



MANITOBA PUBLIC UTILITIES BOARD

Re:

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

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

HELD AT:

Public Utilities Board
400, 330 Portage Avenue
Winnipeg, Manitoba
April 10, 2014
Pages 6321 to 6477

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9 MARY NEAL, Previously Affirmed

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1 --- Upon commencing at 9:12 a.m.

2

3 THE CHAIRPERSON: It's nine o'clock;
4 we'll start the morning's proceedings. I wonder if
5 there are documents that we should acknowledge before
6 we start?

7 MS. MARLA BOYD: Good morning, Mr.
8 Chair. I do have one (1) document this morning to be
9 filed. It's a response to Manitoba Hydro Undertaking
10 number 79, which has been revised. It's from
11 transcript page 4,232. And the proposal, according to
12 my copy, is to file it as Manitoba Hydro Exhibit number
13 166 Revised.

14 MR. KURT SIMONSEN: That's acceptable,
15 thanks.

16 MS. MARLA BOYD: Thank you.

17

18 --- EXHIBIT NO. MH-166 REVISED:

19 Revised response to
20 Undertaking 79

21

22 IEC LA CAPRA ASSOCIATES PANEL CONTINUED:

23 DANIEL PEACO, Previously Affirmed (Qual.)

24 JOHN ATHAS, Previously Affirmed (Qual.)

25 MARY NEAL, Previously Affirmed

1

2

MR. RICHARD BEL: Excuse me, I have --

3

I have two (2) questions from yesterday's cross, just -

4

- just to clarify something. The first question is

5

about the discussion about the relaxing the import

6

constraint. Okay. And a simple question.

7

Is there any risk or negative to

8

relaxing that import constraint? I didn't hear any of

9

that in the discussion with Ms. Rainkie (sic). I can't

10

see anything in the analysis that says it makes any --

11

it -- it does anything negative.

12

MR. DANIEL PEACO: The -- the policy is

13

just that; it's a policy. And what we tried to do in

14

our investigation was to test the policy to see, you

15

know, how much of the -- the policy is -- is an

16

economic-based policy and how much of it is -- is a

17

reliability-based policy.

18

But the fact that -- that Hydro really

19

hasn't tested an alternative policy in any of their

20

analysis, it's hard to know whether there's really --

21

at what point you get to a risk. I think there --

22

there's always a -- you need -- if you're going to be

23

relying on imports you obviously -- there's -- there's

24

a risk associated with the -- the strength of your

25

interties.

1 And so at some point, the -- the ability
2 for one system to rely on a neighbouring system is --
3 is limited by the -- the strength of the interties
4 between the systems, so that would have to be
5 evaluated. So there's a -- those kinds of things, but
6 I think at the level that the policy is now, it's
7 largely a policy based upon economics rather than on a
8 strict -- what I would call strict reliability
9 standard, if -- if that's your question.

10 MR. RICHARD BEL: So the second
11 question is -- I think I get it now. So that example
12 was thrown out by you, and the benefit of using that
13 example is that if we -- if we looked at the No Gen
14 case, I'm -- I'm relying on the comment from -- from
15 Mr. Athas yesterday that he talked about the fact that
16 the No Gen case could actually enhance a development
17 plan.

18 So, for example, if I'm -- I'm just
19 asking if this is a possibility. For example, we could
20 look at a plan that was DSM, the intertie with the
21 relaxed import limits, and that would have the effect
22 of postponing Keeyask, say, to -- to 2031. So that
23 would be like putting Keeyask in where Conawapa was.

24 And if we ran that metric it might have
25 high -- or would likely have an impact on the net

1 present values, correct? So streaming the resources,
2 or ordering them in a different way.

3 MR. DANIEL PEACO: Yeah, and I think
4 the -- to be clear, and I think we talked about this --
5 I forget which day it is now, but the No Gen case we
6 did was a construct to say, I just want to see -- test
7 how the system performs if you do relax the policy. It
8 doesn't go beyond that to say, When do you hit, you
9 know, physical risk or other kinds of risk.

10 But it would say -- but it -- but it
11 would at least tell us, if you could relax it, you
12 know, does it -- does it tend to -- to bring more
13 benefits. And I think in this case it really pointed
14 to the fact that it -- it -- to the extent you can
15 relax it, it can improve the economics and the
16 performance of the plan.

17 So I think that's -- that's as much as
18 we can know from that. And I think it makes -- it says
19 we've got to know more about -- about the -- the
20 flexibility and sort of changing that if we're -- if
21 we're looking at other alternatives as well. With
22 respect to that issue, or the DSM issue, I think what
23 Hydro now has come around to the notion is that PDP can
24 be improved by putting DSM in, which is one (1) issue
25 we raised early on.

1 And -- and I -- I would put this in the
2 same category as -- it's probably worth looking to see
3 whether some different way of thinking about the
4 import/export relationship might also improve the plan.
5 So I agree that tho -- those elements aren't mutually
6 exclusive to No Gen versus PDP. They're each sort of
7 illustrations of certain combinations. And you say,
8 Well, the import part of that looked at -- lends some
9 benefits. So maybe we need to figure out whether
10 there's a way to refine any of the plans we're going to
11 look at to take better advantage of the opportunity
12 that can actually be had from that.

13 MR. RICHARD BEL: Okay. Okay. And the
14 last one, a simple one, you introduced -- and this
15 discussion came from the cross in the afternoon talking
16 about the cumulative present value metrics. So you
17 introduced those metrics and when I first looked at
18 those I wondered, Well, why are they there? Okay. I
19 guess that's a question everybody would have.

20 It seems to me -- for example, the
21 breakeven year metric, so you'd use the breakeven year
22 metric to instruct your decision if you were worried,
23 for example -- I'll take a simple case, if you were
24 worried about, say, in twenty (20) years or -- or at
25 some point in the future there was a disruptive

1 technology going to hit, so you'd want to look at those
2 plans and say, In twenty (20) years where would we be?

3 So is that why those metrics were
4 introduced?

5 MR. JOHN ATHAS: That -- that's
6 certainly one of them. I mean, that's exactly from --
7 if you take -- if you want to take a constant viewpoint
8 from -- you know, because obviously it won't be the
9 same ratepayers and things like that over time and you
10 -- and you -- so you're comfortable with the seventy-
11 eight (78) years, but you were worried about the --
12 something that would make the assumptions out there
13 rather -- create a big error that anything that we've
14 studied, like a disruptive technology, that'd be one
15 reason to -- to wonder about how did we do before that
16 period of time.

17 MR. RICHARD BEL: Okay. Thank you.
18 That's it. Thanks.

19

20 CONTINUED CROSS-EXAMINATION BY MS. MARLA BOYD:

21 MS. MARLA BOYD: Good morning, panel.

22 MR. DANIEL PEACO: Good morning.

23 MS. MARLA BOYD: I'm going to begin
24 today with Manitoba Hydro's book of documents, Exhibit
25 167-3, which is Volume III, financials.

1 (BRIEF PAUSE)

2

3 MS. MARLA BOYD: The LTA scope of work
4 included a requirement to develop a financial model
5 that would have the flexibility to change basic
6 assumptions on factors affecting cost to Manitoba Hydro
7 and MISO utility competitive market alternatives.

8 Is that right?

9 MR. JOHN ATHAS: Sounds correct.

10 MS. MARLA BOYD: Could you explain,
11 please, what's meant by 'MISO utility competitive
12 market alternatives'?

13 MR. JOHN ATHAS: Part of that has to do
14 with -- a major part of that would have to do on price
15 changes. I think at the -- at the MISO -- at the MISO
16 market level.

17 MS. MARLA BOYD: Well, how does that
18 explain competitive market alternatives? Maybe you
19 could bring up the scope of work for us, please? It --
20 it's La Capra scope of work. I believe it's Exhibit
21 number 40 -- 45. It's page 5, down near the bottom.
22 There we go.

23 So you'll see the first couple lines
24 there, it asks for a model that would have the
25 flexibility to change factors affecting cost to Hydro

1 and MISO utility competitive market alternatives.

2 What did you understand that to mean?

3 MR. JOHN ATHAS: I understood that to
4 mean that how the -- how the competition within the
5 MISO marketplace could affect the -- the export
6 pricing.

7 MS. MARLA BOYD: And you've constructed
8 a model that you've provided, correct?

9 MR. JOHN ATHAS: Yes.

10 MS. MARLA BOYD: And is it your
11 understanding that that model is to be used for this
12 proceeding alone, or is the expectation that PUB or
13 others will use it in other proceedings in future GRAs?

14 MR. JOHN ATHAS: It was focussed on
15 this proceeding.

16 MS. MARLA BOYD: And can you confirm
17 that it was your intention to develop a spreadsheet
18 financial model that is an approximation to Manitoba
19 Hydro's financial modelling framework?

20 MR. JOHN ATHAS: That's correct.

21 MS. MARLA BOYD: And you relied upon
22 Manitoba Hydro data in our projected financial
23 statements that were provided in Appendix 11.4,
24 correct?

25 MR. JOHN ATHAS: Correct.

1 MS. MARLA BOYD: You didn't produce any
2 projections of your own?

3 MR. JOHN ATHAS: That's correct.

4 MS. MARLA BOYD: So if we turn to Tab 1
5 of Volume III of our book of documents. On page 1,
6 this is LCA's financial model using the Preferred
7 Development Plan under the ref/ref/ref scenario.

8 Is that correct?

9 MR. JOHN ATHAS: That's correct, with a
10 -- under a scenario where we've changed load growth.

11

12 (BRIEF PAUSE)

13

14 MS. MARLA BOYD: Does it say that on
15 the top?

16 MR. JOHN ATHAS: Yeah, it's cell F5, I
17 believe, where it says, "Load growth change percent
18 minus 10," in 'E' -- 'D' and 'E' and 'F' columns.

19 MS. MARLA BOYD: This is where it says,
20 "Default load growth," yes?

21 MR. JOHN ATHAS: Oh, it's right below
22 that. But, actually, right, the default load growth is
23 an override of that. Excuse me. I misspoke.

24 MS. MARLA BOYD: I'm sorry, I didn't
25 hear your answer.

1 MR. JOHN ATHAS: I misspoke. The --
2 with the default load growth on as -- yes. It -- it --
3 ignore the next line. I apologize.

4 MS. MARLA BOYD: So it is the same as
5 Manitoba Hydro's. It's intended to replicate or
6 approximate Manitoba Hydro's model?

7 MR. JOHN ATHAS: That's correct.

8 MS. MARLA BOYD: And in this model, you
9 would have relied upon Manitoba Hydro's calculation of
10 general consumers revenue, which is at row 9.

11 Is that right?

12 MR. JOHN ATHAS: That's correct.

13 MS. MARLA BOYD: And you would have
14 relied upon Manitoba Hydro's calculation of
15 extraprovincial revenues at row 13?

16 MR. JOHN ATHAS: That's correct.

17 MS. MARLA BOYD: And you would have
18 relied upon Manitoba Hydro's calculations of operating
19 and administrative expenses in row 20?

20 MR. JOHN ATHAS: That's correct.

21 MS. MARLA BOYD: And you would have
22 relied upon Manitoba Hydro's calculations of finance
23 expense in row 32?

24 MR. JOHN ATHAS: That's correct.

25 MS. MARLA BOYD: And you would have

1 relied upon Manitoba Hydro's calculations of
2 depreciation and amortization in row 33?

3 MR. JOHN ATHAS: That's correct.

4 MS. MARLA BOYD: And water rentals in
5 row 34?

6 MR. JOHN ATHAS: Correct.

7 MS. MARLA BOYD: And fuel and power
8 purchases in row 35?

9 MR. JOHN ATHAS: That's correct.

10 MS. MARLA BOYD: And capital and other
11 taxes in row 39?

12 MR. JOHN ATHAS: That's correct.

13 MS. MARLA BOYD: And if we turn in that
14 same tab to page 3, you also would have relied upon
15 Manitoba Hydro's calculations of net plant in-service
16 at row 77?

17 MR. JOHN ATHAS: That's correct.

18 MS. MARLA BOYD: And Manitoba Hydro's
19 calculations of construction in progress at row 79?

20 MR. JOHN ATHAS: That's correct.

21 MS. MARLA BOYD: And Manitoba Hydro's
22 calculation of current and other assets at row 80?

23 MR. JOHN ATHAS: That's correct.

24 MS. MARLA BOYD: And Manitoba Hydro's
25 calculations of long-term debt at row 89?

1 MR. JOHN ATHAS: That's correct.

2 MS. MARLA BOYD: And Manitoba Hydro's
3 calculations of retained earnings at row 95?

4 MR. JOHN ATHAS: That's correct.

5 MS. MARLA BOYD: Is it correct that the
6 underlying calculations for each of those variables are
7 embedded in Manitoba Hydro's models and that you didn't
8 perform those calculations?

9 MR. JOHN ATHAS: Our intention was to -
10 - was to model the same calculation that's being
11 performed by the -- by the Manitoba Hydro model.

12 MS. MARLA BOYD: So if any of those
13 calculations were changed by Manitoba -- for example,
14 if the export revenues were to change -- that outcome
15 would change and that -- this model would not -- would
16 not replicate Manitoba Hydro's, correct?

17 MR. JOHN ATHAS: That's correct.

18 MS. MARLA BOYD: If we turn to page 5
19 of Tab 1, LCA has also included a projected cashflow
20 statement. And can you confirm for me that all of the
21 data in rows 103 to 120 is output from Manitoba Hydro's
22 projected cashflow statements which are found at
23 Appendix 11.4?

24

25 (BRIEF PAUSE)

1 MR. JOHN ATHAS: The -- the version of
2 the model that we gave you, I don't have the model in
3 front of me to verify those are all the same numbers;
4 but, yes, with that caveat.

5 MS. MARLA BOYD: And there's no links
6 between this cashflow statement to the income statement
7 or the balance sheet?

8 MR. JOHN ATHAS: I believe there
9 aren't.

10 MS. MARLA BOYD: You believe there are
11 not?

12 MR. JOHN ATHAS: There are not.

13 MS. MARLA BOYD: I ask you to turn to
14 Tab 2, page 7, of Manitoba Hydro's book of documents.

15

16 (BRIEF PAUSE)

17

18 MS. MARLA BOYD: It's an 8 1/2 x 11
19 hiding amongst all of the big sheets.

20

21 (BRIEF PAUSE)

22

23 MS. MARLA BOYD: This is LCA's Figure
24 10.32, which is reproduced from Appendix 10A on page 51
25 of your report.

1 Do you recognize that?

2 MR. JOHN ATHAS: That's correct.

3 MS. MARLA BOYD: In conducting your
4 rate impact analysis with your financial model, I
5 understand that you focussed on key variable
6 interactions that are shown on this figure.

7 Is that right?

8 MR. JOHN ATHAS: That's correct.

9 MS. MARLA BOYD: And you stated at page
10 51 of your evidence that you had developed your own
11 understanding of the relationships among the different
12 variables based on the financial statements provided by
13 Manitoba Hydro in Appendix 11.4.

14 Is that right?

15 MR. JOHN ATHAS: That's correct.

16 MS. MARLA BOYD: So if we focus on the
17 first relationship, this shows rate changes, impact net
18 income, retained earnings, and debt equity.

19 Is that right?

20 MR. JOHN ATHAS: That's correct.

21 MS. MARLA BOYD: And are those the only
22 three (3) variable impacts that you modelled for this
23 relationship?

24 MR. JOHN ATHAS: Those are -- those are
25 three (3) of the lines of the financial model that

1 would change.

2 MS. MARLA BOYD: Are they the only
3 three (3)?

4 MR. JOHN ATHAS: I don't believe so.

5 MS. MARLA BOYD: Do you have a list
6 somewhere in the material of the others that would
7 change?

8 MR. JOHN ATHAS: No.

9 MS. MARLA BOYD: Are you able to
10 provide such a list?

11 MR. JOHN ATHAS: We'd be able to look
12 at our model and tab -- tabulate what -- what numbers
13 changed, yes.

14 MS. MARLA BOYD: Could you undertake to
15 do that, please?

16 MR. CHRISTIAN MONNIN: We undertake to
17 do so.

18 MS. MARLA BOYD: Thank you. So the
19 undertaking is that you will review your model and
20 provide an itemized list of the variables that are
21 impacted by changes in net income -- rate changes.

22 MR. JOHN ATHAS: That's correct.

23 MS. MARLA BOYD: Thank you.

24

25 --- UNDERTAKING NO. 110: La Capra to review their

1 model and provide an
2 itemized list of the
3 variables that are impacted
4 by rate changes
5

6 CONTINUED BY MS. MARLA BOYD:

7 MS. MARLA BOYD: So to follow through
8 that relationship in an example, I'm going to ask you
9 to turn to Tab 3 at page 8 of our book of documents.

