

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 4, 2009

PROCEEDINGS AT HEARING

BEFORE:

A. J. Pullman,	Chairperson
B. Milbourne,	Commissioner
M. Harle,	Commissioner

VOLUME 12

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
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P. COCHRANE	City of New Westminster
R. FLETCHER	Texada Action Now Community Association

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CAARS

VANCOUVER, B.C.

March 4, 2009

(PROCEEDINGS RESUMED AT 8:28 A.M.)

THE CHAIRPERSON: Please be seated.

Mr. Ghikas, good morning.

MR. GHIKAS: Mr. Chairman, just a preliminary matter.

I've reviewed my cross again, and I've decided not to pursue the matter that I was intending to pursue today. So, I'm complete with Panel 4.

THE CHAIRPERSON: Thank you.

MR. GHIKAS: Thank you.

MR. AUSTIN: Good morning, Panel. The IPPBC is calling its first witness panel of one, so that's -- IPPBC is going to have a witness. And the witness this morning is Dr. Mark Jaccard. Dr. Jaccard used to be chair of the BCUC, and the details of his resume are set out in Exhibit C17-5, and I'd like him affirmed at this point in time.

IPPBC PANEL 1

MARK JACCARD, Affirmed:

EXAMINATION IN CHIEF BY MR. AUSTIN:

MR. AUSTIN: Q: And, Dr. Jaccard, in Exhibit C-5, your evidence is set out. In Exhibit C17-6, you have prepared information response answers. Do you adopt your evidence and these information response answers

1 as your evidence in these proceedings?

2 MR. JACCARD: A: Yes, I do.

3 MR. AUSTIN: Q: Do you have anything to add to your
4 evidence or any changes or any corrections?

5 MR. JACCARD: A: No, I do not.

6 MR. AUSTIN: He's now available for cross-examination.

7 THE CHAIRPERSON: Thank you, Mr. Austin. Mr. Bertsch,
8 are you first up?

9 MR. BERTSCH: I guess I am.

10 **CROSS-EXAMINATION BY MR. BERTSCH:**

11 MR. BERTSCH: Q: I just have a couple of questions for
12 you. If you could take a look at ESVI 1.1, IR
13 response.

14 MR. JACCARD: A: Okay, ESVI?

15 MR. BERTSCH: Q: ESVI IR 1.1.

16 MR. AUSTIN: Could you give an exhibit number, which I
17 believe is C17-6? Is that correct?

18 MR. BERTSCH: I believe that's it.

19 MR. JACCARD: A: Oh, okay. Right. So I'm there, and
20 then --

21 **Proceeding Time 8:30 a.m. T2**

22 MR. BERTSCH: Q: And in the question you read
23 "Testimony and expert witnesses"? Is that what you
24 see at the top of your page?

25 MR. JACCARD: A: Okay, sorry, which --

26 MR. BERTSCH: Q: It should read "Exhibit C17-5 contains

1 one page labelled 'Testimony of Dr. Mark Jaccard'".

2 MR. AUSTIN: Have you got a page number on there?

3 MR. BERTSCH: Q: Page 1, it's the first page. It's the

4 first page of your IR responses.

5 MR. JACCARD: A: Okay. Yes.

6 MR. BERTSCH: Q: Okay. Now, this question relates to

7 the table in your evidence, and the question that we

8 asked is "Is the reference table the only evidence to

9 which Dr. Mark Jaccard will be the expert witness?"

10 And the answer is, "The table is the only evidence to

11 which you will be appearing." Could you confirm that

12 that is the same as Table ES on page 1 of Exhibit C17-

13 5?

14 MR. JACCARD: A: Which is what this is.

15 MR. BERTSCH: Q: Is that the same table?

16 MR. JACCARD: A: Yes.

17 MR. BERTSCH: Q: And that is the only table to which

18 you're providing evidence?

19 MR. JACCARD: A: Yes.

20 MR. BERTSCH: Q: If you could just take a look at ESVI

21 5.4 of the same packet. And it's a question that we

22 had in regards to building shelves.

23 MR. AUSTIN: I believe that's at page 23.

24 MR. BERTSCH: Q: Page 23, I'm sorry.

25 MR. JACCARD: A: Page 23. I'm completely lost here.

26 Do you want to show me here where I'm looking? Yes.

1 **Proceeding Time 8:32 a.m. T03**

2 MR. BERTSCH: Q: And this is in reference to one of the
3 pages in the attached report, in which the report
4 stated, "Improving residential building shells have a
5 minimal role in emissions reductions." And your
6 response, the last sentence, says:

7 "There is evidence that these programs have
8 been largely ineffective in the past and
9 will be much less effective than claimed in
10 the future."

11 Given your previous answer that this evidence only
12 relates to the table, is that comment directed
13 strictly as your opinion, and you do not have evidence
14 to support that particular statement?

15 MR. JACCARD: A: I answered other Information Requests
16 by pointing out that I'm basically here to speak to
17 the methodology of studies that estimate the costs of
18 greenhouse gas emissions, and many of the studies will
19 show a very high potential for energy efficiency. And
20 what I was simply pointing out is that often the
21 amount of energy efficiency, at least from past
22 evidence, is less than what one might attain.

23 Is that helping you with your answer, or --

24 MR. BERTSCH: Q: Right. But you are not at this point
25 providing that evidence.

26 MR. JACCARD: A: No, I guess not. Right.

1 MR. BERTSCH: Q: Okay. Thank you. Those are all my
2 questions.

3 THE CHAIRPERSON: Thank you, Mr. Bertsch.

4 MR. THRASHER: I'd call it a little bit of functional
5 fixation.

6 **CROSS-EXAMINATION BY MR. THRASHER:**

7 MR. THRASHER: Q: So, Dr. Jaccard, it's -- pardon me.

8 Just before we begin, I just want to make
9 sure that you've -- I'm going to identify an exhibit
10 as B-35, which I have provided to your counsel. And
11 at this time, I'll pass it out to the Panel as well.
12 It's basically an illustrative representation of two
13 charts which I'll refer to in my cross-examination.

14 THE HEARING OFFICER: Exhibit B-35.

15 (GRAPH ENTITLED "REAL 2008 \$/TONNE", MARKED EXHIBIT B-
16 35)

17 **Proceeding Time 8:36 a.m. T4**

18 MR. THRASHER: Q: So, Dr. Jaccard, I'm going to be
19 referring to the IPPBC responses to several BCUC IRs,
20 and if you could have a C -- Exhibit C17-6 in front of
21 you, it might speed things along. I'm going to read
22 the contents of the IR so it's not really important
23 that we -- if you don't feel like going to them you
24 don't have to.

25 So I'm going to start out with the response
26 to BCUC IR No. 1.2, and that's --

1 MR. JACCARD: A: Yeah, can you just give me a second on
2 that?

3 MR. THRASHER: Q: Okay.

4 MR. JACCARD: A: Which was "What was Dr. Jaccard's role
5 in the preparation review?" Okay, good.

6 MR. THRASHER: Q: Right.

7 MR. JACCARD: A: I like to know where I am.

8 MR. THRASHER: Q: And yeah, say involved in it. So you
9 state that you were involved in the design and the
10 application of the model used in the entry, and that's
11 -- entry is the National Roundtable on the Environment
12 and the Economy study. Is that correct?

13 MR. JACCARD: A: In the general model over the last two
14 decades that was used in that particular study. So I
15 was not associated in any way as a modeller for that
16 study.

17 MR. THRASHER: Q: But you created the model, the CIMS.

18 MR. JACCARD: A: Exactly.

19 MR. THRASHER: Q: Yeah, that's the Canadian Integrated
20 Modelling System, correct?

21 MR. JACCARD: A: It doesn't mean that any more. It's
22 just called CIMS.

23 MR. THRASHER: Q: CIMS?

24 MR. JACCARD: A: C-I-M-S.

25 MR. THRASHER: Q: So you've already answered my second
26 question. You are the originator of that model,

1 correct?

2 MR. JACCARD: A: With a whole team of people. They'd
3 be upset if I didn't mention that as well.

4 MR. THRASHER: Q: Have you been responsible for and
5 involved with any consulting services based on the
6 application of that model? I would assume yes?

7 MR. JACCARD: A: Yes, but there are a lot -- there is a
8 lot of consulting done with the model that does not
9 involve me and is sometimes mistakenly associated with
10 me.

11 MR. THRASHER: Q: So I'm going to refer again to
12 Exhibit C-17-6 and the report from the National
13 Roundtable, which is -- the title of that report is "A
14 Technology Road Map to Low Greenhouse Gas Emissions in
15 the Canadian Economy: A Sectoral and Regional
16 Analysis". And you can confirm for me that that was
17 prepared for entry by J & C Nyboer, am I correct in my
18 -- pronouncing that correctly?

19 MR. JACCARD: A: Yes.

20 MR. THRASHER: Q: And Associates?

21 MR. JACCARD: A: Go ahead, David.

22 MR. AUSTIN: Perhaps we could find out whether you're
23 referring to the draft report or the final report.

24 MR. THRASHER: The final report.

25 MR. AUSTIN: Thank you.

26 MR. JACCARD: A: Yes, that's my understanding.

1 MR. THRASHER: Q: So if you turn to the Executive
2 Summary of that report.

3 MR. JACCARD: A: Just one second.

4 MR. THRASHER: Q: The first page of the Executive
5 Summary. And you'll see about halfway down that first
6 paragraph -- do you have it?

7 MR. JACCARD: A: Mm-hmm.

8 **Proceeding Time 8:39 a.m. T05**

9 MR. THRASHER: Q: It says the entry has retained M. K.
10 Jaccard and Associates to develop a technology road-
11 map derived from the "Getting to 2050 deep emissions
12 reductions pathways" that simulates a 20 percent
13 reduction in Canada's GHG emissions from 2006 levels
14 by 2020, and a 65 percent reduction in emissions by
15 2050.

16 MR. JACCARD: A: Yes.

17 MR. THRASHER: Q: And I take it that's your firm?

18 MR. JACCARD: A: That might be a mistake in the
19 document, because it shouldn't say "M. K. Jaccard and
20 Associates" there.

21 MR. THRASHER: Q: I am just going from what I read.

22 MR. JACCARD: A: Yes.

23 MR. THRASHER: Q: So there was a draft report --

24 MR. JACCARD: A: I can confirm that those words are
25 there. I thought you were asking me to confirm if the
26 National Roundtable did retain M. K. Jaccard and

1 Associates to develop that road-map, because I don't
2 think they did. This has been done by J & C Nyboer
3 and Associates.

4 MR. THRASHER: Q: Right, okay. I understand that
5 you're not exactly verifying that the statement is 100
6 percent accurate, but you are familiar with the
7 report.

8 MR. JACCARD: A: Absolutely, yeah. I'm familiar with
9 the report because as a member of the National
10 Roundtable I read it.

11 MR. THRASHER: Q: Right. And that the report was
12 prepared by Dr. Nyboer's firm.

13 MR. JACCARD: A: Yeah. But I was not engaged or
14 involved in any way in the preparation of that report.

15 MR. THRASHER: Q: And I think in the earlier questions
16 by Mr. Bertsch, you were referring to an IR response,
17 it's BCUC IR 1.3, and that's again in Exhibit C17-6.
18 You don't have to go to it, Dr. Jaccard.

19 MR. JACCARD: A: No.

20 MR. THRASHER: Q: It's basically saying that it's --
21 "The IPPBC believes that the specific
22 numbers in this report are not important, as
23 the general expertise that Dr. Jaccard
24 brings to discussions of greenhouse gas
25 emission reduction targets, climate policies
26 and likely greenhouse gas emission prices."

1 Basically it's just saying that it's -- you're here to
2 speak to the methodology --

3 MR. JACCARD: A: That's correct.

4 MR. THRASHER: Q: -- and the general concepts involved.

5 MR. JACCARD: A: That is correct.

6 MR. THRASHER: Q: So I guess I'm going to rely on that
7 expertise in the remaining line of my questioning.

8 I provided you that chart, and that chart,
9 if you take a look at -- there's two lines set out
10 there, and one of the lines reflects prices that were
11 reflected in the climate action plan, and so if you
12 turn to Attachment B to -- it's B.C. Hydro's response
13 to BCUC IR 1.67.1, and that's in Exhibit B-3.

14 MR. JACCARD: A: I see my legal counsel going to find
15 something.

16 MR. THRASHER: Q: In general terms, Dr. Jaccard, I just
17 want to make sure that there's a portion in that
18 report on page 103 of that report, there's 132 pages
19 in the report. At that page, it says

20 "The Climate Action Secretariat retained M.
21 K. Jaccard and Associates to refine the
22 analysis of climate change mitigation
23 options for British Columbia."

24 And again, that's your company.

25 MR. JACCARD: A: Yes.

26 MR. THRASHER: Q: Okay. Right. So, I'm glad that you

1 have it in front of you. It's probably not --

2 MR. JACCARD: A: Now I can close it.

3 MR. THRASHER: Q: -- essential -- now you can close it.

4 So, if you refer back to that chart that I gave you --

5 MR. JACCARD: A: Yeah.

6 MR. THRASHER: Q: -- which is basically an illustrative
7 representation of two sets of prices. So you have the
8 prices that are set out in your report, the GHG prices
9 report, and there's also the cap prices which are set
10 out at -- it's page 115 of 132. And basically what
11 this chart does is just illustrate those on one page.
12 And those prices are -- were brought forward to 2008
13 prices on this chart. You're okay with what I'm
14 saying?

15 MR. JACCARD: A: Yes.

16 MR. THRASHER: Q: Yes.

17 MR. JACCARD: A: Or, I'll take your word for it, yeah.

18 **Proceeding Time 8:44 a.m. T6**

19 MR. THRASHER: Q: So I take it you could confirm to me
20 that those two price scenarios are not the same.

21 MR. JACCARD: A: Yes.

22 MR. THRASHER: Q: Could you confirm with me, or for me,
23 or for the Panel, that these forecasts are realistic
24 of what might occur in B.C. and Canada -- or Canada?

25 MR. JACCARD: A: I cannot confirm the British Columbia
26 number. And the reason is that while it was my

1 company, I was deliberately not involved in that
2 modelling. And so I don't know, if I'd had time to
3 review it, I'd look at what parameters, what
4 constraints on the system were set to lead to that
5 price. Right now the questions going on in my head
6 are, was the modelling team asked by the provincial
7 government to set certain parameters for price and so
8 on?

9 What I can confirm to you, though, is the
10 dotted line, which of course is the evidence that I'm
11 able to speak to. And I know exactly where that comes
12 from.

13 MR. THRASHER: Q: Okay.

14 MR. JACCARD: A: It was the prime minister's direction
15 to us on the National Roundtable, to figure out what
16 kind of price would be needed in Canada to reach the
17 Prime Minister's stated target of a 60 to 70 percent
18 reduction in Canadian greenhouse gas emissions below
19 their 2006 levels by the year 2050. And so I'm fairly
20 comfortable with that number. I don't actually know
21 where the British Columbia -- what kind of mandate
22 exactly the British Columbia government gave to the
23 modellers in my company who signed that contract and
24 did that project.

25 MR. THRASHER: Q: Fair enough. In terms of an overall
26 impression of that chart, you could confirm for me

1 that there's a significant difference between the
2 entry numbers and those provided.

3 MR. JACCARD: A: Yes.

4 MR. THRASHER: Q: That's fair enough.

5 MR. JACCARD: A: What would be interesting though, just
6 to elaborate then, would be what I'd want to know is,
7 in that study by M.K. Jaccard and Associates, what
8 direction did the provincial government give the
9 modellers with respect to the year 2050? Because it
10 really is trying to hit a target in 2050 that drives
11 you to such high prices by 2020. I know that that
12 group has been doing modelling for the provincial
13 government with respect to its 2020 target of -- I
14 forget now, a 20 or 30 percent reduction below current
15 levels. But I'm not familiar with what direction they
16 gave them for the year 2050. And that's what would
17 drive the price.

18 If they didn't give them much direction for
19 2050, that would explain the price difference. But
20 I'm just speculating here.

21 MR. THRASHER: Q: You're talking about 33 percent
22 reduction.

23 MR. JACCARD: A: Oh, that's the provincial one, okay,
24 yes.

25 MR. THRASHER: Q: Yeah. So I take what you've said.
26 I'm not really going to be focusing on any details in

1 terms of the CAP report, but it was just -- I just
2 wanted to illustrate the difference between those two
3 prices and I've done that.

4 MR. JACCARD: A: Mm-hmm. And I guess what I -- I don't
5 want to read too much into this, but are the model
6 methodology that I've helped develop over these
7 decades would give fairly consistent price paths. But
8 ever year new clients ask people to make new
9 assumptions about what technologies are available, or
10 the study has within it embedded different assumptions
11 about the underlying rate of economic growth, or the
12 opportunity to get emission reductions from inside or
13 outside your jurisdiction, or what is the exact target
14 by the year 2050. And so I can think of a whole bunch
15 of reasons that would give different numbers, these
16 different paths, but I don't know -- I can't tell you
17 precisely what it is without taking a few hours and a
18 few discussions with people to analyze it.

19 MR. THRASHER: Q: I guess that's basically what keeps
20 us all employed.

21 MR. JACCARD: A: Yes.

22 MR. THRASHER: Q: I'm going to refer to a response,
23 just in general terms, but do you see it possible that
24 the Canadian government could establish a framework
25 that would cause these prices, absent a framework in
26 the U.S. or the rest of the world that would cause a

1 similar impact on GHG prices? Basically could the
2 Canadian government do this alone without any
3 assistance from any other neighbouring jurisdictions?

4 MR. JACCARD: A: Do what? Do the reductions in my
5 exhibit?

6 MR. THRASHER: Q: Right.

7 MR. JACCARD: A: Well, implied by those prices? Could
8 the Canadian government act on its own, is that what
9 you're saying?

10 MR. THRASHER: Q: Yes, and I'm referring to -- if you
11 want I can draw your specific attention to an IR
12 response that I assume that you crafted. It's in 17
13 at 6 again, and it's IR response 9.1.

14 **Proceeding Time 8:49 a.m. T07**

15 MR. JACCARD: A: Do you want to just go ahead and read
16 it? Oh.

17 MR. AUSTIN: Is that BCUC or B.C. Hydro?

18 MR. THRASHER: Q: It's IPPBC's response to a BCUC IR.

19 MR. JACCARD: A: Yeah. Right. So, do you want some
20 elaboration on that response?

21 MR. THRASHER: Q: Well, first of all, if you could just
22 read me the first line.

23 MR. JACCARD: A: "It is Dr. Jaccard's opinion that
24 it is not realistic to assume deep reduction
25 targets and substantial greenhouse gas
26 emissions pricing in Canada in the absence

1 of similar policies in other countries,
2 including the U.S."

3 Is that what you're talking about?

4 MR. THRASHER: Q: Correct.

5 MR. JACCARD: A: Okay. And I still agree with that
6 statement.

7 MR. THRASHER: Q: I totally understand that.

8 So, have you created any scenarios for the
9 U.S. that are consistent with the two -- I'm not sure
10 you're going to be able to answer one portion of this
11 question; but have you created any scenarios for the
12 U.S. that are consistent with these two scenarios,
13 that being the CAP scenario and the one in the entry
14 report, such that either of these two Canadian
15 scenarios could realistically occur?

16 MR. JACCARD: A: Have -- can you repeat that question?

17 MR. THRASHER: Q: So, have you created any scenarios
18 for the U.S. that are --

19 MR. JACCARD: A: Right, so modeling that I've done, you
20 mean.

21 MR. THRASHER: Q: Yes, modeling that you've done. That
22 would be consistent with these two scenarios, such
23 that --

24 MR. JACCARD: A: And which two scenarios?

25 MR. THRASHER: Q: The CAP one or the entry -- the two
26 price forecasts. I'm careful not to call them

1 forecasts, but you refer to them as --

2 MR. JACCARD: A: Oh, I see. Okay. So let's focus on
3 the dotted-line one, I guess. Because remember, I
4 don't know exactly what's behind the lower line.

5 MR. THRASHER: Q: Fair enough.

6 MR. JACCARD: A: And you're asking me if I've done
7 scenarios for the U.S. consistent with that.

8 MR. THRASHER: Q: That would be consistent with the
9 price forecast that you've provided.

10 MR. JACCARD: A: Yeah. Yes. People on my team have
11 done that, at our research institute at the
12 university. In fact, a thesis defended under me in
13 the last five months has that. And I've presented
14 those results in Washington, D.C., and will be
15 presenting them again in the United States next month.

16 MR. THRASHER: Q: So, it's your understanding or your
17 opinion that would be a likely scenario, then.

18 MR. JACCARD: A: Yes, although our estimate was the
19 Canadian -- we assumed the Americans would have a
20 target similar to Canada, which is the 60 percent
21 reduction from the current emission levels. The new
22 American administration is even talking an 80 percent
23 reduction from emission levels, and so it looks like
24 the price would be even higher. And I have not
25 simulated that, although I read in a report last night
26 from a colleague in the United States some estimates

1 that have been done for the U.S. on this, but they are
2 preliminary estimates. So the price path is as high
3 or higher than that dotted line I showed you.

4 MR. THRASHER: Q: Fair enough.

5 MR. JACCARD: A: The dotted line in what you showed me,
6 in B-35.

7 MR. THRASHER: Q: The dotted line being your report,
8 basically.

9 MR. JACCARD: A: Being my evidence.

10 MR. THRASHER: Q: Your evidence, right. So, if you
11 could turn to your final report again.

12 MR. JACCARD: A: This is the J & C Nyboer final report.

13 MR. THRASHER: Q: Yes.

14 MR. JACCARD: A: Yeah.

15 MR. THRASHER: Q: Sorry.

16 MR. JACCARD: A: It's not mine.

17 MR. THRASHER: Q: Your evidence.

18 MR. JACCARD: A: My evidence is this one page. Okay.
19 So, the J & C Nyboer report.

20 MR. THRASHER: Q: Right. So if you turn -- well, if
21 you take a look at the bottom of page 20, and you'll
22 see that there is a little grey box, or a highlighted
23 box at the bottom, under "Residential". It's
24 entitled "Box 1". So, in that box it says:

25 "Most emission reductions are attained
26 through the adoption of electric space and

1 water heating systems. By 2050, virtually
2 the entire space heating stock consists of
3 ground source heat pumps [or] electric
4 baseboards, and the entire water heating
5 stock is electric."

6 MR. JACCARD: A: I see it.

7 **Proceeding Time 8:54 a.m. T8**

8 MR. THRASHER: Q: And then on the next page, it states
9 that:

10 "In the policy scenario, greenhouse gas
11 intensity declines by 93 percent from the
12 reference case projection. The installation
13 of electric baseboards, ground source heat
14 pumps and electric water heaters account for
15 the majority of the decline."

16 See that?

17 MR. JACCARD: A: Yes.

18 MR. THRASHER: Q: And that brings us to page 23, and
19 you'll see under the provincial discussion it says:

20 "In response to the policy, households in
21 all provinces make a shift towards low-
22 emissions systems for space heating, but
23 some provinces show a greater adoption of
24 ground source heat pumps while others show
25 greater penetration of electric baseboards.
26 ... British Columbia, Manitoba, Quebec and the

1 Atlantic provinces show greater penetration
2 of electric baseboards."

3 MR. JACCARD: A: Yeah.

4 MR. THRASHER: Q: And,

5 "By the end of the policy simulation, the
6 difference in the greenhouse gas intensity
7 of space heating is negligible [among]
8 provinces..."

9 And that's demonstrated, I think, in that Table 14.
10 You would confirm that's an accurate representation of
11 what I've just said?

12 MR. JACCARD: A: Yes, I'm following you reading the
13 report.

14 MR. THRASHER: Q: Okay. So my question for you is that
15 if you take -- would you agree that a strong shift to
16 electrification identified for heating is not likely
17 to occur without some strong direction from both the
18 province and the federal government?

19 MR. JACCARD: A: So there was an information request on
20 this exact question and I answered it. I won't look
21 it up right now. But when you say "strong direction",
22 the level of carbon price that we're talking about
23 here -- or do you mean something in addition to that?

24 MR. THRASHER: Q: I would say the entire context,
25 legislation, any -- in a contextual framework, in
26 order to meet this you would say that it would have to

1 be supported by --

2 MR. JACCARD: A: Right. No. No. The carbon pricing
3 of an absolute cap and trade system, to hit that
4 target by 2050, or a carbon tax that did the
5 equivalent amount, would lead to this outcome in the
6 marketplace without any government -- additional
7 government involvement of any kind whatsoever. And
8 the reasons are obvious. I mean, if you're driving
9 your economy down towards negligible emissions
10 compared to where they are today, big things have to
11 happen in all the different end use sectors. And in
12 space heating, you can't be burning oil or natural gas
13 for space heating in any significant way.

14 So what are you going to use? You're going
15 to use biomass, hydrogen or electricity, and
16 electricity tends to win out because we move towards
17 zero emission electricity generation. It's expensive
18 but it's relatively low cost compared to other zero --
19 other options for getting to low emissions. And I
20 explained this in some detail in response to an
21 information request.

22 MR. THRASHER: Those are all my questions.

23 THE CHAIRPERSON: Mr. Austin, you wouldn't happen to know
24 which information request -- you can't do for your
25 witness what Mr. Godsoe does for his?

26 MR. AUSTIN: No, I've never really felt that that's my

1 job. This morning I was acting as Vanna White and was
2 struggling with that, so I'm not the one to remember
3 the numbers to information requests. But Dr. Jaccard
4 should know that because he wrote it.

5 MR. JACCARD: A: Yeah. So this was the information
6 request -- that's the way I kept track of them. Ludo
7 -- oh, ESVI Information Request -- where is it? 4.44,
8 electric space and water heating. So there's 4.1, 4.2
9 and 4.3.

10 THE CHAIRPERSON: Thank you.

11 MR. FULTON: Mr. Chairman, I'm still struggling with the
12 image of Mr. Austin walking across the hearing room
13 holding up the sign.

14 THE CHAIRPERSON: I didn't want to go there this early in
15 the morning, but you're right.

16 MR. FULTON: I have no questions for Dr. Jaccard, thank
17 you. And that concludes any cross-examination that
18 counsel may have had for Dr. Jaccard, so it's over to
19 the Panel for the Panel's questions.

20 THE CHAIRPERSON: Right. The Panel has no questions,
21 thank you, Dr. Jaccard.

22 MR. JACCARD: A: Thank you.

23 **Proceeding Time 8:59 a.m. T09**

24 MR. AUSTIN: IPP Panel 1 is probably now excused, that's
25 what the Chairman's supposed to say.

26 THE CHAIRPERSON: I was going to see if you have any

1 MR. ANDREWS: Q: And do you have any corrections or
2 additions to that written testimony?
3 MR. HACKNEY: A: No. No corrections.
4 MR. ANDREWS: Q: Mr. Plunkett, are you responsible for
5 the testimony filed at Exhibit C21-4?
6 MR. PLUNKETT: A: Yes.
7 MR. ANDREWS: Q: And are you responsible for the
8 amendments filed at Exhibits C21-4-1 and C21-4-2?
9 MR. PLUNKETT: A: Yes.
10 MR. ANDREWS: Q: Other than those two amendments, do
11 you have any errors or corrections, additions, to your
12 written evidence?
13 MR. PLUNKETT: A: No.
14 THE CHAIRPERSON: Mr. Andrews, before you begin, I have
15 an apology to make. I seem to have left Mr.
16 Plunkett's evidence on my desk, and I wondered if
17 there is a spare copy of it.
18 MR. FULTON: I have a spare copy, Mr. Chair.
19 THE CHAIRPERSON: Okay, thank you, Mr. Fulton. That's --
20 thanks, Mr. Godsoe, I appreciate this. Thank you.
21 This is what I want, thank you.
22 MR. ANDREWS: Thank you. This panel is ready for cross-
23 examination.
24 THE CHAIRPERSON: Thank you, Mr. Andrews.
25 **CROSS-EXAMINATION BY MR. GODSOE:**
26 MR. GODSOE: Q: Good morning, Commission Panel.

1 Mr. Hackney and Mr. Plunkett, I think you
2 both know me but my name is Craig Godsoe. I'm B.C.
3 Hydro's in-house regulatory counsel, and I have some
4 questions for you on two topics.

5 But before I go there, I'm just going to
6 list off the exhibits I think I'll be referring to in
7 cross-examination, just so you can have them readily
8 accessible. And the first is Exhibit C21-10, which is
9 Mr. Hackney's direct testimony. Exhibit C21-4, which
10 is Mr. Plunkett's direct testimony. Exhibit C21-4-2,
11 which contain amendments to Mr. Plunkett's exhibit
12 JJP-2. Exhibit C21-6, which is BCSEA *et al.*'s
13 responses to B.C. Hydro and BCUC Information Requests.
14 It's not necessary to have them in front of you, I
15 just wanted to list them for you and we can go there
16 as I go through my cross. Exhibit B-4, B.C. Hydro's
17 response to BCSEA IR 2.29.2. Exhibit B-12, B.C.
18 Hydro's response to BCUC Panel IR 1.21.1. Exhibit
19 C17-6, which was the final report of the National
20 Roundtable on the Environment and the Economy. And in
21 that same exhibit, Exhibit C17-6, some responses to
22 BCUC and ESVI IRs which I'll name later. And then
23 finally Exhibit B-4, B.C. Hydro response to BCSEA *et*
24 *al.* IR 2.28.1, Attachment 1.

25 And just for purposes of cross, no slight
26 on the Sierra Club, but I'm just going to refer to

1 your organizations as BCSEA, if that's all right with
2 you.

3 **Proceeding Time 9:09 a.m. T10**

4 MR. HACKNEY: A: That's fine.

5 MR. GODSOE: Q: Okay. So the first topic I wanted to
6 cover is for B.C. Hydro's DSM unit costs, and I
7 believe, Mr. Plunkett, these questions are for you.
8 And if I could ask you to turn to Exhibit C21-4-2,
9 which is a copy of your Amended Appendix JJP-2. Have
10 you got that?

11 MR. PLUNKETT: A: I have it.

12 MR. GODSOE: Q: Thank you. Would you agree that the
13 unit cost of DSM could vary between different
14 jurisdictions for a variety of reasons?

15 MR. PLUNKETT: A: Yes.

16 MR. GODSOE: Q: Would you agree that the unit costs of
17 DSM could be influenced by the mix of energy saving
18 opportunities in particular jurisdictions?

19 MR. PLUNKETT: A: Yes.

20 MR. GODSOE: Q: Would you agree that the unit costs of
21 DSM could be influenced by a mix of barriers to energy
22 efficiency that is present in a particular
23 jurisdiction?

24 MR. PLUNKETT: A: Yes, my experience is that those --
25 that variation in those barriers is less important
26 because they're so similar everywhere, than the other

1 differences that you're talking about.

2 MR. GODSOE: Q: But it still could be an influence in
3 the unit costs of DSM, you'd agree with me.

4 MR. PLUNKETT: A: Theoretically, or conceptually --

5 MR. GODSOE: Q: Theoretically. Well, let's test that.
6 Would you agree with me that there could be
7 differences in the specific type or nature of barriers
8 to energy efficiency between California and, say,
9 British Columbia?

10 MR. PLUNKETT: A: Not in the type and nature. The
11 specifics, the magnitudes, the importance of them.
12 But the nature of the barriers are pretty universal
13 across jurisdictions.

14 MR. GODSOE: Q: Okay. Flowing from your last response,
15 would you agree with me that these differences could
16 lead to different DSM strategies and tactics?

17 MR. PLUNKETT: A: They could, if their differences were
18 big enough.

19 MR. GODSOE: Q: Thank you. Would you agree that the
20 unit costs of DSM could be influenced by the level of
21 energy efficiency activity amongst utilities in a
22 particular jurisdiction?

23 MR. PLUNKETT: A: Sure.

24 MR. GODSOE: Q: Would you agree with me that the unit
25 of DSM could be influenced by the mix of DSM tools
26 that are employed in a particular jurisdiction?

1 MR. PLUNKETT: A: Oh, absolutely.

2 MR. GODSOE: Q: And would you agree with me that the
3 unit costs of DSM could be influenced by the level of
4 energy prices in a particular jurisdiction?

5 MR. PLUNKETT: A: They could be, but less than you'd
6 think.

7 MR. GODSOE: Q: Right, but in some jurisdictions that
8 have high rates, you might get a different response
9 than in jurisdictions with low rates. You'd agree
10 with me?

11 MR. PLUNKETT: A: Jurisdictions with lower rates might
12 require more aggressive strategies to get the same
13 amount of result. You might have to try harder here.
14 You will have to spend more money here to buy a
15 project down to, say, a one-year payback period than
16 they will -- than we do in Vermont because your rates
17 are about half of ours.

18 MR. GODSOE: Q: Thank you. And still in that same
19 Exhibit C21-4-2, counting in five pages to a table
20 entitled "Cumulative Savings at Customer Meter
21 Gigawatt Hours Per Year". I'm counting five including
22 the cover page. Do you have that?

