER	Texada Action Now Community Association

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**CAARS**

VANCOUVER, B.C.

March 6, 2009

**(PROCEEDINGS RESUMED AT 8:30 A.M.)**

THE CHAIRPERSON: Please be seated.

**B.C. HYDRO PANEL 4 - LTAP ACTION ITEMS**

**CAM MATHESON, Resumed:**

**RANDY REIMANN, Resumed:**

**STEVE HOBSON, Resumed:**

**JAMES SCOURAS, Resumed:**

**MICHAEL JAMES SAVIDANT, Resumed:**

THE CHAIRPERSON: Mr. Fulton, good morning.

MR. FULTON: Good morning, Mr. Chairman, Commissioners.

I had one matter that I was to come back to the Commission Panel on, and that was a matter of scheduling. We're not quite there on the scheduling at this point, Mr. Chairman, and so what I would like to propose is that I come back to you on the morning of the 12<sup>th</sup> with hopefully a proposal which everybody here can live with, including the Commission Panel.

THE CHAIRPERSON: Thank you, and it will be 9:00 on Thursday the 12<sup>th</sup>?

MR. FULTON: That's your call, Mr. Chairman.

THE CHAIRPERSON: That I'm calling, 9:00.

MR. FULTON: All right. Thank you, Mr. Chairman.

THE CHAIRPERSON: Thank you, Mr. Fulton.

1 **CROSS-EXAMINATION BY MR. BOIS (CONTINUED):**

2 MR. BOIS: Q: Good morning, Mr. Chairman,  
3 Commissioners, panels.

4 Yesterday we broke at a really convenient  
5 time because I just have one more topic to talk about  
6 and it's really going to be short. And I spoke with  
7 Mr. Godsoe, and Mr. Reimann, it seems that you're the  
8 likely culprit I have to talk to today. The rest of  
9 you can relax, have coffee, drink your bottle of  
10 water. And it's to do with the filing that was filed  
11 yesterday, Mr. Reimann, Exhibit B-41 which was B.C.  
12 Hydro's Undertaking No. 42.

13 MR. REIMANN: A: Yes.

14 MR. BOIS: Q: Do you have that table handy in that  
15 exhibit?

16 MR. REIMANN: A: I do.

17 MR. BOIS: Q: Now, we confirmed yesterday that the  
18 units have to be amended. I believe Mr. Godsoe made  
19 that point and it should be megawatts instead of  
20 gigawatt per hour, right?

21 MR. REIMANN: A: Correct, all three line items.

22 MR. BOIS: Q: All three columns, all three rows, okay.  
23 Now, I'd just like to talk to you -- I  
24 tried to understand the source of the data and I  
25 understand it comes from Appendix F, Exhibit B1-1, and  
26 I am told that that's called, euphemistically, the

1           RODAT database?

2   MR. REIMANN:    A:    Yes.

3   MR. BOIS:       Q:       And for the life of me I couldn't figure  
4                   out how you got 117 megawatts.  Could you help me out  
5                   there, in F216?  Or 2016, sorry.

6   MR. REIMANN:    A:       So what this table shows is for any  
7                   future resources that we are forecasting, or we model  
8                   in our portfolios that might be acquired, and when we  
9                   do that we're not actually in these portfolios saying  
10                   these are the next resources we'll buy.  It's the  
11                   program is in a linear optimization fashion, trying to  
12                   determine if it shows what the next resources will be.  
13                   So from Appendix F-1, there's a whole series of  
14                   different resource options.  We've built those up into  
15                   bundles.  The program then selects these bundles to  
16                   fill the gap after the DSM is in the plan.

17                   And based on that, there was a number of  
18                   wind bundles that were selected, and this is reporting  
19                   out both the installed capacity, how we've modelled  
20                   the effective load-carrying capability, and what we  
21                   would have assessed as the dependable capacity for  
22                   those bundles that were selected.

23                   I should add, actually, that we looked at  
24                   this table again when we looked at the units.  We went  
25                   back to the transcript, and upon reading it again I  
26                   think we may have misinterpreted what the request was

1 of saying what is all wind that's in the load resource  
2 balance and what this contributes. So we're going to  
3 be revising the numbers to include the current wind  
4 projects that were awarded in the '06 column.

5 MR. BOIS: Q: Well, that's a relief, because I was  
6 going to ask you about that because Bear Mountain is  
7 probably going to be onstream this fall, right? And  
8 that's about 120 megawatts thereabouts?

9 MR. REIMANN: A: Yes.

10 MR. BOIS: Q: And the other two are sort of in limbo.  
11 That would be Doki at 180 megawatts and Mount Haze at  
12 about 25.2 or so.

13 MR. REIMANN: A: Right.

14 MR. BOIS: Q: Okay. That's great.

15 Now, and the other question I guess you  
16 could clarify for me, and I guess, you know, hopefully  
17 the updated table will answer, will provide some more  
18 clarification. But just going forward, looking at the  
19 timeline of this capacity coming onstream, this is  
20 just really -- this isn't a forecast of what you  
21 intend to buy really. It's just to sort of assist  
22 them dump, if you will, of filling in the gap with  
23 wind. Is that how I understood what you were saying  
24 at the beginning?

25 MR. REIMANN: A: So we have these -- went and tried to  
26 characterize the resource options that were available

1 in the province, and we did that originally in our  
2 resource options report that was in the 2006 IEP/LTAP.  
3 For this one we went and tried to update what was  
4 available primarily for those resources that we're  
5 seeing.

6 So we did do some additional analysis in  
7 terms of what available small hydro resources are out  
8 there. We use from the wind largely investigative use  
9 permits to estimate what wind is being investigated.  
10 And then we tried to put a cost to that, and we did  
11 that in concert with intervenors and IPPs to say, "Is  
12 this a reasonable range?" Based on that then, we have  
13 a stack of resources that have a certain  
14 characterization of what the resource looks like in  
15 terms of monthly energy capacity, capacity  
16 availability. And we then take those profiles and  
17 costs, and then the program based on meeting the load  
18 resource balance, will pick what it believes to be an  
19 optimal set of resources for a given set of conditions  
20 in a portfolio.

21 So it's entirely a predictive -- it gives  
22 us enough clarity to be able to compare portfolios but  
23 we in no way intend to predict what we'd actually be  
24 acquiring in acquisition processes.

25 **Proceeding Time 9:37 a.m. T2**

26 MR. BOIS: Q: Okay, and I just wanted to end on a

1 positive note. This table shouldn't be seen as a sign  
2 by wind proponents that B.C. Hydro isn't going to  
3 acquire wind in the future, is it?

4 MR. REIMER: A: No, no.

5 MR. BOIS: Q: Okay, that's all I wanted to confirm.  
6 Thank you very much.

7 Those are my questions, Mr. Chairman.

8 THE CHAIRPERSON: Thank you, Mr. Bois.

9 So if I can follow up on that, you will be  
10 -- I understand your response that you'll be  
11 resubmitting B-41?

12 MR. REIMER: A: We will.

13 THE CHAIRPERSON: And will it be linked in any way to  
14 appendix O, page 15 of 15?

15 MR. REIMER: A: So the -- I think it will come to the  
16 evidentiary update, but for the base resource plan it  
17 will show all wind projects that are either in or  
18 forecasted in.

19 THE CHAIRPERSON: That's fine, thank you.

20 MR. FLETCHER: Good morning, Mr. Chairman.

21 THE CHAIRPERSON: Good morning, Mr. Fletcher.

22 **CROSS-EXAMINATION BY MR. FLETCHER:**

23 MR. FLETCHER: Q: I apologize for not being present for  
24 the third panel. I mean, I hope you will excuse me if  
25 some of my questions might vary to the rate design  
26 aspect, but they will be principled only, and I hope you

1 can answer them.

2 Okay, now I understand this panel is  
3 responding to questions of contingency, what we should  
4 expect under the LTAP plan and how B.C. Hydro will  
5 respond if things do not go as planned. Is that  
6 correct?

7 MR. MATHESON: A: Yes.

8 MR. FLETCHER: Q: Yes. The first question I want to  
9 ask is just on the running of Burrard. Really, it's  
10 just for clarification. Mr. O'Riley was discussing  
11 with Mr. Weaver earlier last week the running of  
12 Burrard and the building of EL83, and Mr. O'Riley said  
13 that the energy issue is disconnected from the EL83  
14 issue, and I wanted --

15 MR. MATHESON: A: Sir, just to clarify, I think you are  
16 talking about 5L83, which is the proposed --

17 MR. FLETCHER: Q: Yeah, 5L83, yes.

18 MR. MATHESON: A: -- interior/Lower Mainland  
19 transmission line.

20 MR. FLETCHER: Q: Right. And I wondered if you could  
21 explain that statement that Mr. O'Riley said.

22 MR. MATHESON: A: Can you take me through it again?

23 MR. FLETCHER: Q: Yeah. He said that the building of  
24 EL83, Mr. O'Riley said that the energy issue is  
25 disconnected from the EL83 issue, particularly with  
26 reference to Burrard.

1 MR. GODSOE: Maybe I can help a little bit. I think the  
2 discussion was around reliability must run in Burrard  
3 and how that was more of a capacity issue, not an  
4 energy issue, and I'm not sure if this panel can add  
5 much more clarity, but I'll let the question go to  
6 them and perhaps they can Mr. Fletcher out.

7 MR. FLETCHER: Q: Yeah. Well, my next question was  
8 going to be, if that's the case, I take it B.C. Hydro  
9 will be relying on its 3,000 gigawatt hours for  
10 Burrard to 2019 whether or not EL83 is actually built.

11 MR. MATHESON: A: Well, the proposition we are putting  
12 forward is that you need Burrard as a dispatchable  
13 plant in the Lower Mainland/Vancouver Island region  
14 because it is essentially an electricity island, as I  
15 think I talked about on panel 2, until you've got the  
16 reinforced transmission capability that 5L83 will  
17 eventually bring.

18 MR. FLETCHER: Q: So even if you have the reinforced  
19 transmission capability, you'll still need Burrard for  
20 capacity and energy?

21 MR. MATHESON: A: Well, I think what we are -- we are  
22 arguing that we'll continue to look at what our needs  
23 will be in the Lower Mainland and Vancouver Island  
24 even after 5L83 comes into service. Burrard provides  
25 a whole bunch of other additional services, not just  
26 capacity and energy, but it provides ancillary

1 services to the system. And so once we -- assuming we  
2 get the go ahead to spend the money and do the work  
3 that we'd like to do, Burrard will relook at it and  
4 ask ourselves what kind of value we think we can get  
5 from Burrard going out into the future once 5L83 comes  
6 into service.

7 So what we are saying right now is you need  
8 it until it's there, and once it is there we'll have  
9 another look at it and ask ourselves what kind of  
10 performance we can get out of Burrard, given that 5L83  
11 is in service.

12 Mr. Reimann may want to add something here.

13 MR. REIMANN: A: Sorry, I was just trying to be helpful  
14 in terms of distinguishing between capacity and  
15 energy. So Burrard, as capacity, is to meet the  
16 winter peak and that's where transmission constraints  
17 can be most of a concern that we can't get enough  
18 resources to lever to the Lower Mainland. So we've  
19 estimated within the portfolio analysis -- or sorry,  
20 not within the analysis but within the LTAP  
21 application that we'd estimate some 600 gigawatt hours  
22 a year for peaking service. That's to meet winter  
23 peak loads.

24 The 3,0000 gigawatt hour as an energy  
25 number would be needed and then offset either by  
26 Heritage hydro non-firm energy, so depending on how

1 much water we get in the reservoirs and whether or not  
2 the market is cheaper. So one for transmission,  
3 that's capacity; the other in terms of energy is  
4 either Heritage hydro or market.

5 **Proceeding Time 8:42 a.m. T03**

6 MR. FLETCHER: Q: Okay. Just turning to the Terasen  
7 contract, because clearly if you're relying on 3,000  
8 gigawatt hours of Burrard, you want to be absolutely  
9 sure this Terasen contract that you have for shipment  
10 of gas is solid.

11 MR. MATHESON: A: Well, I think Mr. O'Riley was pretty  
12 clear on that account.

13 MR. FLETCHER: Q: Okay. So I can tell -- I can judge,  
14 then, from that answer that you've examined Terasen's  
15 critical supply network, and you don't have any reason  
16 to suspect that Terasen would not perform under  
17 critical conditions?

18 MR. MATHESON: A: Well, I -- like I said --

19 MR. GODSOE: I do think Panel 2 addressed that issue, and  
20 the transcript should speak for itself on that issue,  
21 Mr. Chairman.

22 MR. FLETCHER: The reason I'm asking the question is that  
23 Mr. O'Riley himself cast some doubt as to whether  
24 Terasen would actually honour the contract.

25 MR. GODSOE: I don't believe that's true, and I think the  
26 record can speak for itself on that issue.

1 MR. FLETCHER: Well, he seemed to go into the -- he  
2 explained that they paid a lot -- an awful lot of  
3 money to Terasen for the contract, and that he was --  
4 he would be absolutely gob-smacked if they didn't  
5 provide the service, but there was still the doubt --  
6 if you read the transcript, that he had some doubt  
7 whether they would actually fulfill the contract.

8 MR. GODSOE: Well, I'm not going to argue this, but the  
9 transcript's quite clear, and it was definitely for  
10 Panel 2, and I'm not prepared to have this question  
11 proceed any further, Mr. Chairman.

12 THE CHAIRPERSON: As Mr. Godsoe says, the transcript will  
13 speak for itself.

14 MR. FLETCHER: Thank you, Mr. Chairman.

15 MR. FLETCHER: Q: A question on the thermal limit. We  
16 went through the ten percent, or I think Mr. -- so  
17 when you were on the stand, and we discussed the ten  
18 percent limit relative to various levels of running at  
19 Burrard.

20 Now, B.C. Hydro's requirement, as we know,  
21 to maintain this 90 percent clean energy supply, and I  
22 think you explained the 90 percent is calculated on a  
23 rolling five-year average, and that then you said that  
24 you're running at 93 to 94 percent clean, and then I  
25 think Mr. O'Riley said that was based on running at  
26 500.

1 MR. MATHESON: A: Based on what, I'm sorry?

2 MR. FLETCHER: Q: Based -- running at Burrard under  
3 500.

4 MR. MATHESON: A: Okay, yeah.

5 MR. FLETCHER: Q: So, we then went on to say that three  
6 percent is about 2,000 gigawatt-hours in a 60,000 watt  
7 -- gigawatt system. So if you put the numbers  
8 together, how much flexibility does B.C. Hydro  
9 actually have within the ten percent limit? So in  
10 other words, if you were running at 93 to 94 percent  
11 clean, based on running at Burrard at around -- at  
12 under 500, and you have yet to put on the CCGT at Fort  
13 Nelson, and three percent equals to 2,000 gigawatt  
14 hours, how much of that 3,000 for firm energy from  
15 Burrard can you put on each year and still meet that  
16 90 percent clean test?

17 MR. MATHESON: A: Well, I think we talked about that,  
18 and so if you've got, you know, another three percent  
19 to work with, and you know, in my calculation that  
20 would be -- yeah, a couple of thousand gigawatt hours,  
21 I think there's your answer.

22 MR. FLETCHER: Q: Well, I'm not sure that that is the  
23 answer, because on the transcript, O'Riley said you  
24 were running at less than 500, and that 3 percent  
25 equals 2,000, so the maximum you can run Burrard and  
26 meet the 10 percent limit is two and a half. Is it

1 not?

2 MR. MATHESON: A: I don't think -- I'd have to do the  
3 calculation, but I don't know that that's actually  
4 true.

5 MR. GODSOE: It might be helpful, too, to just give my  
6 legal view on this 90 percent, because it's going to  
7 be coming in argument, Mr. Chairman. It might help my  
8 friend out.

9 He did say "required to maintain". That's  
10 not true. So the 90 percent is a policy action in the  
11 Energy Plan, and obviously we give it significant  
12 weight. It is not a legislative renewable portfolio  
13 standard. Pursuant to Section 64.02 of *The Utilities*  
14 *Commission Act*, the government has the ability to  
15 legislative it, has not done so.

16 So, just so we're clear, it's a policy we  
17 take very seriously, and we can have questions about  
18 how it's measured, but it is not legally binding, it  
19 is not a renewable portfolio standard. I just wanted  
20 to be clear on that.

21 **Proceeding Time 8:47 a.m. T4**

22 MR. MATHESON: A: I think the other thing worth  
23 pointing out, Mr. Fletcher, is that while the  
24 provincial government has set out the resource  
25 definitions of what it considers to be clean or  
26 renewable, it actually hasn't yet set down how it

1 intends for the measure to actually -- sorry, for the  
2 policy to actually be measured. So for the purposes  
3 of this, we've have to make some assumptions about  
4 what that would be considering that B.C. Hydro is the  
5 predominantly big utility in the system. But the  
6 policy itself is intended to be for the entire  
7 province as a whole, which would include the Fortis  
8 contribution and other contributions.

9 And so, as I said, the province hasn't yet  
10 come forward with how it intends on measuring this  
11 target, and we've had to make some assumptions about  
12 it. So I wouldn't rely on it, frankly, all that much  
13 until the provincial government actually comes out and  
14 gives us a clear view of how this is to be measured,  
15 and then we'll have a better indication of what we can  
16 do within it and what we can't.

17 MR. FLETCHER: Q: So you are saying to me that it's a  
18 province-wide test. So until we come up -- until the  
19 province comes up with a definition as to how that is  
20 to be applied, it would indicate to me then that you  
21 do have some real constraints in running Burrard, even  
22 at two and a half.

23 MR. MATHESON: A: No, I -- well, that's your  
24 conclusion. That's not mine.

25 MR. FLETCHER: Q: Okay. Well, I think it would be  
26 useful, for me at least, if you were to put together a

1 calculation that would indicate what level you could  
2 run Burrard and meet the -- what you anticipate to be  
3 the 90 percent clean test at the moment. Thank you.

4 MR. GODSOE: No, I'm not prepared to take that  
5 undertaking. I don't believe there is a test. That  
6 was my whole point of my submissions. We've taken an  
7 operational view and you can ask this panel about  
8 that, but I'm not prepared to take that undertaking.  
9 I don't think it's relevant.

10 THE CHAIRPERSON: I think you should address, ask Mr.  
11 Reimann if when he was running his portfolios, if he  
12 treated the 90 percent as a constraint.

13 MR. FLETCHER: Q: Well, could I ask that question. Did  
14 you accept that as a constraint?

15 MR. REIMANN: A: We tracked the 90 percent target but  
16 we didn't make it a constraint. In most of the  
17 portfolios we looked at, we didn't exceed the 90  
18 percent, or go below the 90 percent run rate.

19 What I would say, though, is most of the  
20 portfolios, where the portfolios that we ran were  
21 based on an expected view of the world. And so if we  
22 ran into the dry water sequence and the market wasn't  
23 available at an economic price, then we'd be in a  
24 situation where we'd need to run Burrard. So that  
25 would be not a regular or an expected outcome. And I  
26 can't imagine for the life of me that the day came in

1 the operational timeframe, that if we needed Burrard  
2 to run to support the system, that we wouldn't be able  
3 to do that.

4 MR. MATHESON: A: And that, frankly, is why we have  
5 heard from the province that their indication is that  
6 they will eventually, when they give us their view of  
7 how to measure this, that it will likely be on a five-  
8 year rolling average. Because if in any given  
9 sequence of time we were required to run Burrard, for  
10 instance, for the reasons Mr. Reimann has just laid  
11 out, that it wouldn't then cause us to have to look at  
12 it and go, "Well, geeze, we can't run Burrard because  
13 we're now butting up against that 90 percent." So the  
14 idea of a five-year rolling average is that as a whole  
15 over this period of time, the system is to maintain a  
16 90 percent clean and renewable standard. But if for  
17 whatever reason we actually had to run Burrard for low  
18 water reasons or any other reasons, outages on the  
19 system, that that wouldn't count against us and  
20 wouldn't prohibit us from having to do that.

21 So, as I said, I think we still have to  
22 determine what this measure is going to be, how we're  
23 going to calculate it, and we need to wait for the  
24 government to tell us how they wish that to happen.  
25 Then we can make some assumptions about it.

26

**Proceeding Time 8:51 a.m. T05**

1 MR. FLETCHER: Q: But in the mean -- yeah. But in the  
2 meantime, you want approval from the Commission, and  
3 that -- of this particular LTAP plan, based on  
4 reliance of 3,000 and a critical water EAS sequence.  
5 And we still don't have the guidelines from the  
6 government how that 90 percent is to be defined.

7 MR. REIMANN: A: The observation I might make, Mr.  
8 Fletcher, is that we're requesting the Commission to  
9 accept the reduction from 6,000 gigawatt hour reliance  
10 down to 3,000.

11 MR. FLETCHER: Q: Okay.

12 MR. REIMANN: A: Which in fact would be more in line.

13 MR. FLETCHER: Q: Well, I think we'll accept Mr.  
14 Godsoe's offer to address that, this very issue, in  
15 argument, and hopefully he will then address where the  
16 3,000 sits within a definition of the 90 percent.

17 Can I just move on, then, to demand-side  
18 management. I think it was Steve Hobson said  
19 yesterday that the demand-side management program is  
20 characterized as capacity-based rather than energy-  
21 focused. Is that correct?

22 MR. HOBSON: A: You may be confusing some statements I  
23 would have made when I was being asked questions about  
24 our definition phase plan funding, as part of this  
25 Order. That is more focused on capacity. But I think  
26 you've got, in terms of the DSM plan that we've put

1 forward, you've got the opposite.

2 MR. FLETCHER: Q: All right. So, can you explain that,  
3 then, sorry?

4 MR. HOBSON: A: Explain which, sorry?

5 MR. FLETCHER: Q: So, the DSM plan that you have -- now  
6 have is -- does it relate to energy and capacity?

7 MR. HOBSON: A: It relates to both, and I think I  
8 characterized it yesterday as something where we're  
9 really targeting or going after energy primarily, but  
10 when you target energy, there is a significant amount  
11 of associated capacity that can come with that and  
12 does come with that.

13 MR. FLETCHER: Q: Okay.

14 MR. HOBSON: A: And so this plan will accomplish both  
15 those things.

16 MR. FLETCHER: Q: Now, there is an exhibit here, it's  
17 page 5.58, which is the jurisdictional comparison  
18 filed by B.C. Hydro, and it's table 5, page 19 of  
19 Exhibit B-1. It's one sheet giving a table of average  
20 annual DSM energy savings as percent of sales.

21 MR. HOBSON: A: I have that.

22 MR. FLETCHER: Q: Now, in this case in B.C. Hydro, we  
23 have -- I think we have a marginal rate of \$120 a  
24 megawatt? The marginal rate of new --

25 MR. HOBSON: A: Sorry, marginal rate?

26 MR. FLETCHER: Q: -- power is \$120 per megawatt.

1 MR. HOBSON: A: So, I just want to be clear. When you  
2 say "rate" are you talking about an electricity rate  
3 provided to consumers, or are you referring to the  
4 avoided cost?

5 MR. FLETCHER: Q: The construction -- it will cost \$120  
6 per megawatt to build new generation.

7 MR. HOBSON: A: Correct. That's the result coming from  
8 this LTAP.

9 MR. FLETCHER: Q: And what is your embedded average  
10 cost of generation in the Heritage assets?

11 MR. HOBSON: A: I don't know that number.

12 MR. FLETCHER: Q: It's about \$38 a megawatt. You can  
13 take that, subject to check. That comes out of your  
14 financial statements.

15 MR. REIMANN: A: Sure, we'll accept that, subject to  
16 check.

17 MR. FLETCHER: Q: Okay. And you based your rate design  
18 last year on \$88 a megawatt.

19 MR. REIMANN: A: That was the result of the 2006 Call.

20 MR. FLETCHER: Q: Okay. And this was gone through by  
21 somebody, one of my predecessors on the stand. So  
22 you've got a step rate increase of around 40 percent,  
23 between -- it's over 40 percent between 120 and 88.  
24 Is that correct?

25 MR. HOBSON: A: Subject to check, the numbers sound  
26 about right.

1 MR. FLETCHER: Q: Yeah? And if you take the average  
2 rate --

3 MR. SCOURAS: A: Mr. Fletcher -- Mr. Fletcher, if I  
4 could just add one comment. The \$88 was based on the  
5 actual prices we received in the 2006 Call, whereas  
6 the \$120 is the planning construct from Mr. Reimann's  
7 group. So I just want to make sure we're clear on the  
8 difference between those two numbers.

9 **Proceeding Time 8:55 a.m. T6**

10 MR. FLETCHER: Q: Thank you. And if you take the  
11 average rate, which was \$38, subject to check, versus  
12 the 120, which is the new purchase rate in 2010, it's  
13 a multiple of around two and a half times. Is that  
14 correct?

15 MR. REIMANN: A: So you're saying the 120 --

16 MR. FLETCHER: Q: Well, if I divide 120 by 38 -- well,  
17 let's take 120 but divide it by 38, I get 3.15, three  
18 times.

19 MR. REIMANN: A: Correct.

20 MR. FLETCHER: Q: Now, if you turn to that table which  
21 you've provided as an exhibit, can you give me the  
22 details of each of those utilities, I don't expect you  
23 to give them to me now; but in terms of the average  
24 rate and the marginal rate for those utilities?

25 MR. GODSOE: I believe that we actually put an  
26 information request to BCSEA precisely on this topic

1           and got some results back. So I think it's been asked  
2           and answered. I'm just going to double-check that.

3 MR. FLETCHER:    Q:    Can you give me a flavour of what the  
4           answer is, please?

5 MR. HOBSON:     A:    I can't across the range of utilities.  
6           I think you'll find that -- and I want to be clear  
7           when you're using the terms that you're using, if  
8           you're talking about the electricity prices that  
9           they're charging as well as their avoided costs?

10 MR. FLETCHER:    Q:    Sorry?

11 MR. HOBSON:     A:    I just want to be clear with respect to  
12           the terms that you're using, if what you're talking  
13           about is both the electricity prices being charges to  
14           customers as well as the avoided cost being --

15 MR. FLETCHER:    Q:    We're looking purely at the cost base  
16           of those utilities. In other words, what they have to  
17           recover in terms of revenue requirement. We're  
18           looking at the embedded costs and the incremental  
19           costs of new capacity.

20 MR. HOBSON:     A:    So the rates.

21 MR. FLETCHER:    Q:    Yeah.

22 MR. GODSOE:     I think we should turn to Exhibit C21. I  
23           mean, it's going to be difficult because of course of  
24           BCSEA's evidence. But if we can turn to Exhibit C21-  
25           6, and there's a series of responses that start at  
26           page 4 -- sorry, page 5 of 8 where we walk through

1           some different utilities and get him to confirm some  
2           of their existing rates.

3 MR. HOBSON:    A:    What was the page reference?

4 MR. GODSOE:    It's page 5 of 8, Exhibit C21-6.  It's the  
5           portion of the responses to B.C. Hydro's IRs, not the  
6           Commission IRs.

7 MR. HOBSON:    A:    It was page 5 of 8 within that?

8 MR. GODSOE:    Starting at page 5 of 8 and we start to get  
9           into a description of how different rate levels vary  
10           amongst jurisdictions.

11 MR. FLETCHER:  Q:    I guess -- let's move on.  But what  
12           I'm trying to ask you is, are these utilities valid  
13           comparisons to B.C. Hydro in terms of where you are in  
14           terms of your cost base and your incremental rates?

15 MR. HOBSON:    A:    Well, I think the one thing, you know,  
16           maybe you could take a step back when you look at a  
17           table like this.  I may be able to help you out in a  
18           way broader than just taking a look at your embedded  
19           costs and rates and what their marginal costs may be.

20                    But when we take a look at demand-side  
21           management and we're using a table like this, I think  
22           it's a useful table and it's a useful table for  
23           comparison, but we shouldn't be too precise about how  
24           we apply the results from it.  We're going to have a  
25           lot of differences between different jurisdictions  
26           with respect to rates, potentially with respect to

1 their embedded costs and their marginal costs. We're  
2 definitely going to have differences with respect to  
3 the opportunities that they have within their  
4 marketplace with respect to demand-side management.  
5 So just the very makeup of their end uses or their  
6 marketplace with respect to splits between industrial  
7 customers and residential and commercial, not to  
8 mention the end uses within that.

9 I mentioned the rates earlier, the codes  
10 and standards that may have already been put in place  
11 within the jurisdiction. These could all be factors  
12 that would significantly change the size of the  
13 opportunity.

14 **Proceeding Time 9:00 a.m. T07**

15 And then I think there's also accounting  
16 differences with respect to -- we're probably one of  
17 the few utilities that takes a fairly aggressive  
18 position in decaying the persistence of our savings.  
19 There's a number of utilities, Manitoba would be an  
20 example, when they account for a CFL, they essentially  
21 account for a CFL as perpetual persistence through the  
22 planning period. So, the amount of savings that  
23 they're going to be getting at a point in time could  
24 look a lot different than a different jurisdiction.  
25 So there's a number of differences that you need to  
26 take into account.

1                   So I think you need to be careful in  
2                   drawing too precise a conclusion from a benchmark  
3                   table. I think it provides some guideposts for us.

4 MR. FLETCHER:   Q:    But, Ms. Van Ruyven on the stand said  
5                   that B.C. Hydro's leading the way on demand-side  
6                   management.

7 MR. HOBSON:    A:    Well, and I think we are. I think when  
8                   we take a look at the proposal that we put forward, I  
9                   think we're among the more aggressive utilities that  
10                  are out there, and I think if you -- I can certainly  
11                  speak for having discussions with other utility  
12                  groups, and when we talk about the plan that we're  
13                  moving forward with, and we're talking about some of  
14                  the similar challenges that they're facing within  
15                  their jurisdiction, I think they are seeing B.C. Hydro  
16                  as taking a very large step forward from where we've  
17                  been in the past and where they're at now, and a lot  
18                  of them are contemplating whether or not they're going  
19                  to be taking a similar step like that in the future,  
20                  and they're quite interested in getting learnings from  
21                  us.