10 I understand this to be LCA's model
11 using the Preferred Development Plan under the
12 ref/ref/ref scenario, but adjusting rate increases from
13 2033 on to achieve a one point five (1.5) times
14 interest coverage target rather than the one point two
15 (1.2) interest coverage target modelled by Manitoba
16 Hydro.

17 Is that right?

18 MR. JOHN ATHAS: Just one (1) second.

19 MS. MARLA BOYD: Sure.
20

21 (BRIEF PAUSE)
22

23 MR. JOHN ATHAS: Did you -- from what
24 year on did you say?

25 MS. MARLA BOYD: 2033 on.

1 MR. JOHN ATHAS: I don't believe that's
2 correct. I believe that the -- on top of the page it
3 says, "Target year for 75:25 debt equity is 2032." And
4 I believe that if -- if I look at the detailed data on
5 line 66, it says -- it shows that the -- that the --
6 they had cut -- or, sorry, look at the debt ratio of --
7 on line 62 and -- as being -- and 63 as being less than
8 75 percent after that.

9 MS. MARLA BOYD: And it's less than
10 that because you've moved the interest coverage target
11 ratio to one point five (1.5) rather than one point two
12 (1.2)?

13 MR. JOHN ATHAS: That's correct.

14 MS. MARLA BOYD: So I have the year
15 right, the --

16 MR. JOHN ATHAS: Yeah.

17 MS. MARLA BOYD: -- interest cover
18 kicks in, in 2033?

19 MR. JOHN ATHAS: Sorry, I was -- I was
20 focussed on the -- I thought you -- I thought you -- I
21 thought I heard that you had mentioned the debt
22 coverage ratio, but you're right.

23 MS. MARLA BOYD: Okay. So I'm going to
24 ask you to look at row 11, where LCA has recalculated
25 the additional general consumers revenue starting in

1 2033, and it's circled in red.

2 That's -- that's where LCA made a change
3 to the additional consumers revenue, correct?

4 MR. JOHN ATHAS: That's correct.

5 MS. MARLA BOYD: And if I move over to
6 the last column in that row, fiscal 2037, we can see
7 that in row 15 the total revenue is forty-five fifty-
8 two (4,552) -- 4.5 billion.

9 Do you see that?

10 MR. JOHN ATHAS: That's correct.

11 MS. MARLA BOYD: And that compares to
12 forty-one twenty-eight (4,128) in the -- in the row
13 below, row 16 below, which is the total revenue under
14 the one point two (1.2) times interest coverage,
15 correct?

16 MR. JOHN ATHAS: That's correct

17 MS. MARLA BOYD: And if I move to row
18 46, the net income, 107 million -- I'm sorry, 707
19 million, correct?

20 MR. JOHN ATHAS: That's correct.

21 MS. MARLA BOYD: And that compares with
22 283 million in the following row, 47?

23 MR. JOHN ATHAS: That's correct.

24 MS. MARLA BOYD: Which is the number
25 from the one point two (1.2) times interest coverage

1 scenario, correct?

2 MR. JOHN ATHAS: Correct.

3 MS. MARLA BOYD: And if I go to page 10
4 of this tab, retained earnings are shown on row 94 as
5 eleven thousand, four hundred and sixty-three (11,463).
6 That's in millions.

7 Is that right?

8 MR. JOHN ATHAS: In -- in the last
9 column? Yes.

10 MS. MARLA BOYD: Yes. And that
11 compares to page 1, Tab 1. It's not the same number.

12 Or I can compare it to nine three three
13 five (9,335) in the row immediately below?

14 MR. JOHN ATHAS: That's correct.

15 MS. MARLA BOYD: So the debt ratio on
16 page 8, row 63, page 8 of that tab, is 66 percent,
17 correct, circled in red?

18 MR. JOHN ATHAS: Yes, corresponding to
19 the -- what the number would be without the change that
20 we made.

21 MS. MARLA BOYD: The 66 percent is
22 under the LCA scenario, correct?

23 MR. JOHN ATHAS: Oh, yeah. I'm sorry.
24 Yeah, that's right, yeah, under -- under the -- with
25 the change, yeah.

1 MS. MARLA BOYD: And without the
2 change, it would have been 70 percent, correct?

3 MR. JOHN ATHAS: That's correct.

4 MS. MARLA BOYD: So if I turn to the
5 cash statement, which is at page 12 of that tab, that
6 shows that cash at the end of the year is \$156 million
7 in 2037 at row 124, correct?

8 MR. JOHN ATHAS: That's correct.

9 MS. MARLA BOYD: And that hasn't
10 changed from the one point two (1.2) times interest
11 coverage target scenario. That's Tab 1, page 5.

12 Can you confirm that?

13 MR. JOHN ATHAS: That's correct.

14 MS. MARLA BOYD: And on the income
15 statement, which is at page 8, finance expense is shown
16 on line 32. And in 2037, it's -- it's 1,394 million.

17 Is that right?

18 MR. JOHN ATHAS: That's correct.

19 MS. MARLA BOYD: And that also has not
20 changed from the one point two (1.2) times interest
21 coverage target scenario?

22 MR. JOHN ATHAS: That's correct.

23 MS. MARLA BOYD: So your model captures
24 the direct effects of rate changes on net income,
25 retained earnings, and debt ratio, but it does not

1 capture the change in cash or interest payments.

2 Is that correct?

3 MR. JOHN ATHAS: It makes the
4 assumption that there's no change in the amount of pay-
5 down of debt. So the interest coverage didn't change -
6 - so the interest payment didn't change. And it has
7 not captured the higher accumulation of cash.

8 MS. MARLA BOYD: That's a 'yes',
9 correct?

10 MR. JOHN ATHAS: Correct.

11 MS. MARLA BOYD: Would you agree that
12 increases in rates to achieve a one point five (1.5)
13 times interest coverage target results in an increase
14 in -- in cashflows to Manitoba Hydro?

15 MR. JOHN ATHAS: Yes.

16 MS. MARLA BOYD: And that increase in
17 cashflows would mean that Manitoba Hydro would no -- no
18 longer need to fund its operation by that amount, and
19 may reduce the amount of additional debt that's
20 required, all else being equal, correct?

21 MR. JOHN ATHAS: They'd be able to do
22 that. I don't know whether they want to do that.

23 MS. MARLA BOYD: And if they were to do
24 that, that would result in lower interest payments,
25 correct?

1 MR. JOHN ATHAS: Correct.

2 MS. MARLA BOYD: And that would also
3 reduce the interest payments, correct?

4 MR. JOHN ATHAS: That's correct.

5 MS. MARLA BOYD: And does your model
6 calculate compound interest?

7 MR. JOHN ATHAS: I think it apportions
8 interest to -- to assets.

9 MS. MARLA BOYD: On a year-by-year
10 basis. It doesn't carry them forward between the
11 years, correct?

12 MR. JOHN ATHAS: That's correct.

13 MS. MARLA BOYD: At Tab 4...

14

15 (BRIEF PAUSE)

16

17 MS. MARLA BOYD: At Tab 4 Manitoba
18 Hydro has prepared an interest coverage ratio target
19 sensitivity.

20 Did you have an opportunity to review
21 that?

22 MR. JOHN ATHAS: Somewhat, yes.

23 MS. MARLA BOYD: Just for comparison
24 purposes, the projected financial statement for the
25 Preferred Development Plan under the one point two

1 (1.2) times scenario reproduced from Appendix 11.4 is
2 also included at Tab 5 of the book of documents.

3 So when we look at Tab 4 -- sorry,
4 Diana. If we look at Tab 4, page 18...

5

6 (BRIEF PAUSE)

7

8 MS. MARLA BOYD: You can see that cash
9 at the end of the year in 2037 is \$172 million,
10 correct?

11 MR. JOHN ATHAS: That's correct.

12 MS. MARLA BOYD: And that compares to
13 156 million in Tab 5 at page 24?

14

15 (BRIEF PAUSE)

16

17 MR. JOHN ATHAS: That's correct.

18 MS. MARLA BOYD: And finance expense in
19 2037 on row 20 at page 14, in 2037, is 1,284 million.

20 Do you see that?

21 MR. JOHN ATHAS: That's correct.

22 MS. MARLA BOYD: And that compares to
23 1,394 million at Tab 5, which is on page 20?

24 MR. JOHN ATHAS: That's correct.

25 MS. MARLA BOYD: So in the Manitoba

1 model additional general consumers revenue is 1,470
2 million in 2037, page 14, row 13?

3 MR. JOHN ATHAS: That's correct.

4 MS. MARLA BOYD: And in the LCA model
5 the addition consumers revenue is 1,635 million in Tab
6 3, page 8.

7 MR. JOHN ATHAS: Without flipping back,
8 I'll -- I'll take your word for it.

9 MS. MARLA BOYD: Thank you. And by
10 2062, Manitoba Hydro's model shows additional general
11 consumers revenue of 1,856 million.

12 Do you see that? It's on page 15, row
13 13?

14 MR. JOHN ATHAS: That's correct.

15 MS. MARLA BOYD: And the LCA model
16 shows 2,256 million from page 9, row 11?

17 MR. JOHN ATHAS: That's correct.

18 MS. MARLA BOYD: And that difference is
19 due to the compound effect in interest, correct?

20 MR. JOHN ATHAS: Yes.

21 MS. MARLA BOYD: I'll ask you to turn
22 to Tab 6 of our book of documents.

23

24 (BRIEF PAUSE)

25

1 MS. MARLA BOYD: The top chart on that
2 page has been reproduced, 10-36, from your report. And
3 if we assume LCA's discount rate of 7.05 percent and
4 compare the NPV analysis of your analysis to Manitoba
5 Hydro's analysis, which is below, we can see that LCA's
6 Figure 10-36 shows an impact of nearly \$1.3 billion on
7 the NPV of the Preferred Development Plan by changing
8 the interest coverage ratio from one point two (1.2) to
9 one point five (1.5), correct?

10 That's the difference between the blue
11 bar and the red bar on the top graph?

12 MR. JOHN ATHAS: Correct. Correct.

13 MS. MARLA BOYD: And Manitoba Hydro's
14 figure below shows a significantly smaller impact, just
15 over \$300 million, being the difference between the
16 blue bar and the red bar on the bottom graph?

17 MR. JOHN ATHAS: That's correct.

18 MS. MARLA BOYD: Essentially, that's a
19 billion dollars in difference in NPV between LCA's
20 analysis and Manitoba Hydro's analysis due to the
21 effects on cash, finance expense, and compounding,
22 correct?

23 MR. JOHN ATHAS: Due to the assumption
24 that the cash coming in was not used to change the
25 schedule of paying down debt in our -- when we modelled

1 the increased coverage ratio and the increased
2 revenues.

3 MS. MARLA BOYD: If I turn back to the
4 relationship shown in LCA's Figure 10-32 at Tab 2...

5

6 (BRIEF PAUSE)

7

8 MS. MARLA BOYD: Page 7. If we look at
9 the next series of relationships, you've got capital
10 costs impacting net debt to the debt-equity ratio -- and
11 the debt-equity ratio, correct?

12 MR. JOHN ATHAS: That's correct.

13 MS. MARLA BOYD: Does that also impact
14 cash, finance expense, or any of the other variables or
15 calculations?

16

17 (BRIEF PAUSE)

18

19 MR. JOHN ATHAS: It -- it definitely
20 would change some -- some of the elements on all these
21 -- on these -- on the several pages it takes for the
22 financial statements.

23 MS. MARLA BOYD: Our staff was not able
24 to reproduce your model with any of those variables
25 changing.

1 MR. JOHN ATHAS: You sho -- you should
2 have called us up.

3 MS. MARLA BOYD: Could I ask you to
4 undertake to provide an example of how the
5 relationships would function in the model?

6 MR. JOHN ATHAS: It might be better
7 served with a conference call.

8 MS. MARLA BOYD: Well, un --
9 unfortunately I need it to be on the record. So if I
10 could ask you to undertake to provide that example that
11 shows how those -- those relationships function, I'd
12 appreciate that. I'm happy to have a conversation
13 offline, but we do need to have it on the record as
14 well.

15 MR. JOHN ATHAS: Yeah, I think that
16 would be easy to follow up with something on the --
17 something on the record after we have a discussion.

18 MS. MARLA BOYD: Thank you.

19 MR. JOHN ATHAS: With a -- including a
20 party that's not here right now, from outside. That's
21 why I just wanted to...

22 MS. MARLA BOYD: Okay. I'll discuss
23 that with Mr. Monnin and we'll work that out.

24 MR. CHRISTIAN MONNIN: That's fine,
25 thanks.

1 THE COURT REPORTER: Is that an
2 undertaking?

3 MR. CHRISTIAN MONNIN: I don't think at
4 the moment, but we'll go offline and discuss and we'll
5 get it back on the record once we've come to a --

6 MS. MARLA BOYD: If we -- that's fine.

7

8 CONTINUED BY MS. MARLA BOYD:

9 MS. MARLA BOYD: Looking at the next
10 relationship, net debt impacting finance expense and
11 interest coverage, if you change the net debt in LCA's
12 model, does the gross interest or cash change?

13 MR. JOHN ATHAS: Yes.

14

15 (BRIEF PAUSE)

16

17 MS. MARLA BOYD: I'm going to have to
18 ask you for the same non-undertaking that we have a
19 discussion about -- about that, because again, our
20 staff was not able to -- to replicate a model that does
21 that. And again, if we can't resolve that, I'll come
22 back and ask that it be put on the record.

23 MR. CHRISTIAN MONNIN: That's
24 acceptable.

25

1 CONTINUED BY MS. MARLA BOYD:

2 MS. MARLA BOYD: In that scenario is
3 interest compounding?

4 MR. JOHN ATHAS: It's -- it's capturing
5 what should be the effect of compounding interest, yep.

6 MS. MARLA BOYD: In the same way that
7 it did in the example that we already walked through,
8 where it didn't change?

9

10 (BRIEF PAUSE)

11

12 MR. JOHN ATHAS: Well, when we did -- I
13 don't believe we don't chan -- we didn't change net
14 debt as well, so that's -- now we're talking about if
15 you don't -- if you change net debt, will the finance
16 expense change, yeah.

17 MS. MARLA BOYD: You're suggesting that
18 in your model if you change net debt, that finance
19 expense changes?

20 MR. JOHN ATHAS: I believe so.

21 MS. MARLA BOYD: Can I ask you to
22 undertake to check that, please, and get back to us? I
23 believe you'll find it does not.

24 MR. JOHN ATHAS: We can do that.

25 MS. MARLA BOYD: Yes, LCA is going --

1 has undertaken to check their model to confirm whether
2 changes in net debt impact changes to finance expense.

3

4 --- UNDERTAKING NO. 111: La Capra to check their
5 model and to confirm if
6 changes in net debt impact
7 changes to finance expense

8

9 CONTINUED BY MS. MARLA BOYD:

10 MS. MARLA BOYD: Looking at the next
11 relationship, natural gas export, electric prices, and
12 extraprovincial revenues.

13 If you change the extraprovincial
14 revenues in LCA's model, does the cash, net debt, or
15 finance expense calculation change?

16

17 (BRIEF PAUSE)

18

19 MR. JOHN ATHAS: I -- I don't believe
20 it does.

21 MS. MARLA BOYD: And finally, when you
22 look at the relationship between natural gas fuel and
23 power purchase expense and net income, if you change
24 the fuel and power purchase expense in your model, does
25 the cash, net debt, or finance expense change?

1 (BRIEF PAUSE)

2

3 MR. JOHN ATHAS: You -- just to
4 clarify, you said power purchase expense or the --

5 MS. MARLA BOYD: Fuel and power
6 purchase expense, yes.

7 MR. JOHN ATHAS: Okay. And does it
8 change --

9 MS. MARLA BOYD: Does it change cash,
10 net debt, or finance expense?

11 MR. JOHN ATHAS: Adding that as a check
12 to the prior undertaking, I'll say --

13 MS. MARLA BOYD: Thank you.

14 MR. JOHN ATHAS: -- subject to check,
15 yes.

16 MS. MARLA BOYD: So you'll undertake to
17 check that and advise whether fuel and power purchase
18 expense change -- changes cash, net debt, or finance
19 expense?

20 MR. JOHN ATHAS: Yes.

21

22 --- UNDERTAKING NO. 112: La Capra to check their
23 model to confirm if fuel
24 and power purchase expense
25 changes cash, net debt, or

1 finance expense

2

3 CONTINUED BY MS. MARLA BOYD:

4 MS. MARLA BOYD: LCA also conducted a
5 domestic load growth sensitivity in Appendix 10A.

6 Is that right?

7 MR. JOHN ATHAS: That's correct.

8 MS. MARLA BOYD: Did that analysis
9 consider the changes to extraprovincial revenue, cash,
10 net debt, finance expense, or the compounding effective
11 interest?