23 MR. PLUNKETT: A: That's correct.

24 MR. GODSOE: Q: And at the bottom of that page do you
25 see the figure 82 percent?

26 MR. PLUNKETT: A: I do.

1 MR. GODSOE: Q: In amending your Exhibit JJP-2 found at
2 page 2 after the cover sheet, can you confirm for me
3 that you used the figure of 82 percent to scale down
4 the electricity savings from B.C. Hydro Option A?

5 MR. PLUNKETT: A: Yes.

6 MR. GODSOE: Q: Thank you.

7 MR. PLUNKETT: A: Scaled down 16 percent.

8 MR. GODSOE: Q: Can you explain that response to me?

9 MR. PLUNKETT: A: I'm sorry. It's saying that what
10 we've got here is the evidentiary savings are 82
11 percent of the original value. So we didn't reduce,
12 scale them down 82 percent, we scaled them down 16.
13 Sorry, am I doing my math? 18 percent.

14 MR. GODSOE: Q: All right. Moving on to all of our
15 favourite topics, fuel switching. And Mr. Hackney, if
16 I could get you to your direct testimony, Exhibit C21-
17 10, I'm particularly interested in page 2 of 2. Do
18 you have that?

19 MR. HACKNEY: A: I have that.

20 MR. GODSOE: Q: And the response to question 7 on page
21 2 reads:

22 "BCSEA and SCBC do not support fuel
23 switching programs from electricity to
24 natural gas at this time."

25 And my question for you is this. I take that answer
26 to mean that BCSEA agree with B.C. Hydro that it

1 BCSEA, I take it that those statements reflect the
2 position of BCSEA.

3 MR. HACKNEY: A: Yes, they do. We are very concerned
4 about communicating with the public in an effective
5 manner that will persuade the public that reducing
6 greenhouse gas emissions is important, and we would
7 indeed be concerned if they're a program that sent a
8 contrary message. I would not say absolutely that
9 this would forever result in our rejecting fuel
10 switching, but it would certainly be a concern as to
11 how fuel switching programs would actually get
12 presented.

13 MR. GODSOE: Q: Thank you. Turning now to the issue of
14 the provincial GHG target, Mr. Plunkett, could I ask
15 you to turn to Exhibit C21-6, which is your response
16 to B.C. Hydro IR 1.2? And then to also have in front
17 of you -- and also to have in front of you Exhibit B-
18 4, B.C. Hydro's response to BCSEA IR 2.29.2.

19 THE CHAIRPERSON: Sorry, Mr. Godsoe, what was the second
20 reference?

21 MR. GODSOE: Exhibit B-4, B.C. Hydro's response to BCSEA
22 IR 2.29.2.

23 Everybody have that?

24 THE CHAIRPERSON: There in a minute.

25 MR. GODSOE: Q: I want to first address the hydro
26 response to BCSEA 2.29.2, and the first bullet in the

1 response at the bottom of page 2 of 3 addresses the
2 fact that the B.C. government has legislated much more
3 stringent GHG targets than have been proposed
4 regionally. And so, Mr. Plunkett, I take it that you
5 understand that the B.C. Hydro government has
6 legislated a GHG reduction target for the province of
7 at least a 33 percent reduction below 2007 levels by
8 2020, pursuant to the *Greenhouse Gas Reduction Targets*
9 *Act*.

10 MR. PLUNKETT: A: I understand that, yes.

11 MR. GODSOE: Q: Okay. And I also take it that you
12 understand that the B.C. government has legislated a
13 GHG reduction target for the province of at least 80
14 percent reduction below 2007 levels by 2050 under the
15 same *Act*.

16 MR. PLUNKETT: A: I understand that.

17 MR. GODSOE: Q: And Mr. Hackney, are you able to tell
18 me whether these are amongst -- I'll put it to you
19 that these are amongst the most aggressive targets set
20 by any North American jurisdiction. Is that correct?

21 MR. HACKNEY: A: That is my understanding.

22 MR. GODSOE: Q: Thank you. And, Mr. Plunkett, are you
23 aware that the province has legislated two interim GHG
24 targets for 2012 and 2016?

25 MR. PLUNKETT: A: I am aware of that.

26 MR. GODSOE: Q: You are aware of that. Can you tell me

1 (HEADER ENTITLED "COMMENTS ON THE CLIMATE ACTION TEAM
2 REPORT/BC SUSTAINABLE ENERG...", MARKED EXHIBIT B-36)
3 MR. GODSOE: Q: And Mr. Hackney, I'm interested in page
4 4 of that exhibit, so counting -- it's the third page
5 of the actual response to the recommendations
6 document. And what I'm interested in is the last two
7 sentences of the second paragraph, so I'll quote them,
8 you can tell me if you're there.
9 MR. HACKNEY: A: I'm sorry, the pages are not numbered.
10 MR. GODSOE: Q: And I apologize for that.
11 MR. HACKNEY: A: I have that.
12 MR. GODSOE: Q: Sorry about that. That was sloppy of
13 me not to number it.
14 THE CHAIRPERSON: Section 5, Provincial Policies --
15 MR. GODSOE: Well, let me start. It's actually -- on my
16 version it's four pages in. It's the third page of
17 the actual response to the recommendations.
18 THE CHAIRPERSON: Right.
19 MR. GODSOE: The first paragraph reads, "Columbia
20 firmly..."
21 THE CHAIRPERSON: Yes.
22 MR. GODSOE: But that's not the paragraph I'm going to.
23 THE CHAIRPERSON: Right.
24 MR. GODSOE: Q: All right, so the last two sentences of
25 the second paragraph read:
26 "We also note that further scientific and

1 economic analysis may show that emission
2 reductions for B.C. should greatly exceed
3 the provincial government's reduction
4 targets. Because of these uncertainties,
5 the prudent action of the government should
6 be to take all precautions to avoid adding
7 any GHG emissions through its own policies."

8 And I take it that that statement reflects BCSEA's
9 position, does it?

10 MR. HACKNEY: A: Yes.

11 MR. GODSOE: Q: Thank you.

12 Mr. Plunkett, you'd agree with me that the
13 Western Climate Initiative, which is the regional
14 organization, their GHG target is not legislated. Was
15 that your understanding?

16 MR. PLUNKETT: A: Well, I'm not an attorney, so I'm not
17 an expert in the forms of these things. I understand
18 that it wasn't passed by a legislature. It's an
19 agreement between various entities that are regulated.

20 MR. GODSOE: Q: Fair enough.

21 MR. HACKNEY: A: I'm sorry, I'd like to add to my last
22 answer if I may.

23 MR. GODSOE: Q: Oh, of course, absolutely.

24 MR. HACKNEY: A: We certainly agree with the need to
25 reduce greenhouse gas emissions steeply. My
26 understanding is that this document did not squarely

1 address the question of fuel switching, and to my
2 understanding that was not considered, or at least to
3 my recollection. Fuel switching, as we know, would
4 bring a net reduction in greenhouse gas re --

5 MR. GODSOE: Q: Well, we don't know that and we'll
6 contest that.

7 MR. HACKNEY: A: According to the theory, yes, I know,
8 it's contested. But the idea is that you would create
9 some additional greenhouse gas reductions in order to
10 create larger reductions.

11 So I would just like to put the caveat that
12 that potentiality was not squarely addressed in this
13 document.

14 MR. GODSOE: Q: All right, well, I'm going to test that
15 caveat. What I was reading was, take all precautions
16 to avoid adding any GHG emissions through its own
17 policies. Surely that's applicable to fuel switching
18 as well. Right, Mr. Hackney?

19 MR. HACKNEY: A: Yes.

20 MR. GODSOE: Q: Thank you.

21 Mr. Plunkett, when you were analyzing
22 whether there exists cost-effective fuel switching
23 opportunities, what assumptions did you make about the
24 *B.C. Carbon Tax Act*?

25 MR. PLUNKETT: A: None whatsoever.

26 MR. GODSOE: Q: None whatsoever. Thank you, that cuts

1 a lot of cross off.

2 MR. PLUNKETT: A: It sure does, because what I did is I
3 relied on your own analysis, Hydro's analysis
4 sponsored --

5 MR. GODSOE: Q: Well, okay --

6 MR. PLUNKETT: A: -- CPR 2007.

7 MR. GODSOE: Q: CPR 2007, you'll agree with me, the
8 *Carbon Tax Act* was legislated after the 2007 CPR. Is
9 that correct?

10 **Proceeding Time 9:24 a.m. T13**

11 MR. PLUNKETT: A: I'll accept that.

12 MR. GODSOE: Q: Let me just be clear. So, you didn't
13 make any assumption about the *Carbon Tax Act* in your
14 analysis.

15 MR. PLUNKETT: A: I did not. And the reason is, again,
16 because I was referring to Hydro's analysis. My
17 reason for not even considering it was, again, my
18 belief on the evidence, my conclusion, that a carbon
19 tax would likely affect -- because of what I -- the
20 first law efficiencies involved, and I understand that
21 this is contested about whether this is in fact true,
22 but my conclusion was that because it was a net carbon
23 reducer, that a carbon tax would, if anything, favour
24 the economics of fuel switching.

25 MR. GODSOE: Q: Well, we'll come to that, but the point
26 is you --

1 MR. PLUNKETT: A: But the reason --

2 MR. GODSOE: Q: -- you didn't make any assumption.

3 You'd agree with me that in fact the carbon tax at \$30

4 per tonne of carbon dioxide emissions might well

5 influence the cost-effectiveness of natural gas,

6 because it's a tax on natural gas, correct?

7 MR. PLUNKETT: A: Certainly, but it may also affect the

8 marginal cost of gas-fired generation, which would

9 also come into play.

10 MR. GODSOE: Q: Right. I agree. That's fair enough.

11 And, Mr. Hackney, you'd agree with me that the climate

12 action team in fact recommended increases to the

13 carbon tax after 2012, is that correct?

14 MR. HACKNEY: A: Yes.

15 MR. GODSOE: Q: And your organization agrees with that

16 position.

17 MR. HACKNEY: A: Yes. I don't recollect it. There was

18 some discussion as to revisiting whether the carbon

19 tax needed to be raised or how much it should be

20 raised in this document, as I recollect. And the

21 recommendation that if the greenhouse gas reductions

22 were not sufficient, then consideration should be

23 given to using the increased carbon tax as a

24 mechanism.

25 MR. GODSOE: Q: Right. So what I hear you're saying

26 is, if required to achieve the provincial emission

1 targets after 2012, the climate action team
2 recommended that the carbon tax be increased. Is that
3 your understanding?

4 MR. HACKNEY: A: Yes.

5 MR. GODSOE: Q: Thank you. If I could ask you, Mr.
6 Hackney, to turn to transcript volume 3, page 221.

7 MR. HACKNEY: A: Yes, I have that.

8 MR. GODSOE: Q: And beginning at lines 23 to 26, Mr.
9 Andrews states that BCSEA and SCBC "will reject in
10 principle" the fact that the lack of a full
11 development of the carbon reduction legal regime is a
12 valid reason to hold back on programs incenting fuel
13 switching from electricity and natural gas. Do you
14 see that? I'm at lines -- it's lines 23 to 26, page
15 221.

16 MR. HACKNEY: A: I'm at both lines. Those -- yes.
17 Yes.

18 MR. GODSOE: Q: Mr. Hackney, you'd agree with me that
19 one of the underpinnings of a cap and trade system is
20 the allocation of allowances.

21 MR. HACKNEY: A: Yes.

22 MR. GODSOE: Q: And I take it that you'd also agree
23 with me, Mr. Hackney, that one of the issues not yet
24 resolved is how the more stringent B.C. government
25 target is going to interface with the looser regional
26 target.

1 MR. HACKNEY: A: I can't confirm that specific lack of
2 clarity, but I do understand that the WCI process is
3 in -- is being finalized and I would assume that that
4 is part of the uncertainty.

5 MR. GODSOE: Q: Okay. And so you're -- you'd agree
6 with me there is uncertainties as to the apportionment
7 of B.C.'s GHG allowance budget within the WCI cap?

8 Let me step back. Is it your understanding
9 there's been no apportion of allowances under the WCI
10 to date?

11 MR. HACKNEY: A: Apportionment of allowances meaning
12 each jurisdiction --

13 MR. GODSOE: Q: The issuances of permits to pollute,
14 essentially, it's sort of in the vernacular.

15 MR. HACKNEY: A: Okay. The permits have not been
16 issued, and my understanding is that the individual
17 jurisdictions have not taken on their own relative
18 targets.

19 MR. GODSOE: Q: Mr. Plunkett, would you agree with me
20 that there is no mention of the federal Canadian GHG
21 targets in your direct evidence or IR responses?

22 **Proceeding Time 9:29 a.m. T14**

23 MR. PLUNKETT: A: Yes.

24 MR. GODSOE: Q: Did you factor in the federal Canadian
25 government's GHG targets at all in your analysis?

26 MR. PLUNKETT: A: No, because I believe my analysis is

1 consistent with meeting those targets.

2 MR. GODSOE: Q: Well, can you tell me what those
3 targets are?

4 MR. PLUNKETT: A: I thought we just talked about that.

5 MR. GODSOE: Q: No, we're talking about the federal
6 Canadian targets now.

7 MR. PLUNKETT: A: Oh.

8 MR. GODSOE: Q: So let me step back --

9 MR. PLUNKETT: A: I'm not aware of specific -- the
10 specific federal Canadian --

11 MR. GODSOE: Q: So I'm going to put it to you that you
12 in fact didn't factor them into your analysis at all,
13 did you?

14 MR. PLUNKETT: A: I just said that.

15 MR. GODSOE: Q: You agree with me you did not factor in
16 the federal GHG reduction targets?

17 MR. PLUNKETT: A: Correct.

18 MR. GODSOE: Q: Correct.

19 MR. PLUNKETT: A: Did not factor it into the -- they
20 were not factored into Hydro's analysis, and so I
21 didn't factor them either.

22 MR. GODSOE: Q: I'll let the record speak on Hydro's
23 analysis, I think it's pretty clear, but in your
24 analysis, you did not factor in the federal Canadian
25 GHG targets, did you?

26 MR. PLUNKETT: A: I'm trying to be clear.

1 MR. GODSOE: Q: Okay.

2 MR. PLUNKETT: A: About what I factored into what, my
3 analysis -- my testimony covers a lot of areas. We're
4 talking about fuel switching. My analysis picked up
5 directly from Hydro's analysis.

6 MR. GODSOE: Q: From the 2007 CPR, correct?

7 MR. PLUNKETT: A: Correct. Which -- exactly.

8 MR. GODSOE: Q: We understand each other.

9 Are either of you aware of the National
10 Roundtable on the Environment filed report dated 22
11 August, 2008, and filed as Exhibit C17-6?

12 MR. HACKNEY: A: Yes, I'm aware of it. I've read the
13 executive summary and glossed the table of contents.

14 MR. GODSOE: Q: Okay. Well, let's see how far we go
15 down, and if we can't go very far, that's not a
16 problem.

17 And do you, Mr. Hackney, understand that
18 the National Roundtable report examined what may be
19 required to meet the federal Canadian GHG targets?

20 MR. HACKNEY: A: That's my understanding.

21 MR. GODSOE: Q: Thank you. Now, could I ask you to
22 turn to Exhibit C17-6, IPPBC's response to BCUC IR
23 1.10.1?

24 MR. PLUNKETT: A: Are you talking to me or Mr. Hackney?

25 MR. GODSOE: Q: Mr. Hackney, because I took it from
26 your response you weren't familiar with the --

1 MR. PLUNKETT: A: Right.

2 MR. GODSOE: Q: You're off the hook

3 MR. HACKNEY: A: Could you give me the reference again,
4 please?

5 MR. GODSOE: Q: Absolutely. It's Exhibit C17-6, the
6 response to IPPBC IR -- sorry, IPPBC's response to
7 BCUC IR 1.10.1.

8 MR. ANDREWS: Mr. Chairman, I may need a minute. That
9 particular response was dealt with in electronic
10 version, and so I'm not sure if we have a hard copy of
11 it in front of the witnesses.

12 THE CHAIRPERSON: Are we at page 29, Mr. --

13 MR. GODSOE: Yes.

14 THE CHAIRPERSON: Good.

15 MR. GODSOE: Q: You see the second sentence that
16 states:

17 "Dramatic reduction of fossil fuel used in
18 homes is an inevitable component of deep GHG
19 reductions."

20 Do you see that?

21 MR. HACKNEY: A: Yes.

22 MR. GODSOE: Q: Thank you. And in the same exhibit,
23 and I can give you my copy if you can't find it, could
24 I ask you to turn to IPPBC's response to ESVI IR
25 1.4.2? Just give me -- I can give you my copy if you
26 want.

1 MR. HACKNEY: A: Thank you -- yes, please.

2 MR. GODSOE: Q: And you'll see that response states
3 that zero GHG emission, space and domestic water
4 heating "can only be achieved by some combination of
5 (1) biofuels, (2) electricity, (3) hydrogen, (4)
6 thermal solar gain and (5) high efficiency building
7 shells". And you'd agree with me, Mr. Hackney, that
8 noticeable by its absence is any mention of natural
9 gas as a fuel that is capable of delivering zero GHG
10 emissions for residential applications in this IR
11 response?

12 MR. HACKNEY: A: Yes, certainly.

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

14 MR. GODSOE: Q: Thank you. So I think last IR in the
15 series, it's Exhibit C17-6, same exhibit, IPPBC
16 response to ESVI IR 1.4.3, and again I can give you my
17 copy if you'd like.

18 MR. HACKNEY: A: If you please.

19 MR. PLUNKETT: A: And that IR response states:

20 "In a world of high greenhouse gas prices,
21 the prices of residential natural gas and
22 domestic water heating will rise
23 dramatically."

24 Mr. Plunkett or Mr. Hackney, can you tell me how
25 BCSEA, in the evidence that you sponsored, addressed
26 the issue of dramatically rising prices for

1 residential natural gas?

2 MR. PLUNKETT: A: I didn't, and the reason is because I
3 think again, the natural gas avoided -- you avoid
4 natural gas consumption at the generator when you
5 increase the efficiency of gas -- of direct use of gas
6 at the point of end use.

7 MR. GODSOE: Q: Well, with all due respect we'll come
8 to that, and I'm not asking that. What I'm asking you
9 is, how did you factor in your cost-effectiveness? So
10 from a consumer choice point of view, that there may
11 well be dramatically rising prices for residential
12 natural gas? Did you factor that in at all?

13 MR. PLUNKETT: A: I did not. It's the achievable
14 potential part that affects the pricing as to whether
15 you can price gas and electricity in a way, consistent
16 with their marginal cost, that leads people as to
17 whether or not this is in their own economic interest
18 or not.

19 MR. GODSOE: Q: All right, I'll follow that up in
20 argument. And Mr. Hackney and Mr. Plunkett, if you
21 could turn to the direct testimony of Mr. Plunkett at
22 Exhibit C21-4, and I'm interested in page 21. It's
23 your original direct testimony?

24 MR. PLUNKETT: A: Page 21.

25 MR. GODSOE: Q: Correct. Lines 19 to 20.

26 MR. PLUNKETT: A: Yes.

1 MR. GODSOE: Q: You're there?

2 MR. PLUNKETT: A: I have it.

3 MR. GODSOE: Q: And there, Mr. Plunkett, you recommend
4 "that the Commission address the absence of guidelines
5 for fuel substitution investment." Do you see that?

6 MR. PLUNKETT: A: I do.

7 MR. GODSOE: Q: Okay. Well, I'm sorry to do this to
8 you. I'm going to have to walk you through a bunch of
9 transcripts before I get to my punchline question.

10 MR. PLUNKETT: A: Okay.

11 MR. GODSOE: Q: But bear with me.
12 Mr. Hackney, if I could take you back to
13 the Transcript Volume 3, page 282.

14 MR. HACKNEY: A: I have that.

15 MR. GODSOE: Q: Lines 15 to 22. And there Ms. Van
16 Ruyven states the following with respect to
17 discussions with the B.C. government:
18 "... And in the discussions that I've been in
19 with government and with Terasen, they've
20 been very clear that they don't want to put
21 forward a policy that actually sees B.C.
22 Hydro incenting increases in greenhouses
23 gases in British Columbia. ..."
24 and we'll come back to that very important qualifier,
25 "... That goes against the legislated
26 greenhouse gas reduction..."

1 Do you see that?

2 MR. HACKNEY: A: I do.

3 MR. GODSOE: Q: Okay, and then next on our trip is to
4 page 285 of the same transcript. Beginning at line 2,
5 Mr. Elton states:

6 "... And we've sought clarification on this
7 and received the answer, it isn't government
8 policy to encourage fuel switching from
9 electricity to natural gas."

10 Do you see that?

11 MR. HACKNEY: A: I'm sorry, I haven't found that. What
12 -- this is page 285?

13 MR. GODSOE: Q: Page 285.

14 MR. HACKNEY: A: Line?

15 MR. GODSOE: Q: Line, beginning at line 2.

16 MR. HACKNEY: A: Okay, I've got it.

17 MR. GODSOE: Q: Okay. And then next is page 279 of the
18 same transcript.

19 MR. HACKNEY: A: Yes.

20 MR. GODSOE: Q: Beginning at line 2 with a question
21 from Mr. Ghikas, counsel for Terasen:

22 "...you see that as a gap in a policy, don't
23 you? Something that's waiting for
24 clarification."

25 To which Mr. Elton replies at line 4:

26 "... yes, I [think] that at some point in the

1 future, the government will say something
2 about that. "

3 MR. HACKNEY: A: Yes, I see that.

4 MR. GODSOE: Q: So I'm curious as to how you can say
5 the Commission should formulate guidelines for fuel
6 switching, when the government has a stated policy
7 now, which is neutrality, and may well be speaking to
8 this in the future.

9 Mr. Hackney?

10 **Proceeding Time 9:38 a.m. T16**

11 MR. HACKNEY: A: Well, we see the clear evidence that
12 fuel switching could have a net effect of reducing
13 greenhouse gas emissions. We regard that as being
14 very important. What we see in B.C. Hydro's testimony
15 here and elsewhere was speaking to rejecting fuel
16 switching on the basis that it would cause greenhouse
17 gas emissions inside of B.C., yet we all know that the
18 relevant area of effect is the regional, indeed the
19 global area for greenhouse gas emissions. And it
20 appears that there is a policy problem when a
21 potential to have a net reduction in greenhouse gas
22 emissions is being impeded by some kind of a policy
23 problem. From the perspective of our groups, we would
24 hope that a proceeding such as this would give rise --
25 not to ask the Commission to rebel against the
26 government or anything like that, but at least to

1 really strongly flag such a problem if it indeed is
2 shown to exist.

3 MR. GODSOE: Q: Okay. Well, there's a lot in that
4 response I'm going to have to drill down on, but first
5 things first. You'd agree with me that the
6 Commission, in formulating guidelines, must take into
7 account government policy.

8 MR. HACKNEY: A: That's my understanding.

9 MR. GODSOE: Q: Okay. Well, more than your
10 understanding. That would be your position, wouldn't
11 it? You wouldn't want to have a position where the
12 Commission's guidelines conflicted with government
13 policy, would you?

14 MR. HACKNEY: A: I believe that's correct, yes.

15 MR. GODSOE: Q: Okay. We're going to come back to the
16 clear evidence, because you also said "could", so it's
17 not clear if it could, right? But we'll get to that
18 in a minute.

19 Last question on this topic, and it might
20 be for Mr. Andrews, but Mr. Plunkett, when you
21 formulated this Commission guidelines recommendation,
22 can you point to me a Section in the Act that would
23 permit the Commission to do this?

24 MR. PLUNKETT: A: No, comma, and the reason I didn't is
25 because I consider the Commission part of the
26 government. Now, I may be from another country, but I

1 understand that you're economic regulators and you're
2 part of the government, and where I come from, the
3 parts of the government don't always agree on
4 everything, especially at the same time. And that you
5 might actually have some influence on the government's
6 policy by coming up with some fair guidelines for how
7 to look at this, and that would actually allow the
8 establishment or the determination of the truth about
9 a lot of what's contested, about the facts, about
10 whether gas fuel switching with current technologies,
11 and expected technologies, would be a net carbon loser
12 or winner. But more importantly, I'm an economist,
13 and I'm focusing on the economics of this, and
14 lowering the cost of energy service for the province.
15 And if it is the economics -- it's only cost-effective
16 fuel-switching that I'm recommending be pursued. If
17 it's not cost-effective, under the total resource cost
18 test, there's nothing to pursue, it shouldn't be
19 pursued, and some instances, it isn't cost-effective.
20 It's not always cost-effective. And the point is to
21 not encourage non-economic fuel switching, but to
22 encourage the fuel switching that does make sense.

23 MR. GODSOE: Q: Well, that opens up a whole bunch of
24 questions, unfortunately. Did you use the
25 Commission's definition of cost-effectiveness when you
26 used cost-effectiveness? You seemed to be limiting it

1 to the TRC, but you'd agree with me it's broader than
2 that?

3 MR. PLUNKETT: A: I will agree that the Commission has
4 -- and I followed this one fairly carefully for the
5 last few years. There have been some nomenclature
6 changes, but the primary test that I understand this
7 Commission uses to determine cost-effectiveness is the
8 total resource cost test. You've also taken a look
9 and pay attention to the utility cost test. And at
10 various times, have had to take -- make policy on the
11 extent to which one uses, for example, the non-
12 participant test. There is also the participant test,
13 which is from a different perspective. It's what you
14 -- it's something you want to satisfy in order to
15 achieve the total resource cost cost-effectiveness.

16 I'm not sure where -- I'm not -- I don't
17 recall exactly where this Commission stands on the
18 societal test, and to the extent that the inclusion of
19 environmental externalities, though I understand that
20 with carbon trading, a lot of the carbon externalities
21 are about to become internalized.

22 **Proceeding Time 9:43 a.m. T17**

23 MR. GODSOE: Q: Right, but you seem to be limiting
24 yourself to cost tasks and cost-effectiveness. Is
25 that correct?

26 MR. PLUNKETT: A: Absolutely. Cost-effectiveness means

1 cost-effectiveness. It means economics. It means --

2 MR. GODSOE: Q: Well, that's --

3 MR. PLUNKETT: A: -- that benefits exceed the costs.

4 MR. GODSOE: Q: With all due respect, that's your
5 definition, not the one employed by the Commission.
6 The Commission, you'd agree with me, uses -- also
7 embraces risk as part of its cost-effectiveness test,
8 correct?

9 MR. PLUNKETT: A: I didn't -- that's an element of
10 costs and benefits that anyone should incorporate into
11 their cost-effectiveness tests, and I wasn't meaning
12 to suggest that we live in a deterministic world.

13 MR. GODSOE: Q: Okay. So you'd agree with me that
14 there's more than just costs looking at -- to look at
15 here, when we look at fuel switching programs.

16 MR. PLUNKETT: A: Sure, I would agree with that.

17 MR. GODSOE: Q: Thank you. We're at the same place.
18 All right. Now we're going to turn to the
19 regional perspective, as we've heard a lot from you
20 folks on that. If you could turn to, Mr. Plunkett,
21 your response to B.C. Hydro IR 1.2, and that's found
22 at Exhibit C21-6.

23 MR. PLUNKETT: A: And I'm sorry, which one?

24 MR. GODSOE: Q: It's B.C. Hydro IR 1.2.

25 MR. PLUNKETT: A: I'm here.

26 MR. GODSOE: Q: And I'm interested at page 3. Second

1 full paragraph.

2 MR. PLUNKETT: A: The one that begins, "The SBCC
3 representative"?

4 MR. GODSOE: Q: It starts with "However".

5 MR. PLUNKETT: A: "The CPR study team"?

6 MR. GODSOE: Q: No, sorry, I don't think we're on the
7 right IR. So B.C. Hydro, it's your response to B.C.
8 Hydro IR 1.5.

9 MR. PLUNKETT: A: Oh, 1.2.

10 MR. GODSOE: Q: Sorry, 1.1.2.

11 MR. ANDREWS: If I may help the witness a little.

12 MR. GODSOE: Yeah, my apologies --

13 THE CHAIRPERSON: You can help me too because I'm totally
14 lost.

15 MR. FULTON: Mr. Chairman, on my copy of the IR response,
16 in the upper right-hand corner you see number 82 --

17 THE CHAIRPERSON: That's stamped there, isn't it?

18 MR. FULTON: Yes, it is.

19 THE CHAIRPERSON: Okay. That's very helpful, Mr. Fulton,
20 thank you. We have it.

21 MR. GODSOE: Q: On the right one? Mine has "B.C.
22 Information Request No. 1, BCSEA response December 18,
23 2008, page 3 of 8."

24 MR. PLUNKETT: A: I'm there.

25 MR. GODSOE: Q: You're there? Okay. And in the second
26 full paragraph of your response you state:

1 "Fuel switching would 'increase the amount
2 of hydroelectric energy B.C. Hydro would
3 have available for exporting for trade
4 purposes, if not for the medium to long-term
5 net exports'."

6 Do you see that?

7 MR. HACKNEY: A: The second full paragraph?

8 MR. GODSOE: Q: Second full paragraph, right at the
9 end.

10 MR. HACKNEY: A: Right at the end.

11 MR. PLUNKETT: A: Found it.

12 MR. GODSOE: Q: Thank you. You didn't do any
13 quantitative analysis with respect to B.C. Hydro's
14 trade activity as part of your evidence, did you?

15 MR. PLUNKETT: A: No, I didn't feel I needed to.

16 MR. GODSOE: Q: Okay. Mr. Hackney, if we could turn to
17 Exhibit C21-6, BCSEA's response to BCUC IR 3.1.

18 MR. HACKNEY: A: Yes, I have that.

19 MR. GODSOE: Q: And I'm interested in page 4 and the
20 last two sentences of the response, middle of the
21 page, starting with "This approach". Do you have
22 that?

23 MR. HACKNEY: A: Yes, I have that.

24 MR. GODSOE: Q: Quote, "This approach typically..." and
25 we're talking about fuel switching.

26 "This approach typically leads to an

1 imperative to replace fossil fuel use by
2 electricity wherever feasible, e.g.
3 certainly for space and water heating, and
4 to replace fossil fuel generation of
5 electricity with renewable generation of
6 electricity. Within this viewpoint, the
7 problem with electric to gas fuel switching
8 measure is that they lock in..."

9 that's the important term I'm going to come in,
10 "...in natural gas for the lifetime of the
11 measure, thereby perpetuating the use of a
12 fossil fuel and precluding its replacement
13 with renewable electricity."

14 And I take it, Mr. Hackney, that BCSEA
15 agree the concern expressed here is that encouraging
16 fuel switching could lead to a locking-in of natural
17 gas usage for the lifetime of the measure.

18 MR. HACKNEY: A: Yes. Yes, certainly we're aware of
19 that as a potential problem.

20 **Proceeding Time 9:48 a.m. T18**

21 MR. GODSOE: Q: And Mr. Plunkett, you'd agree with me
22 that 20 years is a reasonable estimate for the useful
23 life of a natural gas burning appliance for home
24 heating?

25 MR. PLUNKETT: A: Yes, that's correct.

26 MR. GODSOE: Q: Thank you.

1 MR. PLUNKETT: A: There's a lot of them out there now.

2 MR. GODSOE: Q: Okay. And yesterday I gave your
3 counsel a BCSEA document entitled "B.C. Sustainable
4 Energy Association 2009 budget submission". And are
5 you familiar with this document, Mr. Hackney?

6 MR. HACKNEY: A: I am. Do you want me to get a copy in
7 front of me?

8 MR. GODSOE: Q: Yes.

9 And Mr. Chairman, I'd ask that this
10 document be entered and marked Exhibit B-37.

11 THE CHAIRPERSON: Thank you. It will be so marked.
12 ("BC SUSTAINABLE ENERGY ASSOCIATION, 2009 BUDGET
13 SUBMISSION", MARKED EXHIBIT B-37)

14 MR. GODSOE: Q: So, Mr. Hackney, if you could turn to
15 page 2 of 3, and it's entitled "Green buildings", the
16 first sentence:

17 "To support the government's important
18 initiative to green the Building Code and
19 move towards zero carbon buildings, we
20 recommend ..."

21 Do you see that?

22 MR. HACKNEY: A: Yes.

23 MR. GODSOE: Q: Can you explain to me, Mr. Hackney, how
24 installing natural gas burning appliances helps us
25 move towards zero carbon buildings?

26 MR. HACKNEY: A: Well, natural gas clearly does not

1 push toward a zero carbon building. The notion of the
2 fuel switching advantage is a net reduction in
3 greenhouse gas notion, rather than an absolute, and so
4 in this line of thinking, if the strategy is indeed
5 let's move straight towards zero emission buildings,
6 then natural gas would not be desired.