22 MR. FLETCHER:   Q:    So when you look at some data from  
23                   comparative utilities in terms of their success, do  
24                   you want to be absolutely sure in terms of the  
25                   firmness of that data and how it is valid to B.C.  
26                   Hydro?

1 MR. HOBSON: A: Absolutely. But again, I think you've  
2 got to be careful in terms of how you use that data.  
3 I think there's always things that we can learn from  
4 different utilities, and sometimes it will be at a  
5 very high level in terms of taking a look at the --  
6 you know, at a high level within the plan, and the  
7 scale of the opportunity that you're moving forward  
8 with, but it will also be on very specific items and  
9 things that may have worked well for them with small  
10 business customers that are a challenge for us in our  
11 marketplace, or the design of a low-income initiative.  
12 And those are areas where we can learn from others  
13 that may have more experience than us.

14 MR. FLETCHER: Q: Well, just -- well, I don't want to  
15 give evidence, but just looking down the list, it's  
16 fairly clear to me that there's no utility on that  
17 list that has such a difference between the embedded  
18 historical cost of \$38 a megawatt and a marginal cost  
19 of \$120.

20 MR. HOBSON: A: That could be. But in terms of that  
21 being a driver, in terms of their market and the size  
22 of the opportunity is, or the motivation of the  
23 customer, as I mentioned before, all of these things  
24 are going to differ.

25 MR. FLETCHER: Q: Okay, I'll move on slightly. What's  
26 the time period of these programs that you're actually

1 illustrating as being measures of success? How many  
2 years --

3 MR. HOBSON: A: Sorry --

4 MR. FLETCHER: Q: How many years do these programs go  
5 for each of these utilities that you're citing as  
6 success stories?

7 MR. HOBSON: A: It will vary. It will vary, and it  
8 will depend on the plans that they've laid out. So,  
9 in compiling this table, it was drawing data from a  
10 number of different resource plans from the various  
11 utilities, and so it would really depend on the  
12 jurisdiction. But it would be quite a variation.

13 MR. FLETCHER: Q: And does that -- is that information  
14 that you have available?

15 MR. HOBSON: A: The resource plans that were --

16 MR. FLETCHER: Q: The time duration of these programs,  
17 how long they've been in existence. Whether the  
18 benefits are front-end loaded, back-end loaded. These  
19 are sorts of pieces of information that one would  
20 appreciate --

21 MR. HOBSON: A: Sorry, maybe if you just slow down and  
22 give me those one at a time.

23 MR. FLETCHER: Q: Okay. First of all, how long had  
24 these programs been going for each of these utilities?

25 MR. HOBSON: A: Yeah. These will be more representing  
26 plans moving forward, and so they'll range depending

1 on the jurisdiction. And so I would imagine that if  
2 what you're interested in is the time frame of the  
3 various plans for each of them, then that data would  
4 be available, yes.

5 MR. FLETCHER: Q: Right. So are these percentage of  
6 sales -- energy savings, are these estimates or are  
7 they in the bag?

8 MR. HOBSON: A: I would suggest that most of these  
9 would be estimates of future plans. These would be  
10 directional plans in terms of where utilities could --

11 MR. FLETCHER: Q: Right. So we're all holding our  
12 hands together thinking we're going to be successful,  
13 but yet nobody's actually done it, is that right?

14 MR. HOBSON: A: Well, I don't think that's a fair  
15 characterization. I think if you go back to  
16 jurisdictions like California, they've got a long  
17 history of demand-side management, and I think well-  
18 documented the success that they've had over the time  
19 periods of maintaining a flat load profile. So I'm  
20 not sure I would suggest that it hasn't been done  
21 before.

22 **Proceeding Time 9:04 a.m. T8**

23 MR. FLETCHER: Q: Can you point to anything that's been  
24 achieved from a tangible point of view physically,  
25 rather than just an estimate of future benefit, from  
26 any of the comparators that you have?

1 MR. HOBSON: A: Like I just said, I think California is  
2 a good place to start with respect to the history that  
3 they have and the success they've documented.

4 MR. FLETCHER: Q: What have they documented?

5 MR. HOBSON: A: They've documented the reduction in  
6 energy sales over a very lengthy time period. And I  
7 think there's some material that's been produced out  
8 of California that shows the forecast of sales moving  
9 forward and the reductions, and shows the impact that  
10 their efforts have had through a combined effort of  
11 state, codes and standards regulation, along with  
12 aggressive utility initiatives.

13 MR. FLETCHER: Q: And that's Pacific Gas and Electric?

14 MR. HOBSON: A: Pardon me?

15 MR. FLETCHER: Q: Are you referring to Pacific Gas and  
16 Electric?

17 MR. HOBSON: A: That would be one of the utilities, but  
18 there is a range of utilities in California.

19 MR. FLETCHER: Q: Right. Pacific Gas and Electric  
20 doesn't appear to have a program on this particular  
21 list. The program is a zero number under --

22 MR. HOBSON: A: Well, Pacific Gas and Electric IC is  
23 1.2 under Programs and Codes and Standards.

24 MR. FLETCHER: Q: I'll leave it there.

25 Now, I understand that you're wanting to be  
26 putting through a 50 percent real increase over the

1 next ten years, in rates?

2 MR. HOBSON: A: You're just referring to the rate  
3 increase forecast, the long-term rate increase  
4 forecast?

5 MR. FLETCHER: Q: You're stepping up the inclined block  
6 rates, and I think the result -- please correct me, I  
7 think Mr. Ince said this, it's a 50 percent real  
8 increase over the next ten years. And I want to know  
9 whether that was --

10 MR. GODSOE: I think you're addressing the long-term rate  
11 increase forecast, which really this panel cannot  
12 speak to. But it's quite clear that that is not what  
13 we're purposing. I think Exhibit B-3, response to  
14 BCUC IR 1.7.1 speaks for itself on what that forecast  
15 is. But it's clearly not a revenue requirement asked-  
16 for rate increase.

17 MR. FLETCHER: No, I'm not getting into the revenue  
18 requirement. I'm getting into the impact.

19 MR. GODSOE: Well then, if you could show me the 50  
20 percent reference, because I'm quite sure it wasn't to  
21 the RIB.

22 MR. FLETCHER: Q: Well, could I ask the witnesses then,  
23 what you anticipate the effect of the inclined block  
24 rates on percentage rate increases to be, within your  
25 modelling that you've done?

26 MR. HOBSON: A: So if you turn to Appendix K and page

1 133 of 213 -- actually starting at 130 -- yeah, 132 of  
2 213, and it would carry through to 134 of 213. It  
3 lays out for each rate class by some milestone years  
4 the steps, so the Tier 1 and the Tier 2 steps and the  
5 prices for each of those steps and how they change  
6 over time.

7 MR. FLETCHER: Q: Okay. And can you just give me a  
8 flavour what they are?

9 MR. HOBSON: A: For any particular rate class?

10 MR. FLETCHER: Q: Well, let's just take the residential  
11 rate class.

12 MR. HOBSON: A: The residential? So 2010 you'd be six  
13 -- in what we've modelled, and this is consistent with  
14 what the RIB proposal that was filed was. 6.15 for  
15 the first step, 8.03 for the second step, 2010, and I  
16 won't give you to the milestones unless you're  
17 interested.

18 MR. FLETCHER: Q: Those are percentages, are they?

19 MR. HOBSON: A: No, those are rates.

20 MR. FLETCHER: Q: So what does that work out in  
21 percentage terms?

22 MR. HOBSON: A: I haven't calculated that, but I'm sure  
23 that we could do that for you if you would like.

24 MR. FLETCHER: Q: Let's say -- I mean, to be effective  
25 we must be talking rate increases over -- well, I  
26 would imagine 40 percent.

- 1 MR. HOBSON: A: And to be clear, these aren't -- and I  
2 think this is maybe where the confusion came in  
3 earlier. When we're talking about rate increases,  
4 these are increases in general that are going to flow  
5 from our revenue requirements application. What we've  
6 put in here is a structure, and that structure will  
7 then take on, if you will, those increases in rates  
8 but they'll apply them to consumers in a different  
9 fashion than they would have before.
- 10 MR. FLETCHER: Q: So are you not able to say just at  
11 the moment, you've certainly modelled some outcomes,  
12 what the average increase in residential rates will be  
13 in five years' time as a result of the policy that  
14 you're trying now to be approved at this Commission?
- 15 MR. GODSOE: I'm unclear what you mean by policy. The  
16 RIB has been approved by this Commission. So I'm not  
17 retreading that ground with you, Mr. Fletcher. So I  
18 think you've got to be clear on what you mean by  
19 policy.
- 20 MR. FLETCHER: Well, I just want to know what the  
21 residential rate is likely to be if this LTAP is  
22 approved as it stands.
- 23 MR. GODSOE: Well, I guess you --
- 24 MR. FLETCHER: And you've done some various modelling and  
25 different rate classes.
- 26 MR. GODSOE: Right.

1 **Proceeding Time 9:09 a.m. T09**

2 MR. HOBSON: A: And I guess the thing I'm struggling  
3 with a little bit is, what's driving the increase in  
4 rates, is going to be the revenue requirements that  
5 we're drawing back through. How those increases over  
6 time are applied to customers is what I've done here  
7 in taking a look at how different structures, if  
8 applied, would result in conservation.

9 MR. FLETCHER: Q: Yes.

10 MR. HOBSON: A: So they're two separate things.

11 MR. FLETCHER: Q: You've made certain assumptions in  
12 terms of curtailing demand because you've done your  
13 elasticity calculations.

14 MR. HOBSON: A: Correct.

15 MR. FLETCHER: Q: So you know precisely how much you  
16 have to raise the rates to curtail demand.

17 MR. HOBSON: A: I can't help you much more than what  
18 I've said. I mean, we've got an increase in rates  
19 that are going to be driven by a revenue requirement  
20 application.

21 MR. FLETCHER: Q: Right.

22 MR. HOBSON: A: What we've done -- let me finish --

23 MR. FLETCHER: Q: You -- okay, all right.

24 MR. HOBSON: A: What we've done within this piece is,  
25 we've modeled different rate structures, coupled with  
26 those increases, and then as you say using

1 elasticities, that's driven an outcome or a result,  
2 and that is something I could speak to in terms of the  
3 amount of energy savings that we're anticipating  
4 getting from that outcome.

5 MR. FLETCHER: Q: Right. You have -- you've got two  
6 precise numbers. I'm asking for a third. You've got  
7 96,000 gigawatt hours savings by 2020. You've got an  
8 elasticity over the system of I think minus .5. The  
9 third number will be the price that you need to charge  
10 the customers in order to achieve those first two  
11 numbers -- that last number, 96,000 gigawatt hours.

12 MR. HOBSON: A: Okay, so the 9600 gigawatt hours is  
13 what we're looking at.

14 MR. FLETCHER: Q: Yeah. Over 2020. But there's a  
15 sequence of rate increases that you will need to  
16 achieve those -- that savings in terms of energy based  
17 on the elasticity across the system, I think, which is  
18 minus .5.

19 MR. HOBSON: A: So, help me out a little bit.

20 MR. FLETCHER: Q: I shouldn't be telling -- you should  
21 -- this is your job, not mine. I mean, I'm --

22 MR. GODSOE: What we are talking about is the long-  
23 term rate increase forecast, which is clearly set out  
24 in Exhibit B-3, response to BCUC IR 1.7.1. The RIB is  
25 revenue-neutral, as we all know. So, the projection  
26 of rate increases, and that's as far as I'm going to

1 go in describing it, I think it's well-described, is  
2 clearly laid out, Mr. Fletcher.

3 THE CHAIRPERSON: It would also help if Mr. Fletcher had  
4 in front of him Appendix K, page 132 of 213. I mean,  
5 that speaks for itself.

6 MR. FLETCHER: Okay. So, you're satisfied -- as long as  
7 the Chairman's satisfied, I'm satisfied.

8 THE CHAIRPERSON: Thank you.

9 MR. FLETCHER: Q: Okay.

10 VOICE: The numbers are right there.

11 MR. FLETCHER: Q: So, I take it, then, that this whole  
12 exercise is neutral in terms of revenue requirements?

13 MR. HOBSON: A: The exercise of the LTAP?

14 MR. FLETCHER: Q: Yeah.

15 MR. HOBSON: A: Or are you speaking of the rate design  
16 itself?

17 MR. FLETCHER: Q: The -- well, the rate -- well, the  
18 LTAP in particular, and with -- which consequent on  
19 the rate design, yes.

20 MR. HOBSON: A: Well, I think the LTAP has a cost  
21 associated with it. To the degree that it has a cost  
22 associated, and that's reflected in our revenue  
23 requirements I don't think it would be neutral. I  
24 think what we're talking about here is moving forward  
25 to address a need within the province for energy, and  
26 that has a price tag associated with it. And to the

1 degree that that has a price tag, then I don't see how  
2 it would be neutral.

3 MR. FLETCHER: Q: Okay. So there's more stick than  
4 carrot to this application.

5 MR. HOBSON: A: I wouldn't see it that way. I would  
6 just see that what we've tried to represent is a range  
7 of options that could be drawn upon to try to fill a  
8 need that the province has, and there's costs  
9 associated with those options and other considerations  
10 that we have to take into account, and we've tried to  
11 put forward portfolios that represent trade-offs  
12 across those things, and so there's definitely a cost  
13 associated with it, but it's not like we're putting a  
14 cost forward as a stick to get a response.

15 MR. FLETCHER: Q: Okay.

16 MR. MATHESON: A: The long-term plan, Mr. Fletcher,  
17 tries to look out in the time frame of the plan, which  
18 is 20 years, try and predict what we think customer  
19 demand will be over that period, and then we try to  
20 fill it, as Mr. Hobson said, with the -- with what we  
21 think is the most prudent choice of resources to draw  
22 from, both demand-side and supply-side. And part of  
23 our thinking around how we decide which portfolio is  
24 the one we'd like the Commission to endorse is based  
25 on a low-cost proposition. Not the lowest cost,  
26 necessarily, for other reasons, but we try to find one

1 that's going to meet customer need, fulfill our  
2 commitments to reliability for our customers, and  
3 continue to live in a low-cost jurisdiction. And  
4 that's generally what we try to do with our long-term  
5 plans.

6 But nobody's suggesting that they'll be  
7 revenue-neutral. The incremental cost of new supply  
8 and even the demand-side measures we are envisioning  
9 here have some cost to them, and so there will be rate  
10 increases and rate consequences as a result.

11 **Proceeding Time 9:14 a.m. T10**

12 MR. HOBSON: A: One thing that might be helpful for  
13 you, and I'm wondering if we've gotten this across, is  
14 when we take a look at the rate structures within the  
15 DSM plan, we haven't increased the rate overall as a  
16 mechanism to try to drive demand-side management. The  
17 increase in the rate is driven by our business.

18 What we've done within the demand-side  
19 management plan is restructure how the rate is  
20 delivered to the customer but it's not an overall  
21 increase, and for the class it would still be revenue  
22 neutral. But we've reorganized within that how we  
23 collect the money to send different price signals  
24 within the rate.

25 MR. FLETCHER: Q: Thank you. I just want to ask one  
26 question. I want to just put a statement to you and I

1 really want to get your response.

2 Intuitively, can one make the proposition  
3 that elasticity for a low-cost utility in a  
4 jurisdiction with high living standards is likely to  
5 be very low? Is that true or false?

6 MR. HOBSON: A: I'm not sure that this is the panel to  
7 weigh in on that, and it's unfortunate that on Panel 3  
8 Dr. Orans was probably your best person to put that  
9 question to.

10 MR. FLETCHER: Q: And you don't have a view  
11 professionally on that?

12 MR. MATHESON: A: Well, I can speak to it in general  
13 terms. I think as we wrestled with the idea of the  
14 consequence of a demand-side management program of  
15 this size, we clearly had to consider what kind of  
16 elasticity we would apply. And our view was we have  
17 not had to do this before. We've not had a demand-  
18 side management program of this size and this nature,  
19 and we haven't had experience with rate increases in  
20 such a long time with our rate base that it was -- we  
21 had a choice to either sort of apply something along  
22 the lines that other utilities, higher-cost utilities  
23 were experiencing, or we could go a little bit more  
24 conservative and wait and see what was likely to  
25 occur.

26 And we chose the latter, frankly, because

1 we felt that that was the best approach to take, to  
2 say, well, we live in a low-cost jurisdiction and we  
3 haven't had the experience, and we've got a very large  
4 program that could have -- where overshooting any  
5 elasticity rate could have very big consequences, and  
6 we thought that the better option to take was a  
7 conservative one and then wait and see and get some  
8 experience, get some actual results of how a rate base  
9 would respond, and then go from there.

10 MR. FLETCHER: Q: Okay, thank you.

11 Just moving on, Mr. Matheson, you testified  
12 last week that the load forecast in B.C. history has  
13 shown us that our load grows, and it grows at roughly  
14 1.5 percent per year. If you take an aggregate on the  
15 long term, it's always shown that it does that, and  
16 that was something that you said.

17 Can you tell me the coefficient of  
18 electricity used to GDP growth, please? In other  
19 words, for every --

20 MR. GODSOE: No, he can't.

21 MR. FLETCHER: Okay.

22 MR. GODSOE: That was dealt with on Panel 2.

23 MR. FLETCHER: Could you tell me what the conclusion was  
24 on Panel 2? I'm sorry, I missed that. I read the  
25 transcripts and I couldn't see it.

26 MR. GODSOE: Well, I think you're going to have to read

1 the transcripts again, Mr. Fletcher, but this panel  
2 cannot deal with that.

3 MR. FLETCHER: Okay.

4 MR. FLETCHER: Q: Let's assume that it's a North  
5 American average then of .8. You can take that  
6 subject to check. Would you accept the fact that if  
7 you're employing aggressive incline rates for  
8 industrial rates, residential rates and commercial  
9 rates, that that may in itself have an effect on the  
10 province's growth rate?

11 MR. MATHESON: A: You know, I don't want to try and do  
12 that in my head on the fly right here, right now.

13 MR. FLETCHER: Q: Okay, yeah.

14 MR. MATHESON: A: But I mean, one of the things that's  
15 important for us to look at as we try and develop our  
16 long-term plans is what has happened in the province  
17 in the past. That's one of our best indicators of  
18 predicting the future. And let's be clear. Our  
19 planning of this nature is all about trying to predict  
20 the future and putting in place what we think are the  
21 best measures in order to meet this growing demand.  
22 And one of the things has been very clear, despite the  
23 fact that we have periodic recessions and upheavals in  
24 the economy, is that our rate base continues to grow  
25 at roughly 1.5 percent per year. That's without  
26 question. You just have to look back in history and



1 supply-side component?

2 MR. FLETCHER: Q: No, the demand-side management  
3 component.

4 MR. HOBSON: A: I think we've talked about the  
5 deliverability and uncertainties with the demand-side  
6 management component in quite a bit of detail. I  
7 think, if I can recall the transcript reference that  
8 you're referring to, I think that was looking  
9 specifically at some of the evaluations required to  
10 understand the impacts from things like rates,  
11 specifically, and that as we move forward with demand-  
12 side management and the type of plan we've put  
13 forward, it will be different than what we've had in  
14 the past, and there will be some longer lags with  
15 respect to our ability to precisely get in and try to  
16 measure the impacts from some of the tools that will  
17 be different than what we've experienced before.

18 MR. FLETCHER: Q: But this --

19 MR. HOBSON: A: But I think the general uncertainty, I  
20 think we've acknowledged that there is uncertainty  
21 with respect to demand-side management, and that's  
22 been a topic that's been covered quite a bit.

23 MR. FLETCHER: Q: And you're not able to give a  
24 probability on that, in terms of a number?

25 MR. HOBSON: A: Well, we did provide probability  
26 distributions as part of our risk analysis, but it is

1           only one part of it, and it's been fairly thoroughly  
2           discussed already. It is in Chapter 5, and there is a  
3           fairly extensive appendix, F-14, that outlines the  
4           approach to the probability distributions in general,  
5           and spends a specific -- or a fair bit of attention  
6           specifically to the approach taken to demand-side  
7           management.

8 MR. FLETCHER:    Q:    Does --

9 MR. REIMANN:    A:    I think perhaps, Mr. Fletcher, the  
10           simple answer to your question may be that what we've  
11           put forward in our base resource plan is our expected  
12           outcome. And by definition, that would be a 50  
13           percent probability that we would get there.

14 MR. FLETCHER:    Q:    Right. Okay, thank you for that  
15           answer.

16                        Now, I want to turn just some -- a subject  
17           that I addressed actually last week, which is -- there  
18           are some Hydro customers out there without access to  
19           natural gas. And I tried to get a number on it, and I  
20           just looked at your annual reports, and if you just  
21           bear with me, you can just accept this, subject to  
22           check. But you serve 1.7 million customers --

23 MR. MATHESON:    A:    Did you say without access to natural  
24           gas?

25 MR. FLETCHER:    Q:    Yeah, you -- there are some -- they  
26           do not have dual fuel.

1 MR. MATHESON: A: Yeah.

2 MR. FLETCHER: Q: Yeah, you're just purely electricity  
3 customers.

4 MR. MATHESON: A: Yeah, sorry. I just couldn't hear  
5 that.

6 MR. FLETCHER: Q: Yeah. So B.C. Hydro serves about 1.7  
7 million customers. Of these, 88 percent are  
8 residential, comprising -- this is a quote from  
9 Wikipedia, actually. 88 percent are residential,  
10 comprising 38 percent of domestic revenues; 11 percent  
11 are commercial or light industrial, and they provide  
12 36 percent of domestic revenues; and Mr. Wallace's  
13 large industrials represent less than 1 percent of  
14 customers, but account for 21 percent of domestic  
15 revenues. And you can accept that, subject to check.  
16 It comes from your annual report and I believe it's in  
17 Wikipedia.

18 MR. HOBSON: A: Okay.

19 MR. FLETCHER: Q: Now, Terasen gave me a number. They  
20 actually serve 925,000 customers in B.C. So, and I'm  
21 asking you to make an assumption, but this is just an  
22 illustration. I'm kind of coming to a principle at  
23 the end of this.

24 If we assume B.C. Hydro serves electricity  
25 to the vast majority of B.C. citizens, and therefore  
26 we can calculate Terasen serves about 54 percent of

1 B.C. customers, which is the calculation is 925 over  
2 1700, and this is just an approximation. So we can  
3 say that roughly 50 percent of B.C. Hydro's load --  
4 B.C. Hydro's customers, are dual-fuel customers. In  
5 other words, they have access to natural gas. Is that  
6 reasonable?

7 MR. MATHESON: A: Sure, we'll accept that.

8 MR. FLETCHER: Q: Okay. Now, another assumption to  
9 make is that those customers not served by natural gas  
10 will be in rural communities, and that's clear because  
11 natural gas systems tend to connect to urban centres,  
12 just because it makes sense commercially.

13 MR. HOBSON: A: Well, I think that could be fair in  
14 some cases. I think kind of flowing from the logic of  
15 your numbers, you've taken customers that don't have  
16 gas service and made those customers that don't have  
17 access to gas service, and I think those are two  
18 different things.

19 **Proceeding Time 9:24 a.m. T12**

20 MR. FLETCHER: Q: I accept that, yeah.

21 Now, when you did your elasticities, did  
22 you just measure the elasticity across the board,  
23 whether or not a customer had access to natural gas or  
24 not?

25 MR. HOBSON: A: Again, if we're going to get into  
26 questions of elasticity and how we estimated that

1 elasticity value, I think those questions would have  
2 been more appropriate for Dr. Orans.

3 MR. FLETCHER: Q: It seemed to me from looking at the  
4 evidence there was no record that you had actually  
5 distinguished the fact that one customer was dual  
6 fuelled and the other was non-dual fuelled.

7 MR. GODSOE: You're free to make that point in argument,  
8 but I must stand on my ground now. Elasticities was  
9 clearly for Panel 3 and we can't get into that with  
10 this panel.

11 MR. FLETCHER: All right. Well, would then Mr. Godsoe  
12 just address that in his argument as to the  
13 elasticity, whether that included reference to those  
14 with dual fuels and non-dual fuels?

15 MR. REIMANN: A: I might make one other observation,  
16 Mr. Fletcher. When you say "dual fuel", would you  
17 consider propane also to be --

18 MR. FLETCHER: Q: That's a fair question, but I was  
19 just trying to generalize, because clearly propane  
20 won't -- will be a heating source. It won't be a  
21 space heating. And I was really getting into space  
22 heating, which is really the critical purpose of your  
23 demand and management, is to curtail your space  
24 heating load.

25 MR. HOBSON: A: One thing we should be clear about,  
26 when you say --

1 MR. GODSOE: Sorry. My friend is giving a lot of  
2 evidence. I don't think that last statement was true.  
3 THE CHAIRPERSON: That was a throwaway remark, Mr.  
4 Fletcher.  
5 MR. FLETCHER: Which I may not --  
6 MR. GODSOE: Which I believe is not true, frankly.  
7 THE CHAIRPERSON: I want Mr. Hobson to respond to it.  
8 MR. HOBSON: A: Yeah, I was just headed in that  
9 direction, and my only point was going to be when you  
10 refer to our demand-side management, I'm assuming  
11 you're referring to the demand-side management plan we  
12 put forward. And it's a much more comprehensive plan  
13 than something that's just targeting residential space  
14 heating.  
15 MR. FLETCHER: Q: Well, I guess because you can't  
16 answer the question on terms of elasticity, my  
17 question was going to be should you not -- should your  
18 elasticities be separate for those customers?  
19 Assuming that it isn't, should it be separate for  
20 those customers that have access to space heating in  
21 terms of natural gas?  
22 MR. GODSOE: And I think Dr. Orans's testimony speaks to  
23 this, so I'm going to let the record stand and my  
24 friend can feel to argue that in argument. But this  
25 panel cannot address that.  
26 MR. FLETCHER: Could you address it then, Mr. Godsoe, in

1 your argument?

2 MR. GODSOE: I will certainly do so.

3 MR. FLETCHER: Q: Now, just briefly on your loads, Mr.  
4 Fulton went through this 1871 gigawatt hours which is  
5 going to be new mining loads in 2016-17. Roughly he  
6 asked what the GDP was. Presumably if it's 1871 and  
7 your system load is about 66 -- 60,000, it's going to  
8 be between 1 and 2 percent.

9 Now, my question is --

10 MR. GODSOE: Hold on a sec, Mr. Fletcher.

11 MR. FLETCHER: Yeah.

12 MR. GODSOE: Now, I am the face of Hydro and I do believe  
13 very much that we should give a lot of leeway to lay  
14 people. But we are getting into GDP and mining load,  
15 which clearly was for Panel 2. Mr. Fletcher was here  
16 for Panel 2. So I don't believe this question can be  
17 put to this panel.

18 THE CHAIRPERSON: We agree with that. Mr. Fletcher, do  
19 you want to come at it another way?

20 MR. FLETCHER: I will come at it another way.

21 MR. FLETCHER: Q: Would you accept that if you are too  
22 optimistic or pessimistic in whichever way you look at  
23 it, in terms of future loads ten years out, and you  
24 are designing inclining block rates, discouraging  
25 consumption in the first five-year period as you  
26 intend to do, if those loads do not materialize in the

1 future, wouldn't there be a lot of pain that  
2 residences and businesses go through needlessly if  
3 that load does not materialize?

4 MR. HOBSON: A: You'll have to repeat that. There was  
5 one statement that you added in there that threw me  
6 partway through. I'm sorry.

7 MR. MATHESON: A: I mean, and we're not proposing an  
8 inclining block. We actually have one and it was  
9 approved by this Commission.

10 MR. FLETCHER: Q: Right, but you are having to curtail  
11 your -- you're trying to take out 96,000 gigawatt  
12 hours out of the system by 2020.

13 MR. MATHESON: A: No, we're trying to take 9600.

14 MR. FLETCHER: Q: Right, out of the system.

15 MR. MATHESON: A: And it's not all through rates.  
16 There's a very small -- well, I shouldn't say very  
17 small. There's a relatively small portion of that  
18 9600 that comes through rates. So only about 25  
19 percent of the total demand-side management plan is  
20 being driven though or is the outcome of rate  
21 structures. The balance is codes and standards --  
22 sorry, I shouldn't say that. I think it's about 20  
23 percent. Codes and standards in around 30 percent,  
24 and about 50 percent coming through demand-side  
25 management initiatives and programs.

26 MR. MATHESON: A: I think the other point is we're not

1 taking it out of the system. It's used to meet new  
2 growth in the system over that period of time. So,  
3 whether they come on or not, it doesn't make any  
4 difference, you're saying.

5 **Proceeding Time 9:29 a.m. T13**

6 MR. MATHESON: A: Sorry, whether --

7 MR. FLETCHER: Q: Whether those loads, the new loads  
8 come on in 2020, you know, 1871 gigawatt hours --

9 MR. HOBSON: A: Oh, it's not --

10 MR. FLETCHER: Q: -- it doesn't make any difference.

11 MR. HOBSON: A: It's not that we're -- it's not that  
12 the portion that's being addressed is the marginal  
13 customer that's coming on, it's the savings are coming  
14 from the base of customers. But what it's providing  
15 us is the effect of not having to add new load at the  
16 margin, recognizing the fact that our load is growing.

17 MR. MATHESON: A: One of the things -- I mean, you're  
18 right in one sense, and that is that, you know, when  
19 you try and predict what will happen in the world over  
20 a 10- and 20-year period of time, you're almost  
21 certain to be wrong. The question really isn't  
22 whether you'll be wrong or right, it's a question of  
23 how much you'll be wrong. Hopefully you're not wrong  
24 very much. But to the extent that things happen that  
25 you can't have foreseen, and you have -- you continue  
26 to have an ability to make flexible decisions toward

1 that, is your best chance of not veering too far off  
2 path. And so, again, in our long-term plans, we  
3 forecast out into a 20-year period of time, but the  
4 actions that we ask for when we come before the  
5 Commission periodically, as we are right now, is  
6 really for a directional move and expenditures that  
7 start us down that path. When we come back before the  
8 Commission two and three years from now, we'll again  
9 debate about what the future holds and what actions we  
10 should be taking then toward that. And so that gives  
11 us the ability to develop a flexible approach, so that  
12 we're not stuck on one track over, say, a 10- or 20-  
13 year period of time. So we can respond.