12 MR. JOHN ATHAS: I don't believe it
13 did.

14 MS. MARLA BOYD: And you also conducted
15 the alternative goal analysis on the debt-equity ratio
16 target year in Appendix 10A, correct? I have it at
17 page 53 of your report.

18 MR. JOHN ATHAS: That's sounds correct.

19 MS. MARLA BOYD: And did that analysis
20 consider changes to cash, net debt, finance expense, or
21 the compounding effect on interest?

22 MR. JOHN ATHAS: No.

23 MS. MARLA BOYD: In Appendix 10B, LCA
24 conducted an analysis of drought using thirty-four (34)
25 year sequences of water years with the various drought

1 years beginning in 2014.

2 Do you recall that?

3 MR. JOHN ATHAS: Yes.

4 MS. MARLA BOYD: Did you develop your
5 own projected financial statements for -- for this
6 analysis using your model?

7 MR. JOHN ATHAS: Yes.

8 MS. MARLA BOYD: And are those filed
9 with the material?

10 MR. JOHN ATHAS: I don't believe we
11 filed those work papers.

12 MS. MARLA BOYD: Could I ask you to
13 undertake to file them, please?

14 MR. JOHN ATHAS: Excuse me. We -- we
15 have filed those work papers.

16 MS. MARLA BOYD: Could you advise me
17 where they're on the record, because we weren't able to
18 locate them?

19 MS. MARY NEAL: So the supplemental
20 filing, I sent a disc with work papers. I can't recall
21 offhand whether it included anything from 10B, but we
22 could check.

23 MS. MARLA BOYD: Okay. So I'll ask you
24 to check -- undertake to check. And if they're not
25 filed on the record, either tell me where they are or -

1 - or file them.

2 MR. CHRISTIAN MONNIN: We undertake to
3 do so.

4 THE COURT REPORTER: Sorry, could we
5 get that undertaking clarified, please?

6 MS. MARLA BOYD: Sure. LCA has
7 undertaken to check their records to determine whether
8 the financial statements associated with the modelling
9 of a thirty-four (34) year sequence of water years for
10 various drought beginning in 2014 are on the record.
11 And if they are not, they will file them. If they are,
12 they will advise where on the record they can be found.
13 Did I get that right?

14 MR. CHRISTIAN MONNIN: Yes.

15

16 --- UNDERTAKING NO. 113: La Capra to check their
17 records to determine
18 whether the financial
19 statements associated with
20 the modelling of a thirty-
21 four (34) year sequence of
22 water years for various
23 drought beginning in 2014
24 are on the record; and to
25 indicate if they modelled

1 cashflow, net debt, finance
2 expense, and compounding
3 effects of the interest for
4 that analysis

5

6 CONTINUED BY MS. MARLA BOYD:

7 MS. MARLA BOYD: Did LCA model the
8 cashflow, net debt, finance expense, and compounding
9 effects for that analysis?

10 MR. JOHN ATHAS: Yes, some of those
11 with no change, I'm sure.

12 MS. MARLA BOYD: I'm sorry, you
13 modelled them but didn't change them from Hydro's -- we
14 don't understand what you mean.

15 MR. JOHN ATHAS: We -- we modelled the
16 -- they're in the model. Whether the -- without having
17 the work paper right in front of me right now to answer
18 the question, I would assume that -- that some of them
19 were held -- were held constant, just like we talked
20 about in the other financial runs here today.

21 MS. MARLA BOYD: You say, "some of
22 them." Of the -- the four (4) that we've listed --
23 cashflow, net debt, finance expense, and compound
24 effects -- are you aware of any of them having changed,
25 or are they all held constant?

1 MR. JOHN ATHAS: Can you read -- give
2 me the list again?

3 MS. MARLA BOYD: Yes. Cashflow, net
4 debt, finance expense, and the compounding effects of
5 interest. And I'm going to guess you're going to check
6 that and advise?

7 MR. JOHN ATHAS: I'll -- I'll check
8 that the -- I believe that those parameters may not
9 have changed. That's correct. We could add that to
10 the other one if you'd like to do the bookkeeping of
11 undertakings with a small number.

12 MS. MARLA BOYD: Fine. Thank you.

13 THE COURT REPORTER: Are we adding that
14 to the previous undertaking or is it a new one?

15 MS. MARLA BOYD: Yes, you can add it to
16 the previous undertaking.

17 MR. CHRISTIAN MONNIN: That's fine.

18 MS. MARLA BOYD: In connection with the
19 undertaking relating to the analysis of the thirty-four
20 (34) year sequences of water years or various drought
21 years beginning in 2014, LCA is going to advise whether
22 or not the model included -- whether they modelled
23 cashflow, net debt, finance expense, and compounding
24 effects of the interest for that analysis.

25

1 CONTINUED BY MS. MARLA BOYD:

2 MS. MARLA BOYD: LCA also conducted an
3 analysis of the CCGT Plan, correct?

4 MR. JOHN ATHAS: That's correct.

5 MS. MARLA BOYD: And as I understand
6 it, that was not analyzed from a financial perspective.

7

8 Is that right?

9 MR. JOHN ATHAS: That's correct.

10

11 (BRIEF PAUSE)

12

13 MS. MARLA BOYD: For the LCA No New
14 Generation Plan that you undertook, did you model that
15 from the financial perspective?

16 MR. JOHN ATHAS: I don't believe we
17 did.

18 MS. MARLA BOYD: Did you develop your
19 own projected financial statements for the No
20 Generation Plan?

21 MR. JOHN ATHAS: No.

22 MS. MARLA BOYD: On page 10B of your --
23 sorry, in 10B, page 12, of your report under the
24 heading of B. It's about three-quarters (3/4s) of the
25 way down the page.

1 MR. JOHN ATHAS: I was -- I was paging
2 through that as you guys were. There is the -- I
3 forgot -- forgotten about this last section of 10B that
4 had a No New Generation case in it.

5 MS. MARLA BOYD: So --

6 MR. JOHN ATHAS: So I stand -- I
7 correct myself that we did model No New Generation.

8 MS. MARLA BOYD: So there are financial
9 statements associated with that?

10 MR. JOHN ATHAS: Yes.

11 MS. MARLA BOYD: And are they on the
12 record?

13 MR. JOHN ATHAS: I believe they're in
14 the -- the same question as whether they're in the work
15 paper disc or not is -- stands for those, as well.

16 MS. MARLA BOYD: Okay. I'm going to
17 ask for the same undertaking, that you'll check your
18 records to determine whether or not the financial
19 statements for the no -- No New Generation Plan have
20 been filed on the record. If they have been filed,
21 please advise where they are. If they've not been
22 filed, please undertake to file them.

23 MR. CHRISTIAN MONNIN: We undertake to
24 do so.

25

1 --- UNDERTAKING NO. 114: La Capra to check their
2 records to determine
3 whether or not the
4 financial statements for
5 the No New Generation Plan
6 have been filed on the
7 record
8

9 CONTINUED BY MS. MARLA BOYD:

10 MS. MARLA BOYD: Are you aware of
11 whether LCA modelled the approximate impact on net debt
12 and finance expense?

13 MR. JOHN ATHAS: I believe we did.

14 MS. MARLA BOYD: And you did that on a
15 proportionate basis?

16 MR. JOHN ATHAS: Yes, with an All Gas
17 starting -- All Gas Plan model starting point.

18 MS. MARLA BOYD: And that's
19 proportioned to the difference in capital costs, is
20 that right?

21 MR. JOHN ATHAS: Capital expenditures,
22 yes.

23 MS. MARLA BOYD: Did LCA model the
24 cashflow and compounding effects for this analysis?

25 MR. JOHN ATHAS: To the extent that we

1 believe they changed, yes.

2 MS. MARLA BOYD: So if there's no
3 change, your evidence is that you don't believe that
4 either cashflow or compounding interest would affect
5 that analysis?

6 MR. JOHN ATHAS: In the financial
7 scenario we modelled, if there's no change, we would
8 believe there wouldn't have been a change, that's
9 right. I mean, there's -- as you -- as these questions
10 have pointed out, there's different things that can be
11 -- that can change, that it could offset, so there can
12 be a change in cash.

13 So there might be -- I -- I don't have
14 the work paper in front of me, so I might be -- there
15 might be changes. But I said, To the extent that they
16 changed. And you said, Do I know they didn't change?
17 No, I don't know if they didn't change. So there --
18 there could be a change in that if the -- but I'm not -
19 - but I didn't want to answer the question in a way
20 that implied that I knew there would be a change.

21 MS. MARLA BOYD: And in looking at your
22 modelling, if we find there is no change in the
23 numbers, that wouldn't surprise you?

24 MR. JOHN ATHAS: That's correct.

25 MS. MARLA BOYD: And that would suggest

1 that the even annual rate increases that you've
2 included in your report are not calculated on the same
3 base as other rates included in that chart, correct?

4 MR. JOHN ATHAS: I -- I wouldn't make
5 that logical connection.

6 MS. MARLA BOYD: The rate impacts that
7 you're showing don't include the impact of compounding
8 interest, correct?

9 MR. JOHN ATHAS: We're talking about
10 whether they change, and -- and I'm -- we -- we made
11 every effort to capture the changes in annual -- even
12 annual rate increases that would -- would occur with a
13 consistent set of financial statements with the changes
14 that we were able to model. So they were -- if there
15 is an error, which I'm sure will be pointed out after
16 you get your work -- after you get to look at our work
17 papers, then it -- then it might -- then there might be
18 some inconsistency.

19 But there is no -- no planned
20 inconsistency on how we calculated that number from the
21 other ones on that page.

22 MS. MARLA BOYD: Diana, could I ask you
23 just to scroll down a bit so that we can see the top of
24 that chart -- sorry, scroll up.

25 This shows nominal rate increase in the

1 No New Generation Plan, correct?

2 MR. JOHN ATHAS: That's correct.

3 MS. MARLA BOYD: So that's not showing
4 a change. That's showing what the expected outcome is
5 of that plan.

6 MR. JOHN ATHAS: Over time, yes.

7 MS. MARLA BOYD: And that plan doesn't
8 include compounding interest effects, as we've just
9 reviewed, correct?

10

11 (BRIEF PAUSE)

12

13 MR. JOHN ATHAS: Just need to make sure
14 I'm answering the question that you're asking. Do I --
15 if there were changes, I believe it includes them. Do
16 I -- do I know that there was change right now? I
17 don't till I -- till we file the work papers.

18 MS. MARLA BOYD: And from the review
19 that we've done of the work papers so far, it would
20 show that your model does not include compound
21 interest, correct?

22 MR. JOHN ATHAS: Includes changes in
23 compound interest portion of the changes in assets.

24 MS. MARLA BOYD: On an annual basis,
25 not moving from year to year. It doesn't carry those

1 changes forward into the next year.

2 MR. JOHN ATHAS: An annual interest
3 expense is just that: an annual interest expense. If
4 it was -- if by -- what you've been referring to is a
5 compounding of interest in a -- in an income statement
6 that says interest expense, then I -- then I now come
7 to realize that I'm not sure what the compounding
8 interest effect that you're talking about is, because
9 certainly the interest expense is proportionate to
10 outstanding debt.

11 And I don't -- and -- and hopefully --
12 well, we've modelled the assumption that -- that
13 Manitoba Hydro is paying its interest expenses. And --
14 and therefore, there isn't the compounding. If the --
15 if they -- if there's borrowing that's embedded in here
16 to cover interest expense, then I guess you could call
17 that a compounding of interest.

18 But I'm not -- I'm not -- in the income
19 statement, I'm not sure what you mean now by
20 'compounding interest'.

21 MS. MARLA BOYD: Well, you can take it
22 back to a simple analogy of your own credit card: If I
23 don't pay it all in one month, the next month I pay
24 interest on the interest, correct?

25 MR. JOHN ATHAS: That's correct. And

1 in the -- and the assumption here is that -- in the
2 modelling that the interest due is paid off in each
3 year. So that means that the -- so I'm not sure that
4 there's a compounding effect.

5 MS. MARLA BOYD: And a change in
6 interest would lead to a change in cash requirement.

7 MR. JOHN ATHAS: A change in interest
8 expense in a year could lead to a change in cash
9 requirements.

10 MS. MARLA BOYD: In your supplemental
11 expert analysis report, page 13, you indicate that
12 Manitoba Hydro did not conduct financial modelling
13 analysis for the additional plans, referring to the
14 CCGT and the No Generation Plans.

15 Do you see that?

16 MR. JOHN ATHAS: That's correct.

17 MS. MARLA BOYD: And your conclusion
18 is, accordingly, the LCA financial analysis on those
19 plans is limited.

20 Is that right?

21 MR. JOHN ATHAS: That's correct.

22 MS. MARLA BOYD: Could I ask us to pull
23 up Figure 10-7, please? It's on page -- 10A, page 18.
24 Thank you.

25 So according to your description, the

1 red portion of the graph represents increases in
2 general consumers revenue, absent the plan.

3 Is that your understanding?

4 MR. JOHN ATHAS: No.

5 MS. MARLA BOYD: Okay. Why don't you
6 explain to me what you understand that graph to
7 represent?

8 MR. JOHN ATHAS: That's the increase in
9 -- the red is in the increase in general consumers
10 revenues at approved rates. It's without -- it's
11 without adding -- accounting for the additional costs
12 required of the plan. But it does not model a case
13 where you didn't do the plan.

14 MS. MARLA BOYD: And what does the blue
15 represent?

16 MR. JOHN ATHAS: Additional consumers
17 revenue to -- to meet the modelled financial parameters
18 under the Preferred Development Plan.

19 MS. MARLA BOYD: Including the plan and
20 all other revenue requirement?

21 MR. JOHN ATHAS: That's correct.

22 MS. MARLA BOYD: Thank you, panel.

23 Thank you, Mr. Chair. Those are my questions.

24 THE CHAIRPERSON: I do have a few
25 follow-up questions in relation to what we've just been

1 discussing and specifically addressing the issue of the
2 modelling.

3 Now, developing your modelling allowed
4 you to do what?

5 MR. JOHN ATHAS: Allowed us to test --
6 or provide some variation around certain assumptions
7 that were -- that were made by Manitoba Hydro when they
8 -- when -- in their -- in their modelling choice. For
9 -- for instance, like the -- I think we spoke about it
10 yesterday or the day before. The example that was
11 brought up by one (1) of the Intervenor during
12 questioning was pointing to the chart that had the
13 variation and what year we target to get to the 75
14 percent debt-equity ratio, and we changed that
15 parametrically. That's -- that's an excellent example
16 of the kind of things that our model was able to
17 provide metrics and insight for.

18 THE CHAIRPERSON: Did you attempt to
19 construct your model as closely as possible or aligned
20 as closely as possible to Manitoba Hydro's financial
21 modelling?

22 MR. JOHN ATHAS: Yes.

23 THE CHAIRPERSON: And your opinion, did
24 it -- did it align pretty closely or did it approximate
25 or...?

1 MR. JOHN ATHAS: It -- it approximated.

2 I believe they -- the observations we've made are
3 consistent with the degree of approximation.

4 THE CHAIRPERSON: So while it may not
5 have perfectly aligned, it allowed you to get some
6 sense of the sensitivity of the results to the
7 parameters -- the change in parameters, right? I mean
8 --

9 MR. JOHN ATHAS: That's -- that's
10 correct.

11 THE CHAIRPERSON: Okay.

12 MR. JOHN ATHAS: I mean, we certainly
13 weren't able to match any logic that was embedded into
14 the -- into the financial planning and financial
15 modelling, for instance, as to the exact timing of
16 paying off debt that Manitoba Hydro may have made, with
17 a change in perturba -- perturbation of something like
18 a target year or other stuff.

19 So we don't profess to have -- to have
20 our model essentially be a forecast of Manitoba Hydro
21 actions.

22 THE CHAIRPERSON: Now, the rate changes
23 that were described in the figure we just examined were
24 not -- we shouldn't be relying on them on precise
25 values.

1 They're estimations, in your opinion, of
2 the impact of different parameters?

3 MR. JOHN ATHAS: The -- the relative
4 reasonableness is -- is -- changes probably, as -- as
5 in many of the -- many of the numbers in this case have
6 been carried out to more digits than they're probably
7 significant digits. So there's probably -- I would
8 caution, that looking for anything any different than a
9 tenth of a percent, or maybe even a couple of tenths of
10 percent, anything within those kind of numbers are the
11 same numbers.