7 MR. GODSOE: Q: Right. Thank you, panel,
8 Commissioners. That ends my line of cross-
9 examination.

10 THE CHAIRPERSON: Thank you, Mr. Godsoe.

11 MR. FULTON: I do have cross-examination for this panel,
12 Mr. Chairman. Probably about 15 minutes.

13 THE CHAIRPERSON: Is it time to break, Mr. Fulton?

14 MR. FULTON: Pardon me?

15 THE CHAIRPERSON: How long have we been sitting here? Is
16 it time to break? I think it is.

17 MR. FULTON: Well, we've had the 8:30 start, so I think
18 it is time to take a break, Mr. Chairman.

19 THE CHAIRPERSON: We will adjourn for 15 minutes.

20 **(PROCEEDINGS ADJOURNED AT 9:51 A.M.)**

21 **(PROCEEDINGS RESUMED AT 10:06 A.M.) T20**

22 THE CHAIRPERSON: Please be seated.

23 Mr. Fulton.

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

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

26 MR. FULTON: Q: Good morning, Mr. Hackney, Mr.

1 Plunkett. All my questions are -- arise as a result
2 of Exhibit C21-6. Like Mr. Godsoe, I will refer to
3 the organizations collectively as BCSEA, if that's all
4 right. And I will also in referencing my questions
5 reference you to the numbers of the pages in the top
6 right-hand corner of C21-6. So the stamped page
7 numbers.

8 And I'd like to begin with the response to
9 BCUC IR 1.2, which is found at page 3 of C21-6. And
10 in that response, Mr. Plunkett, you described the role
11 of Efficiency Vermont and as a ratepayer funded
12 enterprise that administers Vermont's energy
13 efficiency programs. And you also state that an
14 entity such as Efficiency B.C. could go a long way
15 towards tightening the integration of electricity and
16 gas efficiency program design and implementation.
17 Correct?

18 MR. PLUNKETT: A: Yes.

19 MR. FULTON: Q: Okay. And you had a discussion with
20 Mr. Godsoe this morning about B.C. having legislated
21 targets on GHG reductions. You recall that
22 discussion?

23 MR. PLUNKETT: A: I do.

24 MR. FULTON: Q: Okay. And you would agree with me that
25 B.C. does not have a written policy regarding fuel of
26 choice, and either incenting or discouraging customers

1 to choose either electricity or natural gas?

2 MR. PLUNKETT: A: That's my understanding.

3 MR. FULTON: Q: Okay. In the context of British
4 Columbia, then, having regard to the fact that there
5 is legislation regarding GHG reductions, but no policy
6 on fuel switching, can you provide us with the views
7 that you have of what would be required to create an
8 entity such as Efficiency B.C.?

9 MR. PLUNKETT: A: I have to give you the predicate of,
10 "I'm not a lawyer" again. So I'm not sure, like, what
11 you're -- what the levers are that you have to bring
12 something like this about. But, I can tell you the
13 kind of levers that in jurisdictions in the States
14 that we've used that might be your levers.

15 For example, I could imagine how B.C. Hydro
16 and Terasen could get together and just propose to do
17 this, and hire -- design the programs jointly, submit
18 them for Commission review, hire contractors that
19 report to them and they jointly manage. So, it could
20 be done literally voluntarily. And by -- with various
21 cost-sharing agreements and by contract. And that's
22 -- in Vermont, we had legislation to create Efficiency
23 Vermont. So it generally takes legislation. But some
24 jurisdictions had found this sort of thing was already
25 within their statutory -- the powers given to them by
26 statute. My understanding is, economic regulators are

1 usually creatures, yourselves, of state law and
2 provincial law.

3 So, there could be -- legislation would
4 help. The Commission may be able to direct this to
5 happen without legislation, but again, I'm not a
6 lawyer.

7 MR. FULTON: Q: Right. And with that caveat, though,
8 can I take it just to draw your answer to a conclusion
9 that, from your experience at least, in most
10 jurisdictions that you're aware of, where they have
11 similar entities to energy -- or Efficiency Vermont,
12 that legislation has been required to create those
13 entities.

14 MR. PLUNKETT: A: That's correct. And those states are
15 -- Wisconsin also did this, and they had legislation.
16 New York State did it and gave the job to the New York
17 State Energy Research and Development Authority, and
18 there was legislation that did that. So as a general
19 proposition, probably you need legislation.

20 **Proceeding Time 10:10 a.m. T20**

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

22 Now, moving forward to your response to
23 BCUC IR 16.1 which is at page 13 of Exhibit C21-6,
24 there you were referred to the demand-side measures
25 regulation and asked whether, in your opinion, since
26 incentives are not a component of the TRC, does this

1 mean that B.C. Hydro can increase its incentive levels
2 to the full cost of each efficiency measure or more,
3 as long as the TRC achieves a value of one or more.
4 And in your answer you used both the terms "cost-
5 effective" and "least-cost", and you had a discussion
6 with Mr. Godsoe this morning about cost-effective.

7 What I wanted to know from you was, in this
8 answer, are you using the terms "cost-effective" and
9 "least-cost" interchangeably, or are you
10 distinguishing between the two terms?

11 MR. PLUNKETT: A: The short answer is pretty much
12 interchangeably.

13 MR. FULTON: Q: Pretty much interchangeable.

14 MR. PLUNKETT: A: Pretty much. When I mean "least-
15 cost" I usually mean it to apply to the entire system.
16 You're trying to find the least-cost combination of
17 meeting your total energy requirements. And so that
18 something is cost-effective, if it's cheaper than an
19 alternative and the helps make the total portfolio
20 least-cost.

21 MR. FULTON: Q: Thank you. Staying with that answer,
22 the second sentence says:

23 "B.C. Hydro's least-cost planning objective
24 should be to acquire as much cost-effective
25 DSM as it can for the amount of money it
26 decides to spend on efficiency investment."

1 Do I take it from that statement that it's your
2 position that B.C. Hydro should first determine a DSM
3 budget, and then set out to acquire an amount of DSM
4 within that budget?

5 MR. PLUNKETT: A: Not quite. What the best practice
6 really would be is to go down the road -- Hydro
7 started down the road and it does a pretty
8 comprehensive job of it, to inventory the potential,
9 the technically feasible potential, and then find out
10 how much of it's cost-effective. And usually you set
11 -- then we come into your question, which is okay,
12 then we have to set a budget or at least a portfolio
13 level strategy just like Hydro is doing. And that
14 budget is typically constrained -- Hydro's inventory
15 says how much cost-effective potential there is. It
16 doesn't say when -- the pace at which. And so there's
17 a choice of how you pace this and how much you invest
18 when. And that's the budget determination that's
19 usually -- for example, in Vermont the Commission, the
20 Board said, "Look, we want you to go after this --
21 we'll give you this much money to go after this much
22 of the potential," and then they set targets for it.

23 I'm sorry this was such a long answer. So
24 once you've gotten to the point of setting a budget,
25 then the goal is, for example, at Efficiency Vermont,
26 when we get our \$40 million a year budget, we get

1 goals and we try and beat those goals and literally
2 get as much as we can with the money we're given.

3 MR. FULTON: Q: All right, so once you determine the
4 budget, you set out to acquire as much DSM as you can
5 acquire within the confines of that budget. And if
6 you can get more, then so much the better.

7 MR. PLUNKETT: A: Exactly.

8 MR. FULTON: Q: Okay.

9 You conclude the response by saying:

10 "By making a practice of spending no more
11 than necessary to overcome market barriers,
12 B.C. Hydro can maximize the quantity of
13 cost-effective savings it acquires no matter
14 how much it spends."

15 Would you agree with me generally that the more B.C.
16 Hydro offers in incentives, the more market barriers
17 it's likely to overcome?

18 MR. PLUNKETT: A: Yes.

19 **Proceeding Time 10:15 a.m. T21**

20 MR. FULTON: Q: And you are aware, I take it, of the
21 legislation in British Columbia that requires B.C.
22 Hydro to acquire all cost-effective DSM.

23 MR. PLUNKETT: A: Yes, I am aware of that.

24 MR. FULTON: Q: Thank you.

25 MR. PLUNKETT: A: And again, it comes to the point of
26 where -- but it didn't say when. And so, this is

1 often the question of how much when.

2 MR. FULTON: Q: Yes, thank you. Now, I'd like to move
3 forward to your response to BCUC -- to the attachment
4 to the response to BCUC IR 16.1, and that attachment,
5 or one of the attachments is the direct -- your direct
6 testimony on behalf of the Office of Consumer Counsel.

7 MR. PLUNKETT: A: I have that.

8 MR. FULTON: Q: September 17th, 2008. And if you could
9 move along in that evidence to page 39, where there is
10 a discussion beginning at line 11 of compact
11 fluorescent lights.

12 MR. PLUNKETT: A: I'm there.

13 MR. FULTON: Q: And in that answer, you will agree with
14 me, you describe the changes in the market for CFL
15 lights, and how there have been significant advances
16 in naturally-occurring or market-driven -- market-
17 driven efficiency gains. Correct?

18 MR. PLUNKETT: A: Yes.

19 MR. FULTON: Q: And you say that if this dynamic
20 continues, that the potential will start to decline
21 soon. Correct?

22 MR. PLUNKETT: A: Yes.

23 MR. FULTON: Q: If you were considering a jurisdiction
24 where the penetration of CFLs had reached significant
25 levels, would you recommend that DSM programs focused
26 on CFLs be discontinued, and that any new savings

1 estimates should also be terminated?

2 MR. PLUNKETT: A: No.

3 MR. FULTON: Q: Why not?

4 MR. PLUNKETT: A: The reason is because there's still
5 potential out there. For example, in Vermont, where
6 we think we see a lot of evidence that we lead the
7 continent in terms of the market penetration of
8 company fluorescent lamps, because of our efforts.
9 We're still doing it. And the reason is because we're
10 still -- there's more potential to be gotten. Now,
11 the way we look at it, there is about -- between, on
12 average, 30 and 40 sockets in a household, on average.
13 And in Vermont, we think we've got about a
14 penetration, on average, of about 6, which is really
15 high, nation-wide. But there's a long way to go, and
16 it's still cost-effective, and our evaluation shows
17 that we're still -- even though, if we didn't have a
18 program, a lot of lamps would be getting bought
19 because of the market, we're still having a big net
20 effect.

21 Now, we're watching this very carefully,
22 and there may come a point, and it may come soon, and
23 it may come in the next three years or less, that this
24 is not true any longer, and that there are no net
25 additional savings. People -- these things are flying
26 off the shelves, no matter what we do, and it's time

1 to turn our efforts elsewhere.

2 MR. FULTON: Q: Okay. And at that point, I take it, it
3 would be your recommendation that the program be
4 discontinued and that the savings estimates should --
5 would be terminated.

6 MR. PLUNKETT: A: At that point, what we're looking to
7 do is stop providing incentives for certain compact
8 fluorescent lamps, but continuing with other ones, and
9 more particularly, turning our attention to new
10 technologies like solid-state lighting, which is
11 evolving rapidly, both in terms of its performance
12 improvement and its cost reductions.

13 MR. FULTON: Q: Okay. Now, I'd like to turn to the
14 issue of fuel switching, and take you back to your
15 response to BCUC IR 1.2. And the -- or, pardon me,
16 B.C. Hydro 1.2, I'd like to take you to. You were
17 there this morning with Mr. Godsoe. And page 82 of
18 C21-6.

19 **Proceeding Time 10:19 a.m. T22**

20 MR. PLUNKETT: A: Got it.

21 MR. FULTON: Q: And I believe Mr. Godsoe asked you
22 about the second full paragraph on that page, and I
23 want to take you to the third paragraph where I'll let
24 you read the paragraph and then I'll ask you to
25 confirm something for me.

26 MR. PLUNKETT: A: Okay, I've reread it, thank you.

1 MR. FULTON: Q: And you conclude the paragraph with the
2 opinion that "Consequently cost-effective electric to
3 gas fuel switching in B.C. will result in decreased
4 greenhouse gas emissions." And do I take it that you
5 still stand by that statement?

6 MR. PLUNKETT: A: I do.

7 MR. FULTON: Q: Now, Mr. Hackney, I do have some
8 questions for you then arising out of that response,
9 and if you could turn back to the response to BCUC IR
10 1.3.1 which is at page 4.

11 MR. HACKNEY: A: I have that.

12 MR. FULTON: Q: And it may be the way that that
13 question was worded, but as I took the question, you
14 were asked whether BCSEA agreed with the conclusions
15 of Mr. Plunkett.

16 MR. HACKNEY: A: Yes. We agree with the conclusions of
17 Mr. Plunkett insofar as his analysis concerned, that
18 there appeared to be economic fuel switching
19 potential. And we don't agree with the recommendation
20 that that should immediately give rise to implementing
21 fuel switching programs. Rather we take a more
22 measured approach to that.

23 MR. FULTON: Q: And do you say anywhere in that
24 response, as definitively as you say in your evidence,
25 Exhibits C21-10 at question 7, which Mr. Godsoe took
26 you to this morning, that BCSEA and SCBC do not

1 support fuel switching programs, here taken to include
2 fuel substitution from electricity to natural gas at
3 this time?

4 MR. HACKNEY: A: I'm sorry, I don't have the document
5 right here.

6 MR. FULTON: Q: It's your evidence --

7 MR. HACKNEY: A: Yes.

8 MR. FULTON: Q: -- Exhibit C21-10.

9 MR. HACKNEY: A: I have that now.

10 MR. FULTON: Q: Okay, the response to question 7.

11 MR. HACKNEY: A: Yes, I've got that.

12 MR. FULTON: Q: And I took the response to question 7
13 to be a fairly definitive response, at least insofar
14 as at this time is concerned.

15 MR. HACKNEY: A: Correct.

16 MR. FULTON: Q: Okay. And would you agree with me that
17 you don't provide such a definitive response in the
18 response to the IR that I've just taken you to? And
19 if you do, you can point to me where you provide that,
20 the definitive response.

21 MR. HACKNEY: A: If I could have a moment to gloss that
22 response.

23 MR. FULTON: Q: Certainly.

24 MR. HACKNEY: A: Yes, all right. So perhaps you could
25 help me a bit what the question is. The two responses
26 are not identical. The IR response goes into some

1 detail about the CPR study and the SCBC representative
2 on the CPR External Review Panel, which was myself.
3 So it does address -- it addresses a similar issue but
4 from a couple of different perspectives, and I'm not
5 sure exactly if you're -- what you want me to --

6 MR. FULTON: Q: Well, let me ask you this, then. Has
7 the BCSEA and SCCBC position evolved on fuel switching
8 since the time that the IR response was provided?

9 **Proceeding Time 10:25 a.m. T23**

10 MR. HACKNEY: A: No, I don't believe our response has
11 evolved since this IR response was provided.

12 MR. FULTON: Q: Okay. All right. Are there any other
13 aspects, then, of Mr. Plunkett's evidence that BCSEA
14 and SCBC either do not support at this time or do not
15 support at all?

16 MR. HACKNEY: A: No. No, I believe there was one
17 statement in the early part of the evidence that
18 suggested moving directly to fuel switching, and apart
19 from that, we were completely in agreement with --

20 MR. FULTON: Q: All right, thank you. Now, just to
21 return to the response at page 82, Mr. Plunkett --

22 MR. PLUNKETT: A: I have that.

23 MR. FULTON: Q: And here, I'm focusing on the statement
24 that effective electric to gas fuel switching in B.C.,
25 and I'm in the third full paragraph again --

26 MR. PLUNKETT: A: Mm-hmm.

1 MR. FULTON: Q: -- is to reduce coal- or gas-fired
2 generation in Alberta and/or Pacific Northwest U.S.,
3 and then you provide a reason. Can you tell us what
4 aspects of your experience lead you to the conclusion
5 that fuel switching in B.C. would lead to reduced
6 coal- or gas-fired generation in Alberta or in the
7 Pacific Northwest?

8 MR. PLUNKETT: A: There are two parts to this. One is
9 -- I have no experience with any of this in B.C. It's
10 my understanding of the generation profile and the
11 load profiles of B.C., and some understanding of that
12 in Alberta --

13 MR. FULTON: Q: What is the basis of that
14 understanding?

15 MR. PLUNKETT: A: I'm going to give you two answers.
16 One is just my general knowledge of following this
17 jurisdiction in this area, because I've been working
18 here on and off. But part of it is also through
19 consultation with other experts who have even more
20 experience on the generation side. So, to answer your
21 earlier question about how I came to this, I mean, so
22 it's -- that's how I came by the information is
23 through reading and consultation and staying on top of
24 things. And that understanding had led me to two
25 conclusions.

26 One is that I understand that B.C. Hydro

1 purchases power from Alberta during low load hours on
2 Alberta's system so that it can replenish its supply
3 -- hydro-electric resources so that it can dispatch
4 those during high-load, high-cost hours. And so that
5 -- where the power that you're buying from Alberta is
6 excess capacity, and it's generally load following
7 coal-fired generation -- in other words, coal-fired
8 generation, basic load generation that isn't already
9 fully loaded and therefore is dispatched by Alberta to
10 provide the power to Hydro. So that's one source.
11 So, by -- if we eliminate fuel switch -- if we reduce
12 load, regardless of whether it's fuel switching or
13 not, during Hydro's high-load hours, then Hydro will
14 need to do less replenishing of this -- of its
15 resources with this Alberta-based -- what I'm calling
16 coal by wire.

17 And the export side, in general, when Hydro
18 sells into the Pacific Northwest market, most of that
19 generation on the margin is natural gas-fired, or
20 fired -- provided by gas combined-cycle generation
21 that's also load-following.

22 **Proceeding Time 10:30 a.m. T24**

23 And so to the extent a load reduction
24 happens here -- excuse me. To the extent Hydro can
25 sell into the U.S. market, it's avoiding -- with its
26 hydro resource, it's causing the U.S. utilities to

1 back down their gas-fired generation.

2 So those are the two components that I have
3 in mind when I say that on balance increasing the
4 efficiency of gas use at the point of end use will
5 save gas because it's avoiding electricity that's
6 being generated with much less efficiently than the
7 gas would be used if it were used directly.

8 MR. FULTON: Thank you. Thank you, Mr. Chairman, those
9 are my questions.

10 THE CHAIRPERSON: Thank you, Mr. Fulton.

11 COMMISSIONER MILBOURNE: Good morning. I'd like to refer
12 to the B.C. Government's Energy Plan 2007. You don't
13 have to have it in front of you, but I'm sure you're
14 familiar with it.

15 MR. HACKNEY: A: Yes, fairly familiar.

16 COMMISSIONER MILBOURNE: Obviously it covers a variety of
17 topics, but in around page 29, as part of the
18 objectives of the plan it describes B.C. objective to
19 be among the most competitive oil and gas
20 jurisdictions in North America, and goes on to
21 describe the Energy Plan as being designed to take
22 B.C.'s oil and gas sector to the next level to enhance
23 a sustainable, thriving and vibrant oil and gas sector
24 in British Columbia.

25 MR. HACKNEY: A: Well, that sounds familiar.

26 COMMISSIONER MILBOURNE: Okay, that's fine. My question

1 is, do you agree or disagree with that objective of
2 the Energy Plan as an organization?

3 MR. HACKNEY: A: We disagree. Our view is that British
4 Columbia should find ways to phase out the production
5 of fossil fuels as quickly as possible, compatible
6 with our long-term well-being.

7 COMMISSIONER MILBOURNE: Thank you. Given that that's
8 policy of the province as reflected in the Energy
9 Plan, maybe this is a rhetorical question, but why
10 then does it matter where those fossil fuels are
11 combusted? Would it not be more relevant to consider
12 what the most efficient conversion of them to energy
13 is?

14 MR. HACKNEY: A: I think that depends on one's
15 assumption. There is a school of thought which is
16 that we might as well be producing fossil fuels,
17 because if we don't then somebody else will. And
18 there's another school of thought, which is that we
19 should lead by example. There are many moral and
20 practical and idealistic questions that are around the
21 whole project of shifting off of greenhouse gases and
22 the reason being that society as a whole, globally and
23 here, we're actually not doing it very effectively.

24 Our position is that we need to start doing
25 it, and part of starting doing it would be to pay
26 attention to our own actions. And for that reason we--

1 COMMISSIONER MILBOURNE: Thank you. I understand your
2 overall position, but my question is, given that this
3 is policy, --

4 MR. HACKNEY: A: Yes.

5 COMMISSIONER MILBOURNE: My question was, does it matter
6 where then that production is combusted?

7 MR. HACKNEY: A: You mean combusting the greenhouse
8 gases here in British Columbia versus exporting the
9 gas and combusting it in the Pacific Northwest. In
10 that sense, from a climate change perspective, it
11 makes no difference what jurisdiction it's burned in.

12 **Proceeding Time 10:35 a.m. T25**

13 COMMISSIONER MILBOURNE: Thank you. But you would agree
14 that the efficiency with which it's combusted is
15 important.

16 MR. HACKNEY: A: Absolutely.

17 COMMISSIONER MILBOURNE: Thank you. I'd like to perhaps
18 understand a little bit more, Mr. Plunkett, about
19 these jurisdictions that you're familiar with that
20 have these -- we'll call it collaborative activities,
21 albeit they're imposed by legislation. Joint
22 initiatives between -- or coordinated initiatives
23 between gas utilities and electric utilities that
24 operate in the same jurisdiction.

25 You've kind of described that they exist
26 and that they're here by legislation, but could you

1 help me understand a bit better what it actually is
2 they do? What sort of outcomes there are out of that
3 process?

4 MR. PLUNKETT: A: Sure. I have in mind -- let's see.
5 Just off the top of my head, in California there's a
6 lot of this, but they're helped along because, when
7 you've got -- it's easy for Pacific Gas and Electric
8 to do an integrated energy efficiency program that
9 integrates gas and electric. So that's not going to
10 be helpful.

11 In New Jersey, in 2000, this is where this
12 really got started for that state, you have a bunch of
13 -- you know, like, two or three big electric utilities
14 and you have two or three gas utilities. And in 2000
15 I was part of this project that helped put together a
16 long-term plan over eight years. It was -- I recall,
17 it was about a billion dollars. And what happens is,
18 in the areas where it matters, for example, new
19 residential construction, they literally manage these
20 -- this program jointly. There -- it's sponsored by
21 both of them, they both pay into it, and they have a
22 single implementation contractor, or set of
23 implementation contractors, who do all the work of
24 actually -- rarely are these programs really -- you
25 know, a lot of the money you spend on getting things
26 done are done by private contractors that -- not

1 utility people running around doing this.

2 So, I mean, I guess that's probably the
3 best thing I can do is focus on new residential
4 construction. So it's a joint program, it's run by
5 both of them, it's called, you know, "New Jersey Clean
6 Energy" -- something, I can't remember. And it's this
7 umbrella that operates all these programs where it
8 matters jointly. For example, like low-income program
9 that does retrofits to winterize people's homes, low-
10 income people's homes. They also -- which is mostly,
11 obviously, supported by the gas ratepayers, they're
12 also directly installing a lot of compact fluorescent
13 lamps, which are providing a lot of electric savings.

14 Massachusetts, since about 2000, has also
15 had what they called joint management programs. They
16 actually -- the gas utilities and the electric
17 utilities worked cooperatively to jointly manage an
18 identical state-wide program, even though they're a
19 bunch of electric utilities and a bunch of gas
20 utilities in Massachusetts, it's the same program no
21 matter where you are, it's just they jointly design
22 it, deliver it, the incentives are consistent across
23 the board. It's a unified effort, for example, and
24 I'm focusing on this residential new construction
25 program.

26 COMMISSIONER MILBOURNE: So, let me just ask you, then.

1 In this residential new construction program, what
2 would be the physical characteristics of the
3 development or the houses or whatever that came out of
4 this?

5 MR. PLUNKETT: A: Okay, well --

6 COMMISSIONER MILBOURNE: Could you kind of get it down
7 to --

8 MR. PLUNKETT: A: A more nuts-and-bolts level.

9 COMMISSIONER MILBOURNE: Yeah, like, what is it they're
10 doing?

11 MR. PLUNKETT: A: Yeah.

12 COMMISSIONER MILBOURNE: What is it they're implementing
13 to meet the overall objective of combining --

14 MR. PLUNKETT: A: Sure.

15 COMMISSIONER MILBOURNE: -- maximizing the efficiency of
16 the whole system.

17 MR. PLUNKETT: A: All right. So, in a new home, they
18 would be working on the building shell, okay? So,
19 windows, promoting -- we'd have home -- what's the
20 word, it's not "home performance", Energy Star, it's
21 -- there are performance targets that you try and meet
22 to be an energy-efficient home, and so they would be
23 -- certain levels of insulation, attic and wall
24 insulation, as a package, and they would look for
25 high-efficiency furnaces, making sure people --
26 because people generally heat with natural gas and

1 cool with electricity in that part of the country,
2 you've got a ducted system where you're blowing hot
3 air all over the place, or cold air, depending on
4 which season. So, you'd be aiming on making sure that
5 home came equipped with a high-efficiency central air
6 conditioner, a high efficiency gas furnace.

7 **Proceeding Time 10:40 a.m. T26**

8 As I said, the insulation, building shell
9 things properly installed. And then appliances, high
10 efficiency refrigerators, you know, you get sort of
11 points, or if you qualify for the program and
12 therefore usually get a fairly large financial
13 incentive, if you do all the -- you know, punch all
14 the buttons you're supposed to in terms of putting in
15 the right equipment and putting the right windows and
16 having hardwired compact fluorescent fixtures in the
17 house, for example. And if you're a builder you might
18 qualify for an incentive of something like \$4,000, if
19 the house has the requisite -- meets the requirements
20 of the program.

21 COMMISSIONER MILBOURNE: Is there anything comparable in
22 multi-family dwellings, high-rises?

23 MR. PLUNKETT: A: Yes.

24 COMMISSIONER MILBOURNE: And can you describe that for
25 me, please?

26 MR. PLUNKETT: A: Sure. This one is a little tougher.

1 New York is working on this, for example. I represent
2 the City of New York in some of these negotiations, if
3 you will, or proceedings going on in New York about
4 how to handle these buildings, large buildings mostly
5 in New York, that have pretty ancient gas technology,
6 you know, used to be coal boilers and now they're gas
7 boilers and they're really inefficient and old. And
8 so there's also the lion's share of savings potential
9 in multi-family housing, that I'm familiar with, is
10 usually in the heating, and that while the electric
11 savings are cost-effective they're just not as big in
12 terms of money or energy savings.

13 So the point of all that was you're looking
14 at engineered systems in big high-rise buildings, not,
15 you know, people's individual furnaces and air
16 conditioners. So what we're working toward is again,
17 in New York City, Con Ed will actually be the program
18 administrator of this, and they'll provide customized
19 financial incentives. Because again it's not a
20 cookie-cutter thing, you can't just go in and say,
21 "Here's \$50,000 to fix your boiler up." It's got to
22 be customized engineering, it's got to be customized
23 economic analysis to find out what's cost-effective in
24 terms of replacing, early replacing, early replacing
25 the existing boiler, installing a bunch of controls on
26 the systems to make sure they perform better.

1 And then you'd also include the electric
2 efficiency opportunities which are both in the
3 dwellings themselves, compact fluorescents anybody,
4 directly installed into the units, as well as the
5 common areas where you've got common area lighting and
6 other end uses that can be -- whose efficiency can be
7 improved. You might have a chiller, a central chiller
8 that also could stand to either be replaced or with
9 more efficient or have better -- more efficient
10 controls and operation.

11 COMMISSIONER MILBOURNE: Just by way of example, if you'd
12 kind of look out the window you'll see all sorts of
13 high-rise residential buildings around this area. In
14 these jurisdictions, would something like that have
15 like a high-efficiency hot water heating system?

16 MR. PLUNKETT: A: Yes, exactly. The hot water is part
17 of it, domestic hot water. And I've been here for a
18 few days and I've been staying downtown and actually
19 looking in a lot of windows and seeing what kind of
20 lights people have, and both in the offices and
21 houses, and there's a lot -- you know, anecdotally
22 anyway, there's a lot of potential.

23 COMMISSIONER MILBOURNE: But would they be heated with
24 electric baseboards or would there be a central gas-
25 fired high-efficiency boiler system?

26 MR. PLUNKETT: A: I'm sorry, I didn't hear your

1 question.

2 COMMISSIONER MILBOURNE: I said would they be heated with
3 baseboard units in every unit, or would they be heated
4 with a central high-efficiency hot water boiler
5 system?

6 MR. PLUNKETT: A: That would be the ideal. If you've
7 got a bunch of resistance-heated units, you know, that
8 are heated like baseboard and they're a central
9 heating system would certainly work a lot better and
10 be more energy-efficient. It's very expensive,
11 obviously, to put in a whole distribution system, and
12 again you would only do it if cost-effectiveness
13 screening showed it to be worth doing.

14 COMMISSIONER MILBOURNE: Okay, thank you.

15 **Proceeding Time 10:45 a.m. T27**

16 COMMISSIONER MILBOURNE: Okay, thank you.

17 My last question is kind of just a sidebar.
18 I noticed references to -- in some of your material
19 there to land-fill gas recovery and biogas, and things
20 along those lines. And I guess just a similar
21 question, is it more efficient to burn that stuff
22 locally and try and generate small amounts of power,
23 or is it better to clean it up and put it into an
24 existing gas pipeline system and distribute it along
25 with fossil methane? In your policy vehicle.

26 MR. HACKNEY: A: I -- yes, in our policy document. Is

1 it more efficient to flare the gas? I think the
2 efficiency would be something that you would want to
3 work out in -- by detailed calculations, just at a
4 very high level. The main thing with landfill gas is,
5 combust it somehow, because it's methane and if it
6 leaks into the atmosphere, the green -- global warming
7 potential is a lot higher than for carbon dioxide. So
8 you reduce it to carbon dioxide. If you're going to
9 capture it anyway, presumably it will end up getting
10 combusted, so if it can be done usefully, and in the
11 most efficient way possible, that would notionally be
12 idea.

13 COMMISSIONER MILBOURNE: Okay, thank you. Those are all
14 my questions.

15 THE CHAIRPERSON: Thank you.

16 Mr. Plunkett, I just have one question for
17 you. It's page 21 of your evidence in chief, lines 19
18 and 20.

19 MR. PLUNKETT: A: Yes, I have it.

20 THE CHAIRPERSON: And I understand that last half of the
21 page, it is basically the three items of relief which
22 BCSEA seeks, and the last one I'm having trouble
23 understanding.

24 "Lastly, I recommend the Commission address
25 the current absence of guidelines for fuel
26 substitution investment."

1 And I wonder if you could just explain -- are you
2 looking for the Commission to draft the guidelines, or
3 to -- it's "addressing the current absence" which
4 strikes me as being a fairly nebulous request.

5 MR. PLUNKETT: A: I agree. That's pretty nebulous.
6 And actually, I've just had a private conversation
7 with Mr. Godsoe, who alerted me to the fact that this
8 was kind of vague, and all I meant to do was to sum up
9 what I thought I'd said somewhere else here.

10 THE CHAIRPERSON: Maybe at the top of the page?

11 MR. PLUNKETT: A: And --

12 THE CHAIRPERSON: Line 4, is this trying to summarize in
13 a line and a half what you'd said in four lines above,
14 or am I --

15 MR. PLUNKETT: A: Yes. Yeah, I've clearly helped not
16 at all by trying to summarize anything. It is what I
17 -- here's what I mean. I'll just skip to that.

18 THE CHAIRPERSON: Please do, yes.

19 MR. PLUNKETT: A: No, I -- some guidelines need to be
20 worked out, some economic procedures, and on how to do
21 this. With some shared assumptions about what things
22 cost, and how they perform. And all this should get
23 sorted out. And really what I was -- what I have in
24 mind is for the Commission to direct Hydro and Terasen
25 and other interested parties like BCSEA to draft --
26 work out these guidelines for your consideration, not

1 to ask you to do the heavy lifting of trying to figure
2 this out.

3 THE CHAIRPERSON: Okay, thank you very much.

4 Mr. Andrews, I have no further questions.

5 MR. ANDREWS: I have no questions in re-direct.

6 THE CHAIRPERSON: This panel is excused.

7 (PANEL ASIDE)

8 THE CHAIRPERSON: We'll stand down for five minutes
9 while Mr. Godsoe reassembles his panel.

10 (PROCEEDINGS ADJOURNED AT 10:49 A.M.)

11 (PROCEEDINGS RESUMED AT 10:54 A.M.) T28

12 THE CHAIRPERSON: Please be seated.

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

14 CAM MATHESON, Resumed:

15 RANDY REIMANN, Resumed:

16 STEVE HOBSON, Resumed:

17 JAMES SCOURAS, Resumed:

18 MICHAEL JAMES SAVIDANT, Resumed:

19 THE CHAIRPERSON: Mr. Quail, good morning.

20 MR. QUAIL: Good morning.

21 **CROSS-EXAMINATION BY MR. QUAIL:**

22 MR. QUAIL: Q: Panel, I first have a couple of
23 questions arising from section 3 of the update --
24 that's Exhibit B-10, you don't need to go to it. And
25 that is the DSM regulation. It was promulgated in
26 November of 2008, is that correct?