14 And one of the important tenets of our  
15 long-term planning is that we develop a plan that is  
16 flexible and allows us to respond as things change out  
17 in time.

18 MR. FLETCHER: Q: Thank you. Just turning to the IPPs  
19 and run-of-the-river plants, earlier I had asked Ms.  
20 Van Ruyven whether the run-of-river IPPs would revert  
21 back to the province's Heritage assets at the time of  
22 the power purchase agreement. Now, she indicated to  
23 me it wasn't necessarily in the contracts, but that  
24 the water licence expires coincidentally at the  
25 termination of the power purchase contract. So in  
26 essence, we would win because we wouldn't renew the

1 power purchase contracts.

2 I'm not going to ask the question, Mr.  
3 Godsoe, but I'm going to say then I asked the  
4 question, you know, whether that would be contrary to  
5 NAFTA, and Mr. Godsoe stood up and says he -- that's a  
6 legal issue.

7 So what I'm asking Mr. Godsoe to do, when  
8 he does his argument, is to address the question that  
9 if the B.C. government did not renew the water  
10 licences at the end of the term of these IPPs, would  
11 that contravene the NAFTA terms in terms of  
12 expropriation?

13 MR. GODSOE: I have my limits in argument and I think  
14 that's reaching it. I'm not a NAFTA expert. I don't  
15 think I can address that.

16 What I can do for you, Mr. Fletcher, is  
17 confirm that the leasing provisions for IPPs and the  
18 water renewal provisions, I can confirm those in  
19 argument, what they are for you, but the province does  
20 have the discretion either case to renew or not to  
21 renew, and I can't opine on that. But I can certainly  
22 walk you through the provisions of the *Water Act*, the  
23 *Land Act*, and the leasing provisions, and water  
24 licence provisions, if that's of assistance.

25 MR. FLETCHER: Thank you.

26 MR. FLETCHER: Q: Now, the power rates are in next by

1           50 percent of CPI, I understand, and this is just a  
2           general question in terms of engineering. If we are  
3           hopeful to have those assets back within the Heritage  
4           plant in the end of the terms of the contract, is  
5           there an obligation within the IPP contracts to  
6           maintain the facilities so they're in a ready-to-run  
7           situation at the end of the term of the contract?

8 MR. SCOURAS:    A:    The contract does have a provision  
9           that the projects must be maintained according to good  
10          utility standard.

11                    But could I ask you to repeat the first  
12          part of that question again? Because I believe that  
13          you've put on the record a presumed outcome that we  
14          had hoped for. I would just like to hear that again  
15          from you.

16 MR. FLETCHER:   Q:    Well, I understood Mrs. Van Ruyven  
17          told me that the power rate from the contracts are  
18          indexed annually by 50 percent of the CPI.

19 MR. SCOURAS:    A:    That's correct.

20 MR. FLETCHER:   Q:    You accept that. And my next  
21          question was, I'm assuming that the contracts specify  
22          that the facilities within the -- those assets are in  
23          a ready-to-run position at the end of the contract.  
24          In other words, well-maintained.

25 MR. SCOURAS:    A:    Okay, that's helpful, because I think  
26          it was the previous question that may have been the

1 piece that threw me. The contracts stipulate that the  
2 IPP maintains their facility and according to good  
3 utility practice to be able to operate in accordance  
4 with their contract over the term. It does not place  
5 conditions on the -- how the project -- the standard  
6 of the project at the end of the contract term. The  
7 contract governs the relationship during the contract  
8 term.

9 **Proceeding Time 9:35 a.m. T14**

10 MR. FLETCHER: Q: Thank you.

11 Just turning now to the social licence  
12 obligation, and I was quite intrigued by Mrs.  
13 Preston's testimony and it was referring to Burrard  
14 and I was --

15 MR. GODSOE: Yes, I'm just going to warn you, if it  
16 relates to Burrard I'm not going to --

17 MR. FLETCHER: Q: No, it doesn't relate to Burrard but  
18 it's a concept. It's a principle that might relate to  
19 other assets. It related to Burrard. It was in the  
20 context of Burrard but it's not about Burrard. Has a  
21 social licence in current peaking, blah, blah.

22 We define it, this is a social licence as  
23 requiring both the tacit and explicit approvals of  
24 government, communities and other stakeholders. I  
25 won't go into other quotes. That seemed to be the  
26 central tenet of the philosophy.

1 MR. MATHESON: A: Sorry, where are you getting that  
2 quote from?

3 MR. FLETCHER: Q: This is from Ms. Preston's testimony  
4 in terms of the social licence as regards to -- I mean  
5 in fairness to Mr. Godsoe, it was said in terms of  
6 Burrard. And the heart of the quote I believe says,  
7 "We define it as requiring both the tacit and explicit  
8 approvals of governments, communities and other  
9 stakeholders."

10 So my question is, does this social  
11 licence, as applied to Burrard, apply to other plants  
12 that you may want to build in the province?

13 MR. MATHESON: A: I think this did come up earlier in  
14 the hearing and I don't mind answering it again. I  
15 think our view is that yes, absolutely it does apply  
16 to other facilities in the province.

17 MR. FLETCHER: Q: Thank you. And does it also apply to  
18 what power you may buy from IPPs that are located in  
19 the province?

20 MR. SCOURAS: A: And I believe Mr. Quail and I had a  
21 discussion about this yesterday that you'll find on  
22 the record, that we agreed that their -- IPPs need to  
23 look at social licence as well as other projects.

24 MR. FLETCHER: Q: And would this be the case of gas-  
25 fired plants that you may want to purchase from, that  
26 are located in the province?

1 MR. MATHESON: A: We're not -- our long-term plan isn't  
2 proposing any of those, Mr. Fletcher.

3 MR. FLETCHER: Q: But if it did, would this same social  
4 licence apply?

5 MR. MATHESON: A: Well, it would, certainly. But again  
6 I have to reiterate that's a hypothetical example  
7 you're providing, and we aren't -- our long-term plan  
8 does not anticipate that.

9 MR. FLETCHER: Q: Thank you. I wonder if it would be  
10 useful if Mr. Godsoe would actually address that in  
11 his argument in the sense of how he ties that in with  
12 the *Utilities Commission Act* and public interest.

13 MR. GODSOE: I will certainly do that.

14 MR. FLETCHER: Q: Now, finally -- I'm finished. On  
15 Special Direction No. 10, unfortunately I don't have  
16 the papers in front of me, it seemed to me that there  
17 was loophole in that B.C. Hydro could actually buy  
18 from an IPP that ran a gas-fired plant that imported  
19 its gas by LNG from Pacific Rim countries. And that  
20 was because, as Mr. Godsoe explained in his  
21 interrogatory, that so long as B.C. Hydro buys from a  
22 generating plant situated in the province, it is  
23 indifferent under the *Energy Act* as to whether that  
24 gas is sourced from Alberta, B.C., or by LNG from,  
25 say, Russia or Indonesia.

26 MR. GODSOE: I think, to be fair, and that IR was a legal



1 MR. FLETCHER: I'll let you know. No, I don't think so.  
2 Thank you.

3 MR. MATHESON: A: We should be clear though, that the  
4 guidelines that Mr. Godsoe speaks about are not  
5 necessarily related to Special Direction 10. They're  
6 two different issues.

7 MR. FLETCHER: Q: Thank you.

8 **Proceeding Time 9:39 a.m. T15**

9 MR. FLETCHER: Thank you, Mr. Chairman.

10 THE CHAIRPERSON: Thank you, Mr. Fletcher.

11 **CROSS-EXAMINATION BY MR. FULTON:**

12 MR. FULTON: Q: Good morning, panel. Mr. Hobson, I'd  
13 like to begin with you and an exchange that you had  
14 with Mr. Weafer yesterday in relation to the response  
15 to BCUC IR 3.259.3, in Exhibit B-12. And you'll need  
16 to have before you transcript Volume 13.

17 MR. HOBSON: A: I have the transcript, I don't have the  
18 IR yet.

19 MR. FULTON: Q: Okay. So, it's B-12, BCUC IR 3.259.3.  
20 And specifically I'm addressing Step 8 in the table of  
21 that response. So, and I'll just summarize the  
22 transcript for you. Beginning at 2381, line 1, you  
23 and Mr. Weafer had a discussion about the table. At  
24 lines 11 and 12, you acknowledged that it's  
25 complicated and that you were going to help the best  
26 you can. Do you recall that evidence?

1 MR. HOBSON: A: I do.

2 MR. FULTON: Q: Okay. And then turning forward to page  
3 2383, you were asked at lines 13 -- beginning at line  
4 13 about Step 8, and your evidence was that you're  
5 just moving from planned levels of savings back to  
6 mid-level of savings, and were moving from the DSM  
7 plan to the adjusted.

8 And what I would like to ask if, by way of  
9 undertaking, B.C. Hydro could provide a calculation  
10 that represents how the number of 587 gigawatt hours  
11 was arrived at, and references how you got there. So,  
12 what the plus and minus is to get to the 587.

13 MR. HOBSON: A: And I'm not sure of the specifics, Mr.  
14 Fulton, and I'm not sure if it's precisely a  
15 calculation or more a shift from one plan to another,  
16 taking a similar point on a curve. But either way,  
17 I'm assuming what you're after is a more fuller  
18 explanation in terms of how the 587 was arrived.

19 MR. FULTON: Q: Yes, thank you.

20 MR. GODSOE: Sorry, I will take that undertaking.

21 **Information Request**

22 MR. FULTON: Q: Next, if you could have before you  
23 Exhibit B-4, and the response, first of all, to BCUC  
24 IR 2.206.3. And you should also probably have  
25 Appendix K as well, pages 112 and 116 of 213. So,  
26 Exhibit B-4, BCUC IR 2.206.3 to begin with, and

1 Appendix K, Tables 6 and 8.

2 MR. HOBSON: A: Sorry, and what was the reference in  
3 Appendix K?

4 MR. FULTON: Q: I'm going to be referring you to pages  
5 112 and 116 of 213 of Appendix K. So as long as  
6 you're in that general area, that's fine.

7 **Proceeding Time 9:45 a.m. T16**

8 MR. HOBSON: A: Okay, I have that.

9 MR. FULTON: Q: Okay. Now, beginning with the response  
10 to BCUC IR 2.206.3, the response is that DSM programs  
11 encourage customers to take actions in their interest  
12 over the long term. Correct?

13 MR. HOBSON: A: Correct.

14 MR. FULTON: Q: And does B.C. Hydro believe that this  
15 should be a principle behind the design of DSM  
16 programs?

17 MR. HOBSON: A: I think in general when we're putting  
18 together DSM initiatives, I think we're trying to put  
19 together initiatives that are going to benefit our  
20 customers, yes.

21 MR. FULTON: Q: Okay. And then in the second paragraph  
22 of the response, the statement appears

23 "...that the operating costs of natural gas  
24 space heating would be higher than electric  
25 space heating."

26 Are you able to provide the calculations that lead

1 B.C. Hydro to this conclusion?

2 MR. HOBSON: A: Well, I'm drawing that from the CPR, as  
3 an outcome from the CPR.

4 MR. FULTON: Q: And would you draw the same conclusion  
5 from the -- are you drawing the same conclusion from  
6 the CPR for the period ten years from now as well?

7 MR. HOBSON: A: Well, I think the CPR looked at a study  
8 period that's documented within the CPR, and what I  
9 was -- what I think is being addressed within this IR,  
10 206.3, is the conclusion of the CPR in trying to  
11 provide an explanation of the conclusion from the CPR.  
12 And I would expect that it would have varied depending  
13 on the life of the measure that was looked at within  
14 the CPR.

15 MR. FULTON: Q: And does B.C. Hydro believe that the  
16 conclusion is still valid?

17 MR. HOBSON: A: As I said, when we went and developed  
18 our DSM plan, we did not go back and investigate fuel  
19 switching. So we haven't gone back and done that work  
20 to develop initiatives, you know, beyond this point to  
21 better understand what would be possible with fuel  
22 switching. And I think at that point I said as well  
23 that, you know, if we were to move forward under a  
24 different set of circumstances and investigate fuel  
25 switching further, it's possible that we could find  
26 some initiatives that could move forward. But we

1 haven't done that work, and I think if we were to take  
2 that step we would likely come back across the same  
3 issues that were found in the CPR that would have been  
4 difficult for us to overcome.

5 MR. FULTON: Q: All right, thank you. Before we go to  
6 Appendix K, if I could ask you to turn back to the  
7 response to BCUC IR 2.199.4.3, also in B-4. So,  
8 2.199.4.3. And where I want to take you to is the  
9 table on page 2 of 2 of that response. So, and just  
10 ask you some questions about that.

11 MR. HOBSON: A: Okay.

12 MR. FULTON: Q: As I understand it, the first row of  
13 the table shows upgrading attic insulation from R12-25  
14 to R50 and that such an upgrade would save 656  
15 kilowatt hours a year?

16 MR. HOBSON: A: Yes.

17 MR. FULTON: Q: Okay. And the second-to-the-last row  
18 shows the upgrade from R12-25 to R40, which would  
19 result in savings of 500 kilowatt hours per year.

20 MR. HOBSON: A: That's right.

21 MR. FULTON: Q: Okay. And would you agree with me,  
22 then, that the installation of the extra insulation  
23 from R40 to R50 saves 156 kilowatt hours a year?  
24 Subject to check.

25 MR. HOBSON: A: Based on the table. The only thing I'm  
26 wondering about is the source. I'm just trying to

1 recall with this IR and whether or not the source was  
2 different and therefore whether or not it's  
3 comparable, and whether or not it was taking similar  
4 homes when it was taking a look at the calculation of  
5 the values, which could shift the values themselves in  
6 terms of the savings level.

7 **Proceeding Time 9:50 a.m. T17**

8 MR. FULTON: Q: If the numbers are correct and the  
9 difference is 156 kilowatt hours a year, doesn't that  
10 mean that you're trying to induce a customer to spend  
11 the extra money to upgrade his or her insulation, that  
12 would, if one assumed an energy cost of about 8 cents  
13 a kilowatt hour, save the customer only approximately  
14 \$13 a year, subject to check?

15 MR. HOBSON: A: Subject to check I would take those  
16 numbers, but I think my other comments may be  
17 important within that as well.

18 MR. FULTON: Q: Okay. As an undertaking, could you  
19 provide the cost to the customer of choosing the  
20 higher level of insulation of R50 versus R40?

21 MR. HOBSON: A: Can you repeat that, please?

22 MR. FULTON: Q: Yes. Can you provide the costs of a  
23 customer making a choice of R50 insulation rather than  
24 R40 insulation, and also provide the calculation of  
25 the costs and benefits for the customer that would  
26 show increasing the attic insulation from R25 to R40

1 was in their long-run interest?

2 MR. HOBSON: A: We may have to make some assumptions  
3 with respect to the type of home and application,  
4 installation costs, things like that to provide a  
5 response like that, which would maybe give you quite a  
6 range. I'm not sure.

7 THE CHAIRPERSON: Is that a yes or a no?

8 MR. HOBSON: A: It was a qualifier to make sure that  
9 that would still serve Mr. Fulton's interests.

10 MR. FULTON: Q: Yes, and that's fine. You choose your  
11 assumptions when you're doing the answer, when you're  
12 preparing the answer.

13 MR. GODSOE: I'll raise my concern that this should have  
14 been put in an IR. It is from a round before the  
15 third round, but we will take that undertaking and we  
16 will put the qualifiers on it.

17 MR. FULTON: Thank you, Mr. Godsoe.

18 **Information Request**

19 MR. FULTON: Q: Now, if I could take you to Appendix K,  
20 and if we begin at Table 6 which is at page 112 of  
21 213, can we agree that that table shows customer costs  
22 for each program, and that the final column shows a  
23 30-year total?

24 MR. HOBSON: A: Sorry, can you refer me to the table  
25 that you have again?

26 MR. FULTON: Q: Yes. It's Table 6 at page 112 of 213

1 of Appendix K.

2 MR. HOBSON: A: Yes, those are customer costs and there  
3 is a 30-year total.

4 MR. FULTON: Q: And then if you turn forward to page  
5 116, that table shows the customer bill savings for  
6 the same 30-year period.

7 MR. HOBSON: A: That's correct.

8 MR. FULTON: Q: Okay. And can you also confirm for me  
9 that the rows in Tables 6 and 8 for participating  
10 customers show that the 30-year bill savings exceed  
11 the 30-year costs?

12 MR. HOBSON: A: So I'm assuming you're taking from the  
13 portfolio a total of 6790 in Table 6 --

14 MR. FULTON: Q: Yes.

15 MR. HOBSON: A: -- compared to 33,653 in Table 8?

16 MR. FULTON: Q: Yes.

17 MR. HOBSON: A: Yes, I would confirm Table 8 is higher.

18 MR. FULTON: Q: And can you also confirm for me that  
19 for each subcomponent of each program that's listed,  
20 and we can take the residential program for an  
21 example, that the same is also true, that the 30-year  
22 bill savings exceed the 30-year costs?

23 MR. HOBSON: A: I would have to go through and confirm  
24 each number, but I would expect that would be the  
25 case, yes.

26 MR. FULTON: Q: Thank you. The tables are in millions

1 of dollars, correct?

2 MR. HOBSON: A: That's correct.

3 MR. FULTON: Q: And they do not appear, however, to be  
4 discounted. Are they discounted?

5 MR. HOBSON: A: I don't believe they are. I think  
6 there's a separate IR response, I think it was BCUC, I  
7 might have the number wrong but I think it was 166,  
8 165 or 166. We filed some electronic spreadsheets and  
9 I think within those, that was showing -- providing  
10 the tables necessary to then calculate Table 9 within  
11 the same set. And I believe within those it would  
12 likely provide the discounted values.

13 **Proceeding Time 9:55 a.m. T18**

14 MR. FULTON: Q: Okay. Thank you. All right, I may  
15 come back to that last one. We'll check the IRs at  
16 the break.

17 I'd like to return to Exhibit B-12 now, and  
18 I'm going to be coming back to B-4 from time to time,  
19 but if we turn back to B-12, and IR 3.259.1.1. So, B-  
20 12, IR 3.259.1.1.

21 MR. HOBSON: A: I have that.

22 MR. FULTON: Q: And in that response, B.C. Hydro states  
23 that it is unable to differentiate between new and  
24 existing customers and estimated DSM savings do not  
25 differentiate between new and existing customers, and  
26 B.C. Hydro is unable to delineate loads between new

1           and existing customers because of the nature of its  
2           load forecast methodology. Would you agree with that  
3           paraphrasing of the answer?

4 MR. HOBSON:    A:    I think that's accurate.

5 MR. FULTON:    Q:    Thank you. And would you agree with me  
6           that new customers will very likely have different  
7           consumption habits due to different appliance stocks  
8           and housing types than existing customers?

9 MR. HOBSON:    A:    I think that's fair in some cases, that  
10           that would be the case. I don't think across all end  
11           uses, though.

12 MR. FULTON:    Q:    Okay. To the extent that that is fair,  
13           wouldn't B.C. Hydro have challenges differentiating  
14           between new and existing customers when it uses the  
15           same savings for each?

16 MR. HOBSON:    A:    When it uses the same savings for each.  
17           Can you explain to me what you mean by "it uses the  
18           same savings for each"?

19 MR. FULTON:    Q:    Well, you haven't -- you've been unable  
20           to differentiate between new and existing customers.

21 MR. HOBSON:    A:    Right.

22 MR. FULTON:    Q:    So that in terms of the savings that  
23           you're -- because of that inability to differentiate,  
24           aren't you using the same savings for each  
25           classification?

26 MR. HOBSON:    A:    Well, we are, but they're based on

1 averages, and they're also going to take into account  
2 the mix of customers that are going to come through a  
3 program. So a new customer, as an example, that just  
4 had all new appliances, I wouldn't expect would be  
5 making a new purchase of a new refrigerator to replace  
6 a brand-new refrigerator. So I wouldn't expect that  
7 they would make up a very big share of our appliances  
8 program.

9 So when we take a look at the unit savings  
10 for an appliance program, we're basing it on the  
11 average of what we believe will come through that  
12 program, and that will be a mix of a range of  
13 different customers. Similarly, existing customers,  
14 the baseline for them on a customer-by-customer basis  
15 is going to vary significantly as well.

16 MR. FULTON: Q: All right. So then is it B.C. Hydro's  
17 view that the use of the averages, then, does to some  
18 extent address the quality of the estimate of the  
19 savings?

20 MR. HOBSON: A: I think it does. I think in total --  
21 so when we put forward a total for savings, I think  
22 it's representative of the mix that we would see  
23 coming through.

24 THE CHAIRPERSON: Mr. Fulton, is this a good time to  
25 break?

26 MR. FULTON: I have one more question that I would like

1 to ask in this --

2 THE CHAIRPERSON: Please proceed.

3 MR. FULTON: Q: Actually, two, but we should be  
4 finished by pretty close to 10:00. So if you move  
5 forward to 3.259.1.2 --

6 MR. HOBSON: A: .1.2?

7 MR. FULTON: Q: Yes.

8 MR. HOBSON: A: Sorry, can you give me the reference  
9 again, please?

10 MR. FULTON: Q: 3.259.1.2.

11 MR. HOBSON: A: I don't have that in my -- I go from --

12 MR. FULTON: Q: 3.259.1.2.

13 MR. MATHESON: A: Is that in B-12?

14 MR. GODSOE: I don't have that either.

15 MR. HOBSON: A: I go from 259.1.1 to 259.2.

16 MR. MATHESON: A: To 259.2.

17 MR. FULTON: Q: Oh, okay. All right. Thank you.  
18 3.259.2.

19 MR. HOBSON: A: Okay.

20 MR. GODSOE: I thought my photographic memory was going  
21 to fail me, but it didn't.

22 MR. FULTON: Q: There you were asked about B.C. Hydro's  
23 adjustment to DSM savings, and B.C. Hydro stated that  
24 since it didn't have the information on the shares of  
25 DSM savings, and conservation potential about new and  
26 existing customers, that its view was that the

1 adjustment was reasonable. Agreed?

2 **Proceeding Time 10:01 a.m. T19**

3 MR. HOBSON: A: Agreed.

4 MR. FULTON: Q: Okay. Would you agree with me that the  
5 estimate would be improved if you had that  
6 information?

7 MR. HOBSON: A: Yeah. I mean, to the degree that we  
8 had precise information on each customer that was  
9 participating in our program, and precise information  
10 of each customer load that was disappearing from our  
11 load forecast and we could match those, we would  
12 certainly have a better estimation.

13 MR. FULTON: Thank you. This would be a good time for a  
14 break, Mr. Chairman.

15 THE CHAIRPERSON: Okay, we'll break for 15 minutes.

16 **(PROCEEDINGS ADJOURNED AT 10:01 A.M.)**

17 **(PROCEEDINGS RESUMED AT 10:16 A.M.)** **T20**

18 THE CHAIRPERSON: Please be seated.

19 Mr. Fulton?

20 MR. FULTON: Thank you, Mr. Chairman.

21 MR. FULTON: Q: We looked at the attachments to BCUC IR  
22 165.1 during the break, and attachment 2 is the one  
23 that I want to ask you about, and it's just in the  
24 nature of an undertaking. Could you provide a summary  
25 table of the present value of the cost to the customer  
26 and the dollar savings to the customer based on

1 attachment 2?

2 MR. HOBSON: A: I think in general we could. The one  
3 piece that won't be available through that, we would  
4 be using wholesale values for any of the gas savings,  
5 as opposed to retail prices. But we could still  
6 provide those on a PV basis, just with the  
7 understanding that it's not really the -- that portion  
8 would not be the customer perspective.

9 MR. FULTON: Q: What was the discount rate that was  
10 used for attachment 2?

11 MR. HOBSON: A: The discount rates would be consistent.  
12 They would be 8 percent nominal and 6 percent real.

13 MR. FULTON: Q: All right. So, then, that would be  
14 fine if you could provide that summary sheet with the  
15 qualification that you've indicated. Could I ask for  
16 that by way of undertaking?

17 MR. GODSOE: I might have to speak to my friend about  
18 getting a little bit of clarification around that  
19 undertaking. I'm not opposed to it in principle, but  
20 I need to just look at the spreadsheet myself. So if  
21 I could just talk to --

22 THE CHAIRPERSON: Your friend being Mr. Fulton?

23 MR. GODSOE: My friend Mr. Fulton, of course.

24 THE CHAIRPERSON: Okay, yes. Please.

25 MR. GODSOE: If I could just speak to him over the course  
26 of lunch and get back to him, but I'm not opposed in

1 principle.

2 THE CHAIRPERSON: That will be fine.

3 MR. FULTON: Thank you.

4 **Information Request**

5 MR. FULTON: Q: Next I have a few questions on the  
6 total resource cost test. If I could ask you to turn  
7 to Exhibit B-4, the response to BCUC IR 2.207.2.1.  
8 So, 2.207.2.1. In the last paragraph of the response,  
9 you state:

10 "Increasing incentive levels may result in  
11 over paying for the energy savings relative  
12 to that required to obtain participation."

13 Can you explain to me what you mean by "over paying"?

14 MR. HOBSON: A: So, it would be the idea that if you  
15 had -- what's an example? A \$5 incentive for a  
16 compact fluorescent light bulb that cost \$10, and you  
17 would get a certain amount of participation, you could  
18 increase that incentive to \$15 and, if you did so, you  
19 would likely get some additional participation, or  
20 some participation a little bit earlier than you  
21 otherwise would have. But in the process of doing  
22 that, you'd be paying a lot more money, \$10 in fact,  
23 for every customer that would have participated at \$5.

24 MR. FULTON: Q: Okay. And can I take it from that,  
25 then, from B.C. Hydro's perspective over paying  
26 impacts the cost-effectiveness of a program,

1 particularly as measured by the TRC?

2 MR. HOBSON: A: Not specifically by the TRC. But what  
3 it would do is, it would call into question, I think,  
4 the use of the funds that we're putting forward. So I  
5 think our concern there would be that we're putting  
6 forward expenditures to try to deliver energy savings  
7 and we'd be putting forward expenditures beyond what  
8 we would require.

9 **Proceeding Time 10:20 a.m. T21**

10 MR. FULTON: Q: All right, thank you.

11 Next I'd like to turn to the issue of rate  
12 -- the rate impact measure, and just by way of  
13 foreshadowing, there was a brief discussion about this  
14 at Transcript Volume 5, page 759, and Mr. Godsoe is  
15 going to address this issue in part in the DSM  
16 Regulation. But I want to try and approach it in a  
17 different way, and at the end if it needs to be  
18 addressed further in final argument, it can be done.

19 So in general, in your view, Mr. Hobson, is  
20 there any ongoing value to calculating RIM results?

21 MR. HOBSON: A: There's still value, I think, in  
22 designing DSM initiatives and understanding the  
23 results that you take from RIM. What RIM is giving  
24 you is a sense, a narrow sense though within an  
25 individual initiative, what the impacts may be on  
26 those that don't participate. And you need to be a

1           little bit careful with respect to the metric that you  
2           use to measure that, to make sure that you're getting  
3           the right information that you need. But I think  
4           there is some value from it.

5                        So when we're constructing DSM plans, I  
6           think in understanding the impacts from RIM and  
7           understanding the breadth of the program overall that  
8           you're putting in place within your portfolio, those  
9           two things are important in relation to one another  
10          for us to look at.

11                       So as an example, if we put a very narrowly  
12          focused portfolio together that had a number of gaps  
13          with respect to ability for certain groups of  
14          customers to participate, and we had significant  
15          impacts with RIM results across the board with what we  
16          were putting forward, then I think we would look at  
17          that and we'd have to balance off the equity impacts  
18          that we were needing to deal with. To the degree that  
19          we've got a broad opportunity to participate from a  
20          broad portfolio of programs, I think we'd look at the  
21          results from the RIM a little bit differently. So I  
22          think they're important to understand for that  
23          purpose.

24                       The other thing I think we look at is it's  
25          a little bit of a guide with respect to the design of  
26          the initiative itself. And so I think they're

1           important in terms of internal program design and how  
2           you package the portfolio overall.

3 MR. FULTON:    Q:    Okay. Now, is there some value of RIM  
4           which would cause B.C. Hydro to look at, in a more in-  
5           depth way, the equity value of a program?

6 MR. HOBSON:    A:    Not in the sense that there's a  
7           particular value. I think it would need to be within  
8           the context of the overall picture that we are looking  
9           at. So again, I think if we were looking at an  
10          individual initiative, it may help us to better  
11          understand different alternatives we might want to  
12          experiment with, within the modelling of that  
13          initiative. So it could be useful in that sense. But  
14          I think more broadly, I think it's just a guide with  
15          respect to do we have gaps within our portfolio that  
16          we may need to address?

17 MR. FULTON:    Q:    And notwithstanding the DSM regulation  
18          and Hydro will, I take it, continue to consider the  
19          RIM results in looking at its program.

20 MR. HOBSON:    A:    I think we would continue to calculate  
21          them and utilize them differently than what I have  
22          outlined so far.

23 MR. FULTON:    Q:    And would that be equally so with the  
24          utility test, for example? Would you continue to look  
25          at the utility test?

26 MR. HOBSON:    A:    I think we would continue to run the

1 utility test to have an understanding from that. But  
2 I think, you know, we've been clear, I think our main  
3 decision point with respect to looking at costs versus  
4 supply comes back to a TRC or all ratepayers view.  
5 And then I think these other tests provide you  
6 different information that helps shape some of your  
7 decisions.

8 MR. FULTON: Q: And then in terms of the reporting to  
9 the Commission, would B.C. Hydro continue to report on  
10 the results of all three tests?

11 MR. GODSOE: And I think that does raise legal issues. I  
12 think that raises the intersection of section 4(6) of  
13 the DSM Regulation. As you know, I've laid out in the  
14 response to BCOAPO IR 3.4.1, our view that that  
15 eliminates the Commission's jurisdiction. The  
16 interesting thing about the reporting is it's a  
17 compliance function, so we're not asking you to  
18 approve it. So I think I need to go away and think  
19 about and address that in argument.