12 THE CHAIRPERSON: Thank you very much.
13 I'll turn the microphone over to Mr. Peters, please.

14 MR. DANIEL PEACO: Could I -- could I
15 just add one (1) thing to that? The financial
16 modelling that we did was -- was more done as an
17 incremental analysis and do -- to do parametric tests.
18 We did not have the benefit of having the additional
19 financial runs done from the Company because they
20 weren't -- they were asked for but not provided,
21 indicating it took too much time.

22 So our modelling was limited by we did
23 not have -- virtue of the fact of the kinds of work
24 papers that we've provided Manitoba Hydro to do this
25 modelling. So the extent that we're -- our model was

1 able to replicate their system, it didn't have the
2 benefit of the kind of background on their -- on their
3 system that -- and how their models worked, that we
4 were discussing here today about our model.

5 MR. JOHN ATHAS: Simply put, if we had
6 -- if -- if in an undertaking Manitoba Hydro provided
7 financial analysis of all -- of their modelling of all
8 the sensitivities that we ran in our case, we'd be
9 glad, after a review of their model, to update our
10 charts with their information.

11

12 CROSS-EXAMINATION BY MR. BOB PETERS:

13 MR. BOB PETERS: Good morning, Ms.
14 Neal, Mr. Athas, Mr. Peaco, Mr. Monnin. I have some
15 questions for the panel. And whoever is best able to
16 provide full and complete information to the panel
17 please do so. And my questions this morning, -- and
18 I'll stress this morning' -- are not designed to elicit
19 CSI onto the public record, so please keep your guard
20 up as you have on that matter.

21 If you believe that a complete response
22 to my questions needs to get into CSI matters, please
23 advise your counsel. And that answer can be provided
24 either in writing as CSI or it can be deferred till
25 later today.

1 And lastly, by way of preliminary, just
2 please feel free to reference any of your slides to
3 assist in your answers, if you wish to demonstrate some
4 information to the -- to the panel.

5 I just wanted to follow up, Mr. Peaco
6 and Mr. Athas, on that last comment you had in response
7 to the Chair. Is it correct that Manitoba Hydro did
8 not provide LCA with its financial model to run -- to
9 run your cases?

10 MR. JOHN ATHAS: That's correct. The
11 financial model and the economic model were not
12 provided to La Capra.

13 MR. BOB PETERS: And they were
14 requested?

15 MR. JOHN ATHAS: Yes.

16 MR. BOB PETERS: And your -- your last
17 indication was that if Manitoba Hydro wants to re-run
18 the La Capra cases, La Capra would be prepared, if the
19 panel so directed, to review the -- those results and
20 compare them to the La Capra results?

21 MR. JOHN ATHAS: That's correct.
22 That's correct, and if they were -- and to the tune of
23 producing the same charts we have with their -- using
24 their numbers.

25 MR. BOB PETERS: All right. Just so

1 the panel understands your request. I thank you for
2 that.

3

4 (BRIEF PAUSE)

5

6 MR. BOB PETERS: In Appendix 9B of the
7 La Capra report, on page 30 La Capra provides a table -
8 - or a Figure 9-98.

9 You're familiar with that table?

10 MR. JOHN ATHAS: Yes.

11 MR. BOB PETERS: This table was La
12 Capra trying to provide some -- some comparisons as
13 between the plans to isolate the relative economics of
14 certain aspects of those plans, correct?

15 MR. JOHN ATHAS: That's correct.

16 MR. BOB PETERS: And I believe we could
17 also indicate, and perhaps should for the benefit of
18 the panel, that in Manitoba Hydro Exhibit 104-8 --
19 that's 104-8 and maybe we'll just put that one on the
20 screen, on page -- I have page 3 of 7. Thank you.
21 This is a doc -- a document that you reviewed at some
22 length with Mr. Hacault.

23 You remember that?

24 MR. JOHN ATHAS: That's correct.

25 MR. BOB PETERS: Would it be correct

1 that the information in 104-8 that's on the screen now
2 was more current information than -- than La Capra had
3 when it did its Figure 9-98?

4 MR. JOHN ATHAS: Correct.

5 MR. BOB PETERS: And at the bottom of
6 the figure that's on the screen, we see some different
7 sensitivities run, and again I'm not going to review
8 those on this chart.

9 The long and the short of this
10 information is that what's on the screen in front of
11 the Board as part of Exhibit 104-8 had revised capital
12 costs and also revised treatment of common factors that
13 La Capra did not have at the time it prepared its
14 Figure 9-98?

15 MR. JOHN ATHAS: In addition, it has,
16 in a couple of the plans, a change in the treatment of
17 the -- whether WPS was making an investment or not.

18 MR. BOB PETERS: All right. Good
19 point. You indicate that -- for Plan 5 and Plan 14,
20 Manitoba Hydro has updated those to include a sale of
21 308 megawatts to WPS, but WPS is not going to invest in
22 the transmission line.

23 MR. JOHN ATHAS: That's correct.

24 MR. BOB PETERS: All right. Understand
25 your point. If we go back to, then, Figure 9-8 in your

1 book of documents -- I'm sorry, Figure 9-8 on page 30
2 of 9B, this information that you're providing to the
3 Board was done in your supplemental report, correct?

4 MR. JOHN ATHAS: That's correct.

5 MR. BOB PETERS: And it was done after
6 you received some additional information from Manitoba
7 Hydro that it -- that you weren't able to obtain when
8 you prepared your initial report.

9 Have I got that right?

10 MR. JOHN ATHAS: That's correct.

11 MR. BOB PETERS: The information before
12 the Board on the screen is the full complement of the -
13 - of the cases that Manitoba Hydro provided in its
14 August 16th, 2013, filing?

15 MR. JOHN ATHAS: No. It actually --
16 the analysis that we were putting forth here was trying
17 to compare plans to -- to show a difference of one (1)
18 particular element. And just as a quick glance, it
19 wasn't necessarily meant to be all inclusive of every
20 plan. So I -- like just -- there was no analysis that
21 needed the Wind/Gas Plan, for instance, so obviously
22 there's nothing there that relates to Plan 3.

23 MR. BOB PETERS: No, I -- I understand
24 that point.

25 But the information here to run these

1 plans came out of Manitoba Hydro's initial August 16,
2 2013, filing?

3 MR. JOHN ATHAS: I apologize for not
4 understanding the question.

5 MR. BOB PETERS: No.

6 MR. JOHN ATHAS: That -- that's
7 correct.

8 MR. BOB PETERS: All right. And let's
9 just look at a few of the -- a few of the issues.

10 If we go down to -- let's just start
11 with adding Keeyask as an example so that the panel is
12 clear, that you tested Plan 2 against Plan 1 to see
13 what the impact economically would be of adding Keeyask
14 generating station, correct?

15 MR. JOHN ATHAS: That's correct.

16 MR. BOB PETERS: And this -- if we
17 follow -- based on the information that was available
18 when this was prepared, it shows the Board that on --
19 in comparing the Keeyask to the All Gas, and the All
20 Gas is the -- is the -- the base case, so to speak,
21 there's a -- a seventy-eight (78) year net present
22 value difference of \$887 million?

23 MR. JOHN ATHAS: Yes, under the
24 reference assumptions.

25 MR. BOB PETERS: And that's from adding

1 Keeyask?

2 MR. JOHN ATHAS: That's from adding
3 Keeyask in the year 2022.

4 MR. BOB PETERS: And it shows the Board
5 that in the first thirty-five (35) years of adding
6 Keeyask, the -- the benefits haven't yet materialized.
7 They're still negative relative to the
8 All Gas?

9 MR. JOHN ATHAS: That's correct.

10 MR. BOB PETERS: And so those benefits
11 for Keeyask materialize somewhere between year 35 and
12 year 50, correct?

13 MR. JOHN ATHAS: That's correct.

14 MR. BOB PETERS: And that -- we could
15 find that exact location if we wanted to use this dated
16 data by looking at the -- the breakeven year?

17 MR. JOHN ATHAS: That's correct.

18 MR. BOB PETERS: And moving down to the
19 economics of adding the 750 transmission line instead
20 of the 250 transmission line, you ran it through a
21 number of different comparators, correct?

22 MR. JOHN ATHAS: That's correct.

23 MR. BOB PETERS: And why did you chose
24 different cases to test as opposed to just -- to just
25 one (1) case?

1 MR. JOHN ATHAS: Just to make sure that
2 we don't mislead. These -- these are all numbers that
3 were modelled by Manitoba Hydro. So what we -- what we
4 did is make comparisons to do -- to -- to gain some
5 information, insights from the comparisons. So we
6 chose the -- we chose all three (3) because we didn't
7 want to -- we wanted to examine how the -- the change
8 from the two fifty (250) to the seven fifty (750), what
9 the economics would change based on what other
10 resources were in place at the time.

11 And -- and those -- and that -- and
12 therefore we got -- and that's what -- that's what we
13 were just trying to -- to find out.

14 MR. BOB PETERS: And so you -- La Capra
15 tested the seven fifty (750) economics versus the 250
16 megawatt line economics by way of three (3) rate --
17 three (3) comparisons?

18 MR. JOHN ATHAS: That's correct.

19

20 (BRIEF PAUSE)

21

22 MR. BOB PETERS: And just so the panel
23 is understanding of your -- your results, the Plan 6,
24 which was the Keeyask/Gas31 and the seven fifty (750),
25 was compared to Plan 4, where Keeyask in '19, Gas in

1 '24, and a 250 line was used, correct?

2 MR. JOHN ATHAS: That's correct.

3 MR. BOB PETERS: And this basically
4 isolated out the -- just the timing, I suppose, of the
5 -- of the additional resources is -- is shown here.

6 Does that impact on the economics of the
7 transmission line?

8 MR. JOHN ATHAS: The timing change in
9 the resources of the gas timing certainly does chan --
10 does affect that. The -- the need for it is changed
11 with the 750 line versus the 250 based on the -- the
12 way the -- the dependable energy calculation is -- is
13 made.

14 So -- but it -- it captures both the
15 effect of changing the timing of -- of new plant
16 installed and the changes of the mechanics of whether -
17 - of how much value there is to imports and exports.

18 MR. BOB PETERS: And the 750 line
19 doesn't become eco -- more economical than the 250 line
20 under any of the years in which that was examined?

21 MR. JOHN ATHAS: That's correct. Well,
22 cumulatively under any -- under any of these.

23 MR. BOB PETERS: And does it also then
24 demonstrate that there wouldn't be a benefit to having
25 a 750 line compared to a 250 line if there was no

1 Conawapa?

2 MR. JOHN ATHAS: That's correct.

3 MR. BOB PETERS: In terms of adding
4 Conawapa, again there were -- there were four (4) tests
5 done, as shown on Figure 9-98, correct?

6 MR. JOHN ATHAS: That's correct.

7 MR. BOB PETERS: And these again used
8 all of Manitoba Hydro's original filed numbers that
9 you've indicated?

10 MR. JOHN ATHAS: That's correct.

11 MR. BOB PETERS: And in these
12 particular cases, the economics of Conawapa appear
13 predominantly negative except in a couple of cases,
14 when you get out to at least seventy-eight (78) years?

15 MR. JOHN ATHAS: That's correct.

16

17 (BRIEF PAUSE)

18

19 MR. BOB PETERS: Would the panel be
20 correct in observing that the Conawapa economics only
21 become positive if there's a 750 line accompanying that
22 generating station?

23 MR. JOHN ATHAS: In -- within the cases
24 analyzed, that's correct.

25

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: The Board has also
4 understood from Manitoba Hydro's revised filings that
5 not all of the plans that are initially filed by
6 Manitoba Hydro have -- have been run through new
7 economic analysis based on the most current updates.

8 And that's your understanding, sir?

9 MR. JOHN ATHAS: That's my
10 understanding.

11 MR. BOB PETERS: And in terms of --
12 including such things as the levels of DSM activity,
13 perhaps we can go to La Capra Exhibit 47, page 5.

14

15 (BRIEF PAUSE)

16

17 MR. BOB PETERS: What La Capra provides
18 the Board on slide 5 that's in front of them from your
19 Exhibit 47 is a matrix of the plans and the updates
20 that La Capra understands Hydro has done to date?

21 MR. JOHN ATHAS: At the time of the
22 update, that -- yes. I think that it -- that we are
23 now aware that Plan 6 had file -- was filed in -- in
24 some detail with DSM. So I'd add Plan 6 to the -- to
25 the -- in -- in parentheses, similar to -- on the third

1 -- on the fourth note there, similar to what it is on
2 the third.

3 MR. BOB PETERS: All right. So what
4 you're telling the Board is Hydro started off with
5 fifteen (15) resource plans, and then they updated five
6 (5) of those plans based on 200 -- sorry, based on 2013
7 information, correct?

8 MR. JOHN ATHAS: Correct.

9 MR. BOB PETERS: And then since that
10 was filed back in August of 2013, there's been some
11 updated analysis based on 2014 capital costs, as well
12 as some changes in how Manitoba Hydro treats the common
13 factors?

14 MR. JOHN ATHAS: That's correct.

15 MR. BOB PETERS: And your last point
16 was Plan 6 should be added to your fourth bullet,
17 because your understanding is that in terms of the
18 analysis based on different levels of DSM, Plan 6 is
19 going to be -- or has been included in some of the
20 materials provided by Manitoba Hydro?

21 MR. JOHN ATHAS: That's correct.

22 MR. BOB PETERS: When you said,
23 previously, back to your Figure 9-98, I understood you
24 to be saying there was no benefit to the 750 megawatt
25 line over the 250 line without Conawapa.

1 I had that correct?

2 MR. JOHN ATHAS: That's what these
3 comparison show.

4 MR. BOB PETERS: That -- does that
5 conclusion take into account the benefits of additional
6 import capability that was modelled in the no new
7 generation case?

8 MR. JOHN ATHAS: No, it does not.

9 MR. BOB PETERS: Directionally what --
10 what benefit would that -- would -- would additional
11 imports have relative to -- to the economics of the 750
12 line without Conawapa?

13 MR. JOHN ATHAS: If the -- in the
14 comparison shown here, if the relaxation of the import
15 criteria was only in the 750 transmission cases it
16 would probably make the -- the second and third
17 comparisons in the middle of that chart, you know, the
18 twelve eleven (1,211) and the fifteen thirteen (1,513)
19 comparisons, it would probably make those more positive
20 or less negative, and it would probably make the six
21 four (6-4) ones less negative.

22

23 (BRIEF PAUSE)

24

25 MR. BOB PETERS: Based on the

1 information that La Capra now understands has been
2 updated and filed before the Board, is La Capra able to
3 revised this Figure 9-98 in any meaningful way, if so
4 requested by the -- by the Board?

5 MR. JOHN ATHAS: In nine (9) -- in the
6 addendum -- in the addendum we actually tried to update
7 -- updated some of the information here, and I believe
8 it's in -- in the presentation. I'm sorry. If you
9 could just maybe stay in -- you can stay in the
10 presentation, I believe. But we keep going down. I
11 don't remember what -- we'll eventually hit a table
12 that's smaller that --

13 MR. BOB PETERS: Are you referring to
14 the baseball chart on page 70 of your presentation?
15 I'm looking at Exhibit La Capra 45, or was it --

16 MR. JOHN ATHAS: Oh, that's right. In
17 La Capra 45, it's prob -- that's where it is. And that
18 sounds about right: seven zero (70).

19 MR. BOB PETERS: I'm not sure --

20 MR. JOHN ATHAS: Okay. And this --

21 MR. BOB PETERS: -- the Masters starts
22 today so I think the scorecard should be more
23 appropriately a golf score card, but I recognize your
24 affinity for baseball, apparently, so let -- let's --

25 MR. CHRISTIAN MONNIN: And the -- the

1 Boston Bruins are playing tonight, so it's a hockey
2 card.

3 MR. BOB PETERS: A home game, for some.

4

5 CONTINUED BY MR. BOB PETERS:

6 MR. BOB PETERS: All right, back --
7 back to matters at hand.

8 MR. JOHN ATHAS: The -- the -- since
9 these comparisons here shown are -- and now -- and now
10 we know that there's an additional comparison --
11 additional information on Plan 6 that we didn't have
12 from the presentations, but we have in the detailed
13 analysis, we have the kinds of information that we --
14 that we could use to make some of the comparisons on
15 tap -- Figure 9-98 for the addition of the capital cost
16 change to make the -- the -- account for the capital
17 cost change and -- well, the capital cost change, in --
18 in our analysis the treatment of common factors does
19 not affect it at all.

20 MR. BOB PETERS: But what you have on
21 the screen before the Board on page 70 of La Capra
22 Exhibit 45 doesn't take into account the most current
23 of the changes from Manitoba Hydro, does it?