1 MR. HOBSON: A: That sounds about right, yes.

2 MR. QUAIL: Q: And as I understand your evidence from
3 the update and information requests that were
4 submitted arising from it, the only change that B.C.
5 Hydro made to this application flowing from the
6 regulation was the elimination of a specific request
7 for approval of low-income DSM. Is that correct?

8 MR. HOBSON: A: I believe that's correct, yes.

9 MR. QUAIL: Q: And as I understand the rationale for
10 eliminating that request is that under the new rules
11 created by the regulation, this program passes the
12 cost-effectiveness test as rejigged. I see, Mr.
13 Matheson, you're shaking -- you're nodding your head
14 but we need a -- somebody has to --

15 MR. HOBSON: A: Yes, that's correct.

16 MR. QUAIL: Q: Okay. But my understanding from
17 information responses you provided is that B.C. Hydro
18 will be -- does intend to implement this program. Is
19 that right?

20 MR. HOBSON: A: Implement the low income program?

21 MR. QUAIL: Q: That's right.

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

23 MR. QUAIL: Q: That's right. So your position is that
24 you don't require specific approval but it's going
25 ahead on the same basis without that specific element
26 of the relief requested.

1 MR. HOBSON: A: That's right. The low income program
2 is proceeding just like any of the other initiatives.

3 MR. QUAIL: Q: So I gather in fact, in terms of what
4 B.C. Hydro proposes to implement on the ground when it
5 comes to DSM, there are no changes in practice flowing
6 from the regulation.

7 MR. HOBSON: A: I think that's correct, yes.

8 MR. QUAIL: Q: I have some questions about the size of
9 the DSM reduction included in the update. And here,
10 you don't need to turn to it, but the package of
11 material that I've got in mind is section 2-422.4.2 in
12 Exhibit B-10. I maybe just will turn just to the
13 opening passage of that. That's at page 20 of the
14 update. It says:

15 "The reduction between the 2006 load..."

16 I'll give the panel a moment. I'm just going to be
17 reading the first sentence so I don't know if it's
18 worthwhile to turn to it or not.

19 THE CHAIRPERSON: I've got that anyway.

20 MR. QUAIL: Q: "The reduction between the 2006 load
21 forecast and the 2008 load forecast update
22 impacts the amount of economic conservation
23 potential in B.C. Hydro's service
24 territory."

25 So my first question is, can you confirm that the CPR
26 is based on the 2006 load forecast?

1 MR. HOBSON: A: Based on it in the sense that that
2 would be the load forecast that was utilized in
3 establishing a reference case for the conservation
4 potential review.

5 MR. QUAIL: Q: And the 2007 forecast is lower than the
6 2006 forecast, is that right?

7 MR. HOBSON: A: Yes, that's correct.

8 MR. QUAIL: Q: And then the 2008 forecast is lower in
9 turn than the 2007 forecast.

10 MR. HOBSON: A: Correct.

11 MR. QUAIL: Q: Can you confirm that in the application,
12 B.C. Hydro did not make any adjustment to DSM
13 potential due to the reduction in load forecast
14 between 2006 and 2007?

15 MR. HOBSON: A: We had not made an adjustment, no.

16 MR. QUAIL: Q: And in the update, Exhibit B-10, you
17 adjusted the DSM potential based on the differences
18 between 2006 and the 2008 update forecast, is that
19 right?

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

21 MR. QUAIL: Q: Rather than between the 2007 load
22 forecast used in the application, and the 2008
23 forecast in the update.

24 MR. HOBSON: A: The adjustment was made based on the
25 2006 to 2008 time period, yes.

26 MR. MATHESON: A: Mr. Quail, can I have a moment?

1 **Proceeding Time 10:59 a.m. T29**

2 MR. HOBSON: A: Thank you.

3 MR. QUAIL: Q: Can you confirm that if the recent
4 increase in the government's return on equity, which
5 we've discussed very briefly in this proceeding, if it
6 translates into higher rates, whether or not they're
7 deferred to some extent, this will have the effect of
8 decreasing DSM savings -- I'm sorry, increasing DSM
9 savings attributable to rates, is that right?

10 MR. HOBSON: A: Sorry, you'll have to walk me through
11 that again.

12 MR. QUAIL: Q: Okay. So, we've seen the government
13 increase the ROE that it is entitled to from B.C.
14 Hydro. And assuming that that, at some point and in
15 some form, results in higher rates, whether or not
16 some of it's deferred, this will increase DSM savings
17 which are attributable to rates.

18 MR. HOBSON: A: It would certainly increase the rate
19 level savings that would be picked up within the load
20 forecast, and would also increase as a function of the
21 elasticity being applied to the rate structure
22 savings. I guess the key piece would be the delta in
23 between, which is what's attributed to the DSM
24 portion.

25 MR. QUAIL: Q: Yes.

26 MR. HOBSON: A: And I guess the question would be

1 whether or not that would change, and I'm not sure it
2 would, because I'm thinking both pieces may be moving
3 together.

4 MR. QUAIL: Q: Thank you.

5 MR. REIMANN: A: I would add to that that my
6 understanding is that this temporary equity increase
7 applies for three years. So --

8 MR. QUAIL: Q: Yes. Can you confirm that most of the
9 DSM economic potential associated with existing
10 residential customers would not be affected by
11 economic drivers in our economic context?

12 MR. HOBSON: A: Okay, can you repeat that, please?

13 MR. QUAIL: Q: Most of the DSM potential in relation to
14 existing residential customers would be relatively
15 unaffected by the economic circumstances that we find
16 ourselves in. Is that a fair statement?

17 MR. HOBSON: A: Yeah, I think most would be fair, just
18 in the sense that there's still a significant
19 remaining economic potential in play.

20 MR. QUAIL: Q: Yes. But I suggest that the economic
21 downturn and resulting drop in industrial activity and
22 industrial load, mills closing and so on, would be
23 expected to reduce the volume of energy savings
24 achievable from industrial or commercial DSM
25 initiatives. Is that a fair statement?

26 MR. HOBSON: A: Again, I think you would have

1 significant economic potential across all three
2 sectors that would be -- that is remaining even after
3 an adjustment to the load forecast.

4 MR. QUAIL: Q: Yes, but if a large number of mills are
5 shut down, and the size of the industrial load in
6 particular is declining significantly because of the
7 economy, I suggest that that also would tend to reduce
8 the potential for DSM energy savings achievable from
9 that sector.

10 MR. HOBSON: A: Yeah, and it would go hand-in-hand with
11 the amount of potential associated with that load.
12 And so to the degree that that differs, you could have
13 a difference between sectors. To the degree that
14 that's uniform across sectors, then it would be
15 applied in a uniform fashion. It's the idea that if
16 you had a hundred units of load for a house, factored
17 into your load forecast, and you had an opportunity to
18 get 30 units of savings from that hundred units, if
19 suddenly that hundred units is not there, your
20 economic potential hasn't reduced by 100 units, it's
21 clearly only reduced by the 30 that was originally
22 there for potential.

23 MR. QUAIL: Q: Yes, and my --

24 MR. HOBSON: A: And so as that relationship changes
25 across sectors, that would be the driver.

26 MR. QUAIL: Q: Yes. So this might seem obvious, but if

1 a mill is shut down, you're not going to achieve any
2 further DSM savings. It's like flogging the
3 proverbial dead horse at that point, is it not?

4 MR. HOBSON: A: Right. And similar to the residential
5 sector, if new housing starts are half of what they
6 previously would have been, then you're not going to
7 get the efficiency potential that would otherwise have
8 been within those homes.

9 MR. QUAIL: Q: Yes. Thank you.

10 Now, I'd refer you to Exhibit B-10, the
11 update, page 24, please. This is under the heading
12 "Uncertainty, risk, DSM flexibility and DSM cost
13 recovery". And I'll draw your attention to the final
14 bullet on page 24, which reads:

15 "Asymmetric Flexibility: It is easier to
16 ramp DSM down than up. Ramping DSM down
17 involves cancelling DSM programs or
18 restricting eligibility criteria, which B.C.
19 Hydro can do on its own; whereas ramping DSM
20 up requires trade ally cooperation and
21 action, which can be difficult or slow to
22 secure. If B.C. Hydro lowered the three-
23 year DSM expenditure and savings are lower
24 than expected, B.C. Hydro may not be able to
25 react in time to get DSM savings back on
26 track in time to meet self-sufficiency in

1 MR. SCOURAS: A: Other than the termination provisions
2 that would be the contract, no.

3 MR. QUAIL: Q: And you don't have a contractual right
4 simply to terminate the contract because you decided
5 you contracted for too much.

6 MR. SCOURAS: A: No, and I believe Ms. Van Ruyven
7 covered that on Panel 1 as well.

8 MR. QUAIL: Q: Precisely. If you contracted for too
9 little at that point, B.C. Hydro may have to initiate
10 a whole new Call to ramp up the volume of energy. Is
11 that right?

12 MR. SCOURAS: A: That's correct. Subject to we do have
13 the discretion, I think -- that's looking at the world
14 of us having structured province-wide Calls. One of
15 the contingencies we would have is that we
16 underawarded in a particular Call, we felt that a need
17 evidenced, we would have the opportunity to go to
18 those other proponents, perhaps in a bilateral
19 fashion, or look at other options and try to pick
20 those up. So I think -- I would say we have a number
21 of different tools at our disposal.

22 MR. QUAIL: Q: Yes.

23 MR. SCOURAS: A: Not just large province-wide Calls.

24 MR. QUAIL: Q: So in other words, you do have some
25 potential, some flexibility in terms of ramping up the
26 amount of energy that you're obtaining from a

1 particular Call.

2 MR. SCOURAS: A: I think that depends. We have the
3 potential to try to go and get it, yes. I think --
4 trying to think of the IR where we covered that off.
5 It was I believe in BCUC Panel 120.1. I think the
6 problem or the situation we have now is that we have
7 supply that we want on service by 2016. Projects to
8 get there have a certain trajectory. So we could two
9 or three down the road try to pick up more supply.
10 But if projects hadn't been advancing along a path to
11 get there, we may not meet a particular in-service
12 date that we required.

13 MR. QUAIL: Q: So there are significant obstacles to
14 ramping up as well as down a Call, once the Call
15 process or a particular Call has been finalized.

16 MR. SCOURAS: A: I don't know if they would
17 characterize them as significant. There is just
18 things that we would need to work with with different
19 IPPs to understand if they could meet our needs.

20 MR. QUAIL: Q: Okay. Now, suppose you were to sign up
21 for more energy than you need in a Call, say because
22 of declining demand. And you're at the stage where
23 the contracts have been signed and been approved.
24 They're in place. The developers are proceeding.
25 Once you've reached that point, I put it to you that
26 it is certainly too late to ramp the volume down from

1 a Call.

2 MR. SCOURAS: A: So if you're saying, once we've made
3 contract commitments to different parties, that we
4 plan to fulfill those, I think the answer is correct.

5 MR. QUAIL: Q: You'd have to hope that attrition might,
6 for example, exceed your expectation if your concern
7 was that you were -- you had signed up for more power
8 than you're going to require. Is that fair?

9 MR. SCOURAS: A: I don't think we'd ever hope for more
10 attrition. I think what we'd hoped for is that the
11 folks that we signed contracts with are able to make
12 the commitments that they have made, and we're able to
13 make ours, and they're successfully completed.

14 MR. QUAIL: Q: No, the situation I'm putting to is a
15 situation with declining load, which I'm afraid is not
16 particularly hypothetical at the moment. And you
17 reach the conclusion that you have signed on for more
18 IPP source energy than you're going to require. So
19 you have a surplus potentially on your hands. I
20 suggest to you that really the only way out of that
21 situation in terms of shedding some of that, avoiding
22 winding up with that power on your hands, would be if
23 there were greater attrition than you might have
24 anticipated.

25 **Proceeding Time 11:09 a.m. T31**

26 MR. SCOURAS: A: That's an interesting thought. So,

1 you're -- and let me be clear, you're talking about
2 the place and time after we have awarded a contract.

3 MR. QUAIL: Q: That's right.

4 MR. SCOURAS: A: Okay, so I think one thing that's
5 interesting about that is, after we award a contract,
6 we have the ability to also go to the people that have
7 been awarded those contracts, the same way they have
8 the ability to come and ask for different amendments,
9 and we have a number of amendments occur on an ongoing
10 basis. So, if we had purchased something that we felt
11 we didn't need, I think one of the things that B.C.
12 Hydro would have at its disposal is to go to a
13 proponent and say, "We know your COD is this
14 particular date. Can we move it, and what would be
15 the cost implications of that?"

16 MR. QUAIL: Q: Okay, but presumably there would be cost
17 implications that one would expect ratepayers would
18 have to bear.

19 MR. SCOURAS: A: Potentially.

20 MR. QUAIL: Q: Yeah.

21 MR. SCOURAS: A: Or maybe not as well, depending on the
22 unique circumstances of that project.

23 MR. QUAIL: Q: Okay.

24 MR. REIMANN: A: And in the absence of attrition or
25 renegotiating these contracts, Hydro would seek to
26 recoup any value of these contracts, including RECs,

1 by selling them into the market.

2 MR. QUAIL: Q: Yes. But whether or not you are able to
3 realize that is going to depend on market
4 characteristics at the time, when you've got the
5 energy on your hands and you need to dispose of it.

6 MR. REIMANN: A: When you say realize "that"?

7 MR. QUAIL: Q: That is, to be able to -- you're
8 suggesting that reliance on the market for re-selling
9 surplus IPP power, whether that works for ratepayers
10 is going to depend entirely on circumstances in the
11 market at that moment.

12 MR. REIMANN: A: Then I don't -- I'm not clear what you
13 mean by "works for ratepayers".

14 MR. QUAIL: Q: That is, ratepayers -- ratepayers,
15 thanks to the contact you've entered into, are
16 purchasing energy from IPPs they don't need. Okay,
17 that's a surplus --

18 MR. REIMANN: A: That may be temporarily surplus to
19 their needs.

20 MR. QUAIL: Q: There's a surplus. The only -- and the
21 hope is to be able to recover, that is to recover the
22 cost of that surplus power.

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

24 MR. QUAIL: Q: I don't think this is complicated. The
25 ability of B.C. Hydro to do that, to realize that
26 recovery, is going to depend entirely on the

1 circumstances of the market at that particular moment.

2 MR. REIMANN: A: We would look to take the surplus

3 energy and any associated RECs and sell it in the

4 market to recover whatever costs we could.

5 MR. QUAIL: Q: Yes. Whatever costs you could, and what

6 -- and the extent to which you could do that, I'm

7 saying, depends on what the market price is.

8 MR. REIMANN: A: Agreed, that would be the value of the

9 energy and the RECs, would be based on the market,

10 that's correct.

11 MR. QUAIL: Q: What you can get for it depends on what

12 the market will pay.

13 MR. REIMANN: A: Yes. Agreed.

14 MR. QUAIL: Q: That's really beyond B.C. Hydro's

15 control.

16 MR. REIMANN: A: Absolutely.

17 MR. QUAIL: Q: You've got the power coming on in real

18 time, you've got to sell it in real time for the price

19 the market will pay.

20 MR. REIMANN: A: I'm not sure that I agree with you

21 about real time. We would take it into the system and

22 shape it and sell it for whatever premium products we

23 could, yeah.

24 MR. QUAIL: Q: Okay.

25 MR. REIMANN: A: Or sell it for.

26 MR. MATHESON: A: I think it's also worth noting, you

1 know, and Mr. Reimann alluded to this, that
2 historically our load has grown consistently and while
3 we've had situations like we're in now, where we get a
4 temporary slowing of our load and we have to adjust
5 our forecast accordingly, historically it's been shown
6 that our load has continued to go up. So that if your
7 hypothetical, Mr. Quail, were to come to pass and we
8 were to apply some surplus -- if we were to acquire
9 some surplus power, historically our load would
10 eventually take that up. And in the event that we're
11 -- the volumes of Calls that we're talking about these
12 days, I'd suggest that we aren't far away from that
13 surplus being taken up over a fairly short period of
14 time.

15 MR. QUAIL: Q: Now, the context we started off with for
16 this discussion was the material in the update about
17 ramping up and down DSM and flexibility there. So,
18 we're talking about to the extent to which there are
19 constraints in terms of ramping up or down energy
20 source from IPPs. I put it to you that achieving too
21 much DSM is never a problem; too much conservation is
22 never really a problem, is it?

23 MR. REIMANN: A: Can you explain what --

24 MR. QUAIL: Q: If your DSM programs over-perform and
25 are able to achieve greater conservation than you've
26 projected, that doesn't fall within the definition of

1 "problems".

2 MR. MATHESON: A: Well, you still end up with a surplus
3 on your system.

4 MR. QUAIL: Q: Yes.

5 MR. MATHESON: A: Either way.

6 MR. QUAIL: Q: Yes. But in terms of the government's
7 policy in relation to climate change and so on, this
8 is not in the category of things that B.C. Hydro is
9 going to lay up at night worrying about, that your
10 conservation is over-achieving.

11 MR. MATHESON: A: No, but you've switched. You've gone
12 from assessing a situation where we're in surplus and
13 stranding ratepayer cost to now moving toward
14 government policy. And our point, I think, is that a
15 surplus is a surplus. At the end of the day, you're
16 still buying a DSM program, you're buying an IPP
17 supply. You still end up with a surplus either way,
18 and potentially temporarily, at least, stranding
19 ratepayer costs.

20 **Proceeding Time 11:14 a.m. T32**

21 MR. QUAIL: Q: Yeah. Well, and another government
22 policy of self-sufficiency, and you've been discussing
23 the issue of IPP acquisitions in relation to that
24 government policy. So I just put it to you that we're
25 not really crossing any lines here in terms of what
26 the issue is. And again, the issue is the flexibility

1 of different strategies to deal with hitting the mark
2 correctly, in terms of balancing supply and load.
3 That's what we're talking about. And I have put to
4 you that overachieving conservation doesn't fall
5 within the category of problems. But having a large
6 surplus of expensive IPP power hypothetically on your
7 hands does fall within that category.

8 MR. MATHESON: A: I think you're drawing a
9 differentiation we're not prepared to draw.

10 MR. QUAIL: Q: Why is that?

11 MR. MATHESON: A: Because a surplus is a surplus.
12 You're buying a DSM program just like you're buying
13 IPP supply. At the end of the day they all contribute
14 to the surplus you're speaking to. We're not saying
15 one is better than the other. If you end up with a
16 surplus you've got a surplus, by virtue of both, and
17 you can't isolate one and say one is good and one
18 isn't, in that sense.

19 MR. QUAIL: Q: Except to the extent that surplus IPP
20 energy and surplus energy created by DSM have very
21 different price unit costs, don't they?

22 MR. MATHESON: A: Well, not when they both come
23 together. I mean, we're talking about a package of
24 programs in this long-term plan, and the surplus is by
25 virtue of both having existed.

26 MR. QUAIL: Q: Moving on a bit, I think it's well

1 established that B.C. Hydro has two different DSM
2 options, A and B, which have attributed fiscal 2020
3 savings to each of 10,280 gigawatt hours and 13,030
4 gigawatt hours respectively. Is that correct?
5 MR. HOBSON: A: That's correct.
6 MR. QUAIL: Q: But there's some uncertainty regarding
7 these numbers, isn't that true?
8 MR. HOBSON: A: That's right.
9 MR. QUAIL: Q: And it is possible to escalate or slow
10 down DSM programs to some extent if results prove to
11 be more or less than anticipated, is that correct?
12 MR. HOBSON: A: That's correct. We have flexibility
13 with DSM as we spoke of earlier.
14 MR. QUAIL: Q: Yes. And one of the significant pieces
15 of the update that changed the picture from the
16 original application was the change in the forecast
17 attrition associated with the fiscal 2006 Call, is
18 that right?
19 MR. SCOURAS: A: Yes, that's correct.
20 MR. QUAIL: Q: And could more attrition still occur
21 with respect to contracts awarded under that Call?
22 MR. SCOURAS: A: From which Call? For the 2006 Call?
23 MR. QUAIL: Q: 2006.
24 MR. SCOURAS: A: There may be some more attrition, but
25 the attrition might also go down over time.
26 MR. QUAIL: Q: Okay. I believe Panel 1 also touched on

1 that issue to some extent. And can you confirm that
2 the attrition allowance, if we could call it that, for
3 the Clean Power Call is currently set at 30 percent?

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

5 MR. QUAIL: Q: And I assume that this is always a
6 guesstimate, there's considerable uncertainty about
7 whether the number will be 30 or something different
8 from that. Is that right?

9 MR. SCOURAS: A: Well, I don't know if I'd characterize
10 it as guesstimate. I think for planning purposes, and
11 I believe we did our best to try to lay this out in
12 BCUC IR 3.266.1, try to take a number of factors into
13 consideration. But our experience has been with the
14 existing portfolio and do we understand those. What's
15 relevant from other jurisdictions, and what
16 improvements have we made in these calls, refinements
17 to try to dial in on that.

18 So I think for planning purposes, we are
19 comfortable with the 30 percent number, but pursuant
20 to the Section 71 report filing for the bio-energy, if
21 during the course of that Call we develop better
22 information that allows us to dial in tighter on that,
23 that that number could vary.

24 MR. QUAIL: Q: Right.

25 Now, Ms. Van Ruyven in Panel 1, in a
26 discussion with the Chair -- I'll give you the

1 reference but I don't think we need to turn to the
2 transcript, but for the record it's page 848, lines 1
3 to 10; indicated that B.C. Hydro looks very carefully
4 at each project in an attempt to select projects that
5 have a good chance of proceeding. That's probably a
6 fairly commonplace observation. Do you agree with
7 that observation?

8 MR. SCOURAS: A: Yes, I do.

9 MR. QUAIL: Q: And the financial viability of a project
10 is one of the checks that B.C. Hydro does.

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

12 MR. QUAIL: Q: Now, looking at the impact of the
13 current financial crisis, if a project is financially
14 viable and it passes that test, the downturn in the
15 economy of construction activity and commodity cost
16 and so on, potentially -- of component costs of
17 projects, should reduce the attrition rate somewhat,
18 all other factors being equal. Would you agree with
19 that?

20 **Proceeding Time 11:19 a.m. T33**

21 MR. SCOURAS: A: Do you mind stating that again,
22 please?

23 MR. QUAIL: Q: Yeah. If there's sort of an up-side of
24 the financial crisis, the -- we're seeing a downturn
25 in construction activity, much less competition out
26 there in the marketplace for labour and materials for

1 construction. One might expect that this would be of
2 some benefit in reducing attrition from ongoing Calls.
3 Is that fair?

4 MR. SCOURAS: A: I understand what you're saying. But
5 I don't know if that's necessarily fair, because I
6 believe as we've shared, the four projects that have
7 so far terminated from the fiscal 2006 Call cited
8 either permitting or different changes around
9 legislation as the cause of that termination.

10 So in terms of priority ranking, the cost,
11 obviously, is one of the key issues. But I think
12 where cost really comes into play is where permitting
13 or siting or other development items start taking
14 longer than the IPP had anticipated. Costs start
15 creeping up on them, and that's when prices and
16 finance can really get them.

17 So, I would say to you that the potential
18 lowering of different capital costs or different items
19 that may be beneficial to some IPPs that are looking
20 to develop their projects, but it's very hard to say a
21 sweeping statement that would benefit attrition.
22 That's very much based on site-specific attributes.

23 MR. QUAIL: Q: Yes. So I suppose a countervailing
24 impact could be decreased difficulty for private
25 concerns to obtain financing for capital projects. Do
26 you see that as potentially increasing the attrition

1 pressure on on-going projects?

2 MR. SCOURAS: A: Could you just -- the private concerns

3 --

4 MR. QUAIL: Q: That is, one of the circumstances of our
5 current financial crisis is a difficulty that private
6 concerns are having in obtaining financing. Is that
7 an issue for IPPs in the current market?

8 MR. SCOURAS: A: Well, I can't speak for all IPPs, but
9 I think we try to provide a bit of a perspective again
10 in BCUC panel 1.28.1, that the challenges for getting
11 financing are very much project-specific. Some of the
12 folks that we have participating in our balance sheet
13 financing. Other folks have well-established
14 partnerships. So, I think it's very difficult to
15 place a broad sweeping statement that the current
16 financial challenge will cause higher attrition. We
17 also had 68 bids that bid in with people that feel
18 confident that they're going to get financing. So I
19 don't know if I necessarily agree with your statement.

20 MR. QUAIL: Q: Okay. Now, I'd take you to Volume 5 of
21 the transcript, page 580, line 24, as our starting
22 point.

23 MR. MATHESON: A: Can you give us an indication of who
24 you're likely to direct this to?

25 MR. QUAIL: Q: Whoever -- I'll toss it out there and
26 I'll leave it up to you folks to fight over who gets

1 to swat it back.

2 THE CHAIRPERSON: 580, Mr. Quail?

3 MR. QUAIL: Q: Yes. It's page 580, line 24. And here,
4 Ms. Van Ruyven was testifying, was referring to the
5 Clean Call, and her answer doesn't have the word
6 "clean" in it, but if one were to trace back, it's
7 clear that's the context.

8 And she testified as follows:

9 "Well, we were always planning this larger
10 Call to hopefully attract some larger
11 projects, and the reason for that was, we
12 felt there would be some economies of scale
13 and some cost advantage to getting some
14 larger projects into the Call, and we
15 thought if we cut it back much more than the
16 3,000 gigawatt hours, you would start to run
17 the risk of not attracting some of those
18 larger projects."

19 Are you familiar with that testimony?

20 MR. SCOURAS: A: Yes.

21 MR. QUAIL: Q: Well, you are now, at least, because
22 you've --

23 MR. SCOURAS: A: I've read it.

24 MR. QUAIL: Q: Good. So, I would ask you, then, if one
25 of the concerns -- okay, so now the Call results are
26 in, and as you've said, there have been 68 projects

1 bidding. So I understand a total of about 17,000
2 megawatts of supply, is that right?

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

4 MR. QUAIL: Q: And --

5 MR. SCOURAS: A: Oh, sorry, no. That's -- sorry. I
6 mis-spoke. 17,000 gigawatt hours.

7 MR. QUAIL: Q: Oh, gigawatt hours, sorry.

8 MR. SCOURAS: A: Yeah.

9 MR. QUAIL: Q: Thank you. Now that the bids are in,
10 setting the size of the Call to attract larger bids is
11 no longer an issue. We're sort of past that stage of
12 things. Right?

13 MR. SCOURAS: A: The bids have been received.

14 MR. QUAIL: Q: Yeah. So if the Commission were to
15 suggest that, say, 10,000 -- I'm sorry, 1,000 gigawatt
16 hours should be the target rather than the 2100
17 gigawatt hours, let's just say that that were the
18 outcome, the result would be that B.C. Hydro would
19 have a larger number of projects to choose from in
20 filling that requirement, is that right?

21 **Proceeding Time 11:24 a.m. T34**

22 MR. SCOURAS: A: So you're asking me if the Commission
23 -- could you read that sentence again? Sorry, I was
24 going --

25 MR. QUAIL: Q: Okay, I'll just back up a little bit.
26 So there was a large-scale Call, hoping to attract

1 large projects. The Call happens, projects are in.
2 So at this stage -- again, that's sort of behind us.
3 If the Commission were to decide that the appropriate
4 size of the take from the Call should be 1,000
5 gigawatt hours, let's say, should reduce it, you've
6 got the pool of bids that are available to you. Those
7 are all available and actually you've got, if
8 anything, a larger number of ways of meeting the 1,000
9 gigawatt hour out of that pool.

10 MR. GODSOE: Can I just clarify? I think you're speaking
11 to a post-attrition target, right, when you're talking
12 about 2400 gigawatt hours and 1,000 gigawatt hours?
13 Because the 2400 gigawatt hours is post-attrition.

14 MR. QUAIL: I'm informed that I am talking about post-
15 attrition.

16 MR. GODSOE: Okay.

17 MR. QUAIL: Q: Okay. But you would agree with me that
18 this would -- you would still have the same ability to
19 pick and choose among the projects.

20 MR. SCOURAS: A: So I think I would agree that there's
21 the same number of projects competing for a smaller
22 quota. The issue though is that some of those
23 projects may be large enough that in about themselves
24 they're larger than the quota, so they may no longer
25 be in the running to be awarded a contract.

26 MR. QUAIL: Q: Can you tell us whether any of them in

1 fact are in that category?

2 MR. SCOURAS: A: No, I think it's premature to disclose
3 any of the details of particular bids at this time.

4 MR. QUAIL: Q: Okay. Now, just some issues about
5 deliverability. One source -- and generally, dealing
6 with any kind of resource other than perhaps DSM, one
7 source of uncertainty around deliverability for new
8 generation projects is the political and policy
9 sphere, isn't that correct?

10 MR. SCOURAS: A: Could you be a bit more specific?

11 MR. QUAIL: Q: Yeah. One of the things that comes
12 along and has an impact on deliverability of any
13 generation project, is the impact of the political and
14 public policy sphere of things.

15 MR. SCOURAS: A: Can be an impact, yes.

16 MR. QUAIL: Q: And that's the case whether a generation
17 project is physical built by B.C. Hydro or by an IPP,
18 isn't that right?

19 MR. SCOURAS: A: Yes.

20 MR. QUAIL: Q: Any new generation facility has some
21 kind of impact on the environment or on the landscape.
22 It has an impact and this can cause blowback, isn't
23 that correct?

24 MR. SCOURAS: A: Could you explain to me what you mean
25 by "blowback"?

26 MR. QUAIL: Q: It can cause public opposition.

1 MR. SCOURAS: A: Every project has unique siting
2 aspects to it, yes.

3 MR. QUAIL: Q: And this can attract public opposition
4 or political intervention.

5 MR. SCOURAS: A: Or public support.

6 MR. QUAIL: Q: Or public support.

7 MR. SCOURAS: A: Political intervention.

8 MR. QUAIL: Q: Yes. So when we look at attrition from
9 the 2006 Call, the largest single factor was
10 intervening direction from the government in relation
11 to the thermal projects, isn't that right?

12 MR. SCOURAS: A: On a volumetric basis to date, yes.

13 MR. QUAIL: Q: Yeah. I was going to go through some
14 previous testimony. I don't need to give any
15 response.

16 I assume you're familiar with the public
17 reaction or pushback against the planned run-of-river
18 project on the Upper Pitt River.

19 MR. SCOURAS: A: Sorry, could we go back to that
20 question? I think I may have been a bit too quick in
21 answering that. Could you restate that again?

22 MR. QUAIL: Q: Okay. That is that in the attrition
23 from the 2006 Call --

24 MR. SCOURAS: A: Yes.

25 MR. QUAIL: Q: -- which wound up being much more
26 significant than the expected attrition --

1 MR. SCOURAS: A: Right.

2 MR. QUAIL: Q: -- the big factor that came along and
3 knocked the numbers down was, it was intervening
4 direction from government legislatively having to do
5 with thermal projects and greenhouse gases.

6 MR. SCOURAS: A: I think initially that was correct,
7 and the second piece of that answer is also the
8 decline in the forest industry and the biomass-related
9 projects. So the single biggest source was the
10 intervening legislation, yes.

11 MR. QUAIL: Q: Okay.

12 MR. SCOURAS: A: Thank you.

13 MR. QUAIL: Q: So my question again, talking about, you
14 know, what can happen in the public sphere with any
15 kind of generation project, you're familiar that there
16 was considerable public discussion, including adverse
17 discussion, concerning the planned run-of-river
18 project in the Upper Pitt River system. I assume
19 you're familiar with that.

20 MR. SCOURAS: A: I'm broadly aware of it, yes.

21 MR. QUAIL: Q: Yes. Raif Mair was leading the charge,
22 and a number of other people were involved in vigorous
23 debate, shall we say, about the merits of the project.

24 MR. SCOURAS: A: And I heard on the radio today that
25 Willie Mitchell is going up there fishing, so it
26 sounds like there's a lot of people interested in the

1 Pitt River.

2 MR. QUAIL: Q: Good. And this is something that
3 distinguishes new generation projects from DSM, isn't
4 that correct?

5 MR. SCOURAS: A: I can't speak for the siting aspects
6 of different DSM, and I think we've established that
7 generation projects have unique siting aspects.

8 **Proceeding Time 11:29 a.m. T35**

9 MR. QUAIL: Q: No, but my point is that one rarely
10 hears of a protest rally complaining about energy
11 conservation. It doesn't have the same -- excite the
12 same sensitivities from the public or political
13 sphere. Is that a fair statement?

14 MR. HOBSON: A: No, and the one area, and it's maybe
15 more of a minor point, but the one area where I think
16 some of what you're touching on does come in is in the
17 area of our plan that deals with codes and standards.
18 And we are subject to risk with respect to the codes
19 and standards, and different directions that could be
20 taken politically or from a policy perspective with
21 respect to those codes and standards changes
22 occurring.

23 MR. QUAIL: Q: Yes, so for example escalating
24 construction costs could cause some resistance or
25 resentment from affected members of the public.