20 MR. FULTON: And that's fine, and when you do address it  
21 you can address it in the context of section 43 of the  
22 Act. And I'll come to that in a little fuller way in  
23 just a moment. And actually why I don't do that right  
24 now?

25 MR. FULTON: Q: Are you aware, and I believe I provided  
26 your counsel with a copy of the letter from the MEMPR



1 think that was in part what my friend Mr. Godsoe was  
2 speaking to, until such time as the task force has  
3 developed a consensus on reporting and measurement  
4 protocol which they anticipate will be complete in the  
5 fall of 2008.

6 MR. HOBSON: A: I see that, yes.

7 MR. FULTON: Q: Yes. And B.C. Hydro is part of the  
8 task force?

9 MR. HOBSON: A: We do have a member on the task force,  
10 yes. So I can speak to it in general terms, in terms  
11 of what the scope of the work, to the degree that I  
12 understand it, but getting into too much detail, I'd  
13 be not able to go too far.

14 MR. FULTON: Q: Okay. Can you tell us what the status  
15 is of the task force's work at this time?

16 MR. HOBSON: A: My understanding is, they haven't  
17 completed their work. I think they've made a lot of  
18 progress in a number of areas, and the status, I  
19 think, to this point is, they've tried to uncover, I  
20 think, a lot of the issues that need to be dealt with.  
21 And I think that they've reached some common positions  
22 on some of those issues. But I'm not sure that  
23 they've reached common positions on all of them, and  
24 my understanding is, it hasn't formulated itself into  
25 any sort of final report at this stage that I'm aware  
26 of.

1 MR. FULTON: Q: And B.C. Hydro is not asking for any  
2 specific direction in this LTAP on the protocol to be  
3 used for reporting on energy conservation, energy  
4 efficiency and demand-side management efforts?

5 MR. GODSOE: And I think Mr. Hobson can speak to this  
6 more directly, but we certainly are seeking relief  
7 from the semi-annual reporting and asking to move that  
8 to an annual. But I believe that is the only  
9 reporting relief we are seeking.

10 MR. FULTON: Q: So if you'd like to amplify on that.

11 MR. HOBSON: A: Well, the only thing I think I would  
12 add is, my understanding of the scope of what this  
13 group is looking at is trying to get at issues so  
14 that, from a provincial standpoint, they can roll up  
15 reported values coming from different utilities into  
16 an overall provincial picture. And some of the  
17 challenges that they're facing now is concepts like  
18 persistence. So, if one utility -- if two utilities  
19 are going after the same program concept or measure,  
20 and they're using different values or approaches with  
21 respect to persistence or if we take a look at  
22 Terasen's application and the proposal not to  
23 calculate free ridership, and you can imagine from a  
24 provincial standpoint if you had one set of values  
25 from an energy-efficiency standpoint coming from a gas  
26 utility that didn't calculate free ridership, and then

1 an electric utility that did, you'd be mixing apples  
2 and oranges when you tried to add them together.

3 So I think those are more the types of  
4 issues that they're trying to resolve to get everyone  
5 on the same page so that they can get an additive  
6 report in the end.

7 MR. FULTON: Okay. So, then, perhaps in final argument,  
8 Mr. Godsoe, you can address the suggestion in Exhibit  
9 A2-5 that the Commission Panel hold off on making  
10 these types of decisions in the context of B.C.  
11 Hydro's request for relief.

12 MR. GODSOE: I can do that. Sorry, I didn't mean to  
13 interrupt. I can do that. I guess what I'd like to  
14 hear from Mr. Hobson, I can't cross-examine, but it  
15 would help me in argument if I understood whether the  
16 protocol was even remotely talking about the frequency  
17 of reporting, because that's all we're asking for.

18 MR. HOBSON: A: It's my understanding that it's not,  
19 and if anything, I think the intent by government  
20 would be to align on an annual basis, that -- I think  
21 their intent is that they have an obligation to be  
22 reporting out provincially on an annual basis. And I  
23 think that's one of the items that they were looking  
24 at as well, is to make sure all the utilities are  
25 lining up with the same end date for their annual  
26 reporting. So, again, they've got a better matching

1 of things that they can add together. So, I don't  
2 think that it's envisioning something with more  
3 frequency than an annual basis for their purposes.

4 THE CHAIRPERSON: So that would imply ending on a  
5 calendar year.

6 MR. HOBSON: A: It may or may not. I'm not sure where  
7 they've concluded with that. I think what they've got  
8 right now is, they have different utilities following  
9 different practices, and how they resolve that I'm not  
10 certain.

11 **Proceeding Time 10:31 a.m. T23**

12 MR. FULTON: Q: Thank you.

13 Now, I'd next like to turn to a question  
14 that will wind up being a legal -- a question to be  
15 addressed in argument, but I do want to establish some  
16 facts, much as Mr. Godsoe has established in terms of  
17 the question that he asked Mr. Hobson in the course of  
18 my cross, which was quite fine. Given that he has  
19 been very accommodating in terms of the legal issues  
20 that he said that he's prepared to address not only  
21 for me, Mr. Chairman, but for the others, I had no  
22 difficulty with him asking that question.

23 So the IR in question is the response to  
24 BCUC IR 3.278.1, which is at Exhibit B-12. So B-12,  
25 BCUC IR 3.278.1. And that question asked, "If a DSM  
26 measure was found to be a rate, are there values of

1 the RIM so small that the DSM measure would contravene  
2 Section 59 of the *Utilities Commission Act*?" And the  
3 response referred to correspondence in the '90s -- in  
4 the early '90s between B.C. Hydro and the Commission,  
5 and stated that the Commission accepted that generally  
6 DSM programs were not rates. And then the definition  
7 of "rate" was also referenced.

8 There was no reference in the answer to  
9 service, which is defined in the Act as well. And  
10 Section 59(1)(a) states that "a public utility must  
11 not make demand or receive an unjust, unreasonable or  
12 unduly discriminatory, unduly preferential rate for a  
13 service provided by in British Columbia."

14 Now, would you agree with me that DSM  
15 programs have expanded considerably since the date of  
16 the 1990s correspondence between the Commission and  
17 B.C. Hydro?

18 MR. HOBSON: A: I think with what we're proposing to  
19 move forward with, I think that would be the case.

20 MR. FULTON: Q: And that it is possible that there may  
21 be measures that exist now that didn't exist then,  
22 that may fall within the category of a rate or  
23 service.

24 MR. HOBSON: A: That I'm not sure I could comment on  
25 with respect to if they fall within a category of a  
26 rate or a service.

1 MR. FULTON: Q: Right, and that would ultimately be a  
2 matter for legal submission in any event.

3 So what I'm looking for from you, Mr.  
4 Godsoe, in your argument, is that -- and I take it  
5 that B.C. Hydro is not saying that the Commission  
6 cannot revisit its previous decisions.

7 MR. GODSOE: I think that's fair.

8 MR. FULTON: Okay.

9 MR. GODSOE: But I do think the Commission has to note  
10 the new definition of demand-side measure that clearly  
11 distinguishes between program and rate. So that'll be  
12 a large part of my argument.

13 MR. FULTON: Yes, and that's fine. So, and I was  
14 thinking there of Section 75 of the Act, so you can  
15 address it in that context.

16 THE CHAIRPERSON: Is three weeks going to be enough for  
17 you, Mr. Godsoe?

18 MR. GODSOE: It's why I wanted to revisit the schedule,  
19 Mr. Chair.

20 MR. FULTON: So my question then, to be addressed in  
21 argument, Mr. Godsoe, is that if a DSM measure was  
22 found to be a rate, are there values of the RIM that  
23 are so small that the measure would contravene Section  
24 59 of the Act?

25 MR. GODSOE: I will address that in argument.

26 MR. FULTON: Thank you.

1 MR. FULTON: Q: Mr. Hobson, I have provided your  
2 counsel with an excerpt from some evidence that you  
3 gave in the fiscal 2005-2006 B.C. Hydro revenue  
4 requirement application. In fact, I think I've  
5 provided him with two extracts. The one that I want  
6 to take you to first is the one at transcript 2042.

7 MR. HOBSON: A: I have that.

8 MR. FULTON: Q: And I'll just circulate that for the  
9 parties. And while that's being circulated,  
10 specifically I would direct you to lines 4 to 8 on  
11 transcript 2042.

12 MR. HOBSON: A: Thank you.

13 MR. FULTON: And if that document, Mr. Chairman, might be  
14 marked Exhibit A2-6.

15 THE CHAIRPERSON: It will be so marked.

16 (TRANSCRIPT PAGE 2042 FROM B.C. HYDRO REVENUE  
17 REQUIREMENT HEARING, MAY 31, 2004, VOLUME 13, MARKED  
18 EXHIBIT A2-6)

19 MR. FULTON: Q: And I just wanted to try and bring us  
20 up to date in terms of ascertaining whether your  
21 answer still holds true today. So that at that time  
22 you said that for larger projects that are over a  
23 million dollars, B.C. Hydro will have to demonstrate a  
24 RIM greater than 1 before B.C. Hydro proceeds.

25 MR. HOBSON: A: I don't think we would hold ourselves  
26 that today, and some context around this might be

1           useful as well. My recollection of this is we were  
2           talking about in this hearing RIM and a value of 1,  
3           and it's not on projects of a million dollars. I  
4           believe it was incentives that were greater than a  
5           million dollars. And this was in the context of two  
6           large load displacement projects that had incentives  
7           of 15 million and I believe \$49 million.

8                         So we were taking a look at a much smaller  
9           DSM plan in relation to the overall plan. Those were  
10          two very sizable projects. And so when we take a look  
11          at the broader picture in terms of what I outlined  
12          before with how we would look at RIM, I think that was  
13          a concern for us in terms of how do we limit the  
14          equity impacts as we move forward at that time.

15                                 **Proceeding Time 10:38 a.m. T24**

16 MR. FULTON:    Q:    Do you still have Appendix K close at  
17                  hand?

18 MR. HOBSON:    A:    I do, yes.

19 MR. FULTON:    Q:    Okay, could you turn to page 117 of 123  
20                  of Appendix K.

21 MR. HOBSON:    A:    Okay, I have that.

22 MR. FULTON:    Q:    So table 9.

23 MR. HOBSON:    A:    Yes.

24 MR. FULTON:    Q:    And are you able to confirm that none  
25                  of the programs which are under 1 in the RIM test  
26                  exceed a million dollars?

1 MR. HOBSON: A: Again, this isn't the programs. This  
2 would be getting back to individual incentives  
3 provided to projects.

4 MR. FULTON: Q: Okay. And none of those individual  
5 incentives, though, are over a million dollars?

6 MR. HOBSON: A: I think that would be a fair statement.  
7 I think the difficulty I would have, or the hesitation  
8 I would have is we are laying out long-term plans, and  
9 the specific size of projects that may materialize,  
10 would be my only hesitation with that, but I think  
11 it's a fair characterization.

12 I also think that this is a much different  
13 plan with respect to the size and the  
14 comprehensiveness of it, and I wouldn't foresee that  
15 we would have programs in this case that were below a  
16 RIM of 1.0 where we would have incentives in the  
17 neighbourhood of \$40 million flowing to a single  
18 customer.

19 MR. FULTON: Q: All right, thank you. I'd like to  
20 turn next to the utility test. Can you tell us how  
21 the utility test was used in the last LTAP?

22 MR. HOBSON: A: In a similar fashion to how it is used  
23 now. I am not sure what your specific question would  
24 be.

25 MR. FULTON: Q: All right, so it has been used in the  
26 same way that -- in creating the present DSM plan?

- 1 MR. HOBSON: A: Yeah, I think that's fair.
- 2 MR. FULTON: Q: Okay. Was the test used as an economic  
3 screen?
- 4 MR. HOBSON: A: No.
- 5 MR. FULTON: Q: And why not?
- 6 MR. HOBSON: A: Because our approach is to look at the  
7 resources trading off between supply and we use the  
8 all ratepayers or TRC test as the economic screen.
- 9 MR. FULTON: Q: And I take it then it also wasn't used  
10 as an economic screen in the last LTAP.
- 11 MR. HOBSON: A: That would be correct.
- 12 MR. FULTON: Q: Thank you. I'd next like to turn to  
13 the issue of voltage optimization, and Exhibit B-4 the  
14 response to BCUC IR 2.208, and there are a series of  
15 responses in that category. So BCUC IR 2.208, and I'm  
16 going to begin with the response at 2.208.2.
- 17 So the 208.2 asked B.C. Hydro to provide  
18 benefit cost analysis regarding B.C. Hydro's  
19 implementation of voltage optimization on a trial  
20 basis, or those of other utilities, and a table was  
21 provided at page 2 of 2.
- 22 MR. HOBSON: A: I see that.
- 23 MR. FULTON: Q: That showed the results of six  
24 implementations on the B.C. Hydro system, correct?
- 25 MR. HOBSON: A: That's correct.
- 26 MR. FULTON: Q: And the response to 208.2 also says



1           underway.

2 MR. FULTON:    Q:    And is a portion of the \$96 million  
3           present value cost included in the \$418 million DSM  
4           budget for the next three years?

5 MR. HOBSON:    A:    In the 418?

6 MR. FULTON:    Q:    Yes.

7 MR. HOBSON:    A:    No, I believe that would fall outside  
8           of the 418 and it would be part of the total -- the  
9           total DSM plan costs.  Sorry, just bear with me.

10                        So I am looking at page 109 of 213 in  
11           Appendix K and within that you'll see a total DSM plan  
12           cost of \$487 million.

13 MR. FULTON:    Q:    Yes.

14 MR. HOBSON:    A:    And if you trace further back up to  
15           what makes up that 487, you will see voltage  
16           optimization costs.  Those will be some of the costs  
17           that are not included in our 418 million LTAP  
18           expenditure request, and they will represent costs  
19           that would come through in other applications.

20 MR. FULTON:    Q:    Thank you.  If we turn back to the  
21           response to 208.1 --

22 MR. HOBSON:    A:    Yes.

23 MR. FULTON:    Q:    -- there B.C. Hydro states that it used  
24           a harmonizer device supplied by Legend Power.  Were  
25           other suppliers other than Legend Power considered to  
26           provide the device.

1 MR. HOBSON: A: You know, I'm not certain of that level  
2 of detail, in terms of what other suppliers were  
3 available or were considered at that time, and the  
4 specific details of how we arrived at Legend versus  
5 others.

6 MR. FULTON: Q: All right.

7 MR. HOBSON: A: I mean, I think at that point it was  
8 more on, as it's indicated here, on a trial basis. So  
9 it may be more of a limited approach that was taken  
10 through a partnership with Legend to try to get a  
11 better sense of what the results may be, and for that  
12 reason it may have been limited or it may have been  
13 open to others that chose not to participate, I really  
14 don't know.

15 MR. FULTON: Q: Can you, by way of undertaking, provide  
16 us with that information as to whether or not this  
17 contract went out for bid?

18 MR. GODSOE: Well, Mr. Chairman, I question the relevance  
19 of that. I think we've established that the voltage  
20 optimization spend isn't in this application ask, so  
21 if my friend could just address why that would be  
22 relevant.

23 MR. FULTON: Well, we are looking at it from the  
24 standpoint, Mr. Godsoe and Mr. Chairman, on the basis  
25 that Hydro's approach to its calls, et cetera, has  
26 been on a call for tender basis, and we just want to

1           make sure that the same approach in terms of obtaining  
2           suppliers is used, not necessarily on a call for  
3           tender basis, but on a bid type.

4 MR. HOBSON:    A:    I may be able to help you a little bit  
5           there.  In the sense that when we go to market with  
6           technologies, we don't pick and chose within specific  
7           manufacturers of product other than setting criteria  
8           and qualifications around what standards would need to  
9           be met by that product.  And so as we go forward, it's  
10          more for the marketplace to chose to participate, and  
11          in most cases it's the customer making the choice with  
12          respect to the specific technology from the standpoint  
13          of the manufacturer that goes forward.

14                    The only part I'm hesitating with with  
15                    respect to this is this was on a trial basis and what  
16                    was involved in the specific trial I think could look  
17                    different and shouldn't be seen as a representation of  
18                    how we would move forward.

19                    But to the degree that we were, you know,  
20                    generally moving forward with manufacturer's  
21                    technology, if we look at lighting as an example, we  
22                    would be open to any lighting manufacturer coming  
23                    through with product that met the criteria that we  
24                    would need to satisfy that the customer product -- or  
25                    the customer experience with the product is going to  
26                    be satisfactory.

1 **Proceeding Time 10:48 a.m. T26**

2 MR. FULTON: Q: In terms of the 208 voltage  
3 optimization program, is it underway now, or not?

4 MR. HOBSON: A: I believe I said it was, but I -- you  
5 know, subject to check.

6 MR. FULTON: Q: Okay. All right. If you could confirm  
7 that, then, by way of undertaking.

8 MR. GODSOE: We can do that.

9 **Information Request**

10 THE CHAIRPERSON: Thank you.

11 MR. FULTON: Q: And if it is underway, if you could --  
12 will you be using the Legend Power Harmonizer for the  
13 program, then?

14 MR. HOBSON: A: Well, I think there's different aspects  
15 to the program, and I don't know the answer to that.

16 MR. FULTON: Q: All right.

17 MR. HOBSON: A: You know, there's aspects that are  
18 installations on B.C. Hydro sub-stations, and then  
19 there's aspects of this that go to customer sites.

20 And I imagine the technology and the suppliers could  
21 differ between the two as well.

22 MR. FULTON: Q: All right. And if you could ascertain  
23 that and include that response in your undertaking.

24 MR. GODSOE: We will do that.

25 **Information Request**

26 MR. FULTON: Q: Thank you. Now, moving through the 208

1 series, if we could next go to 208.3. And in that  
2 response, you provide some examples of where voltage  
3 optimization works and where it doesn't work.

4 MR. HOBSON: A: That's correct.

5 MR. FULTON: Q: And is there a risk -- or how do you  
6 adjust for the potential for double-counting for  
7 programs such as CFLs, which promote variable speed  
8 drives and which may reduce the benefits?

9 MR. HOBSON: A: I think in the estimates that we've  
10 taken forward, I believe that that has already been  
11 taken into account.

12 MR. FULTON: Q: Okay. All right. So there -- you have  
13 considered the potential for double-counting and taken  
14 it into account.

15 MR. HOBSON: A: That's my understanding, yes.

16 MR. FULTON: Q: I'd next like to turn to natural  
17 conservation.

18 MR. HOBSON: A: Mr. Fulton, we're finished with the 208  
19 series, then?

20 MR. FULTON: Q: Yes, thank you. And I'd like to begin  
21 with Exhibit B-4, the response to BCUC IR 2.199.4.1.

22 MR. HOBSON: A: 199.4.1.

23 MR. FULTON: Q: Yes.

24 MR. HOBSON: A: Thank you.

25 MR. FULTON: Q: And that question asks you to provide a  
26 detailed definition of natural changes.

1 MR. HOBSON: A: Yes.

2 MR. FULTON: Q: And in the response, B.C. Hydro said  
3 that there are efficiency improvements that are  
4 expected to occur in the absence of incremental DSM  
5 initiatives.

6 MR. HOBSON: A: That's right.

7 MR. FULTON: Q: In using the word "incremental", did  
8 you mean that you were defining natural conservation  
9 to be efficiency improvement that will only occur if  
10 existing DSM programs are continued?

11 MR. HOBSON: A: No, I think we were just trying to use  
12 the word "incremental" to suggest our DSM initiatives  
13 would be on top of that natural conservation.

14 MR. FULTON: Q: Okay. Then if you could turn forward  
15 to the response to BCUC IR 2.202.1.

16 MR. HOBSON: A: Can you repeat that, please?

17 **Proceeding Time 10:53 a.m. T27**

18 MR. FULTON: Q: 2.202.1. And that question quoted your  
19 CPR summary report as stating that your consultants  
20 incorporated energy savings that would be expected to  
21 occur naturally.

22 MR. HOBSON: A: That's correct.

23 MR. FULTON: Q: And in the first sentence of the  
24 response, the statement appears that  
25 "The 2007 CPR did not produce a forecast of  
26 natural conservation."

1 And then the response ends after the table with the  
2 comment

3 "B.C. Hydro does not produce a forecast of  
4 natural conservation for its load forecast  
5 before incremental DSM."

6 We can agree that natural conservation  
7 occurs?

8 MR. HOBSON: A: Yes.

9 MR. FULTON: Q: And given that natural conservation  
10 does occur, can you tell us with what level of  
11 certainty B.C. Hydro has -- or what level of certainty  
12 that B.C. Hydro has that the amount of efficiency  
13 improvements which would occur without the DSM  
14 programs would be the same in both the CPR and the  
15 load forecast?

16 MR. HOBSON: A: Well, I think in total one of the  
17 things you're getting that maybe provides you some  
18 confidence is, there is -- there are two separate  
19 processes that have arrived at similar values, and  
20 they've arrived at those values in different ways. So  
21 to the degree that the CPR is constructing a reference  
22 case, which is basically going in from an end use  
23 basis back, modeling back up, how energy is used  
24 within the province, and it's taking into account how  
25 efficiency changes would occur over time, the load  
26 forecast is approaching, and I believe in a different

1 manner, and then we're comparing the reference case  
2 and the load forecast to see if we're arriving at  
3 similar paths with respect to how energy is going to  
4 be used in the province in total. And to the degree  
5 that those are aligning, or not aligning, gives us a  
6 sense of comfort with respect to whether or not our  
7 CPR modeling is coming in at the right level.

8 MR. FULTON: Q: Thank you. I'd next like to go to fuel  
9 shares. And it's still in Exhibit B-4, and begin with  
10 IR 2.199.4.5.

11 MR. HOBSON: A: Sorry, 2.195 --

12 MR. FULTON: Q: 199.4.5.

13 MR. HOBSON: A: Oh, sorry, 199 --

14 MR. FULTON: Q: And in that question, B.C. Hydro was  
15 asked if its assumption on fuel share should vary with  
16 its forecast retail electricity prices, and the  
17 response was that changing a forecasts of fuel shares  
18 would require consideration of changes in all relevant  
19 factors, including both natural gas and electricity  
20 prices. Agreed?

21 MR. HOBSON: A: Agreed.

22 MR. FULTON: Q: And would you also agree with me that  
23 in the last LTAP, the assumption was of a zero percent  
24 real price increase?

25 MR. HOBSON: A: With respect to the load forecast?

26 MR. FULTON: Q: Yes.

1 MR. HOBSON: A: Yes.

2 MR. FULTON: Q: And that being so, can you explain how  
3 and in what magnitude the inclusion of the long-term  
4 rate forecast in the present low cast -- load  
5 forecast, which foresees substantial real rate  
6 increases, has impacted the load forecast compared to  
7 the forecast of fuel shares used in the 2006 forecast?

8 MR. HOBSON: A: I'm not sure I can fully address that  
9 much further than the IR response, and the only thing  
10 I could add to it, and the question may have been  
11 better put to the load forecast group, but I think the  
12 IR response is trying to get across that before you  
13 would assume a change in fuel share purely on the  
14 basis of a change in electricity prices, there would  
15 be other factors you would have to consider as part of  
16 that overall picture.

17 **Proceeding Time 10:58 a.m. T28**

18 MR. FULTON: Q: Did the Monte Carlo simulations  
19 calculate the high and low forecasts?

20 MR. HOBSON: A: You are speaking --

21 MR. FULTON: Q: The Monte Carlo method --

22 MR. HOBSON: A: Within the forecast?

23 MR. FULTON: Q: Let me try it this way, okay? Did the  
24 Monte Carlo simulations used to calculate the high and  
25 low forecasts use -- let me try it again. And as Mr.  
26 Scouras had said earlier, easy for me to say.

1                   In your Monte Carlo simulations to  
2           calculate the high and low forecasts, did fuel shares  
3           change with changes in the real electricity price?  
4 MR. HOBSON:    A:    I'm not sure I can answer that question  
5           for you. I think that would have been better for the  
6           load forecast group.  
7 MR. FULTON:    Q:    Okay. We move forward then to BCUC IR  
8           2.199.5. In that response, B.C. Hydro states that the  
9           2007 industrial CPR does not discuss fuel shares  
10          because most major industrial electric energy using  
11          technology in B.C. is fuel specific.  
12 MR. HOBSON:    A:    Sorry, I'm just catching up with you,  
13          Mr. Fulton.  
14 MR. FULTON:    Q:    Okay.  
15 MR. HOBSON:    A:    That's under the Fuel Shares bullet?  
16 MR. FULTON:    Q:    Yes.  
17 MR. HOBSON:    A:    And can you repeat that then, please.  
18 MR. FULTON:    Q:    Yes. Under that bullet the statement  
19          appears that:  
20                   "...the 2007 CPR does not discuss fuel shares  
21                   because almost all major industrial  
22                   electric-energy-using technologies in B.C.  
23                   are fuel specific..."  
24 MR. HOBSON:    A:    I see that, yes.  
25 MR. FULTON:    Q:    Would you agree that compression load  
26          in the natural gas industry could be powered either by

1 gas motors or electric motors?

2 MR. HOBSON: A: That's my understanding, but that's  
3 probably the depth of my understanding.

4 MR. FULTON: Q: Okay. Has B.C. Hydro estimated the  
5 amount of new natural gas industry compression loads  
6 in the load forecast, to your knowledge?

7 MR. HOBSON: A: Again, within the load forecast -- I  
8 think this may have come up earlier, but within the  
9 load forecast, I think that would have been better put  
10 to that panel.

11 MR. FULTON: Q: And the reason why I'm asking this  
12 panel these questions is I believe that these IRs were  
13 allocated to this panel, so I do apologize for any --

14 MR. HOBSON: A: I understand.

15 MR. FULTON: Q: -- confusion that I may have caused.  
16 So perhaps if that was a better question of Panel 2  
17 and it wasn't put to Panel 2 because of the allocation  
18 of the IR, that we could have an undertaking to  
19 address that question, and address the answer to the  
20 question?

21 MR. GODSOE: I need to go back and look at the  
22 information requests. I think this has been asked and  
23 answered so.

24 THE CHAIRPERSON: Can you do that over lunch?

25 MR. GODSOE: Yeah, I can do that over lunch.

26 MR. FULTON: And if has been asked and answered, I'm

1 fine. If it hasn't been asked and answered, then I  
2 would like it responded to by way of undertaking.

3 MR. GODSOE: Let me hear the question clearly again then,  
4 before I --

5 MR. FULTON: Has B.C. Hydro estimated the amount of new  
6 natural gas industry compression loads expected in the  
7 load forecast?

8 MR. GODSOE: I don't think we can do that, is going to be  
9 the answer I am almost certain that I am going to  
10 arrive at over lunch, but I will check with my  
11 colleagues at Hydro.

12 MR. FULTON: Thank you.

13 MR. FULTON: Q: The next IR is 2.209.1. 2.209.1.

14 MR. HOBSON: A: Sorry, Mr. Fulton, one more time.

15 MR. FULTON: Q: Yes, 2.209.1. And in this IR B.C.  
16 Hydro was asked to describe how it will be estimating  
17 the savings resulting from general non-rate structure  
18 rate increases.

19 MR. HOBSON: A: Yes.

20 MR. FULTON: Q: And the response states that:  
21 "Total DSM savings will be estimated using  
22 econometric models in which consumption for  
23 a customer class is a function of variables  
24 such as GDP and marginal electricity prices  
25 and other variables."  
26 MR. HOBSON: A: Yes.

1 MR. FULTON: Q: Correct?

2 MR. HOBSON: A: Yes.

3 MR. FULTON: Q: And would you agree with me that GDP  
4 estimates are most reliable on a quarterly or an  
5 annual basis?

6 MR. HOBSON: A: I'm sorry, Mr. Fulton, I may not be  
7 able to help you out a lot with this one either. I  
8 think we only received a couple of IR questions on  
9 evaluation, and I have a general knowledge around  
10 evaluation, but if we get into the specifics of it, I  
11 am not going to be of much use, I believe.

12 **Proceeding Time 11:17 a.m. T29**

13 MR. FULTON: Q: In terms of the last paragraph of the  
14 response, am I correct in my understanding of that  
15 sentence that the rate related savings will be the  
16 residual after savings from all non-rate DSM programs?

17 MR. HOBSON: A: Can you say that again please?

18 MR. FULTON: Q: In the last paragraph of the response  
19 you say that the rate related savings will be the  
20 residual after savings from all non-rate DSM programs  
21 are subtracted, correct?

22 MR. HOBSON: A: I think they're speaking of the -- in  
23 this case it's speaking of the approach that would be  
24 taken, as the result of that approach would allow them  
25 to estimate that piece.

26 MR. FULTON: Q: And would that in turn mean that to the

1 extent that there are errors in estimating program  
2 savings, particularly if there are any on a systemic  
3 basis that -- or if there's a systemic bias, that the  
4 rate-related savings estimates will be very  
5 unreliable?

6 MR. HOBSON: A: Well, I think, and I think we were  
7 clear about this within the evaluation material we  
8 filed as part of the DSM plan. I think the ability to  
9 measure the whole with respect to the DSM impact, and  
10 get the total reduction right, we're going to have a  
11 lot higher level of accuracy with respect to that. As  
12 you start to try to disentangle the pieces, I think  
13 we're going to have more challenges with respect to  
14 getting that right. And I think we're going to have  
15 broader ranges around that and we're going to need to  
16 be comfortable that we can test some of that through  
17 sensitivities to make sure that on a cost-  
18 effectiveness basis, the expenditures we're putting  
19 forward are still in line.

20 But there are a number of techniques that  
21 we can use to get estimates of how we break the pieces  
22 apart, and we've started to have discussions with a  
23 number of leading evaluators, and we've held recently  
24 some workshops pulling in Lawrence Berkeley Labs and  
25 Summit Blue. Ren Orans from E-3 was a part of what we  
26 pulled together, and David Sumi from -- I believe it's

1 P.A. Consulting, and tap into some of the lead  
2 evaluators in North America to try to help us with  
3 understanding how best to go about this and take a  
4 look at the various methodologies so that we can  
5 better refine that.

6 So I think we will have a little bit less  
7 accuracy as we start to pull the pieces apart, but I  
8 still think well within what we'll need to estimate  
9 the pieces properly.