24 MR. JOHN ATHAS: It doesn't cha -- cha
25 -- take into account any changes to 2013 loads and

1 assumptions, and it doesn't take into account DSM.

2 MR. DANIEL PEACO: The -- the only
3 change is the change to capital cost.

4

5 (BRIEF PAUSE)

6

7 MR. BOB PETERS: Perhaps, because we
8 have this on the screen, let's -- let's scroll back on
9 the same document, please, Diana, to page 24.

10 What the Board is seeing now in reverse
11 order is -- what's on the screen now on page 24 is the
12 baseball card, the hockey card, the golf score card,
13 based on the initial filing from Manitoba Hydro,
14 correct?

15 MR. JOHN ATHAS: That's correct.

16 MR. BOB PETERS: And this is based on
17 the 2012 assumptions based on Manitoba Hydro's
18 reference case, correct?

19 MR. JOHN ATHAS: That's correct.

20 MR. BOB PETERS: And so from -- from
21 slide 24, that's when you updated it on slide 70 to
22 show the Board, for those five (5) or six (6) plans
23 that you had additional information related to capital
24 costs, what the look would be, correct?

25 MR. JOHN ATHAS: That's correct.

1 MR. BOB PETERS: Now, if we turn back,
2 please, Diana, to slide 70 of this deck, does La Capra
3 have sufficient information to update slide 70 of La
4 Capra Exhibit 45, based on not just the capital costs,
5 which is -- which is included, but also based on the
6 2013 update as well as the DSM information updates?

7 MR. JOHN ATHAS: Only for a case --
8 updating to this table, we'd only be able to update 5
9 and 14 lines, and we might be able to add 6 to that.

10

11 (BRIEF PAUSE)

12

13 MR. JOHN ATHAS: And I just would point
14 out that the line -- line 3 would be unchanged, so in a
15 sense we -- that would -- that could get carried over
16 to an updated table.

17 MR. BOB PETERS: All right. Thank you
18 for that information. We'll -- we'll let the panel
19 consider whether that'll be a request. But before we --
20 - we move these charts --

21 MR. JOHN ATHAS: I'm sorry. I
22 misspoke. The -- the -- you asked for 2013
23 assumptions. That line 3 would not be the same. I'm
24 sorry, Plan 3 would not be the same.

25 MR. BOB PETERS: Okay. But would you

1 be able to update Plan 3 for the 2013 assumptions,
2 based on the information that La Capra has to date?

3 MR. JOHN ATHAS: No.

4 MR. BOB PETERS: In the discussions
5 that you've had with other counsel, the issue of
6 different metrics has come up.

7 You'll recall -- you'll recall that?

8 MR. JOHN ATHAS: Yes.

9 MR. BOB PETERS: And would I be correct
10 in concluding the La Capra evidence to be suggesting
11 that the panel should consider more than just one (1)
12 metric in making -- in deciding whether it's going to
13 make a recommendation related to a plan?

14 MR. JOHN ATHAS: It should -- it should
15 be aware of more than one (1) metric and then make a
16 decision as to what it wants to consider in making the
17 decision.

18 MR. BOB PETERS: And I think you're
19 walking tightly to the line that La Capra is not going
20 to draw a conclusion that it thinks this panel is
21 supposed to draw.

22 Would I be correct in that?

23 MR. DANIEL PEACO: That's correct.

24 MR. BOB PETERS: And you're indicating
25 that the panel should at least be aware of the

1 different metrics, and then decide as the panel as to
2 which ones, if any, they want to put weight on?

3 MR. JOHN ATHAS: That's correct.

4 MR. BOB PETERS: And if they do put
5 weight on it, how much weight they put on it.

6 MR. JOHN ATHAS: That's correct.

7 MR. BOB PETERS: So when we see a -- a
8 score card of different metrics like we have, the --
9 some of the metrics may be negative, some of them may
10 be positive for the same plan, depending on the length
11 of view that's taken. And I think Board member Bel
12 pointed that out this morning. Correct?

13 MR. JOHN ATHAS: That's correct.

14 MR. BOB PETERS: And so how does La
15 Capra recommend that these different metrics be
16 considered if the panel should choose to consider them?
17 That is, why would -- why would there be a twenty (20)
18 year view or a thirty-five (35) year view, or a fifty
19 (50) year view, or a seventy-eight (78) year view of --
20 of net present value?

21 MR. JOHN ATHAS: Are you asking for an
22 example of how you could use like two (2) metrics
23 together and -- to inform a decision, more than one
24 (1), at least?

25 MR. BOB PETERS: Well, I'm -- I'm

1 asking just about the -- the present value. And to be
2 clear, the cumulative present value is just a snapshot
3 on the -- on a point in time on the -- on the seventy-
4 eight (78) NPV gets you your fifty (50) year NPV,
5 correct?

6 MR. JOHN ATHAS: That's correct.

7 MR. BOB PETERS: So -- so maybe, yes,
8 to your question. Under -- give an -- give an example
9 as to why these different mile posts on the NPV journey
10 would have any significance to -- to decision makers.

11 MR. JOHN ATHAS: The -- as -- as I
12 pointed out, these are somewhat indic -- substitutes
13 for the line chart that we -- we spoke about that had
14 the year-by-year. And so they -- so -- I mean, because
15 certainly it gets the -- especially if we went back to
16 all fifteen (15) plans, it would get kind of crowded on
17 the line -- on the chart.

18 So what -- like let's take for example -
19 - let's take example, Plan 8 line, the second from the
20 bottom. And the -- if the -- if I was trying to
21 consider, because of two (2) relevant points that I
22 know about the analysis, that of the thirty-five (35)
23 years is where there was some detailed load forecast,
24 detailed modelling with SPLASH, and, you know, full
25 consideration in developing the year-by-year scenarios,

1 and there was -- and I -- but I'm very interested to
2 know where the -- where a life cycle, kind of seventy-
3 eight (78) year analysis would be.

4 So I'm kind of interested to know about
5 those two (2) points. One (1) would -- could weigh it
6 to say, Well, the -- the estimated seventy-eight (78)
7 year benefit of \$403 million is, you know, certainly a
8 positive number in the black there. It's over -- it's
9 over seventy-eight (78) years.

10 And one could say, Well, the fact that
11 it's still a billion dollars in the hole in -- at the
12 negative one-o-nine one (1,091) number in the C --
13 thirty-five (35) CPV column, that one could weigh it to
14 say, That's -- that's okay, or they could weigh it to
15 say, That's a pretty big number to still be in the hole
16 at the end of the detailed analysis to just be going
17 after \$400 million over seventy-eight (78) years.

18 MR. BOB PETERS: So I take form your
19 example that -- that the -- there's a forecast period
20 involved for all of this, correct?

21 MR. JOHN ATHAS: A detailed forecast
22 and modelling period through thirty (30) -- through
23 thirty-five (35) years.

24 MR. BOB PETERS: Well, that's --
25 there's a forecast out to seventy-eight (78) years, but

1 the details are in the first thirty-five (35) years?

2 MR. JOHN ATHAS: The -- the analysis
3 was taken out through seventy-eight (78) years by
4 extension of -- extension of the parameters that came
5 out of SPLASH and exte -- with on -- on a real dollar
6 basis and utilizing only replacement in kind
7 assumptions for the -- any technology that had a short
8 life that needed to be replaced before seventy-eight
9 (78) years. There was no real load forecast made to
10 change. There were -- there were no changes to
11 individual things like power prices, or the like.

12 MR. BOB PETERS: All right. So you're
13 suggesting that the most reliable information that
14 there is in this forecast is in the first thirty-five
15 (35) years and not after that, where there was an
16 extension as opposed to a forecast?

17 MR. JOHN ATHAS: The ones that got the
18 most thought, yes.

19

20 (BRIEF PAUSE)

21

22 MR. BOB PETERS: When it came time to
23 calculate the -- the export revenues the power prices
24 were escalated out through seventy-eight (78) years?

25 MR. JOHN ATHAS: No. The -- the net

1 effect of -- of -- the net revenue for a particular
2 plan modelled either net cost or net revenue that takes
3 into account any thermal costs that were incurred by
4 Manitoba Hydro, any water rental costs that were
5 incurred by Manitoba Hydro, any power sales revenue
6 that was by Manitoba Hydro, any power purchase costs by
7 Manitoba Hydro, and effect in -- embedded in there the
8 power prices, was all held constant from -- after the
9 year 35 based on the year 35 analysis. Or it might
10 have been the last three (3) years; I actually forget.

11 But it was at -- it was basically using
12 something constant, where you didn't have to make the
13 individual forecasts --

14 MR. BOB PETERS: It was --

15 MR. JOHN ATHAS: -- that I was talking
16 about.

17 MR. BOB PETERS: -- a constant avenue -
18 - constant annual average growth rate used in the last
19 few years of the forecast?

20 MR. JOHN ATHAS: That's right.

21 MR. BOB PETERS: Before we leave the
22 chart that's on the -- the screen, which is found at
23 Tab -- page 70 of La Capra Exhibit 45, we talked about
24 the -- the net present value benefits. Are there
25 circumstances where an NPV is -- is a better measure

1 than any other measure, from La Capra's perspective?

2

3 (BRIEF PAUSE)

4

5 MR. JOHN ATHAS: NPV is always an
6 important measure. Most of these other measures would
7 probably -- you probably wouldn't want to use without
8 having -- being aware of what the NPV is.

9 MR. BOB PETERS: And so the internal
10 rate of return numbers, how -- how should these be
11 interpreted relative to -- to Manitoba Hydro's moving
12 forward?

13 MR. JOHN ATHAS: Well, what the
14 internal rate of return numbers show from a couple --
15 two (2) aspects: The first one they show is -- they
16 essentially show how much did I improve upon my cost of
17 money. The cost of money in this reference case is --
18 on a real dollar basis is five point-o-five (5.05), the
19 interest rate -- the -- the discount rate being used.
20 And -- and so to the extent that the -- that -- again,
21 using my Case 8 as -- there's a forty (40) -- \$403
22 million net present value. That's equivalent to
23 getting 5.5 percent interest on -- in the bank instead
24 of 5.05 percent. So you can -- so it's -- it's
25 indicative of -- of how much -- how much improvement

1 I've made versus the -- versus my cost to -- to
2 borrowing money.

3 The -- so you would also -- then you
4 could look at the case where Plan 4 has a number that's
5 -- that's 6.4 percent. And that says that it's \$900
6 million represents -- even though there were years when
7 I had -- had to have increased cost in the front, that
8 I -- that I bettered my cost of money by about a little
9 less than a percent and a half over time. And it also
10 is much better than the Plan 8 by about a percentage
11 point.

12 So that says that the -- that says that
13 those -- that that comparison is fairly -- is, you
14 know, a good indication of numbers.

15 Now, let's take -- let's take an example
16 of the LCA Wind case and compare that to the Plan 8.
17 If I could be as -- as bold as to say that 459 million
18 and 403 million are about the same number at -- over
19 seventy-eight (78) years, it would be -- one could
20 wonder how I would choose one (1) plan over the other
21 there if that was the only choice I was making and that
22 was the only consideration.

23 What the 8.2 percent IRR tells me in
24 Plan -- on the Plan 3 line is that I've had relatively
25 little years, a little amount of -- of years where I've

1 had to have in -- experience increased cash flows
2 versus All Gas in -- in the LCA Wind/Gas Case 3,
3 because I have an 8.2 percent internal rate of return.
4 And so the internal rate of return kind of measures the
5 end point versus the amount of -- the amount of money
6 that I had to go down and -- as -- so to increase my
7 cost.

8 And similarly, the Plan 8 line says that
9 my -- for just about the same net present value, I only
10 -- I had an internal rate of 5.5 percent. That means I
11 must have had to take a -- a bigger amount of years
12 when -- a large amount of years and maybe dollars where
13 I had to ins -- incur a higher cost in order to --
14 before I could start experiencing benefits that
15 ultimately got me to the -- about the same \$400 million
16 of net present value.

17 So normally, if they -- if you -- if you
18 took those numbers as about the same, four fifty-nine
19 (459) and four-o-three (403), it would probably be --
20 all else being equal and just looking at the numbers,
21 we could say, I like the one that doesn't have as many
22 -- many years that are higher cost.

23 MR. BOB PETERS: I take from that
24 answer then that IRR would be the -- a measure of a
25 more efficient use of capital?

1 MR. JOHN ATHAS: Yes, it would be an
2 indication of that.

3 MR. DANIEL PEACO: And you could see is
4 -- the relationship on IRRs is -- is similar to what
5 you'd see by comparing the seventy-eight (78) year NPV
6 to the present value of the capital spent, which is the
7 first two (2) columns. You know, so you look in the --
8 it's another way to look at a fairly similar effect.

9 MR. BOB PETERS: Sorry, Mr. Peaco, I --
10 do I interpret your answer there, keeping on Plan 8, to
11 say you're spending \$3.5 billion to -- to come out 400
12 million ahead?

13 MR. DANIEL PEACO: Yeah. And -- and to
14 use John's example, you could -- if you're choosing
15 between three (3) and eight (8), in one (1) case you
16 can spend \$1.2 billion to come out \$400 billion ahead -
17 - \$400 million ahead, or you can spend \$3.5 billion to
18 come out \$400 million ahead.

19 MR. BOB PETERS: All right. But in the
20 -- in the circumstance of Manitoba Hydro being a Crown
21 corporation, does that increase or decrease the
22 importance of an IRR?

23 MR. JOHN ATHAS: If the -- if we could
24 go to -- up a few slides to where you had the year-by-
25 year chart, it will definitely stand out by its line

1 chart versus all the other bar charts that we had here.

2

3 (BRIEF PAUSE)

4

5 MR. JOHN ATHAS: Okay. Let's look at
6 this one (1) -- back one (1), I'm sorry. If --

7 MR. BOB PETERS: And just for the
8 record we're on page 32 of La Capra Exhibit 45?

9 MR. JOHN ATHAS: That's correct. If
10 that -- in the IRR looking at kind of these would say,
11 If I'm not worried about having a year -- the impact of
12 the years when I have negative cash flow in the -- or
13 increased cash flow requirements, like -- that you see
14 going very -- down in the blue line a lot, if I'm not
15 worried about the capital component that Mr. Peaco
16 pointed out in the first column, so if -- if I have no
17 -- no constraints on me for that, and so -- so both of
18 these elements do not cause -- cause any kind of a
19 problem, then I would say it's not -- it -- it's not
20 necessary to look at IRR.

21 But to the extent that it -- the capital
22 constraint, or I like to understand or minimize the
23 years of negative cash flow, IRR can be a good
24 indicator.

25 MR. BOB PETERS: I take from that

1 answer, Mr. Athas, that if the -- if the dip in the
2 blue line doesn't cause a concern, then looking out
3 past 2062 you wouldn't put any weight on -- on the --
4 on the early years of that plan?

5 MR. JOHN ATHAS: Yeah, if I -- well, if
6 I -- if I'm not worried about the dip, I -- then the
7 next question is, How long am I -- how long is my
8 perspective? And if it's -- if it's long enough, you
9 would -- you would be able to use a year-by-year -- at
10 that point in time, NPV like seventy-eight (78) years,
11 and say the blue line is a higher number than the black
12 line and, all else being equal, and no -- no other
13 thoughts making them prefer one (1) over the other,
14 that you could -- you'd make a decision and say,
15 Probably the blue line is better.

16 MR. BOB PETERS: While we have this
17 slide up, the All CCGT Plan appears less favourable
18 than Manitoba Hydro's All Gas Plan.

19 Would I have that correct
20 interpretation?

21 MR. JOHN ATHAS: That's correct.

22 MR. BOB PETERS: Why is that the case?

23 MR. JOHN ATHAS: The All CCGT Case, by
24 putting in combined cycles you're spending more money
25 for more efficient -- for more efficient gas-fired

1 units. This is indicating that at the -- when you're
2 averaging the -- all the ninety-nine (99) different
3 flow years that were modelled for each year, that the -
4 - the operating savings by having -- by either burning
5 less fuel when I'm using the CCGT, or may -- being able
6 to change my import/export kind of decisions, were not
7 sufficient to cover the -- the increased capital cost
8 that I -- investment that I made.

9 MR. BOB PETERS: And was the All CCGT
10 Plan optimized, or was it as Manitoba Hydro had
11 initially filed it?

12 MR. JOHN ATHAS: Well, the All CCGT
13 Plan was requested from staff initially, the PUB staff.
14 The All Gas Plan has -- had -- had some degree of
15 optimization attempted by a process where they -- using
16 some busbar costs and preliminary runs to determine
17 which -- whether they thought the addition -- a gas
18 addition should be a combined cycle or a -- a simple
19 cycle.