26 MR. HOBSON: A: Potentially, yeah.

1 MR. QUAIL: Q: Okay. And I also put it to you that
2 projects to upgrade existing Heritage hydroelectric
3 facilities like Mica or Revelstoke are not famous for
4 producing protest rallies, are they?

5 MR. MATHESON: A: Well, I think we're seeing more of
6 that. You know, we've developed consultative
7 committees for the additional units at
8 Mica/Revelstoke, and there, they've certainly not been
9 without controversy, locally.

10 MR. QUAIL: Q: Okay. And nuclear generation is right
11 off the table as a result of government policy, isn't
12 that right?

13 MR. MATHESON: A: Yes.

14 MR. QUAIL: Q: When it comes to the context of Burrard,
15 B.C. Hydro has tended to refer to this issue, that is
16 of the public and political impingement, as one of
17 social licence. Is that right?

18 MR. MATHESON: A: Social licence has been an
19 increasingly important consideration in Burrard, yes.

20 MR. QUAIL: Q: Yeah, social licence means essentially
21 are you going to hit a brick wall where the public or
22 the government are going to respond and say, "No, you
23 can't go there." That's what social licence is, isn't
24 it?

25 MR. MATHESON: A: Generally speaking I think that's
26 right.

1 MR. QUAIL: Q: So it's another way of saying there's
2 uncertainty about the extent to which this resource,
3 that's Burrard, will remain available because of the
4 way it may play in the public policy arena. Is that
5 right?

6 MR. GODSOE: I think it's fair to ask questions about the
7 social licence generally, but I was very clear that
8 this panel would not be dealing with Burrard. I think
9 that issue was heavily debated and dealt with on Panel
10 2. So, if my friend could restrict his questions to a
11 general nature on social licence, I'm fine. But on
12 Burrard-specific, I object.

13 MR. QUAIL: Yes. I will not be going into the details of
14 different levels of operation of Burrard, but what I'm
15 exploring at this point, Mr. Chairman, is some of the
16 terminology that's thrown around, and it's sometimes
17 specialized terminology directed to one kind of
18 resource and not another. And my point is that that
19 social licence appears to be a tag that's associated
20 with Burrard, that doesn't seem to be associated with
21 other potential resources.

22 MR. GODSOE: And that's a fair question for this panel.

23 MR. MATHESON: A: And I would disagree with that. I
24 think that -- and Mr. O'Riley spoke about this on
25 Panel 2. When we undertook to renew all of our water
26 licences on our large hydro system, one of the key

1 components was the so-called licence to operate. And
2 consent to operate. And I think that that and social
3 licence are roughly the same thing.

4 So I think this idea that there's a social
5 licence and that it's important for us as an operating
6 company to recognize that has been part of our lexicon
7 now for a number of years.

8 MR. QUAIL: Q: So social licence is an issue,
9 obviously, for the Site C dam. You would agree with
10 that?

11 MR. MATHESON: A: I would agree with that.

12 MR. QUAIL: Q: And with the Upper Pitt run-of-river
13 project, would you agree with that?

14 MR. MATHESON: A: I think social licences is implicitly
15 important in any kind of a generating resource that's
16 sited and has impacts, yes.

17 MR. QUAIL: Q: Thank you. Now, I'm going to make a
18 transcript reference, but I don't think we need to go
19 there. On page 343, and I believe that's -- is that
20 Volume 1? Page 343 of the transcript, lines 17 to 22,
21 Ms. Van Ruyven indicates that the energy savings
22 associated with the Smart Meters is 78 gigawatt hours
23 for 2009 to 2011, and with an additional 320 by 2028.

24 MR. HOBSON: A: Those numbers sound correct, yes.

25 MR. QUAIL: Q: Okay. And I understand the energy
26 savings from SMI are associated with the in-home

1 displays rather than the meters themselves, is that
2 correct?

3 MR. HOBSON: A: The energy savings in our DSM plan in
4 general go beyond that. But there is a portion within
5 our DSM plan specific to the in-home displays, yes.

6 MR. QUAIL: Q: Yes, I believe Ms. Van Ruyven's
7 testimony was that Smart Metering in general is seen
8 more as a capacity saving resource, hopefully, than an
9 energy one. Is that right?

10 **Proceeding Time 11:34 a.m. T36**

11 MR. HOBSON: A: That may prove out to be the case.
12 Within this application we have asked for capacity
13 definition phase funding to explore that issue
14 further. But at this stage, with what we've built
15 into our plan, it assumes a limited amount of energy.

16 MR. HOBSON: A: Okay. So then I'm incorrect in
17 suggesting that it's the in-home display that is the
18 gadget that's a part of this initiative, which will be
19 the source of projected energy savings. Is that an
20 incorrect --

21 MR. HOBSON: A: No. Within our plan there's two main
22 components where Smart Metering has an impact, and
23 within the residential sector there is an in-home
24 display component and that we're factoring in, and
25 we're factoring in it is driving a good portion of
26 that 300 and some-odd gigawatt hours. It also comes

1 to play within voltage optimization, where it provides
2 the ability -- SMI provides the ability to enable
3 additional voltage optimization to occur.

4 MR. QUAIL: Q: Okay. Can you confirm that the cost is
5 in the ballpark of 70 to 100 million dollars to
6 install the home display unit system-wide?

7 MR. HOBSON: A: No, I can't. And I could confirm that
8 that number seems awfully high for the in-home
9 displays, and I'm not sure if you're referencing a
10 number more specific to SMI in general.

11 MR. QUAIL: Q: Now, a question about cost of IPP
12 energy, in particular in relation to CPI. I
13 understand that B.C. Hydro's contracts with
14 independent power producers include a formula for the
15 adjustment of unit price of delivered electricity
16 based on the rate of inflation. That's correct?

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

18 MR. QUAIL: Q: And can you tell me what the base year
19 is for inflation adjustment in the 2006 open Call?

20 MR. REIMANN: A: Sorry, could you --

21 MR. QUAIL: Q: So you escalate the unit price --

22 MR. REIMANN: A: Right.

23 MR. QUAIL: Q: -- on a formula that's based on
24 inflation. What's the base year for determining that
25 escalation, can you tell us? If you can't, we can
26 come back.

1 MR. REIMANN: A: Yeah, I believe it was 2008 dollars,
2 but we can double-check that for you.

3 MR. QUAIL: Q: Okay, the precise numbers aren't really
4 the point.

5 MR. REIMANN: A: Right. And if I could just add, each
6 Call has sort of a unique different formula that's
7 applied.

8 MR. QUAIL: Q: Yes.

9 MR. REIMANN: A: So all the contracts in the 2006 Call
10 are escalated at one-half of CPI, and I believe it's
11 done in 2008 dollars but we can double-check that for
12 you.

13 MR. QUAIL: Q: Okay. But all of the calls do have an
14 escalation formula where CPI is the driver of the
15 escalation.

16 MR. REIMANN: A: Yes, just in this Clean Power Call we
17 -- bidders would have the option of either having a
18 B.C. CPI or a Canadian CPI. But essentially there is
19 an index that's used.

20 MR. QUAIL: Q: Okay. Now, suppose we find ourselves in
21 an environment of deflation, which by definition means
22 a negative CPI. My question is whether, in Hydro's
23 view, this would result in a reduction of the unit
24 price payable to IPPs under the Calls.

25 MR. REIMANN: A: Again, I'll have to just double-check
26 that, but I believe that the inflation cannot go be

1 below zero. There is no negative inflation on the
2 contract.

3 MR. QUAIL: Q: Okay, so can you give me an undertaking,
4 please, to provide a --

5 MR. GODSOE: We'll take that undertaking.

6 **Information Request**

7 MR. QUAIL: Q: Just a few questions on ILM and the
8 impact of the Court of Appeal decision in that matter.
9 I don't know if you are familiar with the exchange
10 between my colleague Ms. Worth and the members of
11 Panel 3. Basically the issue was punted over to you
12 folks.

13 I assume you're aware that BCTC's CPCN
14 application for the ILM project discussed the
15 potential for delays of three years due to technical
16 and project management issues?

17 MR. REIMANN: A: Sorry, could you repeat the question?

18 MR. QUAIL: Q: That is, BCTC CPCN application for ILM
19 -- this is like alphabet soup. I'm throwing out a lot
20 of letters here. So you're with me so far. But it
21 projected a potential delay of up to three years
22 because of technical and project management issues.
23 Does that sound familiar?

24 MR. REIMANN: A: I can accept that subject to check.

25 MR. QUAIL: Q: Sure. But B.C. Hydro has developed
26 contingency plans that contemplate delays in -- of the

1 in-service date of up to five years. Is that right?
2 MR. REIMANN: A: What we showed in Chapter 6 was the
3 potential impact of a delay of ILM, and we considered
4 it out as far as five years. And what we're showing
5 is that the amount that you would be required to rely
6 upon Burrard and/or the Canadian entitlement in order
7 to meet load in the Lower Mainland period in that --
8 over that actually the complete period, up until ILM
9 and five years beyond. I don't think that it has any
10 changes in the actions that B.C. Hydro is proposing,
11 or any dollars necessarily associated with it.

12 **Proceeding Time 11:39 a.m. T37**

13 MR. QUAIL: Q: Okay. So I gather that's sort of a
14 sensitivity analysis rather than projecting an
15 expectation of other sources of delay.
16 MR. REIMANN: A: Yeah, exactly. We were just trying to
17 assess the adequacy of the system to respond to that.
18 MR. QUAIL: Q: I know it's still early days following
19 the Court of Appeal decision, it was February 18th,
20 2009, but at this point has B.C. Hydro done any
21 preliminary analysis of the potential implications on
22 the development and timing of ILM?
23 MR. GODSOE: I do think I spoke to that when Mr. Wallace
24 asked me that. Transcript, it's either 19 February or
25 20 February, I can check that, but I did speak to
26 that.

1 MR. QUAIL: Q: Yes, I just imagined that some time has
2 passed, and I assume this is an urgent matter, they
3 might have -- you know, applied their minds to. And I
4 did preface my question with suggesting that it --
5 MR. MATHESON: A: Well, I think we are. I mean, I
6 think there's actually meetings taking place today in
7 the company regarding this, but it's a little
8 premature for us to speculating here in this panel as
9 to what that's going to be.

10 MR. QUAIL: Q: Okay, so that discussion is still
11 ongoing. Are you in a position to indicate when B.C.
12 Hydro will have adopted some plan or strategy to
13 respond to the impact of the Court of Appeal decision?

14 MR. MATHESON: A: Well, I might have been if I were at
15 the meeting, but I'm here today, so I can't.

16 MR. QUAIL: Q: Okay. I don't know if this is
17 information that B.C. Hydro would be able to provide
18 us by way of undertaking.

19 MR. GODSOE: So, what I can address in argument is the
20 environmental assessment certificate process for ILM
21 is still ongoing, and so our position has been there
22 is still slack in the schedule for BCTC to deal with
23 the -- to go back to the Commission and deal with this
24 issue. And I can address that more fully in argument.
25 I don't think I'm comfortable in going any further on
26 the evidentiary road at this stage. I think you've

1 got your answer.

2 MR. QUAIL: Pretty much, and the other side of it was the
3 extent to which B.C. Hydro has formulated some kind of
4 a plan to expedite the resolution of the -- what at
5 this point might be considered a bit of an impasse on
6 ILM.

7 MR. GODSOE: I think that's too early to speculate on
8 right now. I can maybe talk to my friend off-line and
9 see if he wants anything from me in argument on that.

10 MR. QUAIL: I'd be quite satisfied with that. And those
11 are all of my questions.

12 THE CHAIRPERSON: Very timely, Mr. Quail, thank you.

13 We will adjourn for lunch and come back
14 here at 1:15.

15 **(PROCEEDINGS ADJOURNED AT 11:42 A.M.)**

16 **(PROCEEDINGS RESUMED AT 1:14 P.M.**

T38

17 THE CHAIRPERSON: Please be seated.

18 MR. FULTON: Mr. Godsoe has one preliminary matter, Mr.
19 Chairman.

20 THE CHAIRPERSON: Thank you.

21 MR. GODSOE: Mr. Chairman, Mr. Reimann has two responses
22 to confirmation requests you requested from Panel 3 on
23 discount rates and Burrard costs as modelled in the
24 portfolios.

25 MR. REIMANN: A: So yesterday, Commissioner Pullman,
26 you were asking about whether or not we use

1 incremental debt costs in our discount rate cost of
2 capital. The answer is yes. And you'd asked -- this
3 is in transcript reference of Volume 11, page 1963.
4 You'd also asked to confirm what the current cost is,
5 and the costs that we've been using in these discount
6 rates apparently is an average of a ten-year debt cost
7 for the years of fiscal '10, '11, '12 and '13, and
8 that averages to 5.66 percent which is rounded to 6
9 percent.

10 On the Burrard question on the transcript,
11 page 1984, you'd asked what we'd included when we
12 model Burrard at 3000 in the costs, and you'd
13 referenced a figure of 300 million which was the
14 simple sum of the expenditures, and that is in fact
15 correct.

16 THE CHAIRPERSON: Thank you.

17 **CROSS-EXAMINATION BY MR. AUSTIN:**

18 MR. AUSTIN: Q: Good afternoon, Commissioners. Good
19 afternoon, panel. As unaccustomed as I am to cross-
20 examining in the after-lunch dead zone, I'll give it
21 my best shot.

22 I'd like to refer you Exhibit C17-22.
23 That's Exhibit C17-22.

24 **Proceeding Time 1:16 p.m. T39**

25 MR. HOBSON: A: We have that.

26 MR. AUSTIN: Q: And I'd like to refer you to what I'll

1 describe as physical page number 20 -- number 2, and
2 perhaps I should have numbered these when I entered
3 them as an exhibit, but I think we can work through
4 this. And on this page, it says:

5 "Review of operations, conservation of
6 energy."

7 It says:

8 "Since 1973, Hydro has promoted conservation
9 through the wise use of energy by providing
10 programs to encourage and assist customers
11 to conserve.

12 Response to B.C. Hydro's low-cost
13 financing program which assists homeowners
14 to install insulation and multiple glazing,
15 increased sharply during the year. In the
16 year ended March 31st, 1981, 6,243 customers
17 took advantage of the plan, nearly as many
18 as during the previous three years
19 combined."

20 And on this page, it then goes on to talk about an
21 aerial thermography program that was begun in 1977.

22 It also says:

23 "Hydro also held seminars for people
24 involved in industrial electrical design and
25 maintenance, road lighting and airport
26 electrical maintenance, and continued an

1 information program to help B.C. farmers use
2 energy efficiently."

3 It talks about new recommended standards for efficient
4 use of energy in homes. There is a reference to the
5 Canadian Electrical Association. And it talks about
6 new guidelines for insulation, water heating,
7 lighting, windows, doors and major appliances that
8 surpass all present building codes and requirements.
9 Do you see that?

10 MR. HOBSON: A: I do.

11 MR. AUSTIN: Q: And would you agree that B.C. Hydro has
12 been involved in promoting conservation through wise
13 use of energy since 1973?

14 MR. HOBSON: A: I would say that B.C. Hydro's been
15 involved since that time, but I would suggest that its
16 level of effort, or the intensity of its efforts, has
17 varied significantly over that period.

18 **Proceeding Time 1:18 a.m. T40**

19 MR. AUSTIN: Q: And I'd like to refer you to Appendix K
20 to Exhibit B-1. So that, I think, is Exhibit B-1-1.
21 And I'd like to refer you to page 138.

22 MR. HOBSON: A: That's 138 of 213?

23 MR. AUSTIN: Q: That's correct.

24 MR. HOBSON: A: I have that.

25 MR. AUSTIN: Q: And it says under "Objective":

26 "The program objective is to inform and

1 educated residential customers about how
2 much electricity they consume and motivate
3 them to reduce that consumption through
4 behavioural changes."

5 Do you see that?

6 MR. HOBSON: A: I do see that.

7 MR. AUSTIN: Q: Would you agree with me that since at
8 least 1980, or at least 1981, that B.C. Hydro has been
9 trying to that?

10 MR. HOBSON: A: Through different approaches, I would
11 agree in general B.C. Hydro has undertaken a number of
12 activities to try to educate the public with respect
13 to conservation. I think what this is getting at
14 through this initiative is something a little bit more
15 tailored or focused.

16 MR. AUSTIN: Q: And if I look under the heading
17 "Barriers" it says:

18 "Awareness - Although customers receive bi-
19 monthly bills, most are not aware of how
20 much electricity they consume, or whether
21 their consumption level places them in the
22 high-use or low-use bracket for their
23 dwelling type."

24 Do you see that?

25 MR. HOBSON: A: I do see that.

26 MR. AUSTIN: Q: How would they not be aware of how much

1 document.

2 MR. HOBSON: A: I have that.

3 MR. AUSTIN: Q: And there is a picture of something
4 called an energy cost indicator, and on the left-hand
5 side it says:

6 "Connected to electrical and gas meters in
7 the homes of 100 Hydro customers. Energy
8 Cost Indicators will convert energy
9 consumption into dollars and cents at the
10 touch of a button. Hydro is preparing to
11 participate in research programs being
12 conducted in eight North American cities to
13 see if people will conserve more energy if
14 they know minute by minute how much the
15 energy is costing them."

16 Do you see that?

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

18 MR. AUSTIN: Q: And if we go over to physical page 4 of
19 Exhibit C17-22, and the easiest way to find that is to
20 look for a very tall looking individual installing a
21 window.

22 THE CHAIRPERSON: With big hair.

23 MR. AUSTIN: Q: Absolutely big hair. Do you see that?

24 MR. HOBSON: A: I have that.

25 MR. AUSTIN: Q: And right down by his knees, it says:

26 "Energy Cost Indicators were connected to

1 electricity and gas meters for the homes of
2 100 Hydro customers. The devices provide a
3 continuous record of consumption and cost of
4 energy. They were installed as part of a
5 research program to see if such information
6 will encourage greater conservation."

7 Over the page:

8 "Hydro and Hydro-Quebec are the two Canadian
9 utilities participating in the program,
10 which is co-sponsored by the United States
11 Department of Energy in cooperation with the
12 Consumer and Corporate Affairs Canada."

13 Do you see that?

14 MR. HOBSON: A: I do see that.

15 MR. AUSTIN: Q: Have you ever gone back to sort of see
16 what the results of the study were, whether there's
17 any reports or anything like that?

18 MR. HOBSON: A: I have not gone back and looked at that
19 particular study, no.

20 MR. AUSTIN: Q: Why haven't you gone back and looked at
21 that?

22 MR. HOBSON: A: To be honest, I wasn't aware of that
23 particular study. But I am aware of more current
24 studies that -- or involvement of pilot projects that
25 B.C. Hydro has been involved in.

26 MR. AUSTIN: Q: Certainly, but why would B.C. Hydro's

1 customers have any different response to minute-by-
2 minute energy conservation information then than they
3 would today?

4 MR. HOBSON: A: Well, I think for a number of reasons.
5 I think the level of effort that B.C. Hydro is
6 proposing to undertake with the demand-side management
7 plan that we put forward today is quite significantly
8 different than the level of effort that would have
9 been put forward at that point in time. And so I
10 think in looking at these types of initiatives in
11 isolation, versus looking at them as a whole, I think,
12 can change your view in terms of the success that you
13 might have with them.

14 I also think that, you know, since 1980,
15 which is quite a period of time ago, I think public
16 views with respect to the issue will likely have
17 changed as well. The ability to communicate in the
18 level of information that we're able to communicate, I
19 think, to our customers and what their condition to
20 receive information will also have changed.

21 **Proceeding Time 1:24 p.m. T42**

22 MR. AUSTIN: Q: Let's pursue that a little bit more
23 through Exhibit C-17-22. On the back of physical page
24 2 we have a well-dressed gentleman writing something
25 down, and on the right-hand it says:

26 "The present phase of Hydro's "Save Energy

1 Save Money" advisory program provides
2 recommendations which could result in
3 extensive reductions in energy use by
4 industrial commercial customers if
5 implemented. Suggestions include
6 installation of high-pressure sodium lamps,
7 automated timers, and lighting level
8 controls."

9 MR. HOBSON: A: Right.

10 MR. AUSTIN: Q: And then down at the bottom it says:
11 "Lighting audits for commercial and
12 industrial customers are among Hydro's
13 energy conservation programs."

14 And then if we go back to the page with the
15 man with the big hair and the window in his hand.

16 MR. HOBSON: A: I've got him.

17 MR. AUSTIN: Q: Under the heading "Conservation Energy"
18 it says:

19 "Hydro promotes conservation through the
20 wise use of energy by providing programs to
21 encourage and assist customers to conserve.
22 Information about energy conservation is
23 communicated through newspapers, magazines
24 and television as well as displays at trade
25 shows and shopping malls."

26 Do you see that?

1 MR. HOBSON: A: I do see that.

2 MR. AUSTIN: Q: Now, you just indicated that probably
3 back in the 1980s, B.C. Hydro's level of effort was
4 not, for lack of a better word, significant? Would
5 that be about right?

6 MR. HOBSON: A: "Significant" is a relative term. I
7 think comparing it to what we're putting forward
8 today, with the demand-side management plan that we're
9 putting forward, I think was more of the relative
10 comparison I was making.

11 MR. AUSTIN: Q: Have you ever gone back to determine
12 what level of effort B.C. Hydro put into its
13 conservation programs in the 1980s?

14 MR. HOBSON: A: Not back to 1980, but I can speak to
15 the period in the early 1990s. And in the period in
16 the 1990s I think is the period where a lot of people
17 saw B.C. Hydro's efforts around conservation really
18 taking a lot of shape under an organized brand, and
19 collection of different initiatives that went forward.
20 And I think a lot of people within our company would
21 see that as the starting point for when Power Smart
22 and demand-side management efforts really kicked off
23 within our company. And comparing our current plan
24 eve back to that plan, I think we're moving forward
25 with a much more aggressive plan today and a much more
26 comprehensive plan than what we had back at that

1 point.

2 MR. AUSTIN: Q: But the answer to your question is that
3 no, you didn't go back and look at the '80s in terms
4 of the level of effort, so how can you --

5 MR. HOBSON: A: To 1980? No, I did not.

6 MR. AUSTIN: Q: So that you haven't looked at the data
7 from that era in terms of success of programs.

8 MR. HOBSON: A: The specific data, no. I guess I'd be
9 looking at it more based on my knowledge since being
10 with the company in the early 1990s, and the knowledge
11 that I have from people that were involved in the
12 programs of that period, that that seemed to be a more
13 significant era with respect to demand-side management
14 than the 1980s period.

15 MR. AUSTIN: Q: You said it seems to be a more
16 significant area, but if you didn't check what went on
17 in the 1980s, how can you reach that opinion?

18 MR. HOBSON: A: I certainly didn't go back and check
19 the data from that, no.

20 MR. AUSTIN: Q: Well, let's look at this physical page
21 4, and it says:

22 "Advisory Services provided to customers
23 included analyses of how to reduce energy
24 losses in major industrial processes such as
25 pulp production and public and commercial
26 buildings such as schools, stores and

1 offices. Computerized programs have been
2 developed which make information readily
3 available about relative cost-effectiveness
4 and energy efficiency in various
5 applications, particularly lighting, water
6 heating, space heating, and air
7 conditioning. Case histories are published
8 to show examples of energy management and
9 conservation practices which have resulted
10 in actual savings of energy and money for
11 customers."

12 And it goes on to talk about a library, it goes to
13 talk about a low-cost financing to assist homeowners
14 installing ceiling and wall insulations, multiple
15 glazing or storm windows, and it says:

16 "...17,700 customers [have] taken advantage of
17 this program and install about 14.5 million
18 worth of insulation..."

19 Do you see that?

20 MR. HOBSON: A: Right, yes, I did see that.

21 MR. AUSTIN: Q: And again I would ask you, why wouldn't
22 you go back and look at these programs?

23 MR. HOBSON: A: Well, I think --

24 MR. GODSOE: Hold on a second. Mr. Chairman, I've given
25 a lot of latitude in this line of cross, but I think
26 it's been established that Mr. Hobson hasn't looked

1 back. So I'm questioning now the utility of
2 progressing down this road, and maybe my friend can
3 explain to me why we keep reading chunks of this
4 document in the transcript and questioning when I
5 think he has his answer.

6 **Proceeding Time 1:29 p.m. T43**

7 THE CHAIRPERSON: I would also be interested, Mr. Austin.

8 MR. AUSTIN: It's the concept of free riders, Mr.
9 Pullman. We've had programs in place on energy
10 conservation from B.C. Hydro since the 1980s, probably
11 the 1970s. The question I'm ultimately going to put
12 to the panel is, at what point do you carry on with
13 programs that have been in place for 30 years?
14 Because if we go back to Appendix K and we look at the
15 behaviour program, why am I still going forward with a
16 behaviour program when I've been trying to modify B.C.
17 Hydro's customers' behaviour with electricity
18 consumption for 30 years?

19 MR. HOBSON: A: I think in general I've answered that
20 question to a degree. I think what you've got
21 reflected is a very small pilot, with respect to the
22 metering display units that you spoke of, compared to
23 the initiative that we're putting forward with
24 residential behaviour, which I think is a far larger-
25 scale initiative that we would be taking up.

26 I think what you're outlining with a lot of

1 these initiatives, you're tying a common end-uses -- I
2 mean, there's only so many end uses that we have
3 available to us to save energy through, and they don't
4 tend to change over the periods of time. Some of the
5 actions or activities are going to be similar in
6 nature, and that incentives or financing programs are
7 going to be typical things that you're going to do
8 that are going to span periods of time. But I'm not
9 sure that that's an indication of the level of effort
10 or the comprehensiveness of what we're doing today
11 compared to that period of time.

12 MR. AUSTIN: Q: Well, let's turn to Appendix K, and
13 let's go to page 181 of 213.

14 MR. HOBSON: A: I'm there.

15 MR. AUSTIN: Q: And under the heading "Barriers", it
16 says:

17 "Awareness - Many industrial customers are
18 unaware of energy management practices and
19 their benefits."

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

21 MR. AUSTIN: Q: And I put it to you, how would they be
22 unaware of energy management practices and their
23 benefits if B.C. Hydro has been providing, in a sense,
24 consulting services to them or programs for them since
25 the early 1980s?

26 MR. HOBSON: A: So again, I think there's been

1 different levels of intensity in terms of what we've
2 offered, and there's certainly been breaks where we've
3 moved completely away from conservation and
4 investments in PowerSmart through the mid- to late
5 1990s, and the very early part of the 2000 period. I
6 think there's also, in terms of the level of effort,
7 there's a lot of customers out there, and the
8 customers themselves change over time, and to suggest
9 that because we've promoted a concept in the past that
10 that concept has been accepted and ingrained within a
11 company's business practices forevermore, I think,
12 would be short-sighted by us.

13 MR. AUSTIN: Q: But you told me that you've never gone
14 back to look at what was done in the 1980s and the
15 impacts or effects, is that correct?

16 MR. HOBSON: A: The data from the 1980s, I certainly
17 did not go back and look at that.

18 MR. AUSTIN: Q: I'd like to enter as an exhibit some
19 extracts from B.C. Hydro's annual reports in 1988 and
20 1989.

21 THE CHAIRPERSON: Mr. Austin?

22 MR. AUSTIN: I'm advised it's Exhibit C17-23.

23 THE HEARING OFFICER: C17-23.

24 (EXCERPTS FROM B.C. HYDRO ANNUAL REPORT FOR 1988 AND
25 1989, MARKED AS EXHIBIT C17-23)

26 MR. AUSTIN: Q: And I'd like to refer you to the second

1 page of that exhibit, the last paragraph on the page
2 says:

3 "Demand-side management. We are continuing
4 to make progress with demand-side management
5 programs which manage the balance between
6 times of high and low demands on our system
7 through energy initiatives. Our goal is to
8 reduce the energy demand by 3,000 gigawatt
9 hours per year, almost the equivalent of the
10 power generated at our 700 megawatt Peace
11 Canyon project. A variety of programs are
12 being developed."

13 **Proceeding Time 1:34 p.m. T44**

14 And then over to page 4 of that exhibit, it says:

15 "Customer service. PowerSmart. To conserve
16 electricity and make better use of what we
17 have, we have launched the PowerSmart
18 conservation program. This 10-year, 225
19 million energy efficiency initiative is
20 expected to free up 2.4 billion kilowatt
21 hours of electricity by 1988, almost four
22 times the amount of power now consumed
23 annually by the city of Victoria."

24 Designed for industrial, commercial and
25 residential customers' participation,
26 PowerSmart is one of the cheapest forms of

1 energy available today. It is
2 environmentally sensitive resource
3 alternative that will allow us to lower the
4 growth in demand for electricity and
5 therefore delay the need for new generating
6 plants. Customers will benefit from reduced
7 bills."

8 Now, there are specific figures in here.
9 It says this 10-year, 225 million energy efficiency
10 initiative is expected to free up 2400 gigawatt hours
11 over a 10-year period.

12 MR. HOBSON: A: Right, I see that.

13 MR. AUSTIN: Q: Now, for the purposes of designing B.C.
14 Hydro's programs in terms of conservation today, can
15 you tell me how B.C. Hydro made out in relation to
16 achieving that 2400 gigawatt hours target?

17 MR. HOBSON: A: Well, I think this is part of what I
18 referred to in the early 1990s that took shape. So,
19 although this is dating back a little bit before that
20 period of time, I believe this would tie into the
21 general PowerSmart launch period in the early 1990s,
22 that roughly speaking saw B.C. Hydro ramp up its
23 PowerSmart demand-side management activities through
24 the early to mid-1990s, and in around -- my dates
25 might be slightly off, but I think in around 1996,
26 1997, saw us move away from that type of strategy for

1 a period of a number of years before coming back to it
2 with previous plans that we've taken forward, in
3 around 2002, 2003, starting back up with demand-side
4 management.

5 MR. AUSTIN: Q: Well, this extract is from the annual
6 report of 1989, so presumably it received some sort of
7 approval before it was -- approval meaning company
8 approval before it was --

9 MR. HOBSON: A: That could be. I read it, though, as
10 being -- talking about a future plan moving forward.
11 And as I say, B.C. Hydro did start to move forward
12 with that plan. I believe in around 1990, '91, B.C.
13 Hydro went forward with a number of smaller pilots, in
14 a number of different areas, with respect to demand-
15 side management, and those translated from the pilot
16 learnings more into established programs through the
17 '91-'92 period. And we were running fairly
18 established programs through probably about '91 to
19 about '95, '96, before starting to wind down.

20 MR. AUSTIN: Q: Well, assuming that it was started in
21 1990, can you tell me what the results were with
22 respect to this 225 million dollar program that had an
23 objective of 2400 GWh of electricity conservation?

24 MR. HOBSON: A: I believe it ended up achieving a run
25 rate of approximately 2500 gigawatt hours per year,
26 something in that ballpark.

1 MR. AUSTIN: Q: Do you have any information with
2 respect to the milestones in this program? Do you
3 have any information with respect to the evaluation of
4 this program?

5 MR. HOBSON: A: There is information that certainly was
6 available as we went through that process, back at
7 that period of time. There was evaluation groups
8 similar to what we have today, and evaluations that
9 were conducted on the various initiatives. There was
10 information that was filed with this Commission, I
11 believe, on our various demand-side management
12 efforts. And I believe when we got back involved with
13 demand-side management and took our first plan back in
14 front of the Commission, I believe it was the '05/'06
15 revenue requirement application, we brought forward
16 not only our new 10-year plan moving forward, but we
17 also brought forward the historical performance at
18 that point of the previous efforts from the 1990s.

19 MR. AUSTIN: Q: Presumably this program was approved by
20 the B.C. Hydro Board, is that correct?

21 MR. HOBSON: A: That I couldn't speak to. It may be a
22 safe assumption, but I wouldn't be in a position to
23 say what the approval process at that point in time.

24 MR. AUSTIN: Q: Would it be relatively easy to look
25 into the Board of Directors minutes of B.C. Hydro to
26 see if this program was approved?

1 MR. GODSOE: Well, I question the relevance of that, Mr.
2 Chairman.

3 MR. AUSTIN: Well, the relevance again, Mr. Chairman, is
4 in its testimony at Volume 9 of the transcript, page
5 1677, it says:

6 "... And at the end of day what we're talking
7 about is professional judgment in looking at
8 this, at our past history, and saying, "How
9 much do we as a company think we can really
10 do in this timeframe?"

11 **Proceeding Time 1:39 p.m. T45**

12 MR. GODSOE: Yes, and how does board approval have
13 anything to do with how the program tracked over time,
14 Mr. Austin?

15 MR. AUSTIN: Well, Mr. Godsoe, what I'm looking for is
16 the information that was filed with the board, so that
17 I can assess what level of risks or what risk
18 identifiers were passed up to the board of B.C. Hydro
19 at that point in time, so that we can have some sort
20 of understanding of how B.C. Hydro's management
21 applies its professional judgment today, which is
22 based on our past history.