10 MR. FULTON: Q: And in terms of the weaknesses of the  
11 type of estimation that has been described, doesn't it  
12 have the same type of weaknesses as the weaknesses  
13 that were described by Dr. Orans and Mr. Ince's  
14 reasons why they used the price elasticity of minus  
15 .05?

16 MR. HOBSON: A: Well, I think to arrive at the total  
17 portion for rates itself, I'm not sure that that would  
18 apply. But I think in terms of trying to separate out  
19 the specific rate level and rate structure, then I  
20 think that will come down to elasticity estimates and  
21 applying those estimates to try to separate that  
22 particular piece.

23 MR. FULTON: Q: And what is the reason for your  
24 uncertainty as to why it wouldn't apply?

25 MR. HOBSON: A: Sorry, my uncertainty as to why that  
26 approach wouldn't apply to the previous?

1 MR. FULTON: Q: Right.

2 MR. HOBSON: A: Well, I think they're just different  
3 things. I think you're taking a look at a general  
4 economic or econometric approach to how you're going  
5 to arrive at the total savings level. But with  
6 respect to then identifying the specific pieces, I  
7 think you're falling back onto program evaluation  
8 methodologies, which I think are a different thing  
9 than applying elasticities. But in the end, I think  
10 what you're left with is a rate structure, or a rate  
11 component, which for our purposes we're going to try  
12 to further disaggregate into a rate level and rate  
13 structure. And at that point I think is where you're  
14 pulling in the elasticities and applying those to try  
15 to understand the difference between those two pieces.

16 MR. FULTON: Q: Thank you.

17 Now, I'm just -- there is a statement in  
18 the answer that the residual amount will be separated  
19 into rate structure and rate level components using  
20 the price elasticity of demand. And that's in the  
21 last paragraph of the answer?

22 MR. HOBSON: A: Yes, and that's what I was just  
23 speaking to.

24 **Proceeding Time 11:08 a.m. T30**

25 MR. FULTON: Q: Right. If your assumed value of price  
26 elasticity is actually low, wouldn't that mean that

1           you would have underestimated the DSM savings?

2 MR. HOBSON:    A:    Well, I think through this approach

3           that wouldn't apply until you've already gotten to the

4           point where you've identified the rate component, and

5           then I think the elasticities are really being applied

6           to try to gain a separation between the two rates

7           components, rate level and rate structure.

8 MR. FULTON:    Q:    Thank you.  BCUC IR 2.173.1.3.

9           2.173.1.3.  and I just would like to get a

10           confirmation.  In that response, you indicate that the

11           next round of EE programs is underway.

12 MR. HOBSON:    A:    Yes.

13 MR. FULTON:    Q:    And that's correct?

14 MR. HOBSON:    A:    That's correct.

15 MR. FULTON:    Q:    Okay.  The next question I had is

16           really more for Mr. Godsoe, and it is one that I

17           addressed with him earlier this morning off-line, and

18           it relates to Exhibit B-40, which was filed yesterday.

19           And as we looked at B-40, it did not have any

20           references to the price of electricity.  So I'd just

21           like to have a confirmation from my friend by way of

22           undertaking that in fact B-40 does not include a

23           reference of the price of electricity.

24 MR. GODSOE:    We will take that undertaking.

25 MR. FULTON:    Thank you.

26

**Information Request**

1 MR. FULTON: Q: The next question I have was a matter  
2 that was punted forward to this panel, and it has to  
3 do with the Lower Mainland/Vancouver Island capacity  
4 balance shown in Table 6-21 and 6-22 on pages 6-62 and  
5 6-63 of Exhibit B-1. And the reference to it being  
6 punted to this panel was an exchange that I had with  
7 you, Mr. Matheson, at transcript 1368. So Volume 8,  
8 transcript 1368.

9 MR. MATHESON: A: Yes, we have that, Mr. Fulton.

10 MR. FULTON: Q: Okay, and the exchange that we had was  
11 at line 17 at page 1368, through to line 2 at 1369.

12 MR. MATHESON: A: Okay.

13 THE CHAIRPERSON: Mr. Fulton, I apologize.

14 MR. FULTON: Yes?

15 THE CHAIRPERSON: I forgot your reference. Table 6-what?

16 MR. FULTON: 6-21 and 6-22 on pages 6-62 and 6-63.

17 THE CHAIRPERSON: All right, okay. Yes.

18 MR. FULTON: Q: And I'm looking at the line "LMVI  
19 dependable capacity excluding Burrard". And can you  
20 clarify for me, Mr. Matheson, whether the dependable  
21 capacity shown has had any amount deducted for  
22 generation reserves, or for any other allowance?

23 MR. REIMANN: A: I can answer that. It has not.

24 MR. FULTON: Q: Okay. So, then, does it -- and so, I  
25 take it then, that it represents the total LMVI  
26 dependable capacity without any deductions?

1 MR. REIMANN: A: Then excluding Burrard in that line.

2 MR. FULTON: Q: Yes.

3 MR. REIMANN: A: Correct.

4 **Proceeding Time 11:14 a.m. T31**

5 MR. FULTON: Q: Okay. And the next questions may also  
6 be for you, Mr. Reimann, and they relate to the loss  
7 of load margin. And I had a discussion with Mr.  
8 Godsoe about that earlier, and it was either Panel 3  
9 or 4 and I think we landed on Panel 4. And I also  
10 believe that I provided Mr. Godsoe with a copy of the  
11 response to BCUC IR 1.22.1 in the 2006 IEP and LTAP.  
12 Did you see a copy of that?

13 MR. REIMANN: A: I have that. Yes.

14 MR. FULTON: I'd like to mark that document the next  
15 exhibit, Mr. Chairman, please.

16 THE CHAIRPERSON: Please do, Mr. Fulton.

17 MR. FULTON: A2-7.

18 THE HEARING OFFICER: Marked Exhibit A2-7.

19 (EXHIBIT B-6, BCUC IR NO. 1.22.1, DATED APRIL 21, 2006  
20 FROM B.C. HYDRO 2006 IEP & LTAP APPLICATION, MARKED  
21 EXHIBIT A2-7)

22 MR. FULTON: Q: And it would also help if you had  
23 before you the response to BCUC IR 1.29.2 which is in  
24 Exhibit B-12, because I'm going to compare the tables.

25 MR. REIMANN: A: I have that.

26 MR. GODSOE: BCUC Panel IR?

1 MR. FULTON: Q: Yes, BCUC Panel IR, thank you. 1.29.2  
2 MR. REIMANN: A: I have that.  
3 MR. FULTON: Q: All right, so if we begin then with the  
4 Table Attachment 1 to what is now Exhibit A2-7, would  
5 you confirm for me that the reserve margin in December  
6 on that table was 13.8 percent?  
7 MR. REIMANN: A: That's correct.  
8 MR. FULTON: Q: Okay, and that the annual cumulative  
9 loss of load margin for that amount of reserve was  
10 .09994 days?  
11 MR. REIMANN: A: That's correct.  
12 MR. FULTON: Q: And if we turn to Exhibit B-12 and  
13 Attachment 1.  
14 MR. REIMANN: A: Yes, I have that.  
15 MR. FULTON: Q: With the addition of certain generation  
16 resources, and I'm taking it there's been an addition  
17 when I looked at the Installed Capacity in Megawatts  
18 column.  
19 MR. REIMANN: A: Yes.  
20 MR. FULTON: Q: Okay. The dependable capacity reserves  
21 have outstripped the load growth? Is that a correct  
22 conclusion to draw?  
23 MR. REIMANN: A: You're looking at the 14.3 percent, is  
24 that what you're saying?  
25 MR. FULTON: Q: Yes, over the 13.8 percent.  
26 MR. REIMANN: A: Right. Generally speaking we looked

1 at this and concluded that things haven't  
2 substantially changed, it's still in the are of 14  
3 percent. So we wouldn't have changed our reserve  
4 margins.

5 I guess if you look at the annual risk in  
6 days in the Attachment 1 to the BCUC 1.21, Exhibit A2-  
7 7, we ended up with three nines point four. In this  
8 one we ended up with two nines point five. So the  
9 decimal points matter here. It's a bit of a manual  
10 process to go through and so you keep engrossing the  
11 load that you can serve to get to the point where  
12 you're achieving that. And so that may be a little  
13 bit of the difference, but our conclusion is that the  
14 added capacity into the system hasn't substantially  
15 changed the system, and we wouldn't have changed our  
16 reserve margin percentage.

17 MR. FULTON: Q: Right, and when you were referring to  
18 the three nines point four and the two nines point  
19 five, you were looking at the annual risk days number,  
20 which is on the second to the last line?

21 MR. REIMANN: A: That's correct.

22 **Proceeding Time 11:19 a.m. T32**

23 MR. FULTON: Q: On each attachment. Does the loss of  
24 load analysis provide an outage probability based on a  
25 certain resource load mix, as opposed to deriving the  
26 required amount of reserves to achieve a desired

1 outage probability?

2 MR. REIMANN: A: You're going to have to repeat that  
3 for me.

4 MR. FULTON: Q: Okay. And I'm just trying to  
5 understand what the loss of load analysis does. Does  
6 it give an outage probability that's based on a  
7 certain resource load mix?

8 MR. REIMANN: A: So, it takes a -- so when you say  
9 "resource load mix", it takes a set of supply-side  
10 resources --

11 MR. FULTON: Q: Yes.

12 MR. REIMANN: A: -- and looks at the probability of  
13 outages of that, and then given a particular load  
14 shape, it calculates an expectancy, and the expectancy  
15 is the sum of the probabilities of outage for the peak  
16 hour of each day, summed over the year.

17 MR. FULTON: Q: All right, thank you.

18 THE CHAIRPERSON: Are you finished on that?

19 MR. FULTON: Yes, I am.

20 THE CHAIRPERSON: Can I just piggy-back?

21 MR. FULTON: You bet.

22 THE CHAIRPERSON: It does take into account the age of  
23 the equipment there.

24 MR. REIMANN: A: That would show up in your forced  
25 outage rates. So, to the extent that your equipment  
26 was aging and you felt that the outages were occurring

1 more frequently, you would intend to bump up your  
2 forced outage rates.

3 THE CHAIRPERSON: What you've done over the 20 years is  
4 hold the 14 percent stable.

5 MR. REIMANN: A: Yes.

6 THE CHAIRPERSON: Static.

7 MR. REIMANN: A: And so our belief is that we, perhaps  
8 in the short-term, as we're going through some  
9 generation equipment aging and failing, that we are  
10 replacing that equipment and so that over the 20-year  
11 period we'd be bringing that up to a similar sort of  
12 level.

13 THE CHAIRPERSON: So it's the -- you're not just looking  
14 at the age of the equipment, you're looking at the age  
15 of the components of it.

16 MR. REIMANN: A: I think that would be true, yes.

17 THE CHAIRPERSON: Okay. Because, I mean, it obviously  
18 does make a difference as your stock of hydro turbines  
19 ages, you would expect before -- intellectually, you'd  
20 expect the 14 percent to increase over a 20-year  
21 planning period.

22 MR. REIMANN: A: Right. And we do tend to compare this  
23 with some CA data, so it's not just the specific  
24 units. At times, we compare it to the CA and say, "So  
25 how are we comparing to what the Canadian average for  
26 similar equipment would be?" So I think that would

1       have a mix of ages in it. But we do try to  
2       distinguish that from -- if we're running through a  
3       short-term period, what we view as a short-term  
4       period, where equipment's becoming so-called  
5       unreliable and we're needing to replace it.

6 THE CHAIRPERSON: But for planning purposes, is it  
7       realistic to freeze that 14 percent?

8 MR. REIMANN: A: We think so. It is something that,  
9       like, we -- like, there's nothing out there that's led  
10      us to conclude that the forced outage rates we've been  
11      using for the hydro equipment should be changing  
12      substantially, over the 20-year period.

13 THE CHAIRPERSON: Thank you. Sorry, Mr. Fulton.

14 MR. FULTON: Thank you, Mr. Chairman.

15 MR. FULTON: Q: I'd like to next turn to a contingency  
16      plan question that was bounced to this panel by Ms.  
17      Van Ruyven in transcript Volume 5, beginning at lines  
18      21 and continuing over to transcript 789, line 2. So,  
19      transcript Volume 788 -- or Volume 5, page 788, it  
20      should be, line 21, to 789, line 2.

21 MR. REIMANN: A: Are we starting at page 788, did you  
22      say?

23 MR. FULTON: Q: Yes, at -- my question is at line 21.  
24      Or begins at line 21, and then continues over to line  
25      1 of 789, and Mr. Godsoe indicated that that question  
26      was a better question for this panel.

1 MR. REIMANN: A: So we have that.

2 MR. FULTON: Q: Okay. All right. So I'll ask the  
3 question again, and then you can respond.

4 After a CRP is accepted by the Commission  
5 and included in a NITS application, can you tell us  
6 how exactly B.C. Hydro will communicate to BCTC the  
7 likelihood that a resource in its CRP will be  
8 required, and/or whether there is sufficient time  
9 available to maintain the resource, or whether there  
10 was a high consequence of the shortage.

11 **Proceeding Time 11:25 a.m. T33**

12 MR. REIMANN: A: So my understanding is that once the  
13 Commission has approved the CRP, we'd make the  
14 application to the BCTC with our base and our  
15 contingency resource plan, and that we wouldn't  
16 necessarily provide any sort of probability of the  
17 CRP, but that the BCTC is required to plan the system  
18 to maintain the CRP and the transmission needed to  
19 support it.

20 MR. FULTON: Q: Right, so then BCTC would be, as  
21 between B.C. Hydro and BCTC, a party responsible for  
22 the likelihood and the timing of the need, and the  
23 consequences of any shortage?

24 MR. REIMANN: A: That's correct.

25 MR. FULTON: Q: And they would presumably do that  
26 relative to the cost of the transmission investment,

1           among other factors.

2 MR. REIMANN:   A:    I would think so.

3 MR. FULTON:    Q:    Are there any other considerations that  
4           may be important in approving associated transmission  
5           requirements such as the lead time relative to risks  
6           addressed by the contingency plan, and non-bridging  
7           options?   Non-transmission bridging options.

8 MR. REIMANN:   A:    I'm sorry, you'll need to repeat that  
9           question.

10 MR. FULTON:    Q:    Okay.  Are there any other  
11           considerations that may be important in approving,  
12           that B.C. Hydro believes may be important in approving  
13           associated transmission requirements?  And in that  
14           respect I have in mind the lead time relative to the  
15           risks that are addressed by the contingency plan and  
16           non-transmission bridging options.

17 MR. REIMANN:   A:    I'm not sure about the non-  
18           transmission bridging options.  I have to think about  
19           that.  But our view on the CRPs is that we have, as  
20           required by the Commission's Resource Planning  
21           Guidelines and Hydro's own views, alternative views  
22           that if the plans don't materialize, how we would go  
23           about the meeting the load.  And so we've identified  
24           resources that would carry us through.  And what we're  
25           trying to do is keep advancing those projects to their  
26           earliest in-service date, and we would anticipate that

1 the BCTC would similar need to keep the transmission  
2 required to deliver those resources available for a  
3 similar timeframe. So that would need to consider  
4 lead time.

5 And our expectation in this is that you  
6 might be able to keep a lot of these projects moving  
7 forward on a modest cost relative to the total  
8 installed cost by keeping approvals and securing, say,  
9 right of ways or going through consultation to ensure  
10 that the routes are available, could be built.  
11 Perhaps you might necessarily need to get the  
12 committing full onto the project.

13 MR. FULTON: Q: Okay. If I could ask you to turn to  
14 Table 6-17 which is on page 6-59 of Exhibit B-1.

15 MR. REIMANN: A: I have that.

16 MR. FULTON: Q: Okay. And can you just tell us  
17 generally, Mr. Reimann, how B.C. Hydro decides on the  
18 resource variances when creating a CRP? And for  
19 example, if I look at the bottom line of the table and  
20 the shortfalls of 930 megawatts and 4,800 gigawatt  
21 hours in the last line --

22 MR. GODSOE: Just make sure we've got the right version  
23 in front of us, because it was updated to read 1,030  
24 megawatts and 1,580 megawatts, et cetera, so.

25 THE CHAIRPERSON: The reference is B1-8.

26 MR. FULTON: Thank you.

1 MR. REIMANN: A: Actually it may be helpful to go to  
2 the evidentiary update which is, I think, Exhibit B-  
3 10, Table 2-12 on page 35.

4 MR. FULTON: Q: Okay, just bear with me a moment.

5 MR. REIMANN: A: We've updated that.

6 MR. FULTON: Q: All right, so page reference again  
7 please?

8 MR. REIMANN: A: Page 35.

9 MR. FULTON: Q: Thank you.

10 **Proceeding Time 11:30 a.m. T34**

11 MR. REIMANN: A: And so in assessing this, what we  
12 tried to consider was what areas of the system had  
13 particular risks associated with them, and I think  
14 there is a degree of professional judgment in this.  
15 Between the load forecast uncertainty and the DSM  
16 deliverability risk, what we used for those values was  
17 largely based on the portfolio analysis in Chapter 5,  
18 and we tried to get to a 10/80/10 distribution. So we  
19 used the high load forecast and the low DSM that would  
20 have put us onto a 10 percent probability of a high  
21 tail, and so that's where we got the load forecast,  
22 the DSM.

23 Then we looked at Burrard and, given the  
24 current state and the repairs, or the refurbishment  
25 that we need to go through in some of the inspections,  
26 and some of -- the report from AMEC, it was a

1 reasonable possibility that we could see one of those  
2 units having a failure; and then the fourth  
3 consideration we put in was the capacity reduction in  
4 the Calls resulting in, perhaps, less of the bio-  
5 energy projects materializing. And if we didn't get  
6 the bio-energy projects that had a good amount of  
7 dependable capacity to them, we'd be looking at  
8 intermittent resources that have very little  
9 dependable capacity to them.

10 So between the two, the load and the DSM  
11 addressed the need side, and then we have reserve  
12 margins, but on the Burrard and capacity was  
13 addressing uncertainties that we had on the supply  
14 side.

15 MR. FULTON: Q: Thank you. Just turning to the topic  
16 of load displacement, can you tell me whether or not  
17 in previous annual load forecasts energy savings from  
18 load displacement programs were considered in the  
19 historical load?

20 MR. HOBSON: A: Within the load forecast?

21 MR. FULTON: Q: Yes.

22 MR. HOBSON: A: The load forecast after DSM?

23 MR. FULTON: Q: Yes.

24 MR. HOBSON: A: Of the DSM component? I'm trying to  
25 understand your question.

26 MR. FULTON: Q: The DSM component, we'll start with.

1 MR. HOBSON: A: Load displacement has been reflected in  
2 past DSM plans.

3 MR. FULTON: Q: Okay. Was it treated as a supply  
4 option in earlier forecasts?

5 MR. HOBSON: A: The load displacement that was  
6 reflected in our DSM plans would have translated into  
7 the load forecast after DSM, still within the demand-  
8 side component.

9 MR. FULTON: Q: All right. So, bear with me one  
10 moment.

11 So can you tell us, Mr. Hobson, what the  
12 criteria are for categorizing a program as a supply-  
13 side or a load-displacement program?

14 MR. HOBSON: A: Well, I think under the UCA, I think  
15 that changes a little bit in terms of what we  
16 characterize as the demand-side measure. But my read  
17 of that is, if we're making a reduction in customer  
18 demand on the customer side of the meter, then that  
19 would be one qualifier.

20 MR. FULTON: Q: Okay. And do the annual forecasts with  
21 the load displacement included have any impact on  
22 conservation potential estimates?

23 MR. HOBSON: A: Sorry, can you repeat that?

24 MR. FULTON: Q: Yes. Do the annual forecasts with the  
25 load displacement -- including the load displacement,  
26 have any impact on conservation potential estimates?

1 MR. HOBSON: A: That was the part that was confusing  
2 me. So, the load displacement that we've  
3 characterized in our DSM plan --

4 MR. FULTON: Q: Yes.

5 MR. HOBSON: A: -- is contained within our DSM plan and  
6 not in the load forecast before DSM.

7 MR. FULTON: Q: Okay.

8 MR. HOBSON: A: So in that sense, it wouldn't have an  
9 impact.

10 MR. FULTON: Q: And in the 2008 LTAP, B.C. Hydro is  
11 including residential, commercial, industrial self-  
12 generation used for on-site load displacement in the  
13 DSM energy savings, is it not?

14 MR. HOBSON: A: Yes.

15 MR. FULTON: Q: And we can agree that the net metering  
16 rate schedule is not included in the 2008 LTAP?

17 MR. HOBSON: A: That's correct.

18 MR. FULTON: Q: Okay. Are you able to tell us at this  
19 time whether or not net metering is going to be  
20 included in future projects in the load displacement  
21 residential programs if the volume grows  
22 significantly?

23 MR. HOBSON: A: I think to the degree the volume were  
24 to significantly increase, then we would look at it.  
25 I think our issue, when we looked at it this time, was  
26 the degree of impact we think would result from that

1 net metering. You know, my understanding of the net  
2 metering is, the customer to take benefit from that is  
3 really going to need to displace their entire load for  
4 that entire period, to receive the higher price  
5 signal. So we didn't foresee the size of impact  
6 coming off net metering at this stage for residential  
7 customers as being a significant component of what we  
8 would include. But if that were to change, we would  
9 certainly include it later.

10 MR. FULTON: Q: Okay. Now, I'd like to ask a few  
11 questions about codes and standards, and are you able  
12 to tell us, or provide us with a description of some  
13 of the federal and provincial codes and standards  
14 designed to conserve energy that were in place during  
15 the development of the last LTAP?

16 **Proceeding Time 11:36 a.m. T35**

17 MR. HOBSON: A: That were in place. I mean,  
18 provincially there haven't been a lot of changes for a  
19 period of time. A lot of the activity provincially  
20 would date back to the 1990s period, where there was  
21 the two major things that happened. An *Energy*  
22 *Efficiency Act* was developed which provided  
23 legislation that then enabled for regulation of  
24 equipment. And to the degree that that would govern  
25 equipment within the provincial jurisdiction, then you  
26 could have some impacts there. And so most of that

1 activity occurred around refrigerators and water  
2 heaters back in that time period.

3 There was also a significant change to the  
4 building code, in the sense that energy efficiency had  
5 never been a part of the building code up until that  
6 point.

7 But since then, I'm not sure that there's  
8 been very many significant changes on a provincial  
9 front. Federally there would be more changes and they  
10 would come in the form of small updates to regulation.

11 MR. FULTON: Q: Household appliances have been  
12 regulated by both the federal and provincial  
13 governments since the mid-1990s?

14 MR. HOBSON: A: That's true.

15 MR. FULTON: Q: And were the savings that related to  
16 code and standard changes for those types of  
17 appliances treated as natural conservation by reason  
18 of a stock upgrade?

19 MR. HOBSON: A: They would be captured within the load  
20 forecast. And as an example, within a CPR that would  
21 be brought in as a baseline. I mean those set minimum  
22 efficiency levels. So they change the efficiency of  
23 the new appliances. And to the degree that that thing  
24 gets picked up in stock turnover models, then that is  
25 forming your base for your natural conservation.

26 MR. FULTON: Q: Thank you. And you'll agree with me

1           that B.C. Hydro's support for codes and standards is a  
2           DSM supporting initiative which includes funding,  
3           research, technical assistance, training efforts as  
4           well as building industry and stakeholder support?

5 MR. HOBSON:    A:    I think that's a fair characterization,  
6           yes.

7 MR. FULTON:    Q:    Can I ask you to turn to Appendix K,  
8           Sub-Appendix C, and page 109 of 213.

9 MR. HOBSON:    A:    Yes, I have that.

10 MR. FULTON:    Q:    And if we look at the fifth line from  
11           the bottom, there's a reference to codes and  
12           standards.

13 MR. HOBSON:    A:    Yes.

14 MR. FULTON:    Q:    And carrying along that line over the  
15           three-year test total, the initiative is separately  
16           identified as \$6.5 million?

17 MR. HOBSON:    A:    Yes.

18 MR. FULTON:    Q:    And that's out of a total portfolio  
19           level activities of 91.8 million?

20 MR. HOBSON:    A:    That's correct.

21 MR. FULTON:    Q:    Can you tell us whether any of the  
22           portfolio level activities are related, either  
23           directly or indirectly, to the codes and standards?

24 MR. HOBSON:    A:    Well, the codes and standards support  
25           as it makes up part of that, is absolutely directly  
26           related.

1 MR. FULTON: Q: Right, but what about any of the other  
2 activities?

3 MR. HOBSON: A: The others? Yeah, it's a good  
4 question. I think they are. I think the portfolio  
5 level activities, especially if you're looking at  
6 selected ones of those, are going to play a big role  
7 with respect to creating a foundation for us that's  
8 going to impact all three forms of energy savings that  
9 come through this plan, whether it's rates, codes and  
10 standards, or programs. And in the case of codes and  
11 standards, you know, one of the important things that  
12 dictates not only different regulation from occurring,  
13 but that the level to which it is set will be driven  
14 by stakeholder and public acceptance around these  
15 issues. And so I think what we've got designed within  
16 some of the portfolio level activities is going to be  
17 very important to ensure the likelihood of achieving  
18 some of the codes and standards savings that we've put  
19 forward within the plan.

20 MR. FULTON: Q: And in terms of how the 6.5 million is  
21 spent, can you provide us with some examples of how  
22 those funds are used? For example, is it full-time  
23 employees, consultants, funding government research?

24 MR. HOBSON: A: I think you've touched on a number of  
25 the areas, so I mean some of it would be -- we do have  
26 some staff. It's a relatively small group of staff

1           that is, I think, pretty crucial to supporting some of  
2           this. So I mean, the recent changes with the  
3           government Building Code in British Columbia, we  
4           played a fairly significant role in doing a lot of the  
5           technical analysis, in trying to understand what  
6           levels of savings and how to rationalize the levels of  
7           savings and levels within the building codes that  
8           would result in those. So that would be a good  
9           example of a piece of work that we would get involved  
10          in.

11 MR. FULTON:    Q:    Okay, thank you.

12 THE CHAIRPERSON:  Mr. Fulton, we're coming up to  
13           lunchtime. Is this a convenient time to break, or  
14           would you like to --

15 MR. FULTON:    Yes, it is a convenient time to break, Mr.  
16           Chairman.

17 THE CHAIRPERSON:  May I inquire as to how much longer you  
18           think you might be after lunch?

19 MR. FULTON:    Yes, you may, and I think I will be probably  
20           an hour.

21 THE CHAIRPERSON:  That's good, because I don't think the  
22           Panel will be more than an hour, so we won't need to  
23           sit late tonight.

24 MR. FULTON:    And I should say, Mr. Chairman, and I have  
25           discussed this with Mr. Godsoe, that I have a number  
26           of accounting type of questions that will need to be

1 addressed by way of undertaking because there is not  
2 an accountant on this panel.

3 THE CHAIRPERSON: You missed your chance to put them to  
4 the only accountant they did tender.

5 MR. FULTON: Yes, I did. Well, Mr. Godsoe didn't raise  
6 that objection, Mr. Chairman, so perhaps it may be  
7 coming.

8 THE CHAIRPERSON: Okay.

9 MR. FULTON: Thank you.

10 THE CHAIRPERSON: We're adjourned for lunch.

11 **(PROCEEDINGS ADJOURNED AT 11:43 A.M.)**

12 **(PROCEEDINGS RESUMED AT 1:14 P.M.)**

**T36**

13 THE CHAIRPERSON: Please be seated.

14 Mr. Godsoe.

15 MR. GODSOE: Mr. Chairman, Commissioners, I have three  
16 undertakings I'd like to enter. The first is a  
17 request from JIESC concerning the status of the  
18 Catalyst Elk Falls, and Crofton Mills and a  
19 preliminary estimate of the impacts on our load  
20 forecast. The public version of that, I would ask be  
21 entered and marked Exhibit B-42.

22 THE HEARING OFFICER: Marked Exhibit B-42.

23 (B.C. HYDRO UNDERTAKING NO. 11, VOLUME 7, PAGE 1033,  
24 LINE 11 TO PAGE 1034, LINE 1, MARKED EXHIBIT B-42)

25 MR. GODSOE: And because that undertaking contains  
26 customer-specific information, there's a confidential

1 version for the BCUC Panel only. I ask that be  
2 entered and marked Exhibit B-42-1.

3 THE HEARING OFFICER: Marked Exhibit B-42-1.

4 **(CONFIDENTIAL VERSION FOR BCUC PANEL ONLY OF B.C.**  
5 **HYDRO UNDERTAKING NO. 11, VOLUME 7, PAGE 1033, LINE 11**  
6 **TO PAGE 1034, LINE 1, MARKED EXHIBIT B-42-1)**

7 MR. GODSOE: The next undertaking concerns a request from  
8 the Commission Panel Chair with respect to what draft  
9 reports and wind data study results were shared with  
10 Independent Power Producers. I ask that be entered  
11 and marked Exhibit B-43. And just a note on that.  
12 Because of the volume of paper we're going to provide  
13 paper copies for the Panel, but we'll post the rest of  
14 it electronically for intervenors, and hopefully  
15 that's satisfactory.

16 THE CHAIRPERSON: Thank you.

17 THE HEARING OFFICER: Marked Exhibit B-43.

18 (B.C. HYDRO UNDERTAKING NO. 43, VOLUME 11, PAGE 1986,  
19 LINE 9 TO PAGE 1987, LINE 8, MARKED EXHIBIT B-43)

20 MR. GODSOE: And the third undertaking concerns a request  
21 from Mr. Austin of IPPBC with respect to the  
22 PowerSmart evaluation reports filed with the  
23 Commission subsequent to the 2006 LTAP, and I have  
24 paper copies for the Panel, and electronically again  
25 will be posted on the Commission website. I'd ask  
26 that be entered and marked Exhibit B-44.