20 MR. BOB PETERS: And is it correct
21 that, as -- as depicted here, there's no new export
22 contracts included in the All CCGT case?

23 MR. JOHN ATHAS: That's correct.

24 MR. BOB PETERS: And while we're on
25 again the No Gen case, there was some discussion

1 yesterday about import policies of other large hydro
2 power systems.

3 Do you recall that, Mr. Peaco?

4 MR. DANIEL PEACO: Yes.

5 MR. BOB PETERS: Did Manitoba Hydro
6 provide comparisons to other hydro power systems in its
7 -- in its filing?

8 MR. DANIEL PEACO: No, it did not.

9 MR. BOB PETERS: And were there any
10 economic analyses, other than those requested by La
11 Capra, with respect to limits on the import policy?

12 MR. DANIEL PEACO: No.

13 MR. BOB PETERS: And I took from an
14 answer you gave the Chairman, I believe, or perhaps it
15 was Board Member Bel, earlier this morning that the
16 current policy may preclude any consideration of any
17 form of increased reliance on imports. And the thrust
18 of what you were telling the -- the Board this morning
19 was there may be reason that that should be examined.

20 MR. DANIEL PEACO: Yeah. We -- we
21 reviewed all the materials that the Company had done to
22 review their policy, and it -- and it didn't give us an
23 indication that they'd tested the economics or -- or
24 other considerations of -- of relaxing that policy.
25 And they preserved the policy they've had place more or

1 less since their initial analysis in 1977.

2 MR. BOB PETERS: And you said yesterday
3 in some of your questions (sic) to other counsel, there
4 was probing as to whether or not the inclusion of DSM
5 and increased imports would also improve the Preferred
6 Development Plan.

7 Do you recall that?

8 MR. DANIEL PEACO: I do.

9 MR. BOB PETERS: And I believe Manitoba
10 Hydro discussed the potential for changes to the
11 Preferred Development Plan that would enhance, I
12 suppose, the comparison to the -- the No Generation
13 case that -- that's currently up on the screen, as well
14 as other plans.

15 MR. DANIEL PEACO: Yes.

16 MR. BOB PETERS: And did Hydro consider
17 such alternative features in its Preferred Development
18 Plan in its -- in its submission?

19 MR. DANIEL PEACO: No, it did not.

20 MR. BOB PETERS: And did La Capra ask
21 Hydro, in the course of La Capra's work, to examine
22 such alternatives?

23 MR. DANIEL PEACO: Yes. As part of the
24 scope of work, we were asked to explore a number of
25 possibilities. And we asked for a number of different

1 analyses that would have explored those issues. But
2 the -- the two (2) cases that we were provided were --
3 were the -- were the limit of the analysis that was
4 produced as a result of that.

5 MR. BOB PETERS: So other than those
6 two (2) cases that La Capra requested, were there any
7 other evaluations of those alternatives?

8 MR. DANIEL PEACO: No.

9
10 (BRIEF PAUSE)

11
12 MR. BOB PETERS: I want to turn to
13 slide 32 of La Capra Exhibit 45, if I could. I think
14 that's still the one on the screen, Diane.

15 This plan, that is, the CCGT Plan that
16 we've been talking about, that was different than
17 Manitoba Hydro's All Gas Plan, correct?

18 MR. DANIEL PEACO: Correct.

19 MR. BOB PETERS: And Manitoba Hydro's
20 All Gas Plan had a mixture of single-cycle as well as
21 combined-cycle generating turbines.

22 MR. DANIEL PEACO: That's correct.

23 MR. BOB PETERS: And I think you've
24 explained that the -- the combined cycle are more
25 efficient as well as higher in capital cost.

1 MR. DANIEL PEACO: That's correct.

2 MR. BOB PETERS: And in the Manitoba
3 Hydro plans, were they optimized for each of the
4 alternatives?

5 MR. DANIEL PEACO: They -- they did a -
6 - an optimization routine to pick a -- a cycle. But we
7 tested that and -- with some of their detailed results,
8 and we -- we came to the conclusion, and I think it's
9 summarized on page 26 of our -- of this same exhibit,
10 that there was opportunities to improve on both the --
11 their All Gas and the All CC case.

12 Specifically, I'm referring to the
13 conclusion in the third bullet of the observations, is
14 that in the All CC case, there were effectively seven
15 (7) combined cycle units added to the plan and -- and
16 there -- there were four (4) combined cycle units in
17 the All Gas Plan.

18 And to us it looks like four (4) was too
19 little, seven (7) was too many, and five (5) or six
20 (6), the Goldilocks' case probably would have been five
21 (5) or six (6).

22 MR. BOB PETERS: That wasn't tested in
23 any detail?

24 MR. DANIEL PEACO: No, other than the -
25 - the review that we did of the -- the two (2) cases

1 that they provided.

2 THE COURT REPORTER: Excuse me, Mr.
3 Peaco. Did you say Goldilocks' case?

4 MR. DANIEL PEACO: Sorry. Yes, I did.

5

6 (BRIEF PAUSE)

7

8 CONTINUED BY MR. BOB PETERS:

9 MR. BOB PETERS: Before I leave the
10 discussion of some of the plans, since your report was
11 filed, it's my understanding of the evidence that Hydro
12 has indicated to conserve the Minnesota Power 250
13 megawatt and the WPS 308 megawatt contracts without
14 building Conawapa in terms of providing the energy.

15 Is that -- is that a conclusion you've
16 reached, as well?

17 MR. DANIEL PEACO: The Minnesota Power
18 250?

19 MR. BOB PETERS: Yeah. I think we can
20 put up, if we could, Manitoba Hydro Exhibit 138. And
21 turn, please, to the chart on the next page.

22

23 (BRIEF PAUSE)

24

25 MR. BOB PETERS: Leaving aside the

1 specific contractual terms and whether there's
2 conditions precedent or termination options or whatever
3 there may be, is it -- is it correct for the panel to
4 understand that the Minnesota Power 250 sale and the
5 WPS 308 sale could be serviced without the need for
6 Conawapa?

7 MR. DANIEL PEACO: Well, if I
8 understand this -- this chart correctly, the Minnesota
9 Power 250 contract would be in the dark blue assigned
10 export.

11 MR. BOB PETERS: Let's make that
12 assumption.

13 MR. DANIEL PEACO: Okay. If that's the
14 case, then -- then, clearly, this shows that dependable
15 supply post-Keeyask to be well above both of those
16 contracts for the duration of -- of the contracts in
17 this -- depicted in -- in the chart here.

18

19 (BRIEF PAUSE)

20

21 MR. BOB PETERS: Mr. Chairman, I want
22 to turn in -- and the time I have left, run through
23 some of the specific reports. It might be an opportune
24 time for a break, although I do have another matter
25 that could just take a few minutes, if I could.

1 THE CHAIRPERSON: Let's do the few
2 minutes. And then we'll --

3 MR. BOB PETERS: All right.

4

5 CONTINUED BY MR. BOB PETERS:

6 MR. BOB PETERS: If we could go back.
7 Sorry to jump around a little bit on you, Diana, but
8 back to 9B of the La Capra report, and page -- the page
9 just before the one that's on the chart -- on the
10 screen is page 9B-29. And I only raise this so that
11 the witnesses have it in front of them.

12 The suggestion -- if we make the
13 assumption that -- that the export contracts that
14 Manitoba Hydro has signed in -- going into the future
15 will still remain available even if Keeyask is delayed
16 a couple of years, how does La Capra analyze whether
17 that delay is a good thing or a bad thing from Manitoba
18 Hydro's perspective or its ratepayers' perspective?

19 MR. DANIEL PEACO: I guess the question
20 is whether that's absent further work from Manitoba
21 Hydro.

22 MR. BOB PETERS: Well, at this point,
23 Manitoba Hydro hasn't done that analysis, correct?

24 MR. DANIEL PEACO: That's correct.

25 MR. BOB PETERS: Now, based on the

1 analysis done by La Capra, are you able to provide the
2 Board with any conclusions that La Capra has reached on
3 that issue of whether or not a delay of Keeyask is a --
4 is good, bad, or indifferent?

5 MR. DANIEL PEACO: Well, only in a very
6 limited way, and -- and it's very difficult. You --
7 you may recall the discussion we had yesterday
8 regarding a -- an approximation we did on a delay case
9 for Keeyask and -- and apparently a case run early on
10 by Manitoba Hydro to that effect. Both of those
11 exercises would suffer from the fact that they don't
12 incorporate any of the set of changed assumptions we've
13 talked about.

14 So I would presume with -- if we had an
15 analysis of that, or if we had -- if we had updated
16 Plans 1 and Plan 2 we could -- we could infer some
17 things from tha -- from that as we -- as we attempted
18 to deal with the Plan 1 and Plan 2 information we have
19 in hand.

20 But, you know, you -- you really should
21 have a -- an additional plan run to show a five (5)
22 year delay, whether it's better or worse, you ought to
23 at least know what that looks like and -- so that you
24 can either rule it in or out.

25 MR. BOB PETERS: You said five (5)

1 years in your answer and I was trying to keep you to
2 two (2) years in my question. Is there a difference
3 between those?

4 MR. DANIEL PEACO: Well, Plan -- well,
5 I think it's Plan 2 as -- as constructed was about a
6 two (2) year delay without the contracts. So we have -
7 - what -- what Hydro has -- has run is a -- a plan with
8 Keeyask coming in in 2019 with a transmission line,
9 with the MP250 contract. And then they have a plan
10 with Keeyask alone in 2022, I believe.

11 It -- it's...

12

13 (BRIEF PAUSE)

14

15 MR. BOB PETERS: You were comparing
16 Plan 2 to Plan 4? Do you know them by -- by numbers?

17 MR. DANIEL PEACO: Yes.

18 MR. BOB PETERS: And so you're saying
19 that you'd have to test even a further delay to see
20 whether or not --

21 MR. DANIEL PEACO: Well, I missed -- I
22 guess I misundertood -- understood the -- your
23 question. I was assuming that you were saying delaying
24 beyond that delay that would be in Plan 2.

25 But you're postulating a -- a delay of

1 Keeyask within the context of everything else in Plan 4
2 staying as is?

3 MR. BOB PETERS: That was my -- my
4 supposition.

5 MR. DANIEL PEACO: Okay.

6

7 (BRIEF PAUSE)

8

9 MR. DANIEL PEACO: Okay. I'm sorry.

10 MR. BOB PETERS: So in terms of the --
11 the two (2) year delay, what would be the impact on
12 Manitoba Hydro and its ratepayers?

13 MR. DANIEL PEACO: Well, I'm just
14 trying to think of whether -- what we can -- there
15 really isn't a case that would inform that. So that if
16 the par -- just to be clear, the -- the question you're
17 asking would be Plan 4 with, I presume, the Minnesota
18 Power contract in place delayed two (2) years, Keeyask
19 delayed two (2) years, and the transmission line
20 delayed two (2) years?

21 MR. BOB PETERS: Yes.

22 MR. DANIEL PEACO: Yeah, I'm -- there's
23 nothing from the runs that we have from Manitoba Hydro
24 that would -- would inform that directly. I mean, if
25 we were to -- to -- asked -- to come up with estimating

1 what that would look like, we would have to sort of
2 make some inferences from information we have. But I -
3 - you know, that's... It may or may not be sufficient
4 for what you're looking for.

5 MR. BOB PETERS: I'll -- I'll accept
6 that. Thank you. I want to just --

7 MR. RICHARD BEL: Could I ask a --
8 could I ask something with -- in that respect? But
9 there is another option I sort of mentioned this
10 morning where we -- we do the seven fifty (750) right
11 away, well, right away means 219 -- or 2019 and then
12 given the DSM imbedded in the new analysis, given a
13 restriction -- or a relaxation of the import
14 restriction, the question would be: Could you delay
15 Keeyask further and finally say as far as 2031? So the
16 -- so the three-o-eight (308) could be taken care of.
17 So that -- that's just a run.

18 MR. DANIEL PEACO: Yeah, well --

19 MR. RICHARD BEL: Because that's what -
20 - that's what the No Gen case showed; in a way, you can
21 stream resources in a different way,

22 MR. DANIEL PEACO: Well, a couple of
23 things that we do know about that particular
24 configuration would be Hydro has already evaluated by -
25 - by implementing the Level 2 DSM that moves the year

1 of need for energy and capacity out to about 2030, plus
2 or minus depending upon the pipeline uncertainty.

3 And, so if you -- if you built a
4 transmission line, even if you preserve Hydro's current
5 import policy, the virtue of having that larger line
6 would expand the import opportunities the same way it
7 currently does in -- in the Preferred Development Plan,
8 or those plans with that line in. So you would -- you
9 would have -- that would provide you some extra
10 dependable energy just because that changes the -- the
11 accounting for reliance on imports that -- within their
12 current policy.

13 So you'd have -- you'd have the DSM
14 change, which moves the year -- the year of need for
15 domestic resources out close to 2030; and if you
16 implemented the transmission line, that would also
17 basically effectively expand the amount of dependable
18 energy available and push the need out further for
19 domestic energy and capacity. Then the question would
20 be: What would be -- if you -- what -- what you think
21 about how to make a decision on timing for Keeyask.

22 MR. RICHARD BEL: Right. And the --
23 the key there would be how much we could export -- so
24 could we satisfy the 250 Minnesota contract with those
25 changes without Keeyask -- that -- that's the question

1 -- until 2030, 2028. That was the question. So --

2 MR. DANIEL PEACO: Yeah.

3 MR. RICHARD BEL: -- so we'd have to
4 run that to see that.

5 MR. DANIEL PEACO: That's -- that's
6 correct. And I think that was Mr. Peters's question a
7 few minutes ago, Is it -- is that based on the new DSM,
8 there looks to be surplus dependable energy to -- to
9 accomplish that. If I understood his question
10 correctly.

11 MR. RICHARD BEL: And there could be
12 another question. The other question was Mr. Athas
13 spoke about the Connecticut situation. And in
14 Connecticut they asked the question: How much DSM for
15 -- to a avoid generation? But we could also ask a
16 question : How much DSM do we need in that scenario to
17 satisfy the Minnesota 250 contract? So is it two point
18 one (2.1), or et cetera.

19 So we could also ask that question in
20 that analysis.

21 MR. DANIEL PEACO: Correct.

22 THE CHAIRPERSON: I think it's an
23 appropriate time to take a break. Let's take ten (10)
24 minutes.

25

1 --- Upon recessing at 10:51 a.m.

2 --- Upon resuming at 11:19 a.m.

3

4 THE CHAIRPERSON: Okay. Mr. Peters, I
5 believe that we can resume the proceedings.

6

7 CONTINUED BY MR. BOB PETERS:

8 MR. BOB PETERS: Yes, thank you. I'd
9 like to turn to the La Capra report that was filed
10 January 24th, and go to page 1-26 and Figure 1-11,
11 please? Thank you, Diana.

12 On this picture, La Capra is showing the
13 Board, perhaps in answer to Board member Bel's last
14 question, what happens with the forecast supply, and
15 also then the -- the demand that may be coming for that
16 supply, correct?

17 MR. DANIEL PEACO: That's correct.

18 MR. BOB PETERS: And the red line is
19 showing the supply based on 2013 load forecast?

20 MR. DANIEL PEACO: Yes, and this is --
21 this is peak demand.

22 MR. BOB PETERS: And what you're
23 showing here is that -- I'm going to go to
24 approximately -- I'm going -- 2018/2019, and the red
25 line has a little bit of a downward trend on it.

1 That reflects the Brandon coal station
2 being mothballed, does it?

3 MR. DANIEL PEACO: I believe that's
4 correct, yes.

5 MR. BOB PETERS: And then as we get
6 further out close to '24/'25, that's when the diversity
7 agreements drop off?

8 MR. DANIEL PEACO: Yes.

9 MR. BOB PETERS: Do you know, as you
10 sit here, Mr. Peaco, whether the Great River Energy
11 Diversity Agreement is included in that red line, or
12 whether it is just the NSP arrangement?

13 MR. DANIEL PEACO: I believe it's just
14 the existing -- it was the preexisting one, and this is
15 based on the -- that's my recollection.

16 MR. BOB PETERS: All right. Thank you.
17 And would it be a correct interpretation, just in terms
18 of orienting the panel to this, that if we pick --
19 let's pick the black line at the bottom, which is the -
20 - the aggressive DSM, four (4) times DSM.

21 Where that intersects the red line would
22 be a time when new capacity would be required?

23 MR. DANIEL PEACO: Yes.

24 MR. BOB PETERS: And so if we compare
25 where the grey line intersects -- that's the 2013

1 demand and reserves and the one point five (1.5) times
2 DSM -- it appears that new capacity would be needed in
3 about '26/'27.