23 MR. GODSOE: Well, Mr. Chairman, I object to that. I'm
24 not going to take that undertaking unless you order me
25 to do that. I think it's of limited relevance. It
26 could have been put in an information request, and the

1 scope of it is unmanageable. Materials filed with the
2 board? I object.

3 THE CHAIRPERSON: Thank you. I will not rule at this
4 time but I will after the break, if that's --

5 MR. AUSTIN: Q: I'd like to move to the next area, and
6 this is covered in part at Volume 9 of the transcript,
7 page 1670, line 9. It says:

8 "... And you know, the plan that we're taking
9 on now with approximately 10,000 gigawatt
10 hours over this period of time, in our view,
11 is still a pretty aggressive plan. ..."

12 Do you see that, Mr. Hobson?

13 MR. HOBSON: A: I do.

14 MR. AUSTIN: Q: And correct me if I'm wrong, but it's
15 my understanding that there's a business case for each
16 PowerSmart program, and that those business cases are
17 presented to the Conservation Committee of the B.C.
18 Hydro Board, or the B.C. Hydro Board, is that correct?

19 MR. HOBSON: A: I'm not sure that each business case
20 would go forward necessarily to the board. I think it
21 would depend on the size of the business case that
22 would determine the governance approval.

23 MR. AUSTIN: Q: With respect to the business cases that
24 do go to the board, is there any form of risk
25 assessment in those business cases?

26 MR. HOBSON: A: Yeah, I would suggest that there is a

1 significant portion of the business case that does
2 explore the various risks associated with the business
3 case.

4 MR. AUSTIN: Q: And could you tell us how those risks
5 are set out? Is it on the basis of probabilities or
6 is it on the basis of information that you've set out
7 in this application, or what is it that allows the
8 board or a committee of the board to make decisions
9 with respect to the business cases that are presented
10 to it?

11 MR. HOBSON: A: Yeah, it's not so much in the form of
12 probabilities, from what I recall. I think you're
13 dealing more with sections that'll identify what the
14 specific risks are, and narrative that'll describe
15 that risk and what steps B.C. Hydro can take to
16 minimize the risk. And the intent of it is to try to
17 identify, for people approving the business case, what
18 risks they are taking on by approving that business
19 case so that they understand what we're moving forward
20 with. And we also try to provide a realistic view in
21 terms of what we have in place to try to mitigate the
22 risks that would be in place.

23 MR. AUSTIN: Q: But in answer to my question, is there
24 a probability analysis with each of these business
25 cases?

26 MR. HOBSON: A: No, and -- sorry, I thought I answered

1 MR. REIMANN: A: To calculate a levelized cost to --
2 we're taking the real cash flows, we present value it
3 to the starting point, and then re-establish the cash
4 flow in which the each year expenditures are constant.

5 MR. AUSTIN: Q: Do you in any way during that
6 calculation inflate those cash flows?

7 MR. REIMANN: A: These are all done on a real basis, so
8 it's net of inflation.

9 MR. AUSTIN: Q: I'd like to move to another area. And
10 this is Exhibit B-3, BCUC Information Request 1.169.2.
11 Exhibit B-3, BCUC Information Request 1.169.2.

12 MR. REIMANN: A: We have that.

13 MR. AUSTIN: Q: And it says:
14 "A DSM portfolio should be capable of
15 carrying portfolio level costs while
16 remaining cost-effective."

17 And now I'd like to refer you to Exhibit B-3, same
18 exhibit number, but the Joint Industrial Electricity
19 Steering Committee Information Request number 1.17.2.
20 That's Joint Industrial Electricity Steering Committee
21 Information Request 1.17.2. And in the response,
22 there's a table entitled "DSM plan utility costs,
23 dollars million six years F2008-F2013". Do you see
24 that?

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

26 MR. AUSTIN: Q: There's a table in the response that

1 says "DSM plan utility costs, (dollars million) six
2 years F2008-F2013". Do you see that?

3 MR. HOBSON: A: I do see that, yeah.

4 MR. AUSTIN: Q: And in that table there is a line, and
5 it's the fourth line, it says "Portfolio level". And
6 there are costs shown of \$175 million. Do you see
7 that?

8 MR. HOBSON: A: I do.

9 MR. AUSTIN: Q: And the question that I have for you,
10 why is it not possible to attribute those portfolio-
11 level costs to the various headings, codes and
12 standards, rate structures and programs, on the basis
13 of the costs attributable to each of those programs?
14 In other words, why can't you pro-rate the portfolio-
15 level costs to codes and standards, rate structures
16 and programs?

17 MR. HOBSON: A: Well, we do pro-rate the portfolio
18 level costs. And we pro-rate it based on the
19 Commission direction that was provided in the 05/06
20 RRA decision. And we pro-rate it on the basis of that
21 decision and on the basis of energy savings weighed to
22 the initiatives. So, that is done. And --

23 MR. AUSTIN: Q: But what I -- sorry, go ahead.

24 MR. HOBSON: A: Sorry. And when we do take a look at
25 the cost-effectiveness numbers that we put forward as
26 metrics for the individual initiatives, they do carry

1 MR. HOBSON: A: Mr. Austin, are we finished with the
2 other two IR references?

3 MR. AUSTIN: Q: Yes, we are. That was Exhibit B-4,
4 BCUC IR 2.197.1. And also it would be helpful if you
5 refer to Exhibit B-1 which was the application,
6 Appendix K, page 99 of 213.

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

8 MR. AUSTIN: Q: And first if you return to Exhibit B-1
9 in Appendix K, under the heading "Energy-Efficient
10 Programs, Refrigerator Buyback", under the column
11 "Persistence", it says, "11 years." And would you
12 agree with me that the refrigerator buyback program
13 has been around for a few years now?

14 MR. HOBSON: A: Yes.

15 MR. AUSTIN: Q: And could you tell us how you
16 calculated the persistence level, given that that
17 program has been around for a few years by now?

18 MR. HOBSON: A: So I'm not completely sure of your
19 question in terms of whether or not you're trying to
20 take it back to the fact that it's been around for a
21 few years or --

22 MR. AUSTIN: Q: Well, it's been around for a few years.
23 So I'm using this as an example of a program that you
24 can --

25 MR. HOBSON: A: I see.

26 MR. AUSTIN: Q: -- go back and evaluate.

1 MR. HOBSON: A: So there have been a number of
2 evaluations. This is program actually that goes back
3 to about that 1990-91 period I spoke of and started as
4 a pilot, and that became a full program, I guess, back
5 in about the '92 period. So it has been around for
6 quite a period of time in different forms. It's
7 undergone a number of different evaluations. I think
8 at one point there was some evaluation work done that
9 did take a look at the persistence and looked at the
10 average ages of fridges that were in market as
11 secondary refrigerators. It did do a life cycle
12 analysis, trying to take a look at what happened to
13 fridges through the cycle and where they ended up if
14 we didn't pick them up.

15 So there was some work done that way, and
16 then there's also additional work that we can draw
17 upon, I guess, from other jurisdictions that have
18 since developed and implemented similar initiatives.

19 MR. AUSTIN: Q: So you're basing your persistence
20 figure on experience, is that what it is?

21 MR. HOBSON: A: Well, experience, and I think study
22 that also has, in the past, looked at the potential
23 life of how long those refrigerators would stay within
24 market, using electricity over a period of time.

25 MR. AUSTIN: Q: So if I'm looking at a figure of
26 persistence of eleven, do I assume that what that

1 really tells me is that I have a refrigerator by that
2 program, people are going to part with their second
3 fridge or fridge that they might give to their friends
4 and family 11 years earlier than they otherwise might
5 have?

6 MR. HOBSON: A: That's right. It's taking a fridge out
7 of service 11 years earlier than it otherwise would
8 have either stopped working or been taken out of
9 service.

10 MR. AUSTIN: Q: And when you do these assessments, is
11 it a behavioural assessments? Is it a quantitative
12 assessment? Or what sort of assessment do you do to
13 arrive at a figure that says people are going to part
14 with their fridge 11 years earlier than they otherwise
15 might have?

16 MR. HOBSON: A: I think it would be a mix in this case,
17 but I do recall that there was some quantitative work
18 done in estimating a persistence value with this. I
19 mean, for some of the other initiatives it draws off
20 of effective measure-like studies, and there's large
21 databases through different regions of the United
22 States that estimate some of these values and are
23 quite comprehensive studies that support those
24 estimations.

25 **Proceeding Time 1:54 p.m. T48**

26 MR. AUSTIN: Q: If I go back to BCUC IR 2.197.1, which

1 is Exhibit B-4, is this calculation some of the
2 quantitative analysis that shows that people will part
3 with their refrigerator 11 years earlier than they
4 might otherwise?

5 MR. HOBSON: A: Sorry, you'll have to run through the
6 reference again, you lost me.

7 MR. AUSTIN: Q: It's Exhibit B-4, BCUC IR 2.197.1.

8 MR. HOBSON: A: Okay, I see that. And your question?

9 MR. AUSTIN: Q: And the question is, is this an example
10 of the quantitative analysis that is done to show that
11 people will part with their refrigerators 11 years
12 earlier than otherwise as a result of the refrigerator
13 buy-back program?

14 MR. HOBSON: A: No. I believe this is more the results
15 of showing what we believe the refrigerator buy-back
16 program, all ratepayer levelized cost would be, and
17 it's showing different streams of values used in
18 arriving at that cost. So it's incorporating those
19 assumptions into that analysis.

20 MR. AUSTIN: Q: I'd like to refer you to Exhibit B-3,
21 BCUC Information Request 1.164.1. So that's Exhibit
22 B-3, BCUC IR 1.164.1.

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

24 MR. AUSTIN: Q: And on the second page, there's a table
25 with column headings "Persistence", "Free riders",
26 "Free drivers", "Market effects". And for the

1 purposes of calculating free riders, which is shown at
2 59 percent, could you tell me what sort of work you
3 did to come to that conclusion?

4 MR. HOBSON: A: Those are based on impact evaluations.
5 So, as you mentioned before, the refrigerator buy-back
6 program has been around for a number of years. It's
7 undergone a number of different impact evaluations.
8 And the assumptions used for planning purposes would
9 draw from the impact evaluations, and the impact
10 evaluations would assess the free ridership through
11 statistical analysis. And we would take a look at our
12 program design moving forward, and if we were moving
13 forward with a similar program design, we would
14 generally adopt those assumptions flowing from those
15 evaluations. If we were significantly altering the
16 program design, then we may consider making
17 adjustments to those evaluation findings.

18 MR. AUSTIN: Q: And if I have free riders at the 59
19 percent level, why do I carry on with the program?

20 MR. HOBSON: A: Because it still delivers cost-
21 effective electricity savings.

22 MR. AUSTIN: Q: Even with the level of 59 percent free
23 riders?

24 MR. HOBSON: A: Yes.

25 MR. AUSTIN: Q: And for the purposes of the
26 refrigerator buy-back program, and I'll just read it,

1 it's going back to Exhibit C17-22, and this is
2 physical page number 4, and on the back of physical
3 page 4 it says:

4 "Virtually all new major appliances now
5 carry the ..."

6 MR. HOBSON: A: Sorry, Mr. Austin, I don't have your
7 reference.

8 MR. AUSTIN: Q: Okay, I was just going to just read you
9 the passage.

10 MR. HOBSON: A: Okay.

11 MR. AUSTIN: Q: If you go to page -- physical page 4 of
12 that, and you flip it over, to the other guy with big
13 hair holding the window.

14 MR. HOBSON: A: Okay.

15 MR. AUSTIN: Q: And just about his thighs, it says:

16 "Virtually all new major appliances now
17 carry the EnerGuide label which indicates
18 probable monthly consumption of energy..."

19 You see that?

20 MR. HOBSON: A: I don't see that, but I follow your --
21 oh, other big guy. I had the wrong big guy with the
22 big hair.

23 MR. AUSTIN: Q: This is the other big guy with --

24 THE CHAIRPERSON: The wrong thigh, you mean.

25 MR. HOBSON: A: Wrong thigh, yeah.

26 MR. AUSTIN: Q: Have you found that yet?

1 MR. HOBSON: A: No, I haven't. Which paragraph is it
2 in?

3 MR. AUSTIN: Q: It says:
4 "Virtually all new major appliances now
5 carry the EnerGuide label ..."

6 MR. HOBSON: A: Okay. Mm-hmm.

7 MR. AUSTIN: Q: "... which indicates probable monthly
8 consumption of energy." Do you see that?

9 MR. HOBSON: A: I do see that, yeah.

10 MR. AUSTIN: Q: So would you agree with me for the
11 purposes of the fridge buy-back program, essentially
12 what B.C. Hydro is doing, fridges that were originally
13 sold with EnerGuide labels on them.

14 MR. HOBSON: A: Oh, one thing I should probably
15 clarify. An EnerGuide label is no -- should in no way
16 be confused with a concept like Energy Star. It's not
17 a label that's provided to a fridge that is more
18 energy efficient. It's simply a label that's provided
19 to provide information with respect to what the
20 efficiency level of the refrigerator is.

21 **Proceeding Time 1:59 p.m. T49**

22 MR. AUSTIN: Q: So presumably if I had an -- when I
23 have an EnerGuide label on it, and if I'm a consumer,
24 I can look at one fridge and see what the energy
25 consumption is, and I can go look at another fridge
26 and see what the energy consumption is, and I can make

1 a comparison on the basis of --

2 MR. HOBSON: A: When you're purchasing them as new
3 refrigerators, yes, that's correct.

4 MR. AUSTIN: Q: Right. So going back to my question,
5 for the purposes of B.C. Hydro's refrigerator buyback
6 program, essentially B.C. Hydro is purchasing -- or
7 taking away, sorry, my mistake -- they're taking away
8 refrigerators that originally probably had EnerGuide
9 labels on them.

10 MR. HOBSON: A: Yeah, you might be surprised. And I
11 can speak to the refrigerator buyback program maybe a
12 little bit more than some of the other programs
13 because earlier in my history with B.C. Hydro I had a
14 fair bit of direct involvement with it. But I can say
15 that at that time, and this would be through the early
16 1990 period, we were picking up refrigerators that at
17 point were about 50 percent manual defrost and 50
18 percent automatic defrost. And some of those
19 refrigerators dated back to sulphur dioxide
20 refrigerators that would have been from the 1930s and
21 1940s, late 1930s, early 1940s period. So it's a
22 whole range of age of refrigerator that you collect
23 through the program, and I would expect that would
24 still be the case.

25 To the degree that the program is picking
26 up newer refrigerators, which I'm assuming is your

1 point, that is taken into account.

2 So when we do the evaluations for these
3 types of programs, the impact evaluations, they're
4 trying to assess not only what difference we're making
5 in terms of customers participating, but they're also
6 getting a sense of what the savings would be that
7 we're actually receiving through the program. And
8 part of what they do to assess that, and in the case
9 of the refrigerator buyback program, there's been a
10 couple of different studies done that are actual
11 metering studies, where we've gone in in fairly large
12 sample sizes, because there's quite the range of
13 different types of fridges, depending on defrost
14 cycles and types of refrigerators, or they have
15 through-the-door ice and things like that, and we've
16 got quite the data with respect to metering studies.
17 It gives us a sense of the amount of energy that's
18 actually being used by these units.

19 MR. AUSTIN: Q: You made reference in your answer to
20 the refrigerators you were picking up in the 1990s.
21 And how many today of the refrigerators that you
22 described, going back to perhaps even the '30s and
23 '40s, which I would characterize as my grandmother's
24 refrigerator that was called a Leonard, and the only
25 reason that anybody quit using it is because the
26 handle broke on the door; how many of those are you

1 picking up versus the refrigerators that were started
2 to be labelled with EnerGuide labels back in the
3 1980s?

4 MR. HOBSON: A: I wouldn't know the percentage today.
5 And even, you know, I should be careful because even
6 in the 1990s -- obviously the ones from the '40s that
7 I'm characterizing would be a very small percentage of
8 what we receive. But what I was trying to
9 characterize is it was quite a mix at that time.

10 To give you an idea of how the mix is
11 changing now, I know that at the time that I was
12 involved in the program we would have been getting
13 about 50 percent manual defrost fridges, and I know
14 that number is down to probably more in the range of
15 about 40 percent today. You know, so we are seeing a
16 movement obviously towards newer fridges as we go
17 further out into time. But again, whether they have
18 an EnerGuide label or not, isn't an indication of how
19 efficient the fridge is. It's just an indication of
20 how much energy it actually uses.

21 MR. AUSTIN: Q: But you would agree with me that
22 starting on the EnerGuide labels we put on, consumers
23 did have a choice in that respect, of being able to
24 compare the energy efficiency --

25 MR. HOBSON: A: They had a choice. I think there's a
26 lot of debate as to how much of that information is

1 being utilized from the consumers making the choice.
2 And that's given rise to concepts in the 1990s with a
3 PowerSmart endorsement program, which tried to
4 identify within that group of refrigerators that was
5 more energy efficient, and helping consumers and
6 retail staff identify those units. And that gave rise
7 to the Energy Start program that you see today out of
8 the Department of Energy and the Environmental
9 Protection Agency that labels a whole variety of
10 different energy-using products, including
11 refrigerators. And we stay involved in that
12 initiative, and the purpose behind that initiative is
13 to try to highlight the more energy-efficient
14 products. And the reason for that is the information
15 coming from those labels isn't always in itself
16 hitting the mark.

17 MR. AUSTIN: Q: How much of the refrigerator buyback
18 program is a technology change-out program versus a
19 behavioural modification program?

20 MR. HOBSON: A: Well, both are factored in, because one
21 of the things that we're really measuring with this
22 isn't so much the fact that we're collecting a
23 refrigerator. It's really about what the customer
24 does in the absence of that. So if all they do is go
25 and put another second refrigerator in, then we
26 haven't accomplished anything. And so really in the

1 end of the day, if you want to characterize it as
2 behaviour, I guess the behaviour is shifting them from
3 using two refrigerators to one refrigerator.

4 **Proceeding Time 2:04 p.m. T50**

5 But the way in which you actually get the
6 savings is the combination of their actions, along
7 with the fact that the technology is taking a fridge
8 away. But it shouldn't be confused with something
9 where we're taking an incremental difference between
10 different efficiency levels of refrigerators and still
11 ending up with two fridges at the end of the day.

12 MR. AUSTIN: Q: I'd like -- while we're on this, in the
13 area of technology, I'd like to refer you to Appendix
14 K, page 123 of Appendix K.

15 MR. HOBSON: A: It will just take me a minute to move
16 all of the binders. Can you give me the page
17 reference again, please?

18 MR. AUSTIN: Q: That's 123 of 213.

19 MR. HOBSON: A: I'm with you.

20 MR. AUSTIN: Q: And page 123, under the heading
21 "Windows", 4.1, it says:

22 "Energy-efficient windows incorporate
23 features such as vinyl frames, low-
24 emissivity coatings ..."

25 -- and I don't even know how to say the word --

26 "... that reflect heat and gases between the

1 window panes that increase insulating
2 properties."

3 Do you see that?

4 MR. HOBSON: A: I do.

5 MR. AUSTIN: Q: And then it goes on to say:

6 "B.C. Hydro [is] promoting energy-efficient
7 windows through its DSM program since the
8 1990s."

9 Do you see that?

10 MR. HOBSON: A: Mm-hmm.

11 MR. AUSTIN: Q: And if we go back to the two big hair
12 boys --

13 MR. HOBSON: A: Oh, I just got rid of those guys.

14 MR. AUSTIN: Q: -- in Exhibit C17-22.

15 MR. HOBSON: A: Which of the two gentlemen?

16 MR. AUSTIN: Q: And big hair number one.

17 MR. HOBSON: A: Okay.

18 MR. AUSTIN: Q: First full paragraph on that page, it
19 says:

20 "Since 1977, Hydro has offered low-cost
21 financing to assist homeowners installing
22 ceiling and wall insulation, multiple
23 glazing or storm windows."

24 Do you see that?

25 MR. HOBSON: A: I don't follow where you're at within
26 the passage, but I'll take that.

1 MR. AUSTIN: Q: The question that I have to you is, if
2 B.C. Hydro has been, in a sense, promoting multiple
3 glazing or storm windows since 1977, and I look at
4 page 123 of 213, it talks about energy-efficient
5 windows. For the purposes of the programs that B.C.
6 Hydro has, that rely on energy savings from windows,
7 am I not just changing out technology that was once
8 part of essentially a demand-side management program
9 back in the 1980s?

10 MR. HOBSON: A: Well, somewhat, but even at that you're
11 going to take the incremental development, if you
12 will, that happens. And I mean, in the case of
13 windows, what we're not doing is, we're not convincing
14 somebody on the basis of energy efficiency alone to go
15 and change their windows. What we're trying to
16 influence is, at the point that you're going to change
17 your windows, what product are you going to install?
18 And so, very much so, I think, part of our role in
19 demand-size management and the success we've had with
20 windows, and it's another I can speak to quite
21 closely, is one that we have been very closely
22 involved in helping the Window and Door Manufacturer
23 Association of B.C. advance the technology for windows
24 within the British Columbia marketplace, and we were
25 directly involved in representing the Window and Door
26 Manufacturer Association of B.C. in conversations with

1 Natural Resources Canada in developing an Energy Star
2 standard for windows, back in around 2000, 2001, that
3 would be acceptable to that group, given there's
4 obviously very different conditions in British
5 Columbia relative to other parts of the province, and
6 it was important to that group to have a specific
7 standard for the B.C. market.

8 We further helped them with testing and
9 technology development, technical assistance in
10 developing new standards to continue to improve that
11 technology with respect to windows that become more
12 the norm within the marketplace. But the trick over
13 time is to continue to try to move that technology
14 forward and to continue to move forward with respect
15 to what choices consumers have and influence what
16 choices consumers make at the points they are going to
17 change their windows out.

18 MR. AUSTIN: Q: One question I have for you, isn't the
19 market just going to come up with a new technology?
20 Why is it necessary for B.C. Hydro to spend money
21 essentially advancing technology that it originally
22 promoted back in the 1980s?

23 **Proceeding Time 2:09 a.m. T51**

24 MR. HOBSON: A: It's a very, very different technology.
25 So, if you want to take a look at the technology that
26 would have been promoted back in the 1980s, you would

1 have been starting with single-pane windows. The big
2 advancement at that point was going to aluminum frame
3 windows, which were basically just putting in place
4 the ability to conduct heat through the frame, and
5 trying to compensate for that by putting a very very
6 small double-pane window in that had an airspace
7 between it, just dead air space as an insulator. And
8 that would not even make the baseline of what we look
9 at today.

10 So I think the improvements that we've made
11 with respect to windows have largely been a part of
12 B.C. Hydro's efforts in the province, working with the
13 Window and Door Manufacture Association to advance the
14 window technology within the province, and the
15 acceptance of it within the province, moving forward.
16 But it's a far cry from where we're at today to where
17 we were in the 1980s with respect to the technology.

18 MR. AUSTIN: Q: I certainly appreciate the technology
19 change, but essentially what I'm putting to you is it
20 would appear that B.C. Hydro is now requesting money
21 from its customers, with the approval of the
22 Commission, to have people change technology that B.C.
23 Hydro originally promoted.

24 MR. HOBSON: A: So what we're really looking at is the
25 technology that we're wanting consumers to make --
26 back up. Consumers have two choices, if you're going

1 to change your windows today, you have a variety of
2 choices and they're not all the same with respect to
3 energy efficiency. So the dollars that we would look
4 at today with respect to moving somebody towards a
5 more energy-efficient window, would be delivering
6 cost-effective energy savings relative to the choice
7 that they could have made to take a less efficient
8 window. So it's the incremental value between the
9 baseline technology and the more efficient technology
10 that's really in play.

11 And if we don't make those investments and
12 the consumer makes a more inefficient choice, that
13 inefficient choice is in the building envelope for
14 probably the next 20 to 30 years. So I think it's a
15 very cost-effective investment to try to encourage the
16 customer to make a more efficient choice with respect
17 to the windows that they put in today.

18 MR. AUSTIN: Q: I guess the point I'm making, Mr.
19 Hobson, is I'm not going to be here 30 years from now
20 asking the same question of why B.C. Hydro has a
21 PowerSmart program for the change-out of windows that
22 are -- were installed today. So that's in a sense the
23 essence of the question is that --

24 MR. HOBSON: A: Yeah, I --

25 MR. AUSTIN: Q: Where do you start and where do you
26 stop in terms of a PowerSmart program, in terms of

1 technology change?

2 MR. HOBSON: A: I think as long as the technology
3 continues to evolve and there's choices that are
4 efficient or less efficient choices, and you can make
5 a difference with respect to the choices consumers
6 make, I think you're going to continue to have those
7 types of initiatives. But again, we're not putting in
8 place the initiative to get the customer to change the
9 windows. We're putting in place the initiative to get
10 them to make a better choice at the point they make
11 that change. And so as long as consumers are making
12 choices to replace their windows, and within that they
13 have choices between efficient and inefficient
14 products, and there's a role for a utility to play to
15 help them make a better choice, a more efficient
16 choice, then there's cost-effective energy savings
17 that will benefit ratepayers, and we continue --

18 MR. AUSTIN: Q: So under those circumstances, B.C.
19 Hydro -- should B.C. Hydro exists, will be here 30
20 years from now saying, "We need money to fund programs
21 to do this."

22 MR. HOBSON: A: If those circumstances persist and
23 those opportunities are available. There's
24 opportunities through concepts like what you took me
25 to on this page, which has a lot less to do with a
26 program and much more to do with a code or a

1 regulation change, and you know, this is a target of,
2 you know, something we put in place that dates back to
3 about 1995 when we worked with the industry to
4 establish the first standard and certification process
5 for a PowerSmart window, and move the industry towards
6 something that had a vinyl frame and low-E coating on
7 the windows, different sealer around the panes of
8 glass. And that was a big step forward.

9 When we got back involved in PowerSmart in
10 around 2001, this was something we sat down with the
11 Ministry of Energy with and we started to target a
12 longer-term plan, that if we could get the industry's
13 agreement along with EnerCan to move towards an Energy
14 Start standard for the windows, and a utility through
15 Hydro came along and worked with industry to promote
16 the product and increase the market share, we could
17 move the provincial government to the point where they
18 would regulate that level for that product. And
19 that's what's transpired as a result of what you see
20 on the page reference you took me to.

21 So in that case, what we'd get is a
22 regulated standard for that window, and no longer the
23 need for a continuation of a utility program. It
24 would only be if that technology continued to evolve
25 beyond that standard, that there may be a need for a
26 utility program to continue.

1 MR. AUSTIN: Q: This is a bit of a side journey, but I
2 was one of the participants of the original window
3 change-out program, and after about 20 years the
4 windows turned into aquariums. Has the technology now
5 changed so that that doesn't happen and participants
6 in B.C. Hydro's new program will not have to replace
7 all their double-paned windows like we had to 20 years
8 from now?

9 **Proceeding Time 2:14 p.m. T52**

10 MR. HOBSON: A: I can't speak to your experience, or if
11 yours is back to the guys with the big hair in the
12 1980s.

13 MR. AUSTIN: Q: It's the big hair guys.

14 MR. HOBSON: A: Big hairs. So that would pre-date my
15 time. I can speak to what we put in place through the
16 90s and what we currently have in place now. And we
17 work closely with Canadian Standards Association. So
18 the levels that are adopted through this, and brought
19 into regulation through the Ministry of Energy, go
20 through the Canadian Standards Association with
21 respect to the quality. And that was one of the big
22 improvements in the 90s, was along with the PowerSmart
23 window, and taking a look at the efficiency levels,
24 one of the concerns we had was to ensure that the
25 quality of the window withstood, and we worked with
26 the Canadian Standards Association, along with Warnock

1 Kersey, to establish test standards in labs where
2 window manufacturers had to take their windows and
3 actually get them tested and certified before they
4 could take that PowerSmart label. And they would
5 undergo wind and rain and blow-out tests to ensure
6 that the window quality was there as well.

7 MR. AUSTIN: Q: But will it or won't it turn into
8 aquarium, 20 or 25 years from now?

9 MR. HOBSON: A: And again, I can't speak for maybe your
10 experience within your home, but the windows
11 themselves should fit the standards that are in place
12 within the market with respect to quality. With
13 respect to the energy efficiency, that would be a
14 different piece, and that's more our interest.

15 MR. AUSTIN: Q: But will the window -- today's windows
16 last for 25 years without turning into aquariums?

17 MR. HOBSON: A: I would suggest that the windows of
18 today would last without turning into an aquarium. I
19 think you may have been a special case.

20 MR. GODSOE: In so many ways.

21 MR. AUSTIN: Q: I don't believe so, Mr. Hobson, because
22 what had also been -- that's absolutely true, but
23 wasn't there a problem with the windows --

24 MR. HOBSON: A: In the 1980s?

25 MR. AUSTIN: Q: -- that were installed in the 1980s.

26 MR. HOBSON: A: There could have been, and if what

1 you're referring to is condensation, it's much less of
2 a problem with the window and much more a problem with
3 ventilation. And I think that's probably maybe more
4 the issue that you were facing.

5 MR. AUSTIN: Q: And for the purposes of the inert gas
6 that may be put in today's windows, is -- in the 1990s
7 there were suggestions that that inert gas was
8 essentially escaping. Never heard of it?

9 MR. HOBSON: A: It could be, I don't know.

10 MR. AUSTIN: Q: Okay. Let's turn to another area. And
11 this is in relation to load displacement programs.
12 And I'd like to show you an extract from a B.C.
13 Utilities Commission decision in the F2004/F2005
14 revenue requirements application. And I'm just
15 seeking clarification on this. There's no need to
16 enter it as an exhibit, I'll just hand it out on the
17 basis of ease of reference.

18 It's incorrectly labeled on the front, and
19 as I indicated, it's an extract from the F2004/F2005
20 F2005/F2006 revenue requirements application decision.
21 And I'd like to refer you to page 195 of the extract,
22 and I'm just seeking clarification on this point.
23 I've done the best I can to sort of track -- to track
24 through what has expired since this decision, and I'd
25 just like to get your views.

26 On page 195, it says:

1 "The Commission Panel determines that Load
2 Displacement projects should be considered
3 as supply side alternatives and accordingly
4 directs B.C. Hydro to not proceed with any
5 new industrial Load Displacement projects as
6 part of the Power Smart ten-year plan.

7 The Commission disallows F2005 and
8 F2006 total expenditures on load
9 displacement projects other than with
10 respect to expenditures for projects with a
11 contract dated prior to the date of
12 Application."

13 And then the next paragraph, it says:

14 "B.C. Hydro may apply on a project-by-
15 project basis for approval of Load
16 Displacement projects; the Commission may
17 then approve a deferral account for recovery
18 of such expenditures in future test periods.
19 The Commission encourages B.C. Hydro to
20 follow an appropriate competitive process
21 for Load Displacement projects if it pursues
22 such projects in the future."

23 Do you see that?

24 MR. HOBSON: A: I do.

25 MR. AUSTIN: Q: And could you bring me up to date on
26 B.C. Hydro's view of whether load displacement

1 projects are supply side alternatives, or whether
2 they're demand-side alternative?

3 **Proceeding Time 2:19 p.m. T53**

4 MR. GODSOE: I can bring you up to speed on that. It is
5 one of the orders we're seeking is to have this
6 overruled on the basis that the definition of demand-
7 side measure clearly encompasses load displacement.
8 So our legal view is that load displacement is a
9 demand-side measure and I'm happy to address that more
10 fully in argument.

11 THE CHAIRPERSON: Thank you, Mr. Godsoe.

12 MR. AUSTIN: Q: I'd like to refer you to Appendix K of
13 Exhibit B-1, page 155 of 213. That's Appendix K, page
14 155 of 213.

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

16 MR. AUSTIN: Q: And would you confirm that B.C. Hydro
17 is proposing a load displacement program for
18 residential customers?

19 MR. HOBSON: A: Yes.

20 MR. AUSTIN: Q: And if you turn to page 166 of 213,
21 B.C. Hydro is proposing a load displacement program
22 for commercial customers.

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

24 MR. AUSTIN: Q: And if we turn to page 179 of page 213,
25 would you confirm that B.C. Hydro is proposing a load
26 displacement program for industrial customers?

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

2 MR. AUSTIN: Q: And if the Commission does not agree
3 that load displacement programs or demand-side
4 management programs, what impact would that have on
5 B.C. Hydro's stated conservation savings?

6 MR. HOBSON: A: Very little. It's a relatively small
7 portion of our overall plan. If you would bear with
8 me I could probably give you a value.

9 Cumulative savings in fiscal 2020 amount to
10 129 gigawatt hours. So out of a total plan of 10,600
11 gigawatt hours, it's a relatively small portion.

12 MR. AUSTIN: Q: Thank you. I'd like to refer you to
13 Exhibit B-4, IPPBC Information Request 2.6.1,
14 Attachment 1. That's Exhibit B-1, IPPBC IR 2.6.1,
15 Attachment 1.