1 THE HEARING OFFICER: Marked Exhibit B-44.  
2 (B.C. HYDRO UNDERTAKING NO. 53, VOLUME 12, PAGE 2291,  
3 LINES 8 TO 23, MARKED EXHIBIT B-44)  
4 MR. GODSOE: And those conclude my preliminary matters,  
5 Mr. Chair.  
6 THE CHAIRPERSON: Thank you, Mr. Godsoe.  
7 Mr. Fulton.  
8 MR. FULTON: Q: I'd like to return briefly to the issue  
9 of voltage optimization and the Voltage Optimization  
10 2008 program. And as I recall your evidence, Mr.  
11 Hobson, there was a summary of the overall benefit and  
12 costs of the various programs in sub-appendix C of  
13 Appendix K?  
14 MR. HOBSON: A: Yes.  
15 MR. FULTON: Q: And would you agree with me that that  
16 sub-appendix, though, does not provide a benefit/cost  
17 analysis for the voltage optimization 2008 program  
18 specifically?  
19 MR. HOBSON: A: I think what it's outlining is more of  
20 the long-term view with respect to what B.C. Hydro is  
21 proposing with voltage optimization, and to the degree  
22 what we do in 2008 is a part of that. That was what I  
23 was referring to.  
24 MR. FULTON: Q: Is there a benefit/cost analysis  
25 available for the voltage optimization 2008 program?  
26 MR. HOBSON: A: I don't think we see it as an isolated

1 slice in time. I think we're viewing it more as a  
2 long-term proposition that we're putting forward, so  
3 we're not seeing it as individual slices of time with  
4 respect to voltage optimization.

5 MR. FULTON: Q: Right, but for the specific program,  
6 has B.C. Hydro done a benefit/cost analysis?

7 MR. HOBSON: A: Again, I would see the program itself  
8 being what we've outlined within Appendix K, so I'm  
9 not sure that I would see it as an isolated piece.

10 MR. FULTON: Q: So does that mean you have not done a  
11 benefit/cost analysis for that program?

12 MR. HOBSON: A: Not that I'm aware of beyond what I've  
13 outlined to you.

14 MR. FULTON: Q: Can I ask you then, if there has been  
15 such a benefit/cost analysis prepared, that that be  
16 provided by way of undertaking?

17 MR. HOBSON: A: For what you're referring to as a 2008  
18 program?

19 MR. FULTON: Q: Yes.

20 MR. GODSOE: I'd like to have a better explanation as to  
21 what the relevance is for that request. I'm  
22 struggling to understand that.

23 MR. FULTON: My understanding, Mr. Chairman, is that that  
24 program would contribute to the gap, in a positive  
25 sense, and that therefore the benefit/cost -- or  
26 should theoretically contribute to the gap in a

1 positive sense, and that therefore the benefit/cost  
2 analysis that relates to that program should be  
3 something that should be available to the Commission  
4 and to the parties to consider.

5 **Proceeding Time 1:20 p.m. T37**

6 THE CHAIRPERSON: We, wishing to inform myself over lunch  
7 as to voltage optimization, did a search of all the  
8 evidence on the record, and I came to an IR that said  
9 that this program is really part of the Smart Meter  
10 initiative, am I right? There are four parts of the  
11 Smart Meter initiative, and there's an IR that says  
12 that this is one of them?

13 MR. HOBSON: A: It's not part of smart metering. I  
14 think what would be a different way to characterize it  
15 would be that smart metering enables some additional  
16 opportunities within voltage optimization, but they're  
17 very distinct, in that voltage optimization can be  
18 done independent of smart metering, but smart metering  
19 provides us some additional resolution to find  
20 additional opportunities for voltage optimization.

21 MR. GODSOE: But I think the important thing to note is,  
22 we're not seeking any costs.

23 THE CHAIRPERSON: Well, I understand that, and I think  
24 Mr. Fulton is rather wondering why not. Are you?

25 MR. FULTON: Exactly.

26 MR. GODSOE: Well, I think we've said it's in a separate

1 application.

2 MR. HOBSON: A: It would come --

3 MR. FULTON: But it still affects the gap.

4 MR. HOBSON: A: And the energy savings resulting from  
5 it are still reflected within the LTAP analysis, as  
6 are the costs. And combined, those are reflected in  
7 Appendix K.

8 MR. FULTON: Q: So, because the costs are reflected in  
9 Appendix K, I'm really struggling with why B.C. Hydro  
10 is resisting providing this benefit/cost analysis for  
11 the program.

12 MR. HOBSON: A: I guess the hesitation is more that the  
13 program isn't isolated to 2008. The program is how  
14 we've outlined it within Appendix K.

15 THE CHAIRPERSON: Mr. Godsoe, could we go to that IR that  
16 I forgot to note the -- it's a Commission panel IR  
17 asking B.C. Hydro what it's applying -- what amounts  
18 it is seeking approval for. And there is a notation  
19 on it that goes to voltage optimization. I don't know  
20 if this is going to help you or not, Mr. Fulton. It's  
21 certainly going to help me.

22 MR. FULTON: Thank you.

23 MR. GODSOE: I don't recollect a BCUC panel IR asking  
24 about it.

25 THE CHAIRPERSON: No, not a panel IR. Sorry.

26 MR. GODSOE: All right. Is it a first-round IR?

1 THE CHAIRPERSON: Yes. A Commission --

2 MR. GODSOE: Yeah. I want to say 1.5, but I'm not sure  
3 if that's right.

4 MR. HOBSON: A: I think it is 1.5.

5 MR. GODSOE: Yes. It's Exhibit B-3, response to BCUC IR  
6 1.5.1, I think is the start of it.

7 THE CHAIRPERSON: Yes, page 2 of 3.

8 MR. GODSOE: Right.

9 THE CHAIRPERSON: So, there's the 14 -- 418 million in  
10 expenditures not sought in 2008. It's 242 million for  
11 expenditures related to SMI in-home display units,  
12 voltage optimization, rate structures and information  
13 technology. Which would imply that voltage  
14 optimization may come before this Commission as part  
15 of the SMI business case.

16 MR. HOBSON: A: I'm not sure it's specifically within  
17 SMI. I think it would come forward within capital  
18 plans that would flow through from our distribution  
19 portion of our business. So it would be separate from  
20 SMI.

21 THE CHAIRPERSON: Okay, so you're telling us that this  
22 Commission will not be receiving a benefit/cost --  
23 cost/benefit analysis of voltage optimization as part  
24 of SMI.

25 MR. HOBSON: A: As part of SMI, I couldn't speak to  
26 that in terms of the additional lift that is delivered

1 as a result of SMI. That could very well be part of  
2 that SMI business case, I don't know. What is within  
3 this, though, is the benefit/cost analysis of voltage  
4 optimization. That is included here.

5 So we've tried to show a full picture of  
6 what we think we'll get with respect to the number of  
7 initiatives that we've put forward.

8 THE CHAIRPERSON: Well, I see the benefit there. I just  
9 don't see the costs.

10 MR. HOBSON: A: The costs are included. So, if you  
11 take a look within Appendix K, the total would add up  
12 to the 487 million.

13 THE CHAIRPERSON: Yes.

14 MR. HOBSON: A: So the full costs related to those  
15 benefits have been included for the purpose of  
16 benefit/cost analysis.

17 THE CHAIRPERSON: But we're only being asked to approve  
18 418.

19 MR. HOBSON: A: For that portion, yes. Given that some  
20 of those other costs are going to come through other  
21 applications.

22 THE CHAIRPERSON: I'm drifting into your area, and I  
23 apologize for that, Mr. Fulton.

24 MR. FULTON: It's quite all right, Mr. Chairman.

25 THE CHAIRPERSON: I'll turn the microphone back to you.

26 **Proceeding Time 1:25 p.m. T38**

1 MR. FULTON: Well, our position, quite frankly, Mr.  
2 Chairman, continues to be that that program  
3 contributes to the gap, and that therefore we should  
4 see a benefit/cost analysis of that program.

5 MR. GODSOE: So I've laid out my reasons for opposing. I  
6 think you're going to have to make a ruling on that,  
7 Mr. Chairman.

8 THE CHAIRPERSON: I'll do that. Not now, but I will, the  
9 Panel will.

10 MR. FULTON: Thank you. We'll move on.

11 MR. FULTON: Q: Mr. Hobson, I'd like to refer you to a  
12 discussion that you had with Mr. Weafer in yesterday's  
13 transcript at -- actually it was with Mr. Andrews,  
14 yesterday's transcript at page 2400.

15 I'll let you get there, and I need --

16 MR. HOBSON: A: Sorry, 2400?

17 MR. FULTON: Q: 2400. And just so that we can perhaps  
18 correct the record because it looks like Mr. Andrews  
19 may be providing the answers rather than you. Would  
20 you agree with me that Mr. Andrews is asking the  
21 question at line 14, and you are responding at line  
22 19?

23 MR. HOBSON: A: I was going go check the quality of the  
24 answer first, but I --

25 MR. FULTON: Q: Very well.

26 MR. GODSOE: It is on our list of errata to give, but --

1 MR. FULTON: Okay, thank you.

2 MR. FULTON: Q: And equally on 2401, I think at line 5  
3 it is Mr. Andrews asking the question and you  
4 responding.

5 MR. HOBSON: A: That's correct.

6 MR. FULTON: Q: All right. So with those corrections  
7 then, and just dealing with the LiveSmart program, the  
8 Ministry of Energy, Mines and Petroleum Resources  
9 issued a news release on December the 1<sup>st</sup>, 2008, that  
10 announce that the Province is investing 17 million in  
11 energy efficiency retrofits for low-income housing, a  
12 target of 9,000 retrofits? I think that's on the  
13 first paragraph of the news release.

14 MR. HOBSON: A: Yes, I have that.

15 MR. FULTON: And I'd ask that the news release be marked  
16 the next exhibit, Mr. Chairman. So that will be A2-8.  
17 (NEWS RELEASE FROM MEMPR DATED DECEMBER 1, 2008 "\$17-  
18 MILLION LIVESMART INVESTMENT FOR LOW-INCOME HOUSING",  
19 MARKED EXHIBIT A2-8)

20 MR. FULTON: Q: And you were provided with a copy of  
21 the news release?

22 MR. HOBSON: A: I was, thank you.

23 MR. FULTON: Q: Thank you. And the reference to the  
24 9,000 target is in the third paragraph of the news  
25 release. Do you see that?

26 MR. HOBSON: A: I do see that, yes.

1 MR. FULTON: Q: Can you tell us whether or not B.C.  
2 Hydro has made a financial contribution to this  
3 program?

4 MR. HOBSON: A: To the 17 million or in general lower?

5 MR. FULTON: Q: No, to the 17 million.

6 MR. HOBSON: A: No. My understanding of this 17  
7 million is this is \$17 million of new money that the  
8 province intends to use to target gas within low  
9 income customers. So it's a complement to the program  
10 that we have targeting electricity.

11 MR. FULTON: Q: Okay. Right. So this program does not  
12 affect B.C. Hydro then.

13 MR. HOBSON: A: It would affect B.C. Hydro to the  
14 extent that it's providing broader coverage of low-  
15 income customers in general. But the dollars, the  
16 intent of the dollars is targeting gas, a gas form of  
17 energy.

18 MR. FULTON: Q: All right, thank you.

19 I next want to take you back to the 2004  
20 B.C. Hydro revenue requirements hearing and your  
21 evidence at that hearing. And I have provided your  
22 counsel with a copy of page 2301 of the transcript in  
23 that proceeding.

24 MR. HOBSON: A: Sorry, 2301?

25 MR. FULTON: Q: Yes.

26

**Proceeding Time 1:30 p.m. T39**

1 MR. HOBSON: A: Yes, I have that.

2 MR. FULTON: Q: And --

3 THE CHAIRPERSON: This will be A2-9, will it?

4 MR. FULTON: Yes, thank you, Mr. Chairman.

5 (TRANSCRIPT PAGES 2300 & 2301 FROM B.C. HYDRO REVENUE  
6 REQUIREMENT HEARING, JUNE 1, 2004, VOLUME 14 MARKED  
7 EXHIBIT A2-9)

8 MR. FULTON: Q: Actually, if we begin at page 2300.

9 MR. HOBSON: A: Yes.

10 MR. FULTON: Q: Line 23.

11 MR. HOBSON: A: Yes.

12 MR. FULTON: Q: And continue over to page 2301, line 8.

13 And I'll let you read that and --

14 MR. HOBSON: A: Yes.

15 MR. FULTON: Q: Okay. Are you able to tell us whether  
16 your evidence in that proceeding reflects the current  
17 position of B.C. Hydro in relation to Option A in the  
18 portfolio?

19 MR. HOBSON: A: Can you be more specific in terms of  
20 how you're seeing it being applied?

21 MR. FULTON: Q: Right. Well, maybe it's better if I  
22 take you to the specific words, then. And as I took  
23 those words, you were looking at the program  
24 opportunities, and that there were -- if there were  
25 changes in the particular sector, whether it was  
26 within a given program or subtraction or addition to a

1 given program, and I'm focusing on the subtractions or  
2 additions, and wanting to know whether or not B.C.  
3 Hydro's position is -- and Mr. Godsoe may want to  
4 intervene here, and I'll take you specifically to the  
5 regulation; but whether it's B.C. Hydro's position on  
6 your understanding that the -- if the Commission were  
7 to determine that one part of the plan portfolio was  
8 not cost-effective, does that mean that it can do  
9 something about that part, or is it entirely a  
10 pass/fail type situation?

11 So, as I took your answer earlier, it was  
12 that there could be some decision-making on the  
13 Commission's part as to whether or not a part of a  
14 program was cost-effective.

15 MR. HOBSON: A: So, I can handle maybe the first  
16 portion of your question --

17 MR. FULTON: Q: Yes.

18 MR. HOBSON: A: -- and the second portion, likely not.

19 MR. FULTON: Q: Okay.

20 MR. HOBSON: A: But with respect to the position that  
21 I've outlined in 2004, I don't think conceptually that  
22 changes. So I think it would still be dependent upon  
23 what sort of changes we were talking about. If we  
24 were talking about fairly minor changes within a plan,  
25 then depending on what the changes were, they could be  
26 quite isolated and have little impact on the costs and

1 benefits that would flow through to the other  
2 initiatives within the plan. If we're talking about  
3 larger changes, or depending on the specific changes  
4 that were being made, there could be resulting impacts  
5 on the costs and benefits that we would see within the  
6 current plan we have.

7 MR. FULTON: Okay. And so, now, to frame the legal issue  
8 for Mr. Godsoe to address in argument, if the  
9 Commission panel could have before it, in historical  
10 order, M 271, which is the demand-side measures  
11 regulation, and that's found in Exhibit A-10, at the  
12 back of A-10.

13 And so first of all,  
14 "...plan portfolio' means the class of  
15 demand-side measures that is composed of all  
16 of the demand-side measures proposed by a  
17 public utility in a plan submitted under  
18 Section 44.1 of the Act.."

19 **Proceeding Time 1:35 p.m. T40**

20 And then if we look at section 4(4) it says:

21 "The commission must determine the cost-  
22 effectiveness of a specified demand-side  
23 measure proposed in the plan portfolio or an  
24 expenditure portfolio by determining whether  
25 the portfolio is cost-effective as a whole."

26 And first of all, in terms of the argument, and this

1 is really as I see it a legal issue, Mr. Godsoe, is  
2 that does B.C. Hydro consider DSM Option A as a plan  
3 portfolio? And then secondly, if it does, in  
4 proposing Option A does B.C. Hydro expect that the  
5 Commission needs to make a pass/fail choice? In other  
6 words, that the Commission could not direct changes to  
7 the plan related to measures contained in the plan  
8 which it determines is not cost-effective.

9 MR. GODSOE: So I'll give you a sneak preview of what I  
10 think is going to be in my argument. I can confirm  
11 that DSM Option A, or the DSM Plan itself, is a plan  
12 portfolio.

13 What I'm going to have to address is  
14 section 44.1(7) and section 44.2(4), which allow the  
15 Commission to either accept or reject. So my argument  
16 will say that the Commission cannot direct certain  
17 things, it cannot amend the plan. It can either  
18 reject the whole plan or part of it, but what it  
19 simply cannot do is amend it. That would be the  
20 Commission stepping into the role of management and  
21 the board of directors, and choosing resources.

22 So I think I could be fairly confident  
23 that, for example, our legal position will be the  
24 Commission cannot direct us to undertake fuel  
25 switching. What it can direct us to do is perhaps  
26 look at that and report on it. And I'll explain this

1 more fully in argument, but I think there's no  
2 question in argument I'm going to be saying that.

3 So hopefully that's of some assistance.

4 MR. FULTON: Thank you.

5 The final area that I have relates to  
6 accounting, and I anticipate from conversations that  
7 I've had with Mr. Godsoe that the bulk of my questions  
8 here will need to be answered by way of undertaking,  
9 Mr. Chairman.

10 THE CHAIRPERSON: That's fine, Mr. Fulton.

11 MR. FULTON: Q: And so I'd like to begin with the  
12 referencing Exhibit B-1, page 1-3, and lines 21 and 22  
13 of the August 19<sup>th</sup> revision.

14 MR. HOBSON: A: Can you provide the reference again  
15 please, Mr. Fulton?

16 MR. FULTON: Q: Yes. Exhibit B-1, page 1-3, and it's  
17 the revision to August 19<sup>th</sup>, '08. And focusing on the  
18 statement,

19 "B.C. Hydro's amortization period for  
20 deferred DSM expenditures to remain at ten  
21 years."

22 Do you see that?

23 MR. HOBSON: A: Sorry, can you give us the reference  
24 again please?

25 MR. FULTON: Q: Yes, it should be at lines 21 and 22,  
26 and there's -- one of the requests is

1 "B.C. Hydro's amortization period for  
2 deferred DSM expenditures to remain at ten  
3 years."  
4 MR. HOBSON: A: Sorry, and the revision is --  
5 MR. FULTON: Q: The revision is lines 21 and 22.  
6 That's what the statement is. I'm just talking about  
7 the revised page.  
8 MR. HOBSON: A: Yeah.  
9 MR. FULTON: Q: And so in the older one, the words  
10 haven't changed, just the line numbers. The line  
11 numbers in the original version was line 14.  
12 MR. HOBSON: A: Okay, and you're working off of  
13 Revision 3, December 23, 2008?  
14 MR. FULTON: Q: Well, actually I was working off the  
15 August the 19<sup>th</sup> revision.  
16 MR. GODSOE: Maybe just going to the actual order might  
17 help, which is Exhibit B-1-11.  
18 MR. FULTON: Q: Okay.  
19 MR. GODSOE: The language hasn't changed on any of the  
20 revisions.  
21 MR. HOBSON: A: I'm with you in either case, Mr.  
22 Fulton, with the right page.  
23 MR. FULTON: Q: Thank you.  
24 MR. HOBSON: A: And yes, I see that.  
25 MR. FULTON: Q: And just to frame the next question, if  
26 you could have before you the response to BCUC IR

1 1.48.3, this was a response that was allocated to  
2 Panel 3, but I think the question that flows from it  
3 is an accounting question rather than one that Panel 3  
4 could have helped out in any event.

5 Q: Mr. Godsoe can tell me otherwise. So,  
6 1.48.3 of Exhibit B-3?

7 **Proceeding Time 1:40 p.m. T41**

8 MR. HOBSON: A: Yes, and I have that.

9 MR. FULTON: Q: Okay. And it says:

10 "B.C. Hydro defers DSM expenditures in  
11 accordance with regulatory accounting  
12 provisions of generally accepted accounting  
13 principles (GAAP). In the absence of the  
14 regulatory accounting provisions of GAAP,  
15 deferral of DSM expenditures would not be  
16 permitted under GAAP. The regulatory  
17 accounting provisions of GAAP also permit  
18 amortization of DSM expenditures over  
19 multiple periods."

20 And I think we're now going to be moving into the area  
21 of undertakings.

22 Could you confirm that if a regulatory  
23 asset were not created for the DSM expenditures, it  
24 would be expensed in the current year?

25 MR. GODSOE: We'll take that as an undertaking.

26 **Information Request**

1 MR. FULTON: Q: I've provided your counsel with a copy  
2 of transcript volume -- an extract from volume 5 of  
3 the transcript to the fiscal '09/'10 RRA, and which  
4 contains some evidence from Mr. Wong on regulatory  
5 accounts.

6 MR. HOBSON: A: Yes, I have that.

7 MR. FULTON: Okay. And if I could ask that this extract  
8 be marked the next exhibit, Mr. Chairman?

9 THE CHAIRPERSON: A2-10.

10 (TRANSCRIPT PAGE 665 FROM B.C. HYDRO REVENUE  
11 REQUIREMENT F2009, F2010, VOLUME 5 PROCEEDINGS,  
12 OCTOBER 8, 2008 WITH ORDER G-55-95 ATTACHED, MARKED  
13 EXHIBIT A2-10)

14 MR. FULTON: Q: And A2-10 also contains, Mr. Chairman,  
15 Order G-55-95 of the Commission which I'm going to be  
16 referring to, and the response to BCUC IR 1.48.1 of  
17 the present application. So, it's a combined exhibit.

18 THE CHAIRPERSON: Right.

19 MR. FULTON: Q: Have you had a chance to review Mr.  
20 Wong's evidence?

21 MR. HOBSON: A: I've read through it, yes.

22 MR. FULTON: Q: Okay. And would you agree, subject to  
23 check, that the use of regulatory accounts would not  
24 be applicable under the current IFRS rules?

25 MR. HOBSON: A: As far as I could go with that would be  
26 confirming what is on the page, but I'm not an

1 accountant and I don't think I could go much further  
2 than that, I'm afraid.

3 MR. FULTON: Q: So --

4 MR. GODSOE: Why don't we take an undertaking?

5 MR. FULTON: Thank you.

6 MR. GODSOE: We'll just try to combine all of these into  
7 one undertaking, so we don't have 50.

8 THE CHAIRPERSON: All right.

9 **Information Request**

10 MR. FULTON: Thank you. Okay. And I would also then --  
11 I think I'll proceed on this basis in terms of an  
12 undertaking request, rather than direct these to the  
13 panel, and so would you agree that the IFRS currently  
14 do not explicitly permit regulatory accounts? And  
15 maybe I should say, does B.C. Hydro agree that the  
16 current IFRS does not explicitly permit regulatory  
17 accounts? If the --

18 MR. GODSOE: I guess we'll play it this way. I don't  
19 think I'll be objecting to any of these, so my silence  
20 will be acquiescence it's an undertaking. Is that a  
21 fair way to proceed?

22 MR. FULTON: Thank you. Thank you.

23 THE CHAIRPERSON: That's fine, Mr. Godsoe.

24 **Information Request**

25 MR. FULTON: And that's a very efficient way of  
26 proceeding, Mr. Chairman.



1           probably goes back more than 10 years now,  
2           where B.C. Hydro moved to a 10-year  
3           amortization period and consistent with a  
4           Commission direction that allowed B.C. Hydro  
5           to amortize up to a 10-year amount. ..."

6           And specifically, when you were speaking of the  
7           Commission direction, were you referring to the  
8           demand-side management accounting policy that is  
9           appended to Commission Order G-55-95, which is found  
10          at the -- on the second pages and following of Exhibit  
11          A2-10?

12   MR. HOBSON:    A:    Yes, it would be consistent with that.

13   MR. FULTON:    Q:    Okay. And that's the policy that you  
14          were talking about in your evidence?

15   MR. HOBSON:    A:    Well, I was referring in general terms  
16          to my understanding of the history with this, and I  
17          think it does trace back to this Order.

18   MR. FULTON:    Q:    Okay. And the next question is again a  
19          question that I think will -- is more likely an  
20          undertaking question. B.C. Hydro has not followed the  
21          uniform system of accounts, because it has taken the  
22          position that it does not apply to it. Is that  
23          correct?

24   MR. HOBSON:    A:    I think your assumption around an  
25          undertaking might be appropriate.

26

**Information Request**

1 MR. FULTON: Q: Okay. And item 2 of the accounting  
2 policy entitled "Deferred costs included in rate base  
3 and earning a return", hypothetically, if order G-55-  
4 95 did apply to B.C. Hydro, how would the DSM  
5 expenditures that are to be placed in a regulatory  
6 account -- a regulatory asset, meet item 2  
7 subparagraph (b) of that Order, which directs program  
8 costs, indirect administration costs, and allocated  
9 overhead shall be deferred according to the intent of  
10 Section 34(50), research and development of the  
11 Canadian Institute of Chartered Accountants accounting  
12 recommendations *Handbook*?

13 Next, if we could turn to Exhibit B-1, page  
14 3-1, lines 18 to 25, does the discussion at lines 18  
15 to 25 on page 3-1, and in particular the statement at  
16 the end, "But did not include general rate increases  
17 which are a load forecasting issue," mean that  
18 amortization of DSM costs which impact rates is a load  
19 forecasting issue in B.C. Hydro's view?

20 **Proceeding Time 1:49 p.m. T43**

21 MR. HOBSON: A: I think all we were trying to  
22 communicate with that last statement was more the  
23 concept that general increases in rates would not be  
24 within what we would consider be a demand-side  
25 measure, that that would be an outcome from normal  
26 course of business.

1 MR. FULTON: Q: Okay. If there is another accounting  
2 or an additive accounting explanation to that  
3 statement in lines 24 and 25, if that could be  
4 included in the response in the undertaking.

5 **Information Request**

6 Exhibit B-1, page 6-2, lines 7 to 10. So  
7 page 6-2, lines 7 to 10, where there's a reference to  
8 the RIB rate structure, can B.C. Hydro confirm that  
9 the Tier 2 of the RIB is higher than the flat rate  
10 prior to the RIB? Is the higher Tier 2 rate to cause  
11 a customer response by the residential ratepayer to  
12 use less energy?

13 MR. HOBSON: A: Sorry, can you go back to your first  
14 question?

15 MR. GODSOE: I think he might be able to answer these.

16 MR. FULTON: Q: Oh, okay. Good. So can you confirm  
17 that the Tier 2 of the RIB is higher than the flat  
18 rate prior to the RIB?

19 MR. HOBSON: A: Yes.

20 MR. FULTON: Q: Thank you. Okay. Is this higher Tier  
21 2 rate intended to cause a customer response so that  
22 the residential ratepayer will use less energy?

23 MR. HOBSON: A: I think in general the design of the  
24 Rib is, yes, intended to drive a conservation  
25 response.

26 MR. FULTON: Q: And is the customer conservation that

1 results considered by B.C. Hydro to be a DSM energy  
2 saving?

3 MR. HOBSON: A: Yes, and I've outlined, I think  
4 previously, how we arrive at that amount and separate  
5 between what increase alone would have resulted in,  
6 versus increases coupled with a rate structure.

7 MR. GODSOE: In argument I'll address that as well  
8 because I think the demand-side measure definition  
9 clearly embraces rates.

10 MR. FULTON: Thank you.

11 MR. FULTON: Q: How is it that the RIB, with its Tier 2  
12 rate, is considered by B.C. Hydro to be energy  
13 conservation, but the amortization of DSM costs, which  
14 causes similar effects as the Tier 2 rate, is not  
15 considered DSM conservation?

16 MR. HOBSON: A: I think the separation we made was that  
17 through the course of our business we're going to  
18 incur costs in general. And to the degree that those  
19 costs that we incur increase our rates in general,  
20 that we wouldn't want to adopt credit for that as a  
21 deliberate conservation measure that B.C. Hydro is  
22 moving forward with. Separate from that, we do have  
23 the ability to structure rates, and within those rate  
24 structures derive a conservation result. And what we  
25 were really trying to capture within that difference  
26 was the difference between the normal course of

1 business and increases in rates that are going to  
2 occur, versus a deliberate action that we would take  
3 with rate structures to try to get a different outcome  
4 with respect to conservation.

5 **Proceeding Time 1:54 p.m. T44**

6 MR. FULTON: Q: If I could ask you to turn to Exhibit  
7 B-3, the response to BCUC IR 1.115.6, and the last  
8 paragraph of that response says:

9 "B.C. Hydro is of the view that the  
10 accounting treatment of costs should not be  
11 guided by the objective to conserve energy."

12 Would B.C. Hydro agree that the amortization period,  
13 whether it's ten years or three years, affects the  
14 actual demand by its customers because of price  
15 elasticity issues?

16 MR. HOBSON: A: To the degree that an amortization  
17 period or a change in an amortization period affects  
18 the pace at which costs flow through to rates, and in  
19 turn that would drive additional natural conservation,  
20 or conservation through the rate structure, then I  
21 would agree, that would be the case.

22 MR. FULTON: Q: Thank you. And is the main objective  
23 of B.C. Hydro's demand-side management simply  
24 conservation? Is that the main objective?

25 MR. HOBSON: A: I think that's a fair characterization,  
26 that the purpose behind it is to drive a reduction in

1 energy usage.

2 MR. FULTON: Q: Okay. The response begins with the  
3 comment:

4 "The purpose of amortizing DSM costs is to  
5 match DSM costs and benefits over time."

6 And then midway through the second paragraph, it says:

7 "However, an approach that expensed DSM  
8 costs would deviate from the concept of  
9 matching expenditures with the time period  
10 when the resulting benefits are realized."

11 Does B.C. Hydro agree that the concept mentioned is  
12 not an accounting concept or an accounting principle  
13 according to GAAP?

14 MR. HOBSON: A: I couldn't comment on how it applies to  
15 GAAP.

16 MR. FULTON: Q: Okay.

17 MR. GODSOE: So, we'll take that as an undertaking.

18 **Information Request**

19 MR. FULTON: Q: Thank you. And could B.C. Hydro also  
20 explain why there should be a variance from the  
21 recommendation in the CICA *Handbook*?

22 MR. HOBSON: A: Again, I couldn't comment.

23 MR. FULTON: Q: All right. Thank you. Those are my  
24 questions, Mr. Chairman.

25 THE CHAIRPERSON: Thank you, Mr. Fulton.

26 COMMISSIONER HARLE: I've got a few additional questions,

1 just following up on where Mr. Weafer was going  
2 yesterday with the amortization period, and perhaps  
3 following up on some of Mr. Fulton's recent questions  
4 as well. I don't want to obviously get down into the  
5 detailed accounting issues, so there won't be any  
6 undertakings related to that from me.