4 Would you agree with that?

5 MR. DANIEL PEACO: Yes.

6 MR. BOB PETERS: And if DSM was ramped
7 up and more successful, it could push off the need for
8 new capacity out to as far as 2030/'31?

9 MR. DANIEL PEACO: Yes. And -- and
10 that's essentially the number that Manitoba Hydro has
11 since put on the record.

12 MR. BOB PETERS: With their different
13 levels of DSM?

14 MR. DANIEL PEACO: Yeah, with a four
15 (4) times DSM, yeah, at the Level 2.

16 MR. BOB PETERS: Thank you. Back, if I
17 could, to La Capra Exhibit 45; and I think this is
18 called a waterfall from the panel, page 16 of the
19 submission.

20 This is what, on the transcript, you've
21 called a waterfall, Mr. Peaco?

22 MR. DANIEL PEACO: Yes.

23 MR. BOB PETERS: And what the Board
24 will first notice is that the capital cost updates of
25 871 -- of the \$871 million number, that, and that item

1 alone, was what your updated materials that you went
2 through yesterday or the day before related to?

3 MR. DANIEL PEACO: Yes. And it was
4 included in the addendum materials that were
5 circulated. So the -- the only thing that we've
6 submitted to update in that fashion is -- is exactly
7 what you've described.

8 MR. BOB PETERS: The impacts of the
9 capital cost updates were reflected in La Capra Exhibit
10 12-2, which is the addendum to Technical Appendix 9A
11 and 9B.

12 MR. DANIEL PEACO: That's correct.

13 MR. BOB PETERS: All right. So the
14 Board has that point.

15 When -- one (1) of the items on this
16 waterfall is the delay of Conawapa by a year, from 2025
17 to 2026?

18 MR. DANIEL PEACO: Yes.

19 MR. BOB PETERS: There's a zero value
20 attached to that.

21 Is that a calculated value, an assumed
22 value, or how do we get to that number?

23 MR. JOHN ATHAS: We observed two (2) --
24 from two (2) of the -- from -- from two (2) of the
25 plans that were originally filed as filed by Manitoba

1 Hydro that had different Conawapa in-service dates.
2 There was a very relatively small change in their
3 present value, like in -- it's like a five (5) year --
4 five (5) year difference in -- in Conawapa in-service
5 dates, and I believe it was under -- well, certainly
6 under \$100 million of net present value difference.

7 So when we -- we took from that that the
8 -- that the impact would be de minimis, so we used
9 zero.

10 MR. BOB PETERS: It's a rounding error,
11 so you used zero.

12 MR. JOHN ATHAS: Yeah. So this is for
13 one (1) year versus the five (5) that we were --

14 MR. BOB PETERS: Yeah.

15 MR. JOHN ATHAS: -- looking at.

16 MR. BOB PETERS: I understood your
17 answer then. The end of the waterfall shows \$45
18 million of net present value.

19 And that's a number that Manitoba Hydro
20 has -- has put on the record as well, correct?

21 MR. DANIEL PEACO: Yes, correct.

22 MR. BOB PETERS: And yesterday there
23 was a discussion between La Capra and other counsel
24 about the net costs in the context of Manitoba Hydro's
25 incremental NPV analysis.

1 Do you recall that, Mr. Athas?

2 MR. DANIEL PEACO: Yes.

3 MR. JOHN ATHAS: Yes.

4 MR. BOB PETERS: And specifically, can
5 you explain what net cost concept you were referring to
6 in your answer?

7 MR. JOHN ATHAS: Yes. I mean, this --
8 this chart that's up now, the waterfall chart, is all -
9 - is all -- well, the -- the first bar and the last bar
10 are all comparing the -- the Preferred Development Plan
11 -- both the Preferred Development Plan to the All Gas
12 Plan.

13 MR. BOB PETERS: I actually intended to
14 take you to slide 70, but you're welcome to stay here
15 if this is your answer, if you -- if it's better to
16 answer for the panel from this.

17 MR. JOHN ATHAS: Well, just -- just --
18 it'd be good for a moment to just stay here. The -- so
19 -- so those -- so the black bars kind of represent, you
20 know, an economic comparison in their own right to All
21 Gas. The -- each of the other bars represents some
22 other com -- relative comparisons of different plans,
23 much like this -- the information that you -- that we
24 examined in 9B at that table that we had up earlier. I
25 forget which one it was. I think it was like 93 or

1 something like that.

2 And -- and so -- so -- but many of the
3 bars actually just come out from a result in changing
4 cost, like the capital cost red bar that you have there
5 that you mentioned about, that purely doesn't need any
6 comparison to All Gas. It's just a change in cost of
7 Conawapa and Keeyask, so it can be -- so it reflects
8 the change in cost.

9 So that the -- so it's important to
10 understand, to differentiate in my mind a little bit,
11 of when people are asking questions, as to whether they
12 want to understanding change in cost in isolation of
13 the plan itself or a change in costs of assumption that
14 might affect the two (2) -- two (2) plans that they are
15 comparing.

16 If it's -- if it's desirable, I -- I,
17 you know, work through an example from some of the --
18 the information on the record to contrast the -- or the
19 -- or kind of to explain why I refer to the Manitoba
20 Hydro risk profiles as demonstrating more of an
21 uncertainty around -- around costs rather than around
22 value. I'm not sure -- if you -- if you'd like that at
23 any time, I could do that.

24 MR. BOB PETERS: Well, if it's
25 responsive and it'll provide the panel with more

1 information, then -- then, yes, I think it should be
2 provided.

3 MR. JOHN ATHAS: I'd be happy to. I --
4 I think I need the -- the --

5 MR. BOB PETERS: The button?

6 MR. JOHN ATHAS: -- the button to
7 control here if it doesn't -- if it's not a problem.

8 MR. BOB PETERS: While you're getting
9 the button, can you explain to us what this example is
10 supposed to -- to demonstrate?

11 MR. JOHN ATHAS: The intention is to --
12 is to demonstrate that the...

13

14 (BRIEF PAUSE)

15

16 MR. JOHN ATHAS: Okay, what -- what I'm
17 -- I'm trying to show is that the -- that the risk
18 profile -- I -- I termed the risk profiles that were
19 put together by Manitoba Hydro as showing the change in
20 cost of a plan without necessarily showing the change
21 in benefits that I defined as the -- the amount that
22 that -- that plan has either cost more or less than the
23 All Gas Plan, so -- which is the attempt that we made
24 in our work to do.

25 MR. BOB PETERS: All right. So you'll

1 have to orientate myself and the panel as to --

2 MR. JOHN ATHAS: Yes. I'll -- this is
3 --

4 MR. BOB PETERS: -- where you are with
5 -- is this on the -- this material on the record?

6 MR. JOHN ATHAS: This is a work paper,
7 number 15, that was filed with the original January
8 24th filing by La Capra. It represents information
9 inside of the model that was supplied to us by Manitoba
10 Hydro. It's one of the -- I -- I referred to an
11 interim step in the calculation that Manitoba Hydro
12 does and that we also are doing for their -- to
13 determine the benefits of cost -- benefits between two
14 (2) plans.

15 What -- what this has here is when --
16 each cell here represents the result of their modelling
17 of a case. So this first cell here under column E that
18 says twenty-nine (29) -- twenty-nine twenty-one (2,921)
19 is the costs that come out of their economic model, the
20 present value of their costs over seventy-eight (78)
21 years of their economic model, by modelling the
22 Preferred Development Plan. And including in that of -
23 - modelling of the costs of the Preferred Development
24 Plan is the benefit from any export revenues that had
25 happened over that seventy-eight (78) years.

1 The fact that is negative show -- means
2 that -- that the incremental costs of the resources
3 were higher than the -- the export revenues that were -
4 - that were collected. So in other words, the -- over
5 time, as we've mentioned before, I think, several
6 places, that the -- that even the Preferred Development
7 Plan represents an increase in costs over time versus
8 today.

9 These -- these represent the -- these
10 are not a total revenue requirement analysis. These
11 are the incremental cashflow analysis. So what gets
12 taken into account to produce that twenty-nine twenty-
13 one (2921) for the Preferred Development Plan is the --
14 the investment -- the -- it going forward investments
15 in Keeyask, the going forward investment in Conawapa,
16 the investment in a 750 line, the impacts of all -- of
17 the -- of the -- all the power contracts that were put
18 in place in the -- under the Preferred Development Plan
19 assumption, the -- you know, all the -- the production
20 costs, or -- or export revenues that come in to --
21 under that plan. So it essentially but -- ral --
22 models all -- micro relevant costs.

23 MR. BOB PETERS: It -- it doesn't have
24 the sunk costs included?

25 MR. JOHN ATHAS: That's correct.

1 MR. BOB PETERS: All right. I think
2 I'm with your.

3 MR. JOHN ATHAS: Okay. So this number
4 twenty twenty-one (2021) here is what -- what comes out
5 of the -- we can look down in the individual case and
6 says this is what the economic model calculates as the
7 net present value seventy-eight (78) year cost of that
8 plan.

9 This number over here in the Colum --
10 Column M under the All Gas column repr -- is the same
11 number, kind of number; it's \$4.6 million negative.
12 And that means the -- the combination of adding plant
13 in the All Gas case and having probably -- adding plant
14 even though it had less capital cost to add plant, it
15 has significantly less export revenues. So it's more
16 negative, or -- or in other words, it incre --
17 increases the cost more for those incremental assets.
18 The difference in those two (2) I've shown here, is the
19 -- is the 1. -- \$1,696 million, or \$1.69 billion,
20 that's -- that we've all seen a lot of time.

21 So when -- when Manitoba Hydro prepares
22 its -- its quilt, the first thing it does, it -- it
23 essentially takes all the other cells on this -- in
24 this quilt, or matrix, and subtracts from that forty-
25 six seventeen (4617), the All Gas/reference/reference

1 case here.

2 THE CHAIRPERSON: It's a little bit
3 unfortunate that we didn't pull out this chart
4 yesterday afternoon. I think it would have informed
5 that discussion. Thank --

6 MR. JOHN ATHAS: Yeah, I --

7 THE CHAIRPERSON: -- thank you for
8 showing us.

9 MR. JOHN ATHAS: Yeah, I didn't -- it
10 took me a little while to figure out where was the
11 place on the record that I could find it.

12

13 CONTINUED BY MR. BOB PETERS:

14 MR. BOB PETERS: Just -- just to
15 interrupt so that I can understand in real time, if I
16 could, Mr. Athas, is that forty-six seventeen (4617)
17 subtracted from every other cell in all the other
18 plans, or just the ref/ref/ref line?

19 MR. JOHN ATHAS: Well, it -- it's all
20 the plans if you want to produce a matrix, a -- a quilt
21 for Hydro -- in Hydro's methodology. So I look at them
22 -- if I look at the -- what I put here -- the business
23 case analysis that was filed by Chap -- Chapter 10
24 under the Manitoba Hydro filing, in a slightly
25 different order of columns -- it's on page -- page 14

1 of 62 on Chapter 10 of -- of the Manitoba Hydro filing.

2 And I'll make it a little bigger.

3 What this -- this is the -- the quilt as
4 Manitoba Hydro filed, obviously, that you get when you
5 -- when you subtract the -- the cell that -- on the All
6 Gas reference from all the other cells. So you get
7 this one-six-nine-six (1696) in the last column under
8 the reference, the middle of the page, and -- and
9 that's -- that's where they -- that's -- that's the
10 famed reference/reference/reference number.

11 And for comparative purposes, or the --
12 or explanative purposes, if I was to go to a case like
13 low energy prices, high -- high discount rates, and low
14 capital costs, I would get a num -- I -- the -- the way
15 that cell would be populated in the multi-colour cell
16 would be to take this -- the Column E twelve (12) cell
17 and subtract from that the
18 reference/reference/reference cell, the forty-six
19 seventeen (4617). And that's what I've done here.

20 And that number -- so being the net cost
21 of the PDP at that cell minus the net cost of All Gas
22 at reference/reference/reference yields a positive one
23 fifty-seven (157).

24 And if I go back to the quilt for the
25 moment, you see that that plan up here has a one fifty

1 seven (157) cell entry into their quilt, and is plotted
2 on their -- it makes -- onto their risk profiles at
3 some point in time.

4 The La Capra methodology -- and the La
5 Capra methodology would subtract the net cost of the
6 PDP for the All Gas cost of that same assumptions which
7 now is in the -- under the conditions of low energy
8 prices and other things. It's much -- it's a much
9 lower cost to the All Gas Plan than the original plan,
10 just like there was a much higher cost to the -- to the
11 Preferred Development Plan than the original -- than
12 the reference case assumptions.

13 And that economic comparison between
14 those two (2) plans under those conditions yields that
15 the -- that the PDP has a hi -- increase in costs
16 compared to the All Gas case under those references as
17 of \$1,958 million, or \$1.958 billion (sic) dollars. So
18 that's how --

19 MR. BOB PETERS: If I could just
20 interrupt. On the LCA methodology, La Capra is
21 subtracting the All Gas cost row-by-row to zero out the
22 All Gas column?

23 MR. JOHN ATHAS: Exactly. And it's --
24 it's very simi -- it's the exact same calculation that
25 was performed by Manitoba Hydro on the next page from

1 what I was showing -- I think it was the next page. Or
2 -- or another page. Actually I was looking at the
3 presentation that was...

4

5 (BRIEF PAUSE)

6

7 MR. JOHN ATHAS: No, I have to -- I
8 apologize. I have to find that.

9 There's a -- the -- that exact
10 calculation was done by Manitoba Hydro in -- in a
11 couple of place -- I believe maybe it's in the -- let
12 me see if I can find it.

13

14 (BRIEF PAUSE)

15

16 MR. JOHN ATHAS: Yeah. I think it's
17 here. It's the presentation that was given in
18 September to introduce the Preferred Development Plan -
19 - I mean the NFAT analysis. There is a chart -- no --
20 yeah, maybe I don't have it. I'll probably be able to
21 figure out shortly where I come -- where it was.

22 But there's a similar chart that was
23 given to our -- our analysis where they -- we would --
24 we would populate our All Gas column in our quilt with
25 -- with all zeros, because we'd make that gran -- line

1 by line subtraction that you mentioned, Mr. Peters.

2

3 (BRIEF PAUSE)

4

5 MR. BOB PETERS: Thank you for
6 explaining the -- the different methodologies, Mr.
7 Athas.

8 Why does La Capra believe its
9 methodology is more informative for the panel?

10 MR. JOHN ATHAS: Well, is -- I'll --
11 I'll try it this way. It's -- sometimes you can look
12 at digital metrics and say, It's all about the math,
13 and -- to understand it. And some -- I would say it's
14 all about -- so it's -- so just like a math problem.

15 I think the metrics is more like a
16 spelling problem. In other words, you don't know the
17 meaning of a word until you can use it in a sentence.
18 And when I use these -- well, I can use -- when I look
19 at the numbers that we calculate within our quilt, each
20 one of those -- the sentence that it satisfies is: Whi
21 -- how -- which plan would have higher costs under
22 these conditions of any of the twenty-seven (27)
23 conditions of the -- of the plan?

24 So that when -- so you could look at --
25 at our quilt, and if -- if I pulled it up -- and say --

1 and ask that question about any plan comparison and any
2 -- any of the twenty-seven (27) branches and ans -- and
3 get the question answered.

4 The way -- whether -- and -- and for
5 convenience, versus All Gas, they're all -- anyone
6 that's negative would be -- would be a higher -- a
7 lower cost than any -- anyone that's negative would be
8 a higher cost than All Gas, and anyone that's positive
9 would be a lower cost than All Gas.

10 And so at a glance, the colours of the
11 red and green, staying with the same convention that
12 Manitoba Hydro used, all the greens would mean that the
13 plan has lower costs -- the plan has lower costs than
14 the All -- All Gas Plan. And I think that's in --
15 that's filed in our -- that quilt is in Appendix 9A.
16 Okay, 9 -- 9.3?

17 So if we -- if we go to -- if we go to
18 Manitoba Hydro Appendix 9.3, and that's why I was
19 having trouble finding it, it happens to be ready to
20 go, because I looked at it earlier if I remembered the
21 right click. Okay.

22 So that says that now, compared to the
23 All -- compared to this quilt, which was prepared
24 exactly as with the LCA methodology except that these
25 numbers don't get put into a risk profile by Manitoba

1 Hydro --

2 MR. KURT SIMONSEN: Mr. Athas, can you
3 give us the reference to Manitoba Hydro's --

4 MR. JOHN ATHAS: Oh, I'm sorry. This
5 is on page 68 of -- of Appendix 9.3 of their -- of
6 their appendices filed in -- on August 16th.