16 Now that you have that exhibit, I'd like to
17 refer you to page 10. And this is just a general
18 question about the ability to do energy conservation
19 in the GHG world. So on page 10 it says:

20 "As the government pointed out in its 2008
21 Speech from the Throne, every molecule of
22 carbon dioxide emitted in the atmosphere
23 matters."

24 And then it goes on to say a number of other things.
25 And in the era, in the era when the emissions of GHGs
26 into the atmosphere is certainly very important from

1 the perspective of the B.C. government, how does B.C.
2 Hydro go about convincing people to use less
3 electricity when, in a sense, it's providing a product
4 from a GHG perspective that's as good as it can get?

5 **Proceeding Time 2:24 p.m. T54**

6 MR. MATHESON: A: Can you repeat the question, please?

7 MR. AUSTIN: Q: In the era when the government of
8 British Columbia wants to see GHG reductions and, for
9 the purposes of GHG reductions, electricity is as good
10 a product as you can get, when it's provided by B.C.
11 Hydro, because it's essentially GHG-free, how do you
12 go about convincing people at the same time that they
13 should be using less electricity for the purposes of
14 energy conservation?

15 MR. HOBSON: A: Well, I think for conservation, there's
16 a number of benefits that flow to a consumer. There's
17 direct benefits that they'll see with respect to
18 savings on their bill. That will be a factor. And I
19 think there can be other benefits that flow from
20 energy-efficient products. We mentioned earlier
21 windows, and aside from your example, I think there's
22 a lot of benefits that go with better windows, in
23 terms of comfort and aesthetics and things like that.
24 So there's a number of factors that directly flow to
25 customers.

26 On a more indirect basis, I think people

1 still see, whether or not it's attached to GHGs or
2 not, I think they still see a reduction in usage in
3 general as a positive thing in today's world, and
4 specifically to the environment.

5 So, I think they understand that there is
6 environmental impacts associated with a whole range of
7 things that we do, and to the degree that we use less
8 of something, that we avoid those types of impacts.

9 MR. MATHESON: A: That's right. I don't think that
10 convincing people to use less electricity is
11 necessarily linked 100 percent to reducing GHGs.
12 There's lots of reasons to want them to do that.

13 MR. AUSTIN: Q: What I'm suggesting to you, for your
14 comment, is if people look at their natural gas bill
15 and see the impact of the carbon tax, and they look at
16 their electricity bill and essentially see no impact
17 from the carbon tax, isn't that a message to use more
18 electricity versus less electricity?

19 MR. HOBSON: A: I think it could be, but I think the
20 starting point is, people are going to look to what
21 can they reduce. So, you know, some of the things
22 that we're going to be focused on are things that are
23 going to reduce the overall consumption period. And
24 whether it's electricity or gas. So if you take a
25 look at your example with windows, windows are going
26 to reduce the heating need of a home regardless of

1 what the energy source is. So I think there's a
2 number of things that people can do that are just
3 going to be a straight reduction.

4 MR. AUSTIN: Q: And I'd like to refer you back to
5 Exhibit C17-22, big hair page number one.

6 MR. HOBSON: A: I have that.

7 MR. AUSTIN: Q: And on the left-hand side in the first
8 column, it says:

9 "Heat pumps monitored by Hydro on Vancouver
10 Island save from one-third to one-half of
11 total heating energy requirements relative
12 to baseboard heaters and electric furnaces
13 during the year."

14 Has anything changed in relation to the efficiency of
15 heat pumps, since that was first written?

16 MR. HOBSON: A: I would imagine quite a number of
17 things have changed with respect to heat pumps in
18 terms of their effective efficiency, but probably more
19 their installed efficiency and the number of
20 installers. But in general, heat pumps are an
21 efficient substitute. I spoke a little bit, I think
22 it might have been yesterday, that you also need to
23 consider what the baseline was prior, and whether or
24 not you're adding cooling load, essentially at the
25 same time. And from a given utility's perspective,
26 what the impacts would be. There could also be

1 capacity issues, so you need to take a look at it both
2 from an energy and a capacity standpoint before moving
3 forward, I think, too aggressively with heat pumps.
4 But heat pumps certainly have their advantages.

5 MR. AUSTIN: Q: But just in relation to that statement
6 on the page, relative to baseboard heaters and
7 electric furnaces, heat pumps saved one-third to one-
8 half of the total heating energy requirements. Has
9 that changed?

10 **Proceeding Time 2:29 p.m. T55**

11 MR. HOBSON: A: I think they're general statements, but
12 I think in that neighbourhood. I think you're still
13 going to see heat pumps that are going to be operating
14 in those ranges, and it's going to depend a little bit
15 if it's ground source or an air source heat pump, and
16 the efficiency levels are quite different depending on
17 those. It's also going to depend, I guess, a little
18 bit in terms of climate, but I'm not sure that that's
19 specific to this quote that you have here. So yeah, I
20 think it's in the same ballpark.

21 MR. AUSTIN: Q: I'd like to go to a different area now.

22 THE CHAIRPERSON: Before you do that, probably we'll
23 break for 15 minutes.

24 MR. AUSTIN: Certainly.

25 **(PROCEEDINGS ADJOURNED AT 2:30 P.M.)**

26 **(PROCEEDINGS RESUMED AT 2:45 P.M.)**

T56

1 THE CHAIRPERSON: Please be seated.

2 Mr. Austin, is it still your desire that
3 B.C. Hydro produce the board of directors minute that
4 had approved the conservation plan back in 1998?

5 MR. AUSTIN: Yes, and the supporting material for that.
6 I don't expect it'll be a lot of material. I've never
7 seen a large package of material go to any board.
8 It's condensed.

9 THE CHAIRPERSON: The Panel is not prepared to grant --
10 to force Hydro, B.C. Hydro to make that available to
11 you.

12 MR. AUSTIN: Q: Panel, I'd like to refer you to Exhibit
13 B-4, BCUC Information Request 2.194.3. That's Exhibit
14 B-4, 2.194.3. And this is just a follow-up question
15 in relation to load displacement. In the third
16 paragraph it says:

17 "The commercial and industrial load
18 displacement programs will target projects
19 that could deliver cost-effective
20 electricity savings, and that would not
21 proceed under the SOP..."

22 meaning Standard Offer Program,

23 "...because of various barriers such as lack
24 of capital and long payback periods."

25 Do you see that?

26 MR. HOBSON: A: I do.

1 MR. AUSTIN: Q: Essentially, is what B.C. Hydro saying
2 is that those projects are too expensive for the
3 purposes of the Standard Offer Program, and what they
4 really need is some subsidies to go ahead?

5 MR. HOBSON: A: Well, I think what we're looking at
6 with respect to these would be, yeah, we take a look
7 at the economics, and if the economics that the
8 customer would see through the Standard Offer Program
9 would not be adequate, then those would be potentially
10 some of the initiatives that we would expect that we
11 would look at. And whether or not they were cost-
12 effective at the point that we looked at them would
13 still need to be determined.

14 MR. AUSTIN: Q: So what would B.C. Hydro say to the
15 winners of the Standard Offer Program who made the
16 grade, so to speak, and then found out that if they
17 hadn't participated in the Standard Offer Program,
18 that B.C. Hydro would give them, in a sense, some
19 subsidies to make the project more attractive? Why
20 would any industrial commercial customer participate
21 in the Standard Offer Program if incentives or
22 subsidies were available if they didn't?

23 MR. HOBSON: A: Well, and again, you know, this is a
24 program that really doesn't fall even within the
25 short-term window, so it's still going to take time to
26 understand what materializes through the Standard

1 Offer Program. But I think what we were seeing in our
2 pursuit of all cost-effective demand-side management
3 was a situation where we expected there's going to be
4 some projects that will be cost-effective but will not
5 be attractive through the Standard Offer Program, for
6 a variety of reasons. Economics may be one of them,
7 but there may be other issues that are preventing
8 customers from moving forward. And the design of
9 putting relatively small initiatives in in the three
10 sectors is to understand that some of those potential
11 savings will be out there, and that those initiatives
12 are designed to ensure that we're in a position to
13 target some of those opportunities.

14 MR. AUSTIN: Q: In relation to the incentives that the
15 Joint Industrial Electricity Steering Committee was
16 talking about earlier this morning, the indication was
17 that the incentives weren't high enough. Is that
18 correct?

19 **Proceeding Time 2:49 p.m. T57**

20 MR. HOBSON: A: The indication from the Joint
21 Industries Steering Committee?

22 MR. AUSTIN: Q: Yes.

23 MR. HOBSON: A: I think they were questioning whether
24 or not the incentives in the overall package was
25 attractive.

26 MR. AUSTIN: Q: And as I understand it, there's no

1 competitive process for the purposes of those types of
2 industrial programs, is that correct?

3 MR. HOBSON: A: The way those offers are currently
4 structured is, they're fixed-incentive offers.

5 MR. AUSTIN: Q: So, why would an industrial customer
6 want to participate in a program at a lower incentive
7 level when it can look at what B.C. Hydro's
8 conservation targets are for that particular program
9 -- why wouldn't it just say, "That's not enough
10 money," and sit there and wait until you come around
11 with more money? Why wouldn't they do that?

12 MR. HOBSON: A: Because I think there's opportunities
13 also for those customers, and I think what they've got
14 to balance off is an opportunity that, when coupled
15 with our offer, is an attractive offer for them, and
16 they're in the business, I think, of staying in
17 business. And if there's an opportunity that helps
18 them, I think that they would be motivated to act upon
19 it. I think if they take a stance where they're
20 playing a waiting game with respect to what we do with
21 our incentive offers, we do have a range of
22 opportunities that we can be looking at through
23 demand-side management, and I think there's also a
24 time aspect to this. And again, I think if they are
25 seeing something that's attractive to them, I would
26 expect that they're going to be motivated to

1 participate.

2 MR. AUSTIN: Q: But if there was a competitive process,
3 wouldn't take -- wouldn't that take the waiting game
4 aspect out of their decision process?

5 MR. HOBSON: A: It could. I think that the issue that
6 we would face is whether or not a process could be put
7 in place that was truly competitive. And whether or
8 not we wouldn't be putting a process in place that
9 just resulted in spending more dollars than trying to
10 put in place fixed offers that move us up the curve
11 over time, or trying to tailor those incentive offers
12 more to the projects themselves.

13 MR. AUSTIN: Q: I'd like to move to another area. And
14 I'd like to refer you to Exhibit B-3, B.C. Utilities
15 Commission Information Request No. 1.139.1. That's
16 Exhibit B-3, BCUC Information Request 1.139.1. And
17 I'd also like to refer you to Exhibit B-10, which is
18 the evidentiary update. And this is page 29.

19 MR. HOBSON: A: Sorry, that was page 29?

20 MR. AUSTIN: Q: Twenty-nine. And this is a question
21 that I was talking to Ms. Van Ruyven about, and it was
22 indicated that this panel would probably be the best
23 panel to answer it. And if we go to Exhibit B-3, and
24 the response, at the bottom of the page in the middle
25 column, it says "2008 2007 mid-load forecast
26 surplus/deficit."

1 And then if we look at page 29 of Exhibit B-10,
2 there's a similar column for singular -- similar
3 heading with different values. And the question is in
4 relation to, for lack of a better word, is the
5 insurance coverage of SD number 10. So if we look at
6 Exhibit B-3, in a sense the insurance coverage is set
7 out in the mid-load forecast surplus/deficit. Do you
8 see that?

9 MR. MATHESON: A: Sorry, which one are you on?

10 MR. AUSTIN: Q: I'm on Exhibit B-3 --

11 MR. MATHESON: A: Okay. And this is the energy
12 outlook, yeah.

13 MR. AUSTIN: Q: And if you look at the entries for the
14 line "2007 mid-load forecast surplus", you'll see that
15 F2016, for example, that there's 2500 GWh of surplus.
16 Do you see that?

17 **Proceeding Time 2:54 p.m. T58**

18 MR. MATHESON: A: Yes, I see that, yes.

19 MR. AUSTIN: Q: And when you look at the same column
20 for Exhibit B-10, which is the evidentiary update,
21 it's reduced to 1700 GWh. And for the purposes of SD
22 No. 10 and the insurance requirement, can you tell us
23 why the insurance coverage was effectively reduced by
24 the reduction or the reductions in the evidentiary
25 update for the purposes of the amount of electricity
26 that would be available to B.C. Hydro?

1 MR. MATHESON: A: Are you speaking in the year F16?

2 MR. AUSTIN: Q: Generally, because if you look at
3 anything after F2016, essentially there was more
4 insurance coverage over a longer period in Exhibit B-3
5 than there is in the evidentiary update.

6 MR. MATHESON: A: Well, the answer is we didn't -- as
7 we set out what kind of balance to have in our load
8 resource balance in those years, we didn't consider
9 any of it to be part of the insurance provisions in SD
10 10.

11 MR. AUSTIN: Q: And as I understand my discussion with
12 Ms. Van Ruyven --

13 MR. REIMANN: A: Sorry, maybe I could just add to that
14 that the insurance provisions we put in could be by
15 2026, the year in which SD 10 --

16 MR. MATHESON: A: Yeah, 2026, so there is a ramp-up.

17 MR. REIMANN: A: So insurance is shown on the last
18 couple of years.

19 MR. AUSTIN: Q: Certainly, and I'm not going to ask you
20 for your views on as soon as practical as set out in
21 the SD No. 10. But Ms. Van Ruyven indicated that at
22 least for the purposes of SD 10 and as soon as
23 practical, B.C. Hydro used a cost-effective test. Is
24 that your understanding?

25 MR. REIMANN: A: It included a cost-effective
26 component, that's right.

1 MR. AUSTIN: Q: And could you please explain to the
2 Commission what goes into the calculation of this
3 cost-effective test?

4 MR. REIMANN: A: We haven't to this point figured out
5 exactly how we'd go about determining what cost-
6 effective or practicable is. That's something that we
7 wanted to get to a point of self-sufficiency first,
8 and we haven't yet determined whether and if it made
9 sense to advance that insurance premium earlier than
10 fiscal 2026.

11 MR. MATHESON: A: What we did though, in the
12 development of this long-term plan, was to determine
13 that it's simply too early right now to consider
14 taking actions to gather the insurance provision in SD
15 10, and that we would, as Mr. Reimann said, revisit it
16 at another time.

17 MR. AUSTIN: Q: I'd like to refer you to another area,
18 and this'll be in Exhibit B-1, page 6-60. That's
19 Exhibit B-1, page 6-60. And this is a question about
20 your contingency plan, and in particular Table 6-19.
21 And there was some discussion with other intervenors
22 this morning about the lead time required to take
23 action should you not be meeting your energy
24 conservation goals, or demand goes up. And the
25 question that I have for you is, in Table 6-19 it says
26 under the heading "Action":

1 "Short lead-time acquisition processes."

2 And

3 "B.C. Hydro would seek to undertake shorter
4 lead-time acquisition processes that [would]
5 include pre-qualifications of bidders and
6 pre-established acquisition rules."

7 And the question that I have for the panel, is that in
8 relation to potential purchases from IPPs, or is it
9 relation to any of the other measures that you might
10 be able to resort to to speed up acquiring additional
11 supplies of electricity?

12 MR. REIMANN: A: I think it would be IPPs and any other
13 opportunities that may be available.

14 MR. AUSTIN: Q: And there's an action that's entitled
15 "Market Reliance" and it says:

16 "In the case of a short term shortfall of
17 energy B.C. Hydro would ultimately resort to
18 market energy acquisitions."

19 Do you see that?

20 **Proceeding Time 2:59 p.m. T59**

21 MR. REIMANN: A: I do.

22 MR. AUSTIN: Q: And given the self-sufficiency
23 requirement of SD 10, if B.C. Hydro has a short-term
24 shortfall after 2016, why would B.C. Hydro be able to
25 resort to market energy acquisitions?

26 MR. REIMANN: A: So I -- when we have a plan in place

1 that gets us to a surplus in fiscal '17, in time for
2 self-sufficiency, and I guess we would never make our
3 base resource plan so certain that the contingency
4 resource plans wouldn't happen. So ultimately we have
5 a plan and we will target getting to self-sufficiency
6 in and by 2016, but we wouldn't, should the world come
7 about that we get into 2016 and we have a shortfall,
8 we wouldn't not meet our customers' needs and not buy
9 from the market. So ultimately in the operational
10 timeframe, we will do what it takes to keep the lights
11 on.

12 MR. AUSTIN: Q: Would you agree with me that in
13 relation to SD 10, that the insurance requirement is
14 one of the things that might attenuate any shortfall
15 that you might experience because of problems with
16 your plant and equipment, an inaccurate load forecast
17 or other items such as that, that might cause a
18 shortfall in supply?

19 MR. MATHESON: A: I don't think I would agree with
20 that. I think if the legislature had intended that
21 insurance be used for that purpose, they'd have
22 required us to have it by the year 2016, when we're
23 required to be self-sufficient, rather than 2026,
24 which is what was set out in Special Direction 10.

25 MR. AUSTIN: Q: With respect to deciding what a DSM
26 portfolio is or isn't, what sort of test do you use,

1 or what sort of logic do you use, for the purposes of
2 determining what goes into a portfolio and what stays
3 out? For example, if we look at the DSM plan as
4 advanced, there's the concept of influencing consumer
5 behaviour. That's one program. And then there's
6 another program that's to do with mechanical pulping.
7 They seem to be very unrelated, and yet they somehow
8 compose a portfolio. Do you -- go ahead.

9 MR. HOBSON: A: So when we take a look at putting a DSM
10 plan together, and in this case we were taking a look
11 at putting together a broad DSM plan, so we're looking
12 to make sure that we've -- we're doing our best to put
13 in place options that are going to provide
14 opportunities for a broad range of customers to
15 participate. And in this case, we're trying to put
16 forward a plan that's fairly comprehensive and
17 aggressive. So we're looking at the conservation
18 potential review, and we're looking at the
19 opportunities that are identified within that
20 conservation potential review, among other things that
21 we may be available -- informed by. And we're taking
22 a look out from those opportunities back, what are the
23 various things that we could put in place to try to
24 realize those opportunities. So in terms of the
25 breadth of the coverage, it's driven more by the
26 opportunities, I'd suggest.

1 So the fact that we end up with mechanical
2 pulping and residential behaviour within the same
3 program is more an outcome from the fact that there's
4 opportunities in both of those areas.

5 MR. AUSTIN: Q: Well, let's take it down to the next
6 level. For the purposes of the current portfolio, you
7 want to include what the Utilities Commission formally
8 described as "supply side options". And for the
9 purposes of determining a portfolio, where do you
10 start and where do you stop on including something
11 like a supply side options?

12 MR. HOBSON: A: Well, again, when we looked at it, and
13 I'm not sure if we need to re-trace this, but when we
14 looked at it, we were considering load displacement
15 consistent with the UCA as a demand-side measure. So
16 that was more the guidance in terms of why that was
17 included. But if a different decision had been made
18 to consider that as something else, then I suppose it
19 would have been not included within our program, or
20 within our plan.

21 MR. AUSTIN: Q: I'll now move into my final area, which
22 is essentially clean-up. In Mr. O'Riley's evidence,
23 he said that B.C. Hydro was discussing the purchase of
24 electricity from Teck. Mr. Scouras, did you know
25 whether Teck bid into the 2008 Call?

26 MR. SCOURAS: A: They're not listed as one of the

1 MR. AUSTIN: Q: So there generally is a capacity for
2 the more modern wind turbines to feather, to allow
3 them to operate in higher wind speeds.

4 MR. REIMANN: A: They still have a cut-off wind speed.
5 I would agree with what you said, and I would also say
6 they still have a certain wind speed at which point
7 they can no longer handle it and they shut down.

8 MR. AUSTIN: Q: I've discussed this question with your
9 counsel and I'd just like to put it to you. Does B.C.
10 Hydro have any objections to making available the
11 evaluation reports that it's been required to file
12 with the BCUC with respect to its PowerSmart programs
13 from the date of the last LTAP?

14 MR. GODSOE: And you're right, you did give me notice on
15 it, thank you. I just to need to check how many
16 reports there are, but I don't object to that in
17 principle.

18 MR. AUSTIN: Q: And the request is made on the basis is
19 that they just be made part of the hearing record and
20 it be done electronically because there's absolutely
21 no need for paper copies of that material.

22 MR. GODSOE: So I'm virtually certain we can take an
23 undertaking.

24 THE CHAIRPERSON: Thank you, Mr. Godsoe.

25 **Information Request**

26 MR. AUSTIN: Q: And one final question for the panel,

1 and this is in relation to the concept of the short-
2 term price of electricity and the long-term price of
3 electricity under IPP contracts. Mr. Scouras, would
4 you agree with me that in the 2006 Call, the average
5 length of an IPP contract was approximately 31 years?

6 MR. SCOURAS: A: Yes.

7 MR. AUSTIN: Q: Would you agree with me that that
8 average was pushed down to some extent because of the
9 thermal projects in that Call?

10 MR. SCOURAS: A: Could you clarify what you mean by
11 "pushed down"?

12 MR. AUSTIN: Q: Well, the thermal projects generally
13 have a requirement to have a contract for usually not
14 more than, say, 25 years, is that correct?

15 MR. SCOURAS: A: I think that's generally correct, that
16 the longer terms were due conversely to renewable
17 projects having longer terms up to 40 years.

18 MR. AUSTIN: Q: And there's been a lot of discussion
19 about comparing short-term prices to long-term prices,
20 and I'd just to just set out an example. Let's
21 suppose if B.C. Hydro enters into an IPP contract with
22 a term of 40 years, and the commercial operation date
23 is 2016 and let's assume that the price to be paid on
24 a levelized basis is \$120 a megawatt hour. And let's
25 suppose out in 2016 the spot market price for that
26 electricity is \$80 a megawatt hour. If I was doing a

1 comparison between short- and long-term prices at that
2 point in time, would you agree with me, at least on
3 the face of it, it wouldn't look like B.C. Hydro did a
4 very good deal?

5 MR. SCOURAS: A: On the face of it.

6 MR. AUSTIN: Q: The answer is yes?

7 MR. SCOURAS: A: I agree with you.

8 MR. AUSTIN: Q: And let's suppose we go out to 2036,
9 which is 20 years later, and let's suppose by then the
10 market prices are \$140 a megawatt hour and that's a
11 short-term market price, would you agree with me that
12 the long-term deal was starting to look better?

13 MR. SCOURAS: A: I would say yes.

14 MR. AUSTIN: Q: And if we went out 30 years to 2046,
15 and the spot market price was \$200 a megawatt hour,
16 and you were sitting there with an IPP contract at
17 \$120 a megawatt hour levelized, that that long-term
18 IPP deal would be looking even better?

19 MR. SCOURAS: A: I would agree with you, with the
20 proviso that in each of those you're comparing a long-
21 term contract price with an individual spot price,
22 which may make the comparability difficult. But on
23 the surface of it I agree with what you put to me.

24 MR. AUSTIN: Thank you very much. No further questions.

25 **Proceeding Time 3:10 p.m. T61**

26 THE CHAIRPERSON: Who's next, Mr. Fulton? Mr. Weafer is.

1 I see him on his feet.

2 MR. FULTON: Yes, he is, Mr. Chairman. And I just wanted
3 to address, while Mr. Weafer is coming up here, the
4 schedule going forward. We are moving along rather
5 more quickly with Panel 4 than I anticipated. I
6 expect that the intervenors will be finished their
7 cross-examinations either late morning -- at the end
8 of the morning tomorrow or early in the afternoon,
9 based on present estimates. And so that looking
10 forward in terms of completing Panel 4, it will either
11 be tomorrow or by mid-day Friday at the outside,
12 including the Commission Panel questions, as I see
13 things.

14 That, then, takes us to next week, where we
15 have presently two days set aside, which are the 10th
16 and the 11th, the 11th for Mr. Shaffer and the 10th for
17 Mr. Ball. I have canvassed parties about their
18 questions for Mr. Ball and we only have about a half
19 an hour of questions for him. I have also talked with
20 Mr. Austin and he is endeavouring to see if Mr. Ball
21 can come on Wednesday rather than Tuesday, so we won't
22 have a very short day on Tuesday otherwise.

23 THE CHAIRPERSON: I would be really loath to sit for
24 half-an-hour on Tuesday the 10th of March. I really
25 could not contemplate doing that, in all honesty. I
26 think it would be a complete -- I just -- I don't

1 think it would be the best use of Commission time.

2 MR. FULTON: Thank you, Mr. Chairman. I'm sure that Mr.
3 Austin will take that forward to Mr. Ball.

4 THE CHAIRPERSON: Thank you.

5 Mr. Weafer.

6 MR. WEAFER: Thank you, Mr. Chairman, Commission Panel.

7 **CROSS-EXAMINATION BY MR. WEAFER:**

8 MR. WEAFER: Q: Good afternoon, B.C. Hydro panel. My
9 name is Chris Weafer. I have spoken with some of you
10 before in this proceeding. I'd like to start off with
11 Mr. Scouras, who we've not had the pleasure of
12 discussing topics in this hearing. And I'm following
13 up on my cross-examination of Mr. Elton in Panel 1,
14 and he passed the matter on to Panel 4, and I assume
15 it's to you, and the discussion -- I don't think
16 you'll need to turn to it, but for the sake of the
17 transcript, it was at Volume 4, and the discussion was
18 at pages 538 to 549. Are you familiar with that
19 discussion at all, Mr. Scouras? And the issue was a
20 discussion around flexibility in terms of contracting
21 with independent power producers in response to the
22 Clean Call or others.

23 MR. SCOURAS: A: I think I am, but if you could just
24 give me a second to give this a quick perusal, I'd
25 appreciate it.

26 MR. WEAFER: Q: Absolutely. It runs from page 548 --

1 MR. SCOURAS: A: 548?

2 MR. WEAVER: Q: Sorry, 538 to 549.

3 MR. SCOURAS: A: So, I'm aware of this. If you want to
4 talk to specific pages, it does cover ten pages, so --

5 MR. WEAVER: Q: Fair enough. I'm taking you to a
6 general level. I did want you to know what they had
7 said --

8 MR. SCOURAS: A: Okay.

9 MR. WEAVER: Q: -- in the discussion. And just to put
10 the discussion in context, in prior cross-examinations
11 we've highlighted from the Commercial Energy
12 Consumers' perspective the desire for flexibility. We
13 are in difficult times, and difficult for B.C. Hydro
14 in terms of planning. Would you agree with that?

15 MR. SCOURAS: A: I think there was a lot of discussion
16 during Panel 1 of the unique aspects of this time, and
17 different implications on the LTAP, so I would take
18 that as being something that's been well-discussed.

19 MR. WEAVER: Q: Thank you, yes. Now, in looking
20 specifically at the Clean Call, I was intrigued by
21 your discussion with Mr. Quail this morning in terms
22 of contracting practices. And as I understood the
23 discussion with Mr. Quail this morning, and I can't
24 quote it directly, but did you understand that
25 discussion to be in the context of the existing Call
26 for tender in terms of flexibilities within -- in

1 terms of what level of power B.C. Hydro would acquire
2 in response to this Call?

3 MR. SCOURAS: A: What I recall from the conversation
4 was examples that were focused around the current
5 Call, and what could happen after contracts had been
6 awarded and a commitment has been made between both
7 parties.

8 MR. WEAFFER: Q: And I think that was part of the
9 discussion, and I also understood there was a comment
10 around under-awarding the Call. In the sense of --

11 MR. SCOURAS: A: Oh, right.

12 MR. WEAFFER: Q: -- not necessarily contracting to the
13 full level of the Call, which level is yet to be
14 approved by this Commission in any event, correct?

15 Actually, there's two questions, so in
16 fairness to you --

17 MR. SCOURAS: A: Yeah. So if you can give me the first
18 part --

19 MR. WEAFFER: Q: In fairness to you -- in fairness, let
20 me do the second part first.

21 MR. SCOURAS: A: Okay.

22 **Proceeding Time 3:15 p.m. T62**

23 MR. WEAFFER: Q: Clearly, it's -- B.C. Hydro is applying
24 for a level to be approved by this Commission as part
25 of this proceeding in terms of --

26 MR. GODSOE: Mr. Chair, you know what I'm going to say,

1 and I'm fussed with this. It is "endorse", not
2 "approve".

3 MR. WEAVER: And I'm fine with "endorse", Mr. Godsoe.

4 MR. WEAVER: Q: With that caveat, at this point, B.C.
5 Hydro does not know what they will have endorsed by
6 the Commission as part of this Clean Call, correct?

7 MR. SCOURAS: A: That is correct.

8 MR. WEAVER: Q: And in the discussion with Mr. Quail
9 this morning, in terms of -- and I have the word
10 "under-awarded" underlined in my notes. When you were
11 speaking about under-awarding, in your mind, were you
12 contemplating B.C. Hydro awarding less than what this
13 Commission may endorse as part of this proceeding?

14 MR. SCOURAS: A: Maybe in -- I'll try to recall the
15 basis of the discussion I believe we had with Mr.
16 Quail, and if that's not the right one, then please
17 help me out.

18 As I recall, there was a hypothetical
19 situation given to me that, what if we were directed
20 to award 1,000 gigawatt hours post-attrition. And
21 what the implications would be to the existing 68
22 bidders. And I believe my response to that was that
23 there would be more folks competing for a smaller pie,
24 potentially, or it also could mean that some folks
25 would not be eligible to have their contract awarded,
26 because they would be larger than the available pie.

1 So that's the conversation that I specifically
2 remember. I don't remember us talking about more
3 abstract aspects of what would cause us to under-award
4 or over-award.

5 MR. WEAVER: Q: Fair enough. So, and if I
6 misunderstood the discussion, it's not my intent to
7 change your evidence. But would you agree with me
8 that B.C. Hydro would not be restricted from under-
9 awarding in the face of material changes in
10 circumstances between now and when B.C. Hydro actually
11 contracts for power as part of the Call?

12 MR. SCOURAS: A: And one of the elements -- I would
13 agree with you, and one of the items that we have
14 that's stipulated in the Request for Proposals is that
15 B.C. Hydro does have the flexibility to make awards
16 based on a number of factors. If you look at the
17 evaluation section of the RFP, it lays out a financial
18 evaluative aspect to it, but also gives B.C. Hydro the
19 discretion to make -- to take other elements into
20 account, which includes updated load supply/demand
21 balance or other public interest factors. So we would
22 take those into account when looking at the bids and
23 decide on what we think the right course of action is.

24 MR. WEAVER: Q: So --

25 MR. GODSOE: Sorry, it might be helpful to put on the
26 record too there's a privative clause by which Hydro

1 isn't obliged to take any energy at all, and that's
2 quite typical.

3 MR. SCOURAS: A: Right.

4 MR. GODSOE: But I wanted to get that on the record, it's
5 a legal issue.

6 MR. MATHESON: A: I think, Mr. Weafer, it might be
7 helpful -- when you say "under-award", you mean award
8 less annual energy than we had originally anticipated
9 when we released the Call itself.

10 MR. WEAFER: Q: That is one aspect of it. The second
11 aspect of it would be under-award in terms of less
12 than this Commission may endorse, because B.C. Hydro
13 makes the judgment at the time that the level of
14 supply endorsed is actually not required to fill the
15 gap.

16 MR. MATHESON: A: Okay.

17 MR. SCOURAS: A: And that was the assumption I was
18 making in responding to your query, so thank you for
19 clarifying, Mr. Matheson.

20 MR. GODSOE: And, Mr. Weafer, would it be helpful in
21 argument for us to outline the various provisions that
22 speak to this in the RFP? Because it is a legal issue
23 as well.

24 MR. WEAFER: That would be helpful, yes.

25 MR. WEAFER: Q: Mr. Scouras, the concerns that IPPs may
26 have with respect to this have -- were highlighted by

1 Mr. Elton, and Ms. Van Ruyven. Would you agree with
2 me, having been involved in Call processes, that the
3 option of potentially getting a contract with B.C.
4 Hydro at a subsequent date, where the contract is not
5 initially accepted, would be attractive to an IPP who
6 has invested in the Call processes?

7 MR. SCOURAS: A: So, I'm not trying to be difficult
8 here, because I did read the transcript. Could you
9 sort of walk me through that again, and option -- so
10 the option is for what?

11 MR. WEAFFER: Q: Well, let me -- the only reference to
12 the transcripts I have there was that Mr. Elton --

13 MR. SCOURAS: A: Right.

14 MR. WEAFFER: Q: -- was indicating, we're in the middle
15 of a Call and wasn't confident or wasn't supportive of
16 interfering with the Call. But you're now the person
17 who's actually dealing with the Call.

18 MR. SCOURAS: A: Right.

19 MR. WEAFFER: Q: So I'm really trying to get the
20 understanding of the reality of the relationships
21 between Hydro and IPPs. So put it at a simple level.
22 Would you agree with me that someone with -- a
23 commercial party that is not selected as part of the
24 Call, but is nonetheless requested by Hydro because
25 Hydro has contractual flexibility to continue to stand
26 by, for a price, to make their bid available on a

1 Hydro may be interested in buying their projects.

2 People have real dollars they need to invest, and are
3 looking for more of a return than just doing
4 permitting or other aspects associated with their
5 project.