7 If we go back to Ms. Van Ruyven's  
8 testimony, she talked about the uncertainty associated  
9 with achieving results from the DSM programs. And  
10 we've just had a little discussion on kind of matching  
11 the costs associated with the benefits of the DSM  
12 programs. And given the degree of uncertainty that's  
13 associated with some of those future programs, I'd be  
14 interested in your comments about how that might be  
15 taken into account when it comes to looking at things  
16 like the reasonableness of the amortization period.

17 MR. HOBSON: A: Well, I guess I could start with the  
18 basis for the amortization period being ten years, and  
19 then I think we had a discussion with Mr. Weafer  
20 bringing it back to the persistence of savings that  
21 we've assumed being 11 years.

22 COMMISSIONER HARLE: Right.

23 MR. HOBSON: A: And if you take a look --

24 COMMISSIONER HARLE: For programs, that is, not  
25 necessarily for some of the other initiatives.

26 MR. HOBSON: A: True, yes, thank you. And when you

1 take a look at how that's arrived at, it draws off of  
2 a starting point looking at something called  
3 "effective measure lives", or EMLs, and these are  
4 fairly well-established through a variety of research,  
5 a lot of it through large databases within the United  
6 States, one in California and there's another eastern  
7 database. And then we take a look at those EML  
8 values, and we make adjustments for those EML values  
9 where we think it's appropriate to further adjust to a  
10 persistence level. So there's a fair bit of rigour in  
11 behind the original EML values that are used.

12 So in terms of supporting, I think, how we  
13 arrive at those persistence levels, I think there's a  
14 fair bit of -- degree of rigor that's gone into that  
15 and that, in turn, I think, is the basis for the  
16 support for the streams of benefits that you would get  
17 over time. And that in turn, I think, helps us to  
18 understand what an appropriate amortization period  
19 would be.

20 **Proceeding Time 1:59 p.m. T45**

21 COMMISSIONER HARLE: Can you elaborate on that a little  
22 bit? I'm interested in the extent that some of your  
23 benchmark kinds of organizations are using a ten-year  
24 amortization period, or if you've got equivalent kind  
25 of DSM programs, how would you stack up against that?

26 MR. HOBSON: A: I think it's quite different when you

1 take a look at the accounting of DSM from different  
2 utilities. If we take a look at Terasen's recent  
3 application, you know, the approach that was taken was  
4 similar. The makeup of their demand-side management  
5 is quite different. Fortis I think takes a similar  
6 approach, although I think they take a longer time  
7 period if I'm not mistaken. Manitoba Hydro, a similar  
8 approach and I think they're in around the 15-year  
9 period.

10 But not all utilities will amortize their  
11 DSM, and the funding that's driving their demand-side  
12 management could also differ quite significantly in  
13 some of these other jurisdictions. So it's difficult  
14 to do direct comparisons that way.

15 COMMISSIONER HARLE: Do you have any -- maybe this is an  
16 accounting question. Do you have any sense of how the  
17 IFRS kind of conversion may ultimately impact on or  
18 have implications --

19 MR. HOBSON: A: I'm afraid I really can't help you with  
20 that, I'm sorry.

21 COMMISSIONER HARLE: Okay. I might just leave it at  
22 that, then. Thank you.

23 COMMISSIONER MILBOURNE: Good afternoon. These are in no  
24 particular order of significance. It's just the way  
25 they came to me during the course of the last couple  
26 of days, so I apologize if I seem to jump around a

1 little bit.

2 There was a discussion that came out of  
3 what I'll call the ESVI exhibit, which was C23-9, Mr.  
4 Bertsch's marked-up copy of your table?

5 MR. HOBSON: A: Yes.

6 COMMISSIONER MILBOURNE: That showed the increments in  
7 DSM realization, if I can call it that, from 2008  
8 through 2023 I think it --

9 MR. HOBSON: A: I recall that, yes.

10 COMMISSIONER MILBOURNE: And this just -- as I understand  
11 it, this isn't Option A or Option B. This is what's  
12 in the revised -- is this what's in the -- according  
13 to the evidentiary update?

14 MR. HOBSON: A: No. This would be in the DSM plan as  
15 outlined in Appendix K.

16 COMMISSIONER MILBOURNE: Okay, so --

17 MR. HOBSON: A: And consistent with Chapter 6, and it  
18 would be prior to the evidentiary update reductions.

19 COMMISSIONER MILBOURNE: Would the evidentiary update  
20 reductions have any material impact on this?

21 MR. HOBSON: A: The evidentiary update reduction was  
22 done at a high level, and so it was done at the  
23 overall plan level. And it would reduce from an  
24 energy savings standpoint the numbers in total. The  
25 work that has not been done is to redo our entire plan  
26 from the bottom up --

1 COMMISSIONER MILBOURNE: Right.

2 MR. HOBSON: A: -- and allocate the reductions to each  
3 specific initiative.

4 COMMISSIONER MILBOURNE: Okay.

5 MR. HOBSON: A: There were some IRs that tested some of  
6 that.

7 COMMISSIONER MILBOURNE: No, I'm just looking at the  
8 bottom line is increment -- the aggregate increment,  
9 okay. So would that, just by way of example, it shows  
10 here the increment of 908 in 2011 is the number Mr.  
11 Bertsch has calculated?

12 MR. HOBSON: A: That's right.

13 COMMISSIONER MILBOURNE: Would that be lower as a result  
14 of the evidentiary update?

15 MR. HOBSON: A: As a result of the evidentiary update,  
16 all of these numbers at a planned total level would be  
17 reduced.

18 COMMISSIONER MILBOURNE: So they would go down  
19 proportionately.

20 MR. HOBSON: A: Consistent with our approach, yes.

21 COMMISSIONER MILBOURNE: And I'm not asking you to  
22 calculate anything, but would it be like 5 percent  
23 lower or 10 percent or --

24 MR. HOBSON: A: The overall reduction in total was 11  
25 percent.

26 COMMISSIONER MILBOURNE: Okay, so these would, pro rata,

1 would all go down by 11 percent roughly?

2 MR. HOBSON: A: Yes.

3 COMMISSIONER MILBOURNE: Okay.

4 MR. HOBSON: A: I think that's a fair way to do it.

5 COMMISSIONER MILBOURNE: The calculations I've done, I  
6 didn't take that into account, but I wanted to kind of  
7 go through the period of the program here and then ask  
8 a couple of questions about it.

9 MR. HOBSON: A: Okay.

10 COMMISSIONER MILBOURNE: And I did do it on the basis of  
11 averaging numbers. And again, feel free to check my  
12 arithmetic and this is not by way of evidence, it's  
13 just by way of framing a question.

14 MR. HOBSON: A: Okay.

15 COMMISSIONER MILBOURNE: But in terms of the average  
16 increment from 2010 through 2014, it comes out to be  
17 936 gigawatt hours per year. That's the average of  
18 those numbers.

19 MR. HOBSON: A: The average of the total increment each  
20 year.

21 COMMISSIONER MILBOURNE: Yeah.

22 MR. HOBSON: A: Okay.

23 COMMISSIONER MILBOURNE: And then for the next five-year  
24 period, from '15 through '19, it comes out to 903. So  
25 kind of roughly the same for those two five-year  
26 periods.

1 MR. HOBSON: A: Okay.

2 COMMISSIONER MILBOURNE: You know, there's some ups and  
3 downs in there.

4 So I take those two numbers and average  
5 them together, I come with 920, which is kind of the  
6 first ten years of this thing, you've got an average--

7 MR. HOBSON: A: Right.

8 COMMISSIONER MILBOURNE: -- incremental reduction of 920.  
9 If you go to the last four years, the average  
10 incremental reduction is 381.

11 MR. HOBSON: A: Right.

12 **Proceeding Time 2:04 p.m. T46**

13 COMMISSIONER MILBOURNE: And it's kind of like a stepped  
14 change. It's significantly lower the last four years.  
15 So if I take the difference between 920 and 381, and  
16 multiply it by 4, in those last four years the  
17 aggregate difference, if you want to call it that, is  
18 2156 gigawatt hours per year.

19 MR. HOBSON: A: Can you run me through that again, just  
20 how you arrived at that?

21 COMMISSIONER MILBOURNE: If I take the 920 and subtract  
22 381 from it. Okay, if I'm running at this level, I  
23 drop to this level, right? I take that difference,  
24 multiply it by the four years that it applies to --

25 MR. HOBSON: A: I see.

26 COMMISSIONER MILBOURNE: And I come up with an aggregate

1 number of 2156.

2 MR. HOBSON: A: Okay.

3 COMMISSIONER MILBOURNE: So, my kind of question is,  
4 would that be a significant -- have a significant  
5 impact on the insurance requirement?

6 MR. HOBSON: A: The insurance -- I'm not sure I can  
7 speak to directly, so somebody else on the panel --

8 COMMISSIONER MILBOURNE: I've seen it in my head, that's  
9 around 3,000.

10 MR. REIMANN: A: And so we put the insurance in, in the  
11 last three years, I guess, getting there by 2026. And  
12 I think in our load resource balance that we could  
13 probably go to Table 2-10, but we start adding future  
14 resources to keep the gap under balance.

15 COMMISSIONER MILBOURNE: I understand you're adding  
16 future resources. That's why I'm asking the question.

17 MR. REIMANN: A: Right. So we didn't add those in the  
18 earlier years to do the insurance, the insurance was  
19 in the latter period.

20 COMMISSIONER MILBOURNE: My question is, if -- two  
21 questions. One is, what causes this difference? Why  
22 does the average realization kind of step down by a  
23 factor kind of almost two and a half in the last four  
24 years?

25 MR. HOBSON: A: Right.

26 COMMISSIONER MILBOURNE: And the second piece is, would

1           it -- have you considered kind of introducing  
2           additional efforts in order to prevent that step-down  
3           and offset the need for additional resources to meet  
4           the insurance requirement?

5 MR. HOBSON:    A:    At this point I think what we've laid  
6           out, and it gets difficult as you get further out into  
7           time, but it could be as we get close to that period  
8           that we'll have new information and it would allow us  
9           to come forward with different DSM initiatives, but  
10          we're too early in the process, I think, to know that  
11          with enough certainty to have factored that in at this  
12          point.

13                        I think the piece that's really driving  
14           down on an incremental basis the numbers is the decay  
15           of the savings from the prior periods, that you're  
16           getting an effect of those savings dropping off in  
17           time. So that's mixed in with the increments that  
18           you're calculating. So you've got two things, you've  
19           got activity likely slowing, but you've also got a  
20           decay with respect to the persistence, and both of  
21           those things are combining to lower the increments in  
22           the latter part of the plan.

23 COMMISSIONER MILBOURNE:    And that --

24 MR. REIMANN:    A:    Sorry, can I add to that?

25 COMMISSIONER MILBOURNE:    Sorry, let me just finish my  
26          question. That decay, then, is reflected in

1 additional resources on the supply side. In your  
2 plan.

3 MR. REIMANN: A: And we've shown those as notionally  
4 future resources. We hadn't intended, by showing the  
5 future resources to necessarily indicate that it would  
6 be IPP energy per se. It filled in, so we showed one  
7 plan that we could provide primarily to the BCTC for  
8 planning purposes. So we haven't decided, then. -- we  
9 don't feel we are at a point needing to decide, and we  
10 haven't yet decided what would fill those future  
11 resource options. And DSM is clearly one of the  
12 potentials.

13 MR. HOBSON: A: Specific to your question that you  
14 asked, though, the decay is factored into the net  
15 numbers in the cumulative numbers that we actually do  
16 reflect within the load resource balance.

17 COMMISSIONER MILBOURNE: I understand that. Thank you.

18 In the course of the discussion, I believe  
19 this was with Mr. Ghikas, there was a fair bit of to-  
20 ing and fro-ing about fuel switching and electric  
21 heating and so on and so forth. And there was -- I  
22 believe the number that you gave was 300,000 of your  
23 existing accounts have electrical heating. You get  
24 that from your billing information.

25 MR. MATHESON: A: That's right. 302,000 of our  
26 accounts use electric space heating.

1 COMMISSIONER MILBOURNE: Is that 300,000 accounts  
2 reliably accurate? Or do you have other kind of  
3 surveys, like REUS surveys and so on that show that  
4 there's a fair degree of uncertainty in that number  
5 and that there's a lot of what I would call "mixed"  
6 heating around, where people have combinations of  
7 electric heat and other sources?

8 MR. MATHESON: A: I think there's a little uncertainty  
9 out there. I think we get a lot of that information  
10 from our billing system, and there may be some mix-up  
11 of customers that actually do have both.

12 COMMISSIONER MILBOURNE: Thank you. There has been a  
13 fair bit of the use of your fridge program, fridge  
14 recovery program, as a kind of typical of the  
15 incentive-driven programs. Would it be possible for  
16 you to give me a ballpark -- what the annual savings  
17 attributable to that program are? Like, and I'm not  
18 looking for any decimal places.

19 **Proceeding Time 2:10 p.m. T47**

20 MR. HOBSON: A: Yeah. They will vary over time, and  
21 have. And are you talking about more out planning  
22 going forward?

23 COMMISSIONER MILBOURNE: Yeah, what is the kind of  
24 reasonable -- is it 100 gigawatt hours per year?

25 MR. HOBSON: A: No.

26 COMMISSIONER MILBOURNE: It is 10? Is it 1,000?

1 MR. HOBSON: A: No, no. To give you an idea, fiscal  
2 2008 drew 18 gigawatt hours and it would be scheduled  
3 --  
4 COMMISSIONER MILBOURNE: 18?  
5 MR. HOBSON: A: 18, and it would be scheduled to rise  
6 to 35 in fiscal '09 on a cumulative basis. So that  
7 would be an addition of another 17. And it ramps up a  
8 little bit more from there, 51, 65. So you know, it's  
9 going in increments of around 15, 15 to 20 gigawatt  
10 hours per year.  
11 COMMISSIONER MILBOURNE: So the annual kind of  
12 expectation is somewhere around 15 gigawatt hours per  
13 year?  
14 MR. HOBSON: A: 15 to 20, I would suggest.  
15 COMMISSIONER MILBOURNE: Okay, in that range.  
16 MR. HOBSON: A: Yeah.  
17 COMMISSIONER MILBOURNE: I was trying to find a reference  
18 for the discussion that again was with Mr. Ghikas  
19 about the potential kind of range of savings from  
20 influencing the choice of fuel in new residential  
21 accounts. I believe a number of about 9 was  
22 calculated on the back of an envelope for that.  
23 MR. MATHESON: A: Right. What we were saying was that  
24 the realistic view as far as fuel switching right now,  
25 given that customers, new customers have a choice  
26 about what fuel they can use to heat their homes, that

1 the historic 20 percent level of electricity versus 80  
2 percent natural gas, that if you went an additional 10  
3 percent given the carbon economy that we're now into,  
4 that that 10 percent uptake of electricity as opposed  
5 to natural gas, essentially represented 8.9 gigawatt  
6 hours per years on our system.

7 MR. HOBSON: A: Thank you, that kind of confirms my  
8 memory. But do I also recall that you characterized  
9 that as kind of *de minimus* or not really worth  
10 considering?

11 MR. MATHESON: A: Well, it was only -- it was really  
12 intended, I think, to put in perspective all the  
13 discussion relative to fuel switching. In the lead-up  
14 to this hearing, and indeed during the hearing itself,  
15 there was an awful lot of discussion about the entire  
16 customer load B.C. Hydro has that use electricity to  
17 heat their homes or heat hot water -- sorry, to heat  
18 water -- and that our view is that that's not a  
19 particularly useful way to look at the issue because  
20 most of those customers have already embedded costs in  
21 the systems they have in their homes. They're very  
22 unlikely to spend the money it would take to switch  
23 over, and that therefore the more useful discussion  
24 ought to be about new accounts. And thus we tried to  
25 sort of inject some, I guess, some perspective about  
26 what the level of electricity that those new accounts

1           might represent. That was really the purpose of that.  
2 COMMISSIONER MILBOURNE: Thank you. I'm not intending to  
3           pursue a discussion of advocacy or prospect. I'm  
4           simply trying to understand the position that you put  
5           forward as to the nature and the kind of weight that  
6           you would put on that kind of number. But I guess  
7           just to finish, close the loop for me, that 9 gigawatt  
8           hours per year that you indicate is about half of what  
9           you're looking for from your ongoing fridge program,  
10          which you regard as kind of a viable contributor.

11 MR. MATHESON: A: Right. That was the idea. It was to  
12          try to --

13 COMMISSIONER MILBOURNE: But it's about half of it,  
14          right?

15 MR. MATHESON: A: -- put some relativity to some of the  
16          other programs we are proposing in our plan.

17 COMMISSIONER MILBOURNE: Thanks.

18                       This is probably just a technical curiosity  
19          question, but the Island -- there was some discussion  
20          about the Island Cogen plant and the kind of the  
21          neighbouring industries that used the by-product steam  
22          from it?

23 MR. SCOURAS: A: Yes.

24 COMMISSIONER MILBOURNE: What happens to the steam when  
25          they're not operating?

26 MR. SCOURAS: A: Well, as I understand, the steam is

1 diverted into the turbine to turn the combine cycle  
2 gas turbines. So the excess steam is just used to  
3 increase the heat rate of the existing unit, the way I  
4 understand the contract.

5 COMMISSIONER MILBOURNE: So the absence of the offtake  
6 from the pulp mill or the paper mills -- does the  
7 absence of the offtake go into the -- by the pulp and  
8 paper mills, influence the cost of operation of the  
9 cogen plant?

10 MR. SCOURAS: A: The way I understand, it improves the  
11 heat rate for that unit. So yes, it does affect the  
12 cost.

13 COMMISSIONER MILBOURNE: In a positive sense?

14 MR. SCOURAS: A: Yes. Oh, I don't know the economics  
15 of the different offtake agreement with the steam  
16 host. So what I do know is -- so I can't answer that.  
17 It improves the economics for B.C. Hydro. That would  
18 depend on the dispatch agreement that we have with the  
19 operator.

20 MR. REIMANN: A: I can answer that in a general sense.

21 COMMISSIONER MILBOURNE: Yeah, that's what I'm looking  
22 for.

23 MR. REIMANN: A: So with a cogen unit, rather than  
24 burning separately gas for generation, electrical  
25 generation and having a separate steam boiler and  
26 burning gas just for steam, it's more efficient if you

1 run the gas through a turbine, take some steam off,  
2 and put that into the process.

3 So you'll get less efficiency on the  
4 electrical portion itself, but the costs that you save  
5 by not having to generate steam for process offsets  
6 those costs to a greater degree. So overall you're  
7 more efficient with the cogen facility.

8 **Proceeding Time 2:16 p.m. T48**

9 COMMISSIONER MILBOURNE: Are you describing the situation  
10 when somebody's using the steam? Or when they -- when  
11 you have an off-taker for the steam or when you don't?

12 MR. REIMANN: A: So when you have an off-taker for the  
13 steam, it's more efficient to run the steam with the  
14 process and the generation combined.

15 COMMISSIONER MILBOURNE: Okay, and when you don't have an  
16 off-taker for the steam, what happens?

17 MR. REIMANN: A: So then you don't bleed off the steam  
18 off the turbine. You keep it all in the turbine, you  
19 generate more power, but overall that process would be  
20 less efficient than if the steam host was there.

21 COMMISSIONER MILBOURNE: Okay. So the unit cost of  
22 energy from that facility goes up without the host.

23 MR. REIMANN: A: Generally it should, yes.

24 COMMISSIONER MILBOURNE: Thank you. This question to Mr.  
25 Matheson. In the course of discussion, you referred  
26 to the -- for lack of a better term, I'll call it the

1 "challenge" of dealing with some of the  
2 inconsistencies in the Energy Plan, the kind of  
3 different directions that it tugs you in. You may  
4 recall or may not recall that.

5 MR. MATHESON: A: Okay.

6 COMMISSIONER MILBOURNE: You did. Trust me. The pen  
7 never lies.

8 And I was curious as to what you had in  
9 mind by the way, what you would identify as  
10 inconsistencies. As things that you had to manage.

11 MR. MATHESON: A: I'm just trying to remember the  
12 context of the conversation. I'm having trouble  
13 recalling that. I don't suppose you have a reference  
14 back to that, to the passage or anything.

15 COMMISSIONER MILBOURNE: Let's see. It was somewhere  
16 between Mr. Ghikas and Mr. Wallace. Well, I'm not  
17 going to pursue it now. I'll -- if it's okay with  
18 you, I'd give -- Mr. Godsoe, give him a transcript  
19 reference, and you can see if you want to add anything  
20 to explain what you meant by inconsistencies.

21 MR. GODSOE: So we'll call that a quasi-undertaking.

22 **Information Request**

23 COMMISSIONER MILBOURNE: That's -- we're here to create  
24 new terminology. Thank you.

25 MR. MATHESON: A: I may have just -- speaking off the  
26 top of my head, I may have been talking about, you

1 know, what our plan proposes as opposed to, say,  
2 what's in the Energy Plan related to Burrard, for  
3 instance. I think that may have been --

4 Mr. Reimann was just reminding me about  
5 some of the provisions in the Energy Plan which talk  
6 about low cost versus least cost, and the difference  
7 between those. I don't know whether that was --

8 COMMISSIONER MILBOURNE: Okay. Well, I'll dig -- I'll do  
9 the work.

10 MR. MATHESON: A: Okay.

11 COMMISSIONER MILBOURNE: Thanks. One of the residual  
12 questions that I had after your discussion with Mr.  
13 Wallace about the impact of Tier 2 or stepped rates in  
14 your DSM calculations --

15 MR. HOBSON: A: Yes.

16 COMMISSIONER MILBOURNE: -- was, for the life of the  
17 development of these numbers, right? In this exhibit,  
18 did you assume any relative change in the tiers in  
19 those various programs, or were they always the same  
20 relative position?

21 MR. HOBSON: A: In terms of thresholds?

22 COMMISSIONER MILBOURNE: Yeah, in terms --

23 MR. HOBSON: A: The splits?

24 COMMISSIONER MILBOURNE: -- of assessing the impact of  
25 stepped rates, projecting the benefits. Was it on a  
26 kind of a constant differential basis, or was it the

1 differential increasing?

2 MR. HOBSON: A: My understanding is that the splits or  
3 the thresholds would hold constant within the  
4 modeling, but what would be changing would be the  
5 application of additional increases in rates over time  
6 to the various steps. And that would be changing the  
7 relative prices within Step 1 compared to Step 2. But  
8 I believe the threshold differences would be equal.

9 **Proceeding Time 2:21 p.m. T49**

10 COMMISSIONER MILBOURNE: I'm sorry, the threshold being?

11 MR. HOBSON: A: Sorry. So if you took a transmission  
12 services rate and it's got a 90/10 split, the 90/10  
13 split would hold through the period.

14 COMMISSIONER MILBOURNE: Okay. When you apply a general  
15 rate increase to that --

16 MR. HOBSON: A: Right.

17 COMMISSIONER MILBOURNE: -- you have applied --

18 MR. HOBSON: A: In that case the increases would be  
19 being applied on the Tier 1 rate because you're  
20 holding your Tier 2 fixed.

21 COMMISSIONER MILBOURNE: So 5 percent on that, 5 percent  
22 on that.

23 MR. HOBSON: A: Well, no, in the case of the TSR you're  
24 holding your Tier 2 I believe is more tied in that  
25 case for that particular rate, is more tied  
26 particularly to the avoided cost. And so in that

1 modelling I believe that would hold true. So it would  
2 increase, I would believe, with inflation but I don't  
3 think it would be general increases in rates that  
4 would be driving a Tier 2 increase.

5 COMMISSIONER MILBOURNE: Okay, that's in the -- so did  
6 you project forward the incremental --

7 MR. HOBSON: A: A change.

8 COMMISSIONER MILBOURNE: A marginal cost?

9 MR. HOBSON: A: No. In that projection it's fixed at  
10 the 73/60 I believe it is, within that point in time  
11 out into time. So it's not picking up, for example,  
12 and I think this was the point behind Mr. Wallace's  
13 undertaking to us, is it's not picking up the \$120  
14 that's been discussed through this LTAP process as a  
15 potential Tier 2 price.

16 COMMISSIONER MILBOURNE: So it's not picking up \$120.

17 MR. HOBSON: A: It's not picking up the \$120.

18 COMMISSIONER MILBOURNE: That's really what I'm trying to  
19 --

20 MR. HOBSON: A: Yes.

21 COMMISSIONER MILBOURNE: So if it doesn't pick up the  
22 120, if I looked down the road and said, "Five years  
23 from now that number is 150," it wouldn't be --

24 MR. HOBSON: A: Right.

25 COMMISSIONER MILBOURNE: You didn't make that projection.

26 MR. HOBSON: A: We did not make that projection, no.

1 COMMISSIONER MILBOURNE: Okay, maybe I'm asking the same  
2 thing as Mr. Wallace is undertaking, but that was kind  
3 of what I was trying to understand.

4 MR. HOBSON: A: Yes.

5 COMMISSIONER MILBOURNE: So thank you for that.

6 There was some reference with respect to  
7 the reluctance to kind of entertain the notion of  
8 scaling down the Clean Power Call even -- any more, as  
9 some participants were asking questions about, because  
10 of the desire to have large projects. Have I got that  
11 right?

12 MR. SCOURAS: A: I think what I was thinking, when you  
13 originally designed this call, our goal was to attract  
14 large projects.

15 COMMISSIONER MILBOURNE: Right.

16 MR. SCOURAS: A: And if I recall the discussion, the  
17 concern I think would be that as you scaled it down,  
18 you may get to the point where some of the large  
19 projects would take over the whole quota, so you  
20 wouldn't be able potentially to award them a contract.

21 COMMISSIONER MILBOURNE: And then there was a companion  
22 discussion about scalability.

23 MR. SCOURAS: A: Right.

24 COMMISSIONER MILBOURNE: And I believe I heard your  
25 answer along the lines that these things weren't  
26 really scalable?

1 MR. SCOURAS: A: Well, yes, actually I read that, I was  
2 thinking at the time it probably could have been more  
3 explicit, that if you look at the resources that have  
4 participated in the Clean Power Call, or the ones that  
5 were eligible to participate, I think wind is one  
6 resource that would have scalability associated with  
7 it. But the other resources, the water and biogas, or  
8 even focusing on making looking to do things like  
9 municipal solid waste or different -- all the  
10 different technologies that potentially would be  
11 available. Those are often more optimized around a  
12 site-specific feedstock, and have less ability -- or  
13 the water at the particular stream, they have less  
14 ability to be scalable.

15 COMMISSIONER MILBOURNE: So was every kind of water --  
16 and I don't have many details of the results you got,  
17 but was kind of -- are all the water projects single  
18 site proposals? Or are they -- some cases there's  
19 kind of one proponent who's got five or six sites in a  
20 given area.

21 MR. SCOURAS: A: No, there's some projects with the  
22 latter.

23 COMMISSIONER MILBOURNE: Okay.

24 MR. SCOURAS: A: In terms of -- not ladders, but in  
25 terms of they have the other option that there's  
26 multiple sites. But they have the choice to bring

1 those through as one project.

2 COMMISSIONER MILBOURNE: I understand that.

3 MR. SCOURAS: A: So the question I think is if you  
4 started taking -- seeing if you could take pieces off,  
5 do the economics fall apart for the whole thing?

6 COMMISSIONER MILBOURNE: How would that differ from the  
7 kind of scalability you just ascribed to wind  
8 generation?

9 MR. SCOURAS: A: Well, I think the way I understand  
10 this is that wind can have a site where it could grow  
11 out maybe in 100 megawatt increments. The site is  
12 large enough, it just could add more turbines as it  
13 went. Whereas with the water projects, the  
14 infrastructure is often put in at one time or within a  
15 certain band width. So a wind project can be -- some  
16 of the wind projects, if you know -- Pincher Creek and  
17 those, they can expand over several years or a decade  
18 because the resource is there. Whereas the water  
19 projects that people have chosen where they feel is  
20 the best resource for that project at that time, and  
21 looked to develop it over to a two to four-year  
22 period.

23 COMMISSIONER MILBOURNE: Okay, could I put it another  
24 way. Your comments with respect to scalability, would  
25 it be fair to characterize them as limited scalability  
26 as opposed to no scalability?

1 MR. SCOURAS: A: Yes, and I think that's --

2 COMMISSIONER MILBOURNE: Maybe that's --

3 MR. SCOURAS: A: That's what I was trying to get  
4 across, that some of the resources and some of the  
5 projects may have some scalability. Some others may  
6 not. And I also wouldn't want to leave you with the  
7 perspective that some folks don't try to grow projects  
8 in a watershed or a crossing area, but they would  
9 probably try to bring those to B.C. Hydro as separate  
10 discrete packages as opposed to saying every two or  
11 three years we'd like to add this amount of new  
12 energy.

13 **Proceeding Time 2:27 p.m. T50**

14 COMMISSIONER MILBOURNE: Okay, thank you. There was a  
15 fair bit of reference made to the conservation  
16 potential review --

17 MR. HOBSON: A: Yes.

18 COMMISSIONER MILBOURNE: -- and so on and so forth. And  
19 again, it comes back to -- my question kind of comes  
20 back to the energy impacts from heating. In the  
21 assessments that were done, I believe you concluded  
22 that there was an excessively long or no payback on --  
23 based on the model or the reference case for gas  
24 firing versus electricity? There just wasn't any  
25 operating payback. Have I got that right?

26 MR. HOBSON: A: From the consumer's standpoint.

1 COMMISSIONER MILBOURNE: Was -- from the consumer's  
2 standpoint, did that reflect stepped rates for  
3 electricity?

4 MR. HOBSON: A: It would not have -- no, sorry. It  
5 would not have reflected stepped rates and it also  
6 wouldn't have reflected potential impacts on the gas  
7 side, like GHG offsets or carbon tax, concepts like  
8 that.

9 COMMISSIONER MILBOURNE: Okay, thank you.

10 And the other subject that got a fair bit  
11 of airtime was light bulbs.

12 MR. HOBSON: A: Yes.

13 COMMISSIONER MILBOURNE: I don't know why, but in any  
14 event -- I do know why. My question is, has B.C.  
15 Hydro done any assessments or evaluations of the  
16 corollary impacts of high efficiency lighting in  
17 indoor applications on the -- given B.C.'s climatic  
18 and illumination seasonality, any work to look at the  
19 perhaps unintended consequences of increased energy  
20 requirements for space heating as a result of higher  
21 light efficiency?

22 MR. HOBSON: A: We actually factored that into the  
23 analysis, so it's a term called "cross effects", and  
24 we factored that in, not just for our lighting  
25 program, but for other programs where it's applicable  
26 as well. And so, basically the concept that you're

1 describing, you're taking heat essentially out of the  
2 home in the sense that an incandescent bulb produces  
3 mostly heat and not light. And in certain periods of  
4 time within the year, that heat needs to be replaced.  
5 And so that has a cross effect back onto whatever that  
6 heating system is. So we factor that in both for  
7 electricity, for the estimate of customers that would  
8 participate that have electric heat. As well, we  
9 factor it in for participants that would have gas  
10 heat. And those costs are also reflected within the  
11 TRC.

12 COMMISSIONER MILBOURNE: Are the cumulative effects  
13 always positive in favour of the higher efficiency  
14 lighting?

15 MR. HOBSON: A: Sorry, I'm not sure what you mean by  
16 that. A net increase in energy savings?

17 COMMISSIONER MILBOURNE: Yes.

18 MR. HOBSON: A: Yes. And that's when I'm saying that  
19 we're factoring that in, we're taking into account  
20 that we're getting a reduction in lighting load, but  
21 we're also getting an increase in heating load. And  
22 so some of the savings that we're realizing from  
23 lighting are being reduced from the increased heating  
24 load, and it's that net energy that's actually feeding  
25 in as a benefit in our calculations. And so to the  
26 degree that our calculations are showing it to be

1           passing the TRC, then that's an indication that it's  
2           low-cost relative to supply, even with the cross  
3           effects being applied.

4   COMMISSIONER MILBOURNE:   Are you aware that there's kind  
5           of certain contrary views that are being given to the  
6           public?

7   MR. HOBSON:   A:   I'm aware of some of what's transpired  
8           over the last few days with respect to that, but it's  
9           --

10   COMMISSIONER MILBOURNE:   That's what I was trying to  
11           understand without saying it.

12   MR. HOBSON:   A:   Yeah.  It's -- it's --

13   THE CHAIRPERSON:   Without admitting he watched the CBC.

14   COMMISSIONER MILBOURNE:   I think it was -- all I could  
15           say is it was one of Canada's 24-hour news networks.  
16           I can't say which one because that button keeps  
17           working.

18   MR. HOBSON:   A:   It's not a new issue.  It's an issue  
19           that we've looked at.  And I mean, it can cut both  
20           ways, with respect to lighting.  So with residential  
21           and given our cooling load in B.C., it -- with  
22           lighting in the residential load, I mean, it has more  
23           of an impact.  When you take a look at lighting with  
24           respect to commercial facilities, then the impact can  
25           actually go the other way, where your more efficient  
26           lighting is producing less heat, and to the extent





1 COMMISSIONER MILBOURNE: -- taken into account? Is there  
2 any surveys as to the people that otherwise wouldn't  
3 have air conditioning, that now have it, that use it  
4 as an offset to the benefits?

5 MR. HOBSON: A: I don't know the precise calculations  
6 for the heat pumps and what's factored into the  
7 programs that would carry that technology, but I would  
8 have to think that that has been taken into account  
9 and it would be taken into account in two ways. One  
10 in terms of taking a look at the load that would occur  
11 afterwards, but also the baseline that we would be  
12 working from. And it would be taking the *delta* of  
13 that.

14 COMMISSIONER MILBOURNE: Okay, thank you, that's all I  
15 have.

16 THE CHAIRPERSON: We'll break for 15 minutes.

17 **(PROCEEDINGS ADJOURNED AT 2:34 P.M.)**

18 **(PROCEEDINGS RESUMED AT 2:47 P.M.)** **T52**

19 THE CHAIRPERSON: Please be seated.

20 Mr. Fulton and Mr. Godsoe, the Panel has  
21 considered your request for an undertaking, and  
22 perhaps you could clarify it. The information you  
23 sought was the cost/benefit analysis purely for the  
24 year 2008?

25 MR. FULTON: If I wasn't clear on that, Mr. Chairman, it  
26 was for the entire program.

1 THE CHAIRPERSON: It was for the entire program.

2 MR. FULTON: Yes.

3 THE CHAIRPERSON: I have to say that this -- the whole  
4 voltage optimization is of interest to the Panel,  
5 primarily because we are concerned that for some  
6 reason B.C. Hydro has chosen not to seek Commission  
7 approval for this particular program. The Panel is  
8 not certain why not. And what I propose, Mr. Godsoe,  
9 is that when we reconvene on Thursday, you may wish to  
10 inform us further as to why this program is not filed  
11 with your application, and why you should not  
12 specifically respond to the request by Mr. Fulton.

13 MR. GODSOE: I will do that.

14 THE CHAIRPERSON: Thank you.

15 Well, I guess that just leaves me. And if  
16 it's one thing worse than being -- like Mr. Austin,  
17 cross-examining after lunch, it's being between -- the  
18 only person between you and your weekend.

19 Mr. Reimann, while we're still -- I wrote  
20 down "90 percent rule", and you were describing for us  
21 how a co-generation works. And I wondered how you  
22 account for the -- for co-generation in your -- when  
23 you do your calculation of the 90 percent rule. 90  
24 percent test, I mean.

25 MR. REIMANN: A: I believe we do it based on the net  
26 that we would emit, but that would be subject to

1 check.

2 THE CHAIRPERSON: Perhaps you could, because it seems to  
3 me that, as you describe co-generation, that the --  
4 before the co-generation asset was put in place, the  
5 steam house was burning gas to create its own steam  
6 for its own process.

7 MR. REIMANN: A: Right.

8 THE CHAIRPERSON: So really you should be focusing in a  
9 perfect world on just the increment.

10 MR. REIMANN: A: Yes.

11 THE CHAIRPERSON: Yes. So could you confirm that?

12 MR. REIMANN: A: Yeah, and I'm -- I guess -- yeah,  
13 we'll check it out to see. This is existing  
14 facilities need to be offset, I think, by 2016, so I'm  
15 not sure we've put our minds yet to how that would  
16 work, but --

17 THE CHAIRPERSON: Oh, I see.

18 MR. GODSOE: Sorry, can I seek clarification? The 90/10  
19 rule, do you mean the 90 percent clean renewable rule?  
20 Or --

21 THE CHAIRPERSON: Yes.

22 MR. GODSOE: I think we can answer that. I think that --

23 MR. MATHESON: A: I think -- my recollection is that we  
24 just simply decided which resources in our system fell  
25 within the definitions released by the province, and  
26 they counted in the 90 percent bucket, and those that

1        didn't did not count, and we tabulated them up and  
2        they tended to run between 93 and 94 percent on that  
3        rolling average. And frankly, in most months as well.  
4        We did a monthly look, we did an annual look, and we  
5        went back as far as we had decent data, which was  
6        actually back to about four years. And we did all of  
7        those, and there were only, I think, out of that --  
8        out of the past four years there were only two months  
9        out of those entire four years where the system  
10       actually fell below 90 percent, and not surprisingly  
11       that's because in those two particular months we were  
12       running Burrard quite hard, and that's what caused us  
13       to dip below.

14                    But again, we only -- we looked at the  
15       resources that would have qualified for the  
16       definitions of "clean" and "renewable" and I don't  
17       believe co-generation does, and then just added up the  
18       contributions in energy they created and got to the  
19       93, 94 percent level.

20 THE CHAIRPERSON:    So when I hear you say that, it's as  
21       though you charged Island co-gen and McMahon with the  
22       full amount of gas that got burnt.

23                    **Proceeding Time 2:51 p.m. T53**

24 MR. MATHESON:    A:    Yeah, and that I'm not -- I didn't do  
25       the modelling exercise. I'm not --

26 THE CHAIRPERSON:    No, I'm just --

1 MR. MATHESON: A: I'm not sure about that, but I think  
2 that's the case. I'm just not --

3 THE CHAIRPERSON: I think, Mr. Reimann, perhaps you could  
4 confirm it one way or the other?

5 MR. REIMANN: A: Yes.

6 THE CHAIRPERSON: Thank you.

7 MR. GODSOE: I still don't understand the request and I  
8 just need to understand it. So if it's with respect  
9 to the 90 percent clean renewable, co-generation is  
10 out completely. It's by technology.

11 THE CHAIRPERSON: We've had a certain amount of  
12 discussion over the last two days as to how B.C. Hydro  
13 sets, establishes and reports its 90 percent  
14 compliance.

15 MR. GODSOE: Right, and you can put this to the panel,  
16 but that's by technology. And when I look at Appendix  
17 B-3 of Exhibit B-1-1, co-generation is not a clean and  
18 renewable resource.

19 So I'm just struggling why we can't answer  
20 this here, because it's not in the 90 percent. I  
21 think you can put that to the panel, but --

22 MR. REIMANN: A: I think Mr. Pullman understands that.

23 MR. GODSOE: Okay.

24 MR. REIMANN: A: It's the difference between -- if all  
25 the gas that was burned at this facility all counted  
26 towards -- the GHGs all counted towards Hydro's GHG

1 requirements as opposed to a portion of those GHGs  
2 being allocated to the steam host.

3 THE CHAIRPERSON: Yes.

4 MR. REIMANN: A: And I believe it's the net we  
5 modelled, but I'll confirm that.

6 THE CHAIRPERSON: Okay, thank you.

7 **Information Request**

8 THE CHAIRPERSON: Mr. Hobson, I don't want this to  
9 appear frivolous, but it was a question I -- is it  
10 possible that you could have charged to you a program  
11 that actually increased electric use but decreased  
12 GHG? And what I'm thinking of is lawnmowers.

13 MR. HOBSON: A: Is -- sorry?

14 THE CHAIRPERSON: Lawnmowers.

15 MR. HOBSON: A: Okay.

16 THE CHAIRPERSON: And I'm just wondering, if the  
17 government decided that you should get in the business  
18 of giving incentives for people to switch to electric  
19 lawnmowers, would that fall under your bailiwick?

20 MR. HOBSON: A: I suppose it could in the sense that it  
21 would be a program that we would take forward into  
22 market, and it would still be a demand-side type  
23 program. So I guess it would fall within our area. I  
24 certainly haven't heard anything with respect to that  
25 type of program at this stage. Not even specific to  
26 lawnmowers, but just conceptually that kind of idea.

1 THE CHAIRPERSON: I'm still waiting to turn my old  
2 lawnmower in.

3 One thing, and if this has been asked, I  
4 apologize, just point me to it. Is it possible for  
5 somebody in your accounting department to look forward  
6 over the next 20 years and forecast -- calculate what  
7 the unamortized balance of the DSM will be?

8 MR. HOBSON: A: I think we -- I think the short answer  
9 would be I'm sure that calculation could be done, and  
10 I'm wondering if it's not already been provided.

11 THE CHAIRPERSON: Nothing -- I mean, do it in five-year  
12 increments. I just want to know what it is now, what  
13 it'll be in five years, five, ten, fifteen and twenty  
14 years.

15 MR. HOBSON: A: I think it's in BCUC 115.4, and it  
16 states that it levels out at 1.3 billion.

17 THE CHAIRPERSON: If that's the case that's fine, thank  
18 you.

19 And my last question for you, Mr. Hobson,  
20 is, when you do your analysis, you've heard  
21 discussions that I've had with Mr. Reimann about  
22 energy weighting by season and super-peak, off-peak.

23 MR. HOBSON: A: Yes.

24 THE CHAIRPERSON: Do you apply those factors --

25 MR. HOBSON: A: We do. And so just to separate the two  
26 areas where the analysis has been done, there's

1 analysis within the LTAP that Mr. Reimann's group  
2 performs where we're just feeding in streams of energy  
3 but not valuing them. And then in the more static  
4 analysis where we've driven out benefit/cost ratios  
5 within Appendix K, we do actually take a look at the  
6 load shapes themselves, and then we apply that to  
7 streams of value specific to time periods.

8 THE CHAIRPERSON: And which particular weighting table  
9 factor would you have used?

10 MR. HOBSON: A: In terms of the load shapes?

11 THE CHAIRPERSON: No, in terms of the evaluation.

12 MR. HOBSON: A: I think it is just drawing off of high  
13 load and low load, if that's what you're meaning, with  
14 respect to values consistent with the \$88 energy  
15 value. And then it's also applying a factor, where  
16 appropriate, specific to capacity. But the key is  
17 it's driving off of the load shape specific to the end  
18 use or the appropriate load shape for the sector,  
19 depending on the best data we have.

20 THE CHAIRPERSON: So to the extent you're deferring -- or  
21 sorry, you're achieving conservation in high load  
22 hours, --

23 MR. HOBSON: A: Yes.

24 THE CHAIRPERSON: -- you reflect some form of weighting.

25 MR. HOBSON: A: Of value for that.

26 THE CHAIRPERSON: Okay.

1 MR. HOBSON: A: Yes.

2 **Proceeding Time 2:57 p.m. T54**

3 THE CHAIRPERSON: Thank you.

4 Mr. Matheson, I've been -- we can just turn  
5 to the Canadian entitlement. Are you the person to  
6 talk to the Canadian entitlement?

7 MR. MATHESON: A: I think so. I can --

8 THE CHAIRPERSON: Okay. Now, correct me if I'm wrong.  
9 The earliest date that this agreement terminates is  
10 September of 2024, is it?

11 MR. MATHESON: A: I think that's right, yes.

12 THE CHAIRPERSON: And it requires a ten-year termination  
13 period.

14 MR. MATHESON: A: Yes, it does.

15 THE CHAIRPERSON: Would it -- is it a reasonable  
16 assumption that it will be terminated? Or is it --

17 MR. MATHESON: A: I keep hearing that our sister entity  
18 in the United States is unhappy with it, and may well  
19 do that, but I don't think there's any definitive sort  
20 of sense of that at all. That's just hearsay, I  
21 guess.

22 THE CHAIRPERSON: What obligations, in simple terms,  
23 would it be free of, your sister entity, if it  
24 terminated?

25 MR. MATHESON: A: Well, to deliver that amount of  
26 energy to the border every day, essentially.

1 THE CHAIRPERSON: And what obligations would you be  
2 relieved of if it terminated it?

3 MR. MATHESON: A: Well, in its truest form, I think  
4 we'd be relieved of the obligation to shape and to  
5 store and shape the energy on our side of the border,  
6 pursuant to their own ends. And of course that goes  
7 directly to the treaty itself. So assuming that that  
8 really would never happen, there would have to be some  
9 other mechanism put in place that would oblige us to  
10 continue to shape and store that energy pursuant to  
11 their -- particularly their flood requirements south  
12 of the border.

13 THE CHAIRPERSON: Right. And you have said, in a couple  
14 of instances, and I have them somewhere, that -- I  
15 think you said -- neither the CE nor the exchange low  
16 priced paired energy would contribute to B.C. Hydro's  
17 firm supplies, as they are not open quite solely from  
18 electric generating facilities within the province, as  
19 required by SD 10.

20 So, and then in another -- in your report  
21 on bio-energy call phase 1 at page 26, you've -- you  
22 modify that a bit, and you say:

23 "Use of the Canadian entitlement to the  
24 downstream business is assumed to be  
25 unavailable as a firm capacity source to  
26 meet B.C. Hydro's domestic requirements."

1           And I'm wondering if you have anything definitive that  
2           says that the CE does not count.

3 MR. GODSOE:    I can be definitive legally.  It does not  
4           count under SD 10.  It is not from a generating  
5           facility solely within the province, so I think that's  
6           black and white.  I can dress it up further in  
7           argument, but that's my legal view.

8 THE CHAIRPERSON:  Nothing is entirely black and white,  
9           because as I think -- as I understand the treaty, the  
10          facilities are actually the Mica Dam, the Duncan and  
11          the Arrow -- or the Twin Lakes --

12 MR. MATHESON:   A:   Well --

13 THE CHAIRPERSON:   -- within B.C., and they sit on B.C.  
14          Hydro's balance sheet, just the fact that the power  
15          comes from somewhere else.

16 MR. MATHESON:    A:   They do, so you're -- then you're  
17          into a question, I think, of where the water  
18          originates really, is what that comes down to.  But  
19          the premise here is that because the energy itself is  
20          produced by generators that are in the United States,  
21          and then delivered back to British Columbia, that they  
22          can't fall within the definition of Special Direction  
23          10 in that sense.

24 THE CHAIRPERSON:   It's an easier leap to see that this  
25          might qualify as opposed to, say, Sundance or Wabamun  
26          in Alberta.

1 MR. MATHESON: A: I think if you step back and you ask,  
2 what is the intent of Special Direction 10, and the  
3 idea behind self-sufficiency, I still think it's a  
4 hard hurdle to get over the fact that the energy  
5 itself is actually generated in another jurisdiction  
6 than British Columbia, and I think that's the -- it's  
7 hard then to say, "Well, it's okay -- it's okay to be  
8 self-sufficient in every sense other than the fact  
9 that 400 megawatts of this -- of capacity is actually  
10 coming from outside of B.C." I think that's a hard --  
11 in my mind, that's a hard hurdle to get over with  
12 that, despite the fact that it might be attractive,  
13 for obvious reasons.

14 THE CHAIRPERSON: Not insuperable, maybe a hard hurdle,  
15 but -- okay, thank you.

16 **Proceeding Time 3:02 p.m. T55**

17 THE CHAIRPERSON: Not insuperable, maybe a hard hurdle,  
18 but -- okay, thank you.

19 Moving to the -- Mr. Scouras very briefly,  
20 as I understand it, the B.C. Hydro is -- in the  
21 process of putting this application together, has used  
22 professional judgment to determine that the gap will  
23 be partly supplied by 2100 gigawatt hours of acquired  
24 power, and further it has used its professional  
25 judgment to say that in order to deliver that acquired  
26 power, it requires to over-procure by 43 percent.

1           Would that be a fair summary of what it is --

2 MR. SCOURAS:    A:    You lost me with the 43 percent.  I

3           think we said 30 percent was the attrition rate.

4 THE CHAIRPERSON:   30 percent attrition rate is one way of

5           looking at it.  43 percent over procurement is the

6           other -- is the obverse of that particular coin.  And

7           you get that just by dividing --

8 MR. SCOURAS:    A:    Oh, I see.  I understand.  Okay.

9 THE CHAIRPERSON:    Yes.

10 MR. SCOURAS:    A:    So, and I think you had a bit of a

11           discussion with Mr. Elton about this topic.  Is at the

12           end of the day, our target is to deliver 2100 gigawatt

13           hours of firm energy, post-attrition firm energy.

14           We've used a planning target and I guess what you're

15           providing is both sides of the same coin, how you

16           might characterize getting to that 2100.

17 THE CHAIRPERSON:    Yes.

18 MR. SCOURAS:    A:    At the end of the day, our intention

19           would be to complete this Call, and then file an

20           application with you that would state what we think is

21           the most accurate representation of attrition for the

22           Call that we've just completed to get to the 2100

23           gigawatt hours of firm energy post-attrition.

24 THE CHAIRPERSON:    And the attrition will very much depend

25           on the nature of -- it's the over procurement, sorry,

26           will very much depend on the size of the contracts you

1           award, and the amount of due diligence you will have  
2           done.

3 MR. SCOURAS:    A:    And if I could add to the unique  
4           aspects of each of the projects that are ultimately  
5           awarded contracts.

6 THE CHAIRPERSON:   Exactly.  And so, it is very hard for  
7           -- I suggest, for us to sit here and say that 30  
8           percent is the right number.  42.3 percent is the --

9 MR. SCOURAS:    A:    Right.

10 THE CHAIRPERSON:   But I think my discussion with Mr.  
11           Elton is probably enough in that regard.

12                            Could I turn you to panel IR 1.28.1?

13 MR. SCOURAS:    A:    Yes.

14 THE CHAIRPERSON:   And in response to a question on -- you  
15           had stated that volatility in the financial markets  
16           has increased the cost of debt and equity for IPPs,  
17           and then underneath you say B.C. Hydro cannot quantify  
18           the increases in IPP debt and equity costs.  Have you  
19           -- in the course of doing your due diligence, have you  
20           retained a financial advisor?

21 MR. SCOURAS:    A:    Yes, we have.

22 THE CHAIRPERSON:   And what is your financial advisor's  
23           view on the state of the project, project finance,  
24           debt capital markets, at this time?

25 MR. SCOURAS:    A:    Well, maybe I should be specific.  
26           We've retained a financial advisor to help us with

1 each of the individual project assessments, and what  
2 they've done is assessed each of the projects that  
3 have been submitted into Clean Power Call and assessed  
4 their financing plan. And come out with a range of  
5 opinions that some folks have a strong opportunity,  
6 some are balance-sheet financing their projects, some  
7 have strong financial backing, and some other ones  
8 have less strong financial backing. But we have not  
9 found -- at that level of analysis, we've not found a  
10 systemic trend that would lead us to believe that  
11 there is a barrier to a significant number of projects  
12 getting financing.

13 **Proceeding Time 3:06 p.m. T56**

14 THE CHAIRPERSON: So you couldn't comment then on the  
15 capacity of the debt market that is available to these  
16 projects.

17 MR. SCOURAS: A: I couldn't personally provide an  
18 opinion on that, no.

19 THE CHAIRPERSON: Okay, just looking at it on a project-  
20 by-project basis is what you said, I think.

21 MR. SCOURAS: A: Yeah, we're looking at it -- as I  
22 said, for some folks, the capacity of the debt market,  
23 if they're an entity with a strong balance sheet and  
24 they want to finance, that's self-evident, we can  
25 understand that. For other folks, we take that as one  
26 consideration and decide if we want to have a

1 discussion with them. And that discussion, that may  
2 be one of the items that we'd press further with, and  
3 I think that's one of the other items that we're  
4 trying to understand in this call is how does the  
5 current economic situations put pressure on different  
6 projects, and that would be one of the things that we  
7 do, I believe, report on when we come forward with our  
8 Section 71 report.

9 THE CHAIRPERSON: Thank you. Finally, if you could turn  
10 to page 35 of Exhibit B-10, and I want to turn to the  
11 top box. Sorry, do you have that?

12 MR. REIMANN: A: We do.

13 THE CHAIRPERSON: Load forecast uncertainty. That's the  
14 REUS. The rationale is peak load and energy  
15 requirements can increase as a result of either  
16 sustained growth or load temperatures on winter peak.  
17 Do you have a breakdown of those four numbers that  
18 appear opposite there as those which were caused by  
19 sustained growth and those which were caused by load  
20 temperatures on winter peak?

21 MR. REIMANN: A: I don't. Mr. Ince, Panel 2, probably  
22 would have.

23 THE CHAIRPERSON: Ah. Mr. Ince wasn't down to discuss  
24 Chapter 6 though, was he?

25 MR. REIMANN: A: No.

26 THE CHAIRPERSON: Could that be made available?

1 MR. GODSOE: We'll take that as an undertaking.

2 THE CHAIRPERSON: Thank you.

3 **Information Request**

4 THE CHAIRPERSON: So really you cannot tell me then what  
5 sort of assumption you made with respect to cranking  
6 down the thermometer.

7 MR. REIMANN: A: I don't know if Mr. Matheson can add.  
8 My understanding is that you have a similar sort of  
9 distribution of temperatures as you do for economic  
10 activity, and that they take -- I think we used 80  
11 percent because we combined the load forecast  
12 uncertainty with a DSM uncertainty, get an overall  
13 distribution. And we're targeting a 10 percent  
14 probability of being in low DSM, high load situation.  
15 And my understanding is that, I think, roughly  
16 speaking, is a 2020 load DSM, and so we've have taken  
17 the DSM for the load forecast distribution. And I  
18 think the cold temperature on that capacity  
19 contributes in an equal way through a distribution,  
20 but that would --

21 MR. MATHESON: A: It does, and I think where these  
22 numbers come from is that high load forecast, which is  
23 by definition in the top 10 percentile of occurrences.  
24 So on the energy side, that's precisely what that  
25 figure in 2028 represents, is if we took the  
26 distribution of energy load forecasts in that

1 particular year and said, "What's the high load  
2 forecast look like? What does it represent in terms  
3 of gigawatt hours?" that's -- that numbers 5,000  
4 higher than the mid-load forecast, and that's at a  
5 distribution basis. And I know the peak is done  
6 exactly the same way, but Mr. Ince makes an assumption  
7 about the temperature that we would have to in the  
8 Lower Mainland particularly, to get to that upper  
9 distribution point, and I just can't recall what the  
10 number is.

11 THE CHAIRPERSON: Okay. I am concerned that one of the  
12 things that falls out of this CRP is the advancement  
13 of Mica 5 by 10 or 11 years.

14 MR. REIMANN: A: Yes.

15 THE CHAIRPERSON: And as we've already discussed, Mica 5  
16 brings very little to the table in terms of energy and  
17 475 megawatts or so of --

18 MR. REIMANN: A: So within the CRPs, I think our  
19 biggest concern is about ensuring that there is  
20 capacity available to the extent that we have any  
21 shortfalls in capacity helps us keep the lights on.  
22 But if you look at Table 2-11, I think it just helps  
23 to put it into context. One of the --

24 **Proceeding Time 3:11 p.m. T57**

25 COMMISSIONER MILBOURNE: Is there a page?

26 MR. REIMANN: A: Sorry, page 30.

1 MR. REIMANN: A: So we do have capacity uncertainty,  
2 but we're also relying by fiscal 2020 about 1700  
3 megawatts on the DSM. And in addition, most of the  
4 resources that we're buying between now and 2020 are  
5 intermittent resources. So, intermittent resources  
6 and DSM, the only sort of firm capacity on a supply  
7 side that's coming in in that picture, if you look up  
8 in the proposed new supply, it shows Mica 5 coming in  
9 in that plan in 2025.

10 THE CHAIRPERSON: Right.

11 MR. REIMANN: A: So we're talking 15 years out before any  
12 additional firm capacity beyond Revelstoke 5 comes on.

13 THE CHAIRPERSON: And in addition to the litany of  
14 problems you have with capacity, you lose 400  
15 megawatts of reliance on outside neighbouring markets.

16 MR. REIMANN: A: Exactly. And so we start looking at  
17 that, and it's -- and again, there's a degree of  
18 professional judgment in this thing, but it's -- it  
19 starts to become a bit worrisome that we're not seeing  
20 any additional firm resources coming on.

21 So what we're hoping is, with the  
22 contingency resource plans that we can continue to  
23 advance these resources through the low-cost period  
24 and keep them available for that. And as we get  
25 closer to the period, if we realize that everything is  
26 going smoothly, then we should have the ability to

1           perhaps move these things out.

2   THE CHAIRPERSON:    And I gave Mr. Fulton, who I believe  
3           gave your counsel, just the first -- you can confirm  
4           that you have already -- B.C. Hydro has filed with the  
5           B.C. Environmental Assessment office for a project  
6           description of Mica 5 and 6.

7   MR. REIMANN:        A:    That's right.

8   THE CHAIRPERSON:    But I went to the EAO website and just  
9           pulled off Mica 5.  And it says on the second page:  
10                        "B.C. Hydro is working towards a contingency  
11                        operational date of October, 2013, for the  
12                        Mica 5 project."

13   MR. REIMANN:        A:    That's correct.

14   THE CHAIRPERSON:    So, you're hoping for the best and  
15           planning for the worst, is that --

16   MR. REIMANN:        A:    That would about sum it up.

17   THE CHAIRPERSON:    And what other impact does this Panel  
18           approving the CRPs -- it sends BCTC away to start  
19           planning for them?

20   MR. REIMANN:        A:    That's right.  Now, with respect to  
21           Mica 5, the site of some capacitor upgrades that may  
22           or may not happen, depending on the degree of  
23           contingencies that we're willing to live with, in  
24           terms of getting Mica into the main system, but aside  
25           from that I believe once ILM is in place, I don't  
26           think there's additional transmission over and above



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## ERRATA

### Volume 4, February 19, 2009

Page 453, Lines 15 & 18 "MR. WEAFFER:" should be  
"MR. ANDREWS"

### Volume 5, February 23, 2009

Page 649, Line 7 "process" should be  
"projects"

Page 686, Line 6 "MR. GODSOE:" should be  
"MR. OULTON"

Page 699, Line 2 "our" should be "a"

Page 722, Line 7 "quality" should be  
"qualify"

Page 784, Line 14 "BCIT 3.27.1" should be  
BCUC IR 3.27.1"

### Volume 6, February 24, 2009

Page 831, Line 23 "the mill square" should  
be "them elsewhere"

Page 836, Line 5 "State Falls" should be  
"Stave Falls"

Page 871, Line 20 "sync" should be "sink"

Page 884, Line 10 "cost" should be "flat"

Page 917, Line 23 "40 to 60" should be  
"4260"

Page 934, Line 22 "surface" should be  
"service"

Page 963, Line 12 & 15 "practically" should be  
"proactively"

Page 981 Line 7 "Zip" should be "ZFF"

Page 981, Line 8 "Pyra" should be "Pira"

## ERRATA

### Volume 7, February 25, 2009

Page 1042, Lines 1 & 5	"MR. RICH" should be "MR. O'RILEY"
Page 1081, Line 14	"MR. MATHESON" should be "MR. WEAFFER"
Page 1093, Line 13	delete "[sic]"
Page 1099, Line 24	"Zip" should be "Ziff"
Page 1099, Line 25	"Pyar" should be "PIRA"
Page 1103, Line 22	"long" should be "long-term"
Page 1117, Line 12	"MR. O'RILEY" should be "MR. INCE"
Page 1118, Line 5	"MR. O'RILEY" should be "MR. INCE"
Page 1118, Line 9	"res-" should be "residences"
Page 1118, Line 16	"MR. O'RILEY" should be "MR. INCE"
Page 1119, Lines 2 & 7	"MR. O'RILEY" should be "MR. INCE"
Page 1124, Line 2	"GP" should be "GDP"
Page 1140, Line 10	"REAPS" should be "REEPS"
Page 1124, Line 13	"convert" should be converge"