7 So -- so now, when I -- when I look at
8 the red here, the red means that -- that these cases
9 have higher costs than the All Gas Plan. So if you
10 look over here at the one (1) cell for the Plan 14,
11 we'll see the famed six nine six (696) (sic) down here,
12 and it's green, one point six-nine-six (1.696) (sic)
13 over the middle of the page toward -- second column
14 from the right under the Preferred Development Plan.

15 So green means that that plan under this
16 analysis, under the -- by comparing it to All Gas, is
17 lower costs. Red means it's higher costs. That's why
18 I kind of believe that my -- the negative and positives
19 of our methodology are more intuitive and more
20 informative.

21 The -- the Manitoba Hydro quilt has
22 different reds and greens, which is the page before it,
23 page 67. I don't know how to use the negatives and
24 positive differences in a sentence, so that's my
25 analogy to this billing.

1 MR. DANIEL PEACO: I think another way
2 to think about -- John, if you could put the
3 spreadsheet back up. So if I could offer up a sentence
4 for -- for Mr. Athas on this, this table here shows the
5 net preve -- present value cost of each of the twenty-
6 seven (27) branches of each of the development plans
7 that Manitoba Hydro has run.

8 And the -- these numbers all -- and --
9 and there could be -- there would be a similar table,
10 which is their quilt that they show, which is the same
11 numbers if you subtract the number minus -- minus four
12 six one seven (4617) from each one of those. So
13 basically, if you shift them by four six one seven
14 (4617), you have the same number. So it's essentially
15 just subtracting a constant number from all the numbers
16 in this table and -- and redisplaying it.

17 So it's basically the same cost numbers
18 adjusted by -- so it's a question of whether you
19 measure your height from the floor or from the table
20 you're standing next to. You're still measuring the
21 same thing. There's nothing changing. You're just
22 subtracting a constant from all the numbers.

23 So -- and so it -- it really comes back
24 to it's just a -- the cost of each of those branches in
25 the twenty-seven (27) outcomes with -- with a constant

1 number removed from all them, which they -- which
2 happens to be chosen as -- as the result for Gas
3 ref/ref/ref.

4 But I think, as Mr. Borison testified,
5 it's arbitrary. They could have used any number. They
6 could have used zero, they could have used that number,
7 any other number to subtract from all the numbers, and
8 -- and get the same relative result in their quilt.

9 MR. JOHN ATHAS: So that's if you look
10 up and down a column, you see the -- the relative
11 spacing between one (1) cell in the same column to the
12 other cell in the same column is a reflection of the
13 differences in cost of those plans, and not a
14 difference in their benefits versus the All Gas Plan.
15 And that was the reason why I was calling their profile
16 a cost profile rather than a value profile.

17 MR. BOB PETERS: Okay. Thank you. I'm
18 not sure if My Friend opposite will have some questions
19 on that, but we'll -- we'll move ahead if we could.

20 I want to go to Appendix -- Technical
21 Appendix 2 of La Capra's report. And it's page 2-18.
22 And it's under, "Levelized cost of energy analysis."
23 Just I need a clarification, if I could.

24 This approach uses the present value of
25 project costs, correct?

1 MR. DANIEL PEACO: Yes.

2 MR. BOB PETERS: And -- and it also
3 uses the present value of energy generated?

4 MR. DANIEL PEACO: Yes.

5 MR. BOB PETERS: And to get the present
6 value of the energy generated, a price is needed, is it
7 not?

8 MR. DANIEL PEACO: Yes.

9 MR. BOB PETERS: How did La Capra
10 arrive at that number?

11 MR. DANIEL PEACO: I think -- we didn't
12 -- we -- this is a discussion of Manitoba Hydro's
13 calculation.

14 MR. BOB PETERS: Were you able to
15 verify it though?

16 MR. DANIEL PEACO: Yeah, I believe we
17 were.

18 MR. BOB PETERS: Is -- is it gross
19 revenue from exports only or is it exports as well as
20 domestic rates?

21 MR. JOHN ATHAS: I think -- I -- I
22 think the key thing to realize here, this is a cost of
23 production and it doesn't get reflected on whether it's
24 used to supply export opportunities or domestic energy.

25

1 MR. DANIEL PEACO: The -- they -- do --
2 if I could just --

3 MR. BOB PETERS: The calculation is
4 indifferent to -- to the -- to the end use of the
5 energy?

6 MR. DANIEL PEACO: This calculation, as
7 -- as presented in Manitoba Hydro's materials, is used
8 for the sole purpose of screening. So what they're
9 simply doing is saying, If I have resource A versus
10 resource B, which ones do I think are -- pass some cost
11 threshold worth considering in the planning process?

12 And so, at this juncture, they're not
13 doing a development plan. They're just simply sorting
14 through the various resource options and costing them
15 out in an approximate way to -- with the levelized cost
16 of energy metric to say, you know, all the ones that
17 are below -- below some threshold I'm going to continue
18 to -- to look at further in -- in development plans.
19 Ones that are above that threshold, I'm going to screen
20 out of the process and not spend time with.

21 So that -- that's the -- the purpose to
22 which they use it. And the discussion here really was
23 looking at a review of their screening process, in
24 terms of what resources they -- they considered in or
25 out for their development planning purposes.

1 MR. BOB PETERS: All right. If we
2 scroll towards the bottom of the page, please.

3 There's methodology for Manitoba Hydro
4 is -- is noted as being different from the revenue
5 requirement methodology, correct?

6 MR. DANIEL PEACO: Yes.

7 MR. BOB PETERS: Can you explain the
8 difference to the panel, please?

9 MR. DANIEL PEACO: This -- it's similar
10 to what Mr. Athas, I think, described yesterday. The -
11 - they're -- they're doing -- they're not -- some of
12 the things that are missing from this would be like
13 financing costs and other -- other things that would go
14 into a full -- what I would say a full pro forma of the
15 -- the development costs of a project, because you're
16 looking at more of the economic costs.

17 MR. BOB PETERS: So from the
18 ratepayers' perspective, you'd need to go to the
19 revenue requirement methodology?

20 MR. DANIEL PEACO: Right.

21 MR. BOB PETERS: So the finance
22 expense, the depreciation expense, OM&A, taxes, those
23 would have to be included?

24 MR. DANIEL PEACO: Yes. These were --
25 these are more on the economic cashflow kind of basis,

1 the way Mr. Athas described in the economic model.

2 MR. BOB PETERS: So those -- so those
3 items were not included?

4 The -- the items that -- that usually
5 make up some of the revenue requirements, like finance
6 expense, depreciation, OM&A, and capital taxes, are not
7 included?

8 MR. JOHN ATHAS: Just -- just to
9 clarify. In the methodology of using cashflows, you
10 don't need to include them and -- as opposed to like
11 something that was needed to be included but not
12 included. In revenue requirements, you would capture
13 the effects of all those -- all those elements that you
14 had.

15 MR. BOB PETERS: All right. I -- I
16 have your -- your distinction. In your Appendix 3B on
17 page 4, there's a Figure 3.8 shown on the screen.

18 Would it be correct to interpret the
19 CCGT capacity supply as the plan proposed by La Capra?

20 MR. DANIEL PEACO: No. There was the
21 alternative gas case that Manitoba Hydro prepared.

22 MR. BOB PETERS: And in that
23 alternative gas case, we had some discussion about it
24 already, Mr. Peaco, Manitoba Hydro swapped out the
25 single cycle and -- and put in the combined cycles?

1 MR. DANIEL PEACO: That's correct.

2 MR. BOB PETERS: And you had a
3 discussion as to whether it could have been optimized
4 to a greater or lesser -- or to a greater degree than
5 it -- than -- than it was.

6 MR. DANIEL PEACO: That's right.

7 MR. BOB PETERS: All right. Did La
8 Capra carry out an analysis that looked to meet of any
9 -- to meet Manitoba Hydro's new export contracts with
10 an expanded All CCGT Plan?

11 MR. DANIEL PEACO: No. Not
12 specifically to -- to supply those contracts, no.

13 MR. BOB PETERS: Would that have been
14 an option?

15 MR. DANIEL PEACO: Would it -- would it
16 have been an option?

17 MR. BOB PETERS: Yes, to supply those
18 contracts with -- with gas turbine generation.

19 MR. DANIEL PEACO: Well, we didn't
20 specifically look at that but the -- those contracts
21 typically are system power -- system -- system power
22 contracts. So to some degree, they may be able to be
23 supplied with the addition of -- of gas. The
24 conditions on supply really are tied to Manitoba Hydro
25 contingencies, not -- not the buyers. So, you know, in

1 theory there -- there's at least some amount of that
2 that -- that could -- could well be done that way.

3 MR. BOB PETERS: What -- one of the
4 distinctions you drew is that in -- in many of these
5 arrangements that are -- we've got exhibits with the
6 contracts described.

7 But when there's system power
8 participation agreements, it's the purchaser who's
9 getting the power from Manitoba Hydro no matter how
10 it's generation.

11 MR. DANIEL PEACO: Yeah, and typically
12 the -- I don't know if we're going to get in -- I don't
13 want to get far into contract terms because I'm -- when
14 -- when I reviewed the contracts they were 100 percent
15 redacted. So my -- my understanding of what is and
16 isn't in -- in CSI anymore is not very good.

17 But -- but that's correct. I think
18 you'd have to look at the -- the way the accounting is
19 done on system power, and -- and in terms of the extent
20 to which you could perform under the contract terms
21 with -- with the system as configured with gas
22 turbines.

23 MR. BOB PETERS: If we turn the page to
24 page 3B-5 and look at Figure 3-9, did La Capra quantify
25 the additional generation output that the CCGT Plan

1 will provide during the twenty (20) to thirty-five (35)
2 time period under -- under maximum flows?

3 MR. DANIEL PEACO: Yes.

4 MR. BOB PETERS: Do you have that
5 number, or could you --

6 MR. DANIEL PEACO: I think it's in this
7 chart that you've pulled us to.

8 MR. BOB PETERS: I was looking for, I
9 guess, the cumulative additional generation output.

10 MR. DANIEL PEACO: Okay. Let me try --
11 try that question again. I'm not sure if I understood
12 it.

13 MR. BOB PETERS: Okay. If we look at
14 the maximum line, which is the dark line on the chart -
15 - not the blue one, but the brown one or black one --
16 how does that output level compare with the Preferred
17 Development Plan outputs from, say, twenty (20) to
18 thirty-five (35)?

19 MR. DANIEL PEACO: The Preferred
20 Development Plan outputs?

21 MR. BOB PETERS: Yes.

22 MR. DANIEL PEACO: This -- this figure
23 is plotting the -- the production specifically from
24 those gas units added to the plan. So in the Preferred
25 Development Plan, it doesn't have gas plants until

1 fairly far out into the planning horizon. Is that what
2 -- is that what you're asking?

3 MR. BOB PETERS: No. I was asking
4 whether you were able to determine how much more the
5 Preferred Development Plan would -- would produce than
6 what's shown under the -- the All CCGT Plan.

7 MR. DANIEL PEACO: You mean how much
8 surplus energy?

9 MR. BOB PETERS: Yes.

10 MR. DANIEL PEACO: I don't know that we
11 produced that anywhere. I bel -- I mean, the numbers,
12 those -- those could be derived from -- from the cases
13 we looked at, but I don't -- I'm not recalling that we
14 have it anywhere to show you.

15 MR. BOB PETERS: And again, this --
16 this isn't the La Capra CCGT Plan?

17 MR. DANIEL PEACO: Yes. This is the --
18 the alternative plan that includes all combined cycle
19 units.

20 MR. BOB PETERS: But it's Manitoba
21 Hydro's alternative.

22 MR. DANIEL PEACO: Well, it's the new
23 plan that was done in response to our request.

24 MR. BOB PETERS: All right.

25 MR. DANIEL PEACO: I think the -- maybe

1 I threw you off on the distinction, as we had requested
2 a somewhat different configuration, but Hydro was in
3 the process of putting together a plan that was
4 combined cycle. And -- and so that ended up sufficing
5 for purposes of fulfilling that request. So my -- I
6 may have thrown you off by -- by...

7

8 (BRIEF PAUSE)

9

10 MR. BOB PETERS: If La Capra could
11 undertake to provide the comparison of surplus energy
12 compared to the Preferred Development Plan compared to
13 this plan, that would be appreciated.

14 MR. DANIEL PEACO: Okay.

15 MR. BOB PETERS: Yes. The -- just
16 looking for the -- the surplus energy from the CCGT
17 Plan that's shown on Figure 3.9 -- 3-9, and also the
18 amount that would be achieved under the Preferred
19 Development Plan. And let's just narrow the time line
20 between 2020 and 2035, please, Mr. Monnin.

21 MR. CHRISTIAN MONNIN: We undertake to
22 do so.

23

24 --- UNDERTAKING NO. 115: La Capra to provide a
25 comparison of surplus

1 energy from the CCGT Plan
2 as shown in Figure 3-9 to
3 the Preferred Development
4 Plan between 2020 and 2035
5

6 CONTINUED BY MR. BOB PETERS:

7 MR. BOB PETERS: On page 3 dash -- 3B-
8 17, in the second paragraph, I just want to understand,
9 there's a reference here that SPLASH modelling used a
10 generic gas plant with a heat rate equal to the average
11 of the CCGT and SCGT heat rates, correct?

12 MR. DANIEL PEACO: Correct.

13 MR. BOB PETERS: Can you explain to the
14 panel why the use of separate heat rates for the two
15 (2) different units could not be modelled to reflect
16 their different operating conditions, as opposed to
17 averaging them together?

18 MR. JOHN ATHAS: This -- this is an
19 interim run as opposed to being meant to be an economic
20 analysis case. This is the run in part of the
21 optimization process, where first they -- whenever
22 they're going to add gas, they add it in with that
23 average heat rate.

24 Then they take a look at the operation
25 of that -- of that unit and say -- and basically look

1 at it. If it operated enough to be warranted, the
2 investment of a combined cycle, they would change it to
3 a combined cycle. If it didn't, they make it a -- a
4 simple-cycle gas turbine. Both of those -- each of
5 those at their appropriate heat rate.

6 So the economic analysis you see never
7 has the -- a model run with the average heat rate.
8 It's just something that's used in their optimization
9 process to decide on simple-cycle combustion turbines
10 versus combined-cycle gas turbines.

11

12 (BRIEF PAUSE

13

14 MR. BOB PETERS: Are you able to
15 indicate to the panel whether the results would be
16 different if you were to use the heat rate more
17 applicable to the SCGT as distinct from the heat rate
18 that would have been used for the CCGT?

19 MR. DANIEL PEACO: I think that was --
20 we were talking about this earlier. We had a slide up
21 from -- from our presentation talking about our
22 conclusions about there being a different configuration
23 of, or mix of, combined cycle and combustion turbines
24 that might give a better solution. I suspect that that
25 result would come from -- from a more specific look at

1 the heat rates of these two (2) types when -- in
2 designing the plan.

3 MR. BOB PETERS: On page 26 under the
4 same appendix, the middle paragraph, have a second to
5 look at that.

6 Did La Capra examine the possible
7 integration of an All CCGT Plan with higher import
8 limit as a means to deferring hydraulic resources?

9 MR. DANIEL PEACO: Other than the case
10 we were just talking about, that was -- that's the only
11 one that we had.

12

13 (BRIEF PAUSE)

14

15 MR. BOB PETERS: I want to turn to --
16 to drought risk in the time I have left. On Appendix
17 5, I believe, page 4 -- 5-4. If we can just go up,
18 please, to -- that's good, yes. In the second
19 paragraph. I have a question as to whether or not La
20 Capra is able to explain what this energy in excess of
21 the reserve requirement is in the context of Lake
22 Winnipeg operations?

23

24 (BRIEF PAUSE)

25

1 MR. DANIEL PEACO: I've read the
2 passage here. Could -- I -- I'm not sure if I'm
3 understanding your question.

4 MR. BOB PETERS: There's -- there's
5 reference in the brackets to energy in excess of the
6 reserve requirements. And I'm not sure I understand
7 what -- what's meant from that.

8 Are you able to explain that any
9 further?

10 MR. DANIEL PEACO: This is basically
11 just -- and I think the reserve require -- reserve
12 requirements there essentially is the energy required
13 for domestic -- domestic consumption and fixed
14 obligations.

15 MR. BOB PETERS: Is there a minimum
16 energy and storage level above the 711 feet lower
17 licence limit that Manitoba Hydro operates under?

18 MR. DANIEL PEACO: Well, they have a
19 minimum and a maximum range they can operate within
20 under, you know, under their control. And then if it's
21 -- if it's too low they're -- they're governed by some
22 -- one (1) set of rules and if it's too high it's
23 another set.

24 MR. BOB PETERS: And they have a --
25 from that lower limit is