6 MR. WEAFFER: Q: Thank you. What I take from the answer
7 is some may, some not.

8 MR. SCOURAS: A: I believe that's what I said, yes.

9 MR. WEAFFER: Q: And would you agree with me that there
10 may be projects which are scalable, which may be
11 successful in a portion of the Call, but that B.C.
12 Hydro may have the option to encourage them to remain
13 ready to add more supply to B.C. Hydro for further
14 payment?

15 MR. SCOURAS: A: Scalability, that's an interesting
16 aspect. When we look at the range of technologies
17 that are in the Clean Power Call, I think few of them
18 have scalability as a future. Most of them are at a
19 specific site where someone has optimized the aspects
20 of their projects. So in terms of being to put in
21 more turbines, or different aspects to it, I think
22 scalability is probably challenging for a lot of the
23 projects that we currently have bid into our calls.

24 MR. WEAFFER: Q: And I'm careful to recognize that you
25 are in a process now.

26 MR. SCOURAS: A: Right.

1 MR. WEAFFER: Q: And I'm not looking to draw detail out
2 of specific bids.

3 MR. SCOURAS: A: Right.

4 MR. WEAFFER: Q: But would you agree that the Calls that
5 B.C. Hydro has received to date have identified much
6 of the, for lack of a better term, low-hanging fruit
7 in terms of economic IPP projects within the province?
8 That you're seeing the best of what is available at
9 this time?

10 MR. SCOURAS: A: So I think my response to that is I
11 think that was true earlier this decade. I don't
12 believe it's -- or maybe I should -- I should ask you
13 to rephrase it. Are you saying that we're getting the
14 best projects now, and there's no better projects in
15 the future?

16 MR. WEAFFER: Q: I'm saying that the market has assessed
17 what are the best projects now, and those are what
18 have come to B.C. Hydro in response to this call.

19 MR. SCOURAS: A: Well, I hope so. I hope we're getting
20 good quality projects. But in terms of the low-
21 hanging fruit in the province, I think there was quite
22 a bit of IPP activity in the '90s. So I think our
23 first Calls in the early 2000s, we had a lot of
24 projects that people had been advancing for five or
25 ten years that are relatively well known. So I think
26 what we're really now into our projects where people

1 in the private sector, as we've provided more
2 transparency and more -- or aspect of what's going to
3 happen in the future, have gone and prospected
4 different projects. And as the network grows, I think
5 people are continuously trying to prospect good
6 quality projects.

7 So I don't know if the low-hanging fruit
8 idea that, you know, we're at the lower rung of the
9 trees and we're going to eventually run out of that,
10 and I don't want to go down a road of analogies, but I
11 don't know if it isn't that there are good projects
12 that will become more economically viable over time.

13 MR. WEAVER: Q: Would you agree that there may be good
14 projects identified that may not be selected as part
15 of this Call, but that may be attractive to B.C. Hydro
16 at a subsequent date? That there's been work done
17 that has value to B.C. Hydro in terms of specific
18 projects in the call?

19 **Proceeding Time 3:26 p.m. T64**

20 MR. SCOURAS: A: I think the work that's been done to
21 date has value to the developer, trying to reflect why
22 they feel the project is valuable, and when that -- we
23 should purchase. So I think the value of the -- and I
24 think Ms. Van Ruyven made this point, is that the
25 structure of RFPs is such that the IPPs go do the
26 prospecting, pay those development costs, and then

1 hope to get a contract with us. So, to the extent
2 that there's more options in the province down the
3 road to compete, or potentially develop power, then
4 that's probably a good thing. But the current value
5 rests with the IPP.

6 MR. WEAVER: Q: Let's take it to the next step, which
7 is that B.C. Hydro does identify that the project has
8 value and in fact B.C. Hydro, on behalf of its
9 customers, would like to see the project taken to the
10 next stage, in terms of development, but doesn't wish
11 to go to the point of purchasing the power. Has that
12 option been assessed by B.C. Hydro?

13 MR. SCOURAS: A: So, we've had discussions about that
14 option. And I think we actually provided a
15 perspective on that in CEBC IR 2.5.3. So, I think our
16 perspective, looking at it right now, is that we have
17 some pretty serious concerns about what -- how that
18 approach would work. First of all, you've used the
19 word "value". How would you choose folks that you
20 think that you want to have options with? A lot of
21 the way we're choosing IPPs right now is based on
22 cost-effectiveness. So, how would you choose who
23 you'd want to participate in some kind of process? I
24 think we've also -- we're not -- you'd have less
25 certainty about what their trajectory was. You'd have
26 less certainty about what deliveries would be, and

1 less certainty of what the contract terms would be.

2 So we have discussed it at a fairly high
3 level, and again I'd bring you back to your earlier
4 point that we do have an RPF that's structured and
5 designed to make firm award -- firm contract awards.
6 And I believe it was Mr. Elton that suggested that may
7 be something that's worthy of further consideration in
8 the future.

9 MR. WEAVER: Q: Well, that's helpful, thank you. Just
10 to put it in the context in the discussion around
11 relative value of this initiative, and Mr. Savidant,
12 you're the member of the panel responsible for the
13 Site C review?

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

15 MR. WEAVER: Q: And as I understand it, B.C. Hydro is
16 looking to have approval of \$41 million in
17 expenditures to undertake and complete the Stage 2
18 definition and consultant -- consultation phase for
19 Site C, correct?

20 MR. SAVIDANT: A: Subject to Mr. Godsoe's wording on
21 "endorsement" versus "approval", I think that's
22 correct.

23 MR. WEAVER: Q: Fine. So, there we have -- the
24 relative certainty of that project, can you -- can the
25 panel -- and maybe you two gentlemen give me a sense
26 of the investment being sought there, and you'll agree

1 with me that that \$41 million is not going to create a
2 level of certainty to determine whether Site C should
3 be built or not, correct?

4 MR. SAVIDANT: A: No, we have a staged process for
5 evaluating the project, and this is Stage 2 of what we
6 propose is a five-stage process. So what this will do
7 is, this will -- when we end this stage, we'll have
8 updated information on some of the technical,
9 environmental and social issues around the project.
10 We'll have the results of an extensive public
11 consultation process and we'll have an updated cost
12 estimate and unit energy cost. What we'll then do is,
13 we'll then look at that information and provide a
14 recommendation to government on whether or not it
15 makes sense to proceed to the next stage, which would
16 involve more detailed regulatory processes with the
17 project.

18 MR. WEAFFER: Q: So at this point with respect to Site
19 C, B.C. Hydro doesn't have a specific set of criteria
20 around proceeding with the project or not, correct?

21 MR. SAVIDANT: A: Are you talking about the final
22 decision --

23 MR. WEAFFER: Q: Yes.

24 MR. SAVIDANT: A: -- on whether or not to construct the
25 project?

26 MR. WEAFFER: Q: Or criteria even to -- arriving at that

1 decision.

2 MR. SAVIDANT: A: Sorry, maybe you could -- so, if
3 you're talking about the criteria on whether to move
4 to Stage 3 or not, we have -- we do have a criteria
5 around that, and it's basically looking at some of the
6 results of this actual LTAP itself. So, is there the
7 potential for there to be a need for the project
8 within the 20-year planning horizon, or by the
9 earliest in-service date that we've identified as
10 2019? Then, does Site C appear to offer potential
11 benefits to ratepayers compared to some of the other
12 options that we have identified as part of the
13 resource options update? Other criteria would be
14 around whether or not we think it's actually feasible
15 to build the project from a technical and social
16 perspective.

17 And then the final evaluation criteria that
18 we'd look at before we'd decide whether to move to
19 Stage 3 is based on the uncertainties around all the
20 first three criteria, do we think there's value to
21 proceeding to gather more information to proceed to
22 the next stage? Do we think there's value to
23 ratepayers from proceeding to that next stage?

24 **Proceeding Time 3:31 p.m. T65**

25 MR. WEAFFER: Q: So would you agree with me that what
26 we're undertaking with B.C. Hydro -- with the

1 evaluation of Site C is really a fairly -- well, an
2 expensive process around determining whether an option
3 should be available?

4 MR. SCOURAS: A: I think the process is really -- it is
5 looking at preserving the option value of Site C going
6 forward, and preserving the option to actually
7 construct it by the earliest in-service date. When
8 you talk about whether or not that's an expensive
9 process, \$41 million isn't a small amount, but
10 compared to the actual total capital costs that you
11 would be committing if you were to actually decide to
12 proceed with the project, it actually is fairly small
13 amount compared to that total capital cost.

14 MR. WEAFFER: Q: And so back over to Mr. Scouras, just
15 looking at the Hydro approach to Site C in terms of
16 investing in what at this point is the option, I mean,
17 do you see any parallel in terms of customers
18 investing in creating options available for IPP
19 supply, that may not be called on in the short term
20 but may be available if the need does arise?

21 MR. SCOURAS: A: So I think, and I'll try and be as
22 clear as I can be here; I think as it pertains to the
23 current Clean Power Call RFP, we have a Call that's
24 designed toward contracts to meet a defined need by a
25 period of time. I think the idea of -- if there
26 wasn't a defined need but options want to be kept

1 alive in the province, this may be something that's
2 worth consideration. I'm not aware of any other
3 jurisdictions that are doing this. And we do have
4 some concerns but we don't have any data notionally to
5 know if it would be effective or not effective. It's
6 something that would probably be worth investigating,
7 if there wasn't a defined need. If there's a defined
8 need, then I'd put to you that a competitive vehicle
9 is a good tool to get there, and that's the one that
10 we're using right now.

11 MR. MATHESON: A: And Mr. Weafer, I think we're
12 pointing out that a Call process is effectively an
13 option to us. And the kind of timeframes that we're
14 talking about in terms of maintaining the optionality
15 of a decision on Site C aren't all that different from
16 the length of a Call process itself in terms of
17 initiating it, getting bidders, and making selections
18 after a negotiations process. They're not all that
19 different, those timeframes. So the Call process
20 itself could be seen as an option that's available to
21 us.

22 MR. WEAFER: Q: Mr. Matheson, I don't want to go back
23 to the load forecast discussion, but you'll recall
24 that we've had a 5500 megawatt drop in load forecast
25 between 2006 and 2008, which is raising some serious
26 concerns about how much power we need and how soon.

1 MR. MATHESON: A: Well, I don't think your numbers are
2 correct, but I do agree that there's a drop in the
3 load forecast.

4 MR. WEAFFER: Q: There's been a material drop in the
5 load forecast 25 years out between 2006 and 2008,
6 correct?

7 MR. MATHESON: A: Yes. I don't think it's in the order
8 of 5500 megawatts, but --

9 MR. WEAFFER: Q: Well, that's the record -- we'll deal
10 with that in argument. And so would you agree with me
11 that that uncertainty would lead customers to wish to
12 make sure we're making prudent investments in supply
13 options?

14 MR. MATHESON: A: Well, I think we always have to make
15 prudent investment in supply options. There's no
16 question about that. We talked about this on Panel 2.
17 The change in the load forecast has the effect of
18 moving load forecast out a couple of years, and then
19 we'll start to see a trajectory of growth very similar
20 to that, that we were already seeing in 2006. So the
21 overall, we will start to see load growth toward our
22 historical level. So we're not talking about a
23 difference of 20 years, we're talking about
24 essentially a two- or three-year delay, depending on
25 what actually occurs within that.

26 My point is that if you're trying to

1 compare Site C, which is (a) much larger, (b) has the
2 qualification of government approval that goes with
3 it, and much higher dollars and much more intensive
4 development issues associated with it than the typical
5 IPP project that we get in our Calls,

6 **Proceeding Time 3:35 p.m. T66**

7 I think it's comparable to say that the
8 kind of optionality that we're trying to maintain with
9 Site C is not all that different in terms of the
10 optionality of being able to go out and actually have
11 a Call, which is rather different from where I think
12 you were coming from, which was to say "Could you
13 bring some projects in, in the current Call that we
14 have out right now, and then string them along and use
15 them as an option?" I see that as quite a different
16 thing than the kind of optionality that we're trying
17 to maintain on Site C.

18 MR. WEAVER: Q: But it's an additional option.

19 MR. MATHESON: A: Well, it could be, I think, that's
20 right. But we always run -- we always try to run the
21 balance between our Call processes, which have to, at
22 the end of the day, work for the IPP community itself,
23 and the prudence of what we purchase. I mean, the
24 more IPPs we can attract into our Calls, the better
25 off our customers will be, because we'll get better
26 processes.

1 And so, if there's some residual projects
2 IPPs at the end of the day that have already bid into
3 the Call that don't necessarily get selected but can
4 be maintained for an option, that's one thing. But to
5 suggest that there's going to be this roster of IPPs
6 that are sort of out there forever and a day, they're
7 going to be willing to bid in when we come calling, I
8 think that's quite a different thing.

9 MR. WEAVER: Q: Well, I'll move on shortly, but there
10 is an objective in the province to develop and see the
11 development of the IPP industry. Would you agree with
12 that?

13 MR. MATHESON: A: Well, when you say -- can you clarify
14 that? I'm not sure what you mean by "objective in the
15 province".

16 MR. WEAVER: Q: You don't understand that to be a part
17 of the energy policy, to assist in the development of
18 the IPP industry?

19 MR. MATHESON: A: The provincial government's?

20 MR. WEAVER: Q: Yes. Yes.

21 MR. MATHESON: A: Yes, that's correct. Yes.

22 MR. WEAVER: Q: And B.C. Hydro looking at its long-term
23 acquisition plan, taking a step which creates further
24 opportunity for IPP participants because of the
25 existence of an option scenario where they may be able
26 to recover their development costs, would you see that

1 as a contributor to that development?

2 MR. SCOURAS: A: Can I offer a thought on that? To
3 date, our IPP strategy has been to fulfill a defined
4 need through different competitive Calls for power.
5 We've had a series of Calls, because we've had a
6 defined need that we needed to fill. If, going
7 forward, we want to maintain other options, with an
8 uncertain end point, and I think that's where I've
9 tried to be clear that that is something that is
10 worthy of consideration. There may be other
11 approaches to that as well. But it's not -- to date
12 has not been one -- a tool that we thought would be
13 effective because we do want people to have their
14 projects built by 2016. So that's why we design a
15 process that says, commit to this price, commit to
16 this date, if you don't get there, then there's
17 penalties.

18 I think what you're talking about is a
19 different world where we're not sure if we need some
20 power, but we want to keep people moving along. Well,
21 then, we'll have to think about what's the appropriate
22 strategy to maintain investment in projects, if that's
23 what we want, but also have things that we may want to
24 pick up along the way.

25 MR. WEAFFER: Q: A last question on the topic, Mr.
26 Scouras. Wouldn't you agree that we're in a different

1 world than we were in two years ago when you started
2 on this Call?

3 MR. SCOURAS: A: I would -- again, what I would say is
4 that our current Request for Proposal gives us the
5 ability to evaluate projects on the most up-to-date
6 load forecasts and make the awards that we think are
7 prudent.

8 MR. WEAFFER: Q: Thank you, sir.

9 MR. MATHESON: A: We still have long-term needs, Mr.
10 Weafer, in the system. So in that sense, we're not --
11 we're in a different world economically and we've got
12 different conditions that we have to deal with, but
13 the end -- we still need to acquire new resources to
14 meet future load growth. So in that sense, we're not
15 in a different world.

16 MR. WEAFFER: Q: Would we have higher certainty two
17 years out? Looking at the longer term from that point
18 on?

19 MR. MATHESON: A: Sorry, I missed the first part of
20 that.

21 MR. WEAFFER: Q: Would we have higher certainty two
22 years out from now, looking at the long term, from
23 that point on?

24 MR. MATHESON: A: I don't know. We'll have to assess
25 that when we get there two years out.

26 MR. WEAFFER: Q: But doesn't common sense say you're

1 going to have a higher level of certainty when you're
2 closer to the point in time you're reviewing?

3 MR. MATHESON: A: Yes, if you're talking about a static
4 point in time, you're right, you will have higher
5 certainty the closer you get to it. Generally
6 speaking.

7 MR. WEAFFER: Q: Thank you. Thank you. I'll move
8 along. If I could refer you to -- and here -- and
9 this will be the focus of much of my cross-
10 examination, as meeting the gap. And if I could turn
11 you to Exhibit B-12, BCUC IR 3.262.1.

12 MR. SCOURAS: A: Do you mind repeating the reference
13 again?

14 MR. WEAFFER: Q: Yes, it's Exhibit B-12, IR BCUC
15 3.262.1.

16 MR. SCOURAS: A: Thank you.

17 MR. WEAFFER: Q: And really a higher-level question just
18 to set the context of the -- of later discussions.
19 Now, Commission staff was looking -- sorry.

20 I take it from the response that B.C. Hydro
21 is not recommending a quantitative probability
22 estimate for meeting the SD 10 requirement, correct?

23 MR. MATHESON: A: The response to the IR?

24 MR. WEAFFER: Q: Yes. I take it from that -- the
25 response to the IR, the -- B.C. Hydro isn't telling
26 the Commission that it has a quantitative probability

1 estimate for meeting the SD 10 requirement.

2 **Proceeding Time 3:42 p.m. T67**

3 MR. REIMANN: A: So do you have a reference to that in
4 this IR?

5 MR. WEAVER: Q: The response. In terms of the response
6 it's --

7 MR. REIMANN: A: I think what we said here is that we
8 weren't 100 percent -- we didn't think we needed and
9 were 100 percent certain, that we wouldn't require 100
10 percent certainty.

11 MR. WEAVER: Q: Right, so it's not a -- there's a large
12 level of judgment applied to determining whether
13 you're meeting the requirements of SD 10. B.C. Hydro
14 has applied its judgment to assessing whether it's
15 meeting the requirements of SD 10, correct?

16 MR. REIMANN: A: I think that's true.

17 MR. WEAVER: Q: And the Commission, in looking at its
18 endorsement or review of the plan, also shouldn't be
19 looking for a quantitative probability to determine
20 whether it should endorse or not. It also should be
21 applying judgment to the materials before it, correct?

22 MR. REIMANN: A: I think that's fair.

23 MR. WEAVER: Q: Now, in response at page 2 in this
24 discussion of the level of probability that should be
25 assigned, B.C. Hydro does acknowledge as part of its
26 filings and its evidentiary update, that the current

1 economic uncertainty, economic hardship and potential
2 for further delays in load growth, caused a change in
3 their perspective, caused its judgment in terms of how
4 to achieve SD 10 to be achieved, correct?

5 MR. REIMANN: A: I'm sorry, I didn't follow that
6 question.

7 MR. WEAVER: Q: That B.C. Hydro has changed its
8 judgment from that which was originally filed, in
9 terms of its assessment as to how to meet SD 10, it's
10 updated its evidence because of changes in economic
11 circumstances. Correct?

12 MR. REIMANN: A: So we have changed the actions of the
13 LTAP.

14 MR. WEAVER: Q: Yes.

15 MR. REIMANN: A: That is correct.

16 MR. WEAVER: Q: Recognizing the change, and so you're
17 -- the probability assessment that you did with the
18 initial filing has changed as a result of changed
19 economic circumstances and economic hardship, and the
20 evidence has evolved, the factors supporting your
21 applications have evolved, correct?

22 MR. REIMANN: A: Agreed.

23 MR. WEAVER: Q: Now, in terms of the next period of
24 time for applying judgment, as I understand -- or B.C.
25 Hydro is applying judgment, I take it from this
26 response that it would be the filing of the next LTAP

1 in 2011. Is that --

2 MR. MATHESON: A: Is your question, Mr. Weafer, when we
3 would have the next opportunity in front of the
4 Commission to change our long-term actions?

5 MR. WEAFER: Q: Well, the question relates to you've
6 made a judgment change that revised your application,
7 and now you're indicating you'll be filing another
8 LTAP in 2011.

9 **Proceeding Time 3:45 p.m. T68**

10 MR. MATHESON: A: That's our proposal, that's correct,
11 is to file the next one in 2011.

12 MR. WEAFER: Q: And would that be, in B.C. Hydro's
13 view, the next step in terms of assessing the
14 probability of meeting SD 10?

15 MR. MATHESON: A: I don't think so. I think the next
16 step will be the Section 71 filing for the Clean Power
17 Call.

18 MR. REIMANN: A: And just to be clear on that, if we
19 felt that aside from the Commission endorsing the
20 3,000 gigawatt hour from the Call, if we felt that the
21 circumstances had changed, that would provide an
22 opportunity to address it at that time. In the
23 absence of changing it at that point, I think the next
24 LTAP would be when you would see our next assessment
25 of achieving and delivering on self-sufficiency.

26 MR. WEAFER: Q: If you could help me with that

1 response, Mr. Reimann, are you saying as part of the
2 Section 71 you may come in with a different level of
3 request for endorsement on the contracts than the
4 level that the Commission may endorse as part of this
5 process?

6 MR. REIMANN: A: I think that option is open, yes.

7 MR. MATHESON: A: Your question was when would be our
8 next opportunity to exercise judgment about what we
9 would do pursuant to our long-term plan, and I think
10 the next opportunity will be the Section 71 process.

11 THE CHAIRPERSON: And the one after that may well be the
12 Section 5 inquiry.

13 MR. MATHESON: A: It may well be. That's right.

14 MR. WEAVER: Q: And just focusing on the Section 71
15 filing, would B.C. Hydro -- is B.C. Hydro saying that
16 that -- the endorsement received as part of this
17 filing in seeking the 3,000 gigawatt hours before
18 attrition, that that level may go up or down with the
19 Section 71 filing?

20 MR. MATHESON: A: I don't think we've determined
21 whether it would go up and down. It's just that we
22 have that option to do that.

23 MR. WEAVER: Q: With respect to the -- so there's the
24 supply side. With respect to the DSM side of the
25 equation, would B.C. Hydro continue to pursue all
26 cost-effective DSM irrespective of whether the gap was

1 filled or not?

2 MR. HOBSON: A: So I think maybe the best way to
3 approach an answer to your question is we would take
4 the level of DSM that comes through this process, and
5 the dollars associated with the plan that goes with
6 that level, and our intent would be to implement a
7 plan consistent with those dollars and try to drive as
8 much demand-side management through that plan as we
9 could within that period. And then I think we would
10 have a process of looking back and revisiting what was
11 successful with demand-side management and what wasn't
12 and recasting our plan and looking that in the context
13 of future LTAPs. And that would be the opportunity
14 to take a look and see if the level of demand-side
15 management that we are pursuing is still the
16 appropriate level or not.

17 **Proceeding Time 3:48 p.m. T69**

18 MR. WEAVER: Q: So the next opportunity on the DSM side
19 is 2011. On the supply side we may see intermediate
20 steps in terms of the Section 71 filing, but on the
21 DSM side there will be no further --

22 MR. HOBSON: A: The one difference from my perspective
23 is at the point that we move forward with a demand-
24 side management plan and an associated dollar amount
25 that goes with that, we would work to try to stay
26 within that budget amount, but we would try to get as

1 much energy savings through that as we could, and I
2 think to the degree that we chose to move beyond that,
3 then we would be taking our own judgment and our own
4 risk associated with those dollars, I suppose.

5 MR. MATHESON: A: And we talked yesterday about needing
6 to develop some time based milestones about how the
7 plant is tracking and whether we need to them make
8 adjustments if things don't go according to how we
9 think they might.

10 MR. WEAVER: Q: The contingency question is certainly
11 well-canvassed. My point is when -- and I believe I
12 have a response that really it will be -- the reviews
13 are going to occur between now and 2011 and you expect
14 the 2011 to develop an assessment of the plans filed,
15 of the expenditures here, and I assume by then,
16 possibly contingency plans in the event you are not
17 needing your --

18 MR. HOBSON: A: With respect to DSM.

19 MR. WEAVER: Q: Yes.

20 MR. HOBSON: A: Yeah, I think that's consistent with
21 what I've outlined.

22 MR. WEAVER: Q: And in the interim, will you continue
23 to pursue all cost-effective DSM even other than that
24 which may be identified in your plan?

25 MR. HOBSON: A: I think I just spoke to that, but maybe
26 you could reframe your question. Are you talking

1 about within the dollars that I was speaking of?

2 MR. WEAFFER: Q: Within the opportunities that may arise
3 where something -- for example, a government
4 initiative that is implemented in the short term that
5 may have value to B.C. Hydro unanticipated today, but
6 available in six months. Would you see B.C. Hydro
7 taking steps to try and respond to what other
8 incentives may --

9 MR. HOBSON: A: I think it would depend on what the
10 opportunity was. But again, I think at the point that
11 we leave this process with an accepted level of energy
12 savings and set of dollars that go with that, I think
13 our intent would be to try to work within those
14 dollars to drive as much energy savings as we could
15 through those dollars. To the extent that there are
16 other opportunities that materialize, I think we would
17 have to judge those as they came up.

18 But I think our next opportunity to
19 look at it in the context of the full picture with
20 respect to DSM is in that next LTAP.

21 **Proceeding Time 3:51 p.m. T70**

22 MR. WEAFFER: Q: Fair enough. And we'll come back to
23 that topic, but just in terms of the GAAP question and
24 just to deal with an issue that deals more with the
25 excess in the GAAP, and an issue that we've raised
26 before, and if I could turn you to Exhibit B-12, and

1 it's an IR, JIESC 3.27.6. And this relates to the
2 topic which I think will carry us to the end of the
3 day, of the relationship with Powerex and the trade
4 income account. And I don't intend to pursue the
5 transfer pricing agreement in detail, but just again
6 to highlight the customer concern around the transfer
7 pricing agreement.

8 In response to the JIESC IR, and the
9 question:

10 "Confirm that B.C. Hydro customers will not
11 benefit from the sale of energy surpluses in
12 excess of 200 million."

13 The response referred to a B.C. Hydro undertaking from
14 the 2006 IEP LTAP hearing. Is there someone on the
15 panel that can speak to this IR?

16 MR. REIMANN: A: At a high level.

17 MR. WEAVER: Q: Okay, fair enough. The -- as I
18 understand the response, customers are not penalized
19 by B.C. Hydro acquiring in excess of its needs on the
20 supply side that may then be sold by Powerex into the
21 market on behalf of Hydro. Is that a correct summary
22 of the response?

23 MR. REIMANN: A: I think I agree with what you're
24 saying in that if B.C. Hydro owns and acquires energy
25 that's surplus to its needs, that Powerex would be the
26 entity that would sell it, but the proceeds come back

1 to the generation business and don't flow through the
2 trade account.

3 MR. WEAFFER: Q: And that would be B.C. Hydro inter-
4 segment revenue, is that how that would be
5 characterized?

6 MR. REIMANN: A: That would be, sorry?

7 MR. WEAFFER: Q: That would be B.C. Hydro inter-segment
8 revenue, is that how that would be characterized? Do
9 you know?

10 MR. REIMANN: A: I'm not sure.

11 MR. MATHESON: A: Sorry, inter-segment -- well, I'm not
12 sure what you mean when you say "inter-segment".

13 MR. WEAFFER: Q: If you can't respond, well, that's
14 fine. The prejudice to customers, as I understand it,
15 relates to investments in capacity and the creation of
16 surplus capacity, which may not be needed for domestic
17 purposes. Would that be your understanding of where
18 the trade income account can work to the detriment of
19 customers?

20 MR. REIMANN: A: I don't understand "working to the
21 detriment of customers".

22 MR. WEAFFER: Q: If capacity is -- if investments in
23 capacity are made which are in excess of domestic
24 customer needs, Powerex is entitled to utilization of
25 that capacity for the development of trade income. Is
26 that correct? Powerex has the right to utilize

1 capacity on the system for trade. Is that --
2 MR. GODSOE: Mr. Chairman, this might be timely to put
3 forward my concerns on this, and I guess I can ask my
4 friend to further -- I want a further understanding
5 how this \$2 million cap is even remotely relevant to
6 the LTAP.

7 So, my friend referenced Mica Units 5 and 6
8 and transmission when dealing with this issue in his
9 opening statement, and the references trend --
10 Transcript Volume 3, page 209, lines 10 to 12.

11 "As you know, pursuant to BCUC Order G-126-
12 08 ..."

13 -- and that's Exhibit A-4 --

14 "... the evidentiary phase for Mica Units 5
15 and 6, definition phase expenditures, is
16 closed."

17 And that ended on 15 October 2008. So that's set
18 aside. And frankly, with respect to transmission,
19 there are no asks in the LTAP, so I would submit that
20 again that isn't relevant.

21 So I'm struggling to understand how this is
22 even remotely relevant to the LTAP.

23 **Proceeding Time 3:51 p.m. T71**

24 THE CHAIRPERSON: I'm not sure where you're taking this,
25 Mr. Weafer.

26 MR. WEAFER: Well, I understand there are expenditures of

1 \$30 million required to undertake and complete the
2 definition phase for Mica Unit 5 and Mica Unit 6.

3 MR. GODSOE: The phase for that is closed.

4 THE CHAIRPERSON: And you're timed out on that.

5 MR. WEAFFER: Then I will move on, Mr. Chairman, although
6 the issue -- in terms of --

7 MR. GODSOE: Let me help my friend out, though. His
8 issue is relevant. I think in BCUC IR -- response to
9 BCUC IR 2.211.1, Exhibit B-4, we're clear that we will
10 move to an implementation phase for Mica Units 5 and
11 6, and I think my friend's issue is relevant there.
12 It just isn't relevant here. The definition phase and
13 the evidentiary phase is closed. That's my
14 submission.

15 So I don't think we're going to end this
16 debate as far as my friend is raising, but I am
17 suggesting that it's not relevant to this proceeding.

18 MR. WEAFFER: The issue relates to long-term acquisition
19 processes of B.C. Hydro, Mr. Chairman, and the concern
20 around long-term supply investments that may create
21 excess capacity on the B.C. Hydro system. The
22 relevance, B.C. Hydro responded to the IR of the JIESC
23 with respect to the impact of the transfer pricing
24 agreement, and didn't argue relevance there.

25 So I don't need to press this any further,
26 Mr. Chairman, except to make sure there is a common

1 understanding from the customer's perspective in terms
2 of the income of the trade income cap as it relates to
3 planning for long-term acquisition by B.C. Hydro. And
4 that's really --

5 THE CHAIRPERSON: If you want to stay generic, Mr.
6 Weafer, I think you can.

7 MR. GODSOE: The \$200 million cap is legislated pursuant
8 to Section 1 of Heritage Special Direction HC2. So
9 the Commission can't change it, Mr. Chairman. So
10 again I say this issue is irrelevant to this
11 proceeding.

12 THE CHAIRPERSON: I'm not arguing. Sorry, I hear what
13 you're saying, Mr. Godsoe. I felt at a general level
14 that Mr. Weafer's question was not objectionable. If
15 he's talking about the acquisition of capacity that is
16 excess to ratepayers' needs, he can be told. I think
17 that's a reasonable enough question.

18 MR. WEAFER: And that is the focus of the inquiry, Mr.
19 Chairman, to make sure there is a common
20 understanding. And if I could proceed.

21 THE CHAIRPERSON: On a general basis, yes.

22 MR. WEAFER: On a general. And that is the intent,
23 really. Mica were the examples.

24 MR. WEAFER: Q: But gentlemen, in terms of the --
25 actually let me put the question to you in a manner
26 that we're not going to go beyond your level of

1 knowledge on the topic, because it's not my intent to
2 go too deep with this.

3 From B.C. Hydro's perspective, is there a
4 potential prejudice to customers where investments in
5 capacity are in excess of customer needs?

6 **Proceeding Time 3:58 p.m. T72**

7 MR. GODSOE: Mr. Chairman, I do object to this. The
8 \$200 million cap is legislated, so Hydro's views on
9 that are not relevant.

10 THE CHAIRPERSON: I agree with you that the first time
11 you put the question you used the word "detrimental".
12 The second time you used the word "prejudicial". I
13 mean, if you just want them to explain to you, put it
14 on the record, how income is shared between Powerex
15 and Hydro, B.C. Hydro, do that, but -- and I think as
16 you said, we all know that.

17 MR. WEAFFER: Well, I think there's a misunderstanding in
18 terms of there's an IR response which dealt with one
19 half of the equation in terms of the relationship
20 between Powerex and B.C. Hydro, and I'm just trying to
21 get to the second half which relates to the capacity
22 question.

23 THE CHAIRPERSON: It's four o'clock. Could you just
24 give me that IR reference again?

25 MR. WEAFFER: It's JIESC 3.27.6, Exhibit B-12.

26 THE CHAIRPERSON: Okay, the Panel will read it over

1 night, and you can appear before us tomorrow morning
2 at 8:30. If you still want to put your question, we
3 will take it from there.

4 MR. WEAVER: Thank you, Mr. Chairman.

5 THE CHAIRPERSON: We stand adjourned until 8:30 tomorrow.

6 **(PROCEEDINGS ADJOURNED AT 4:00 P.M.)**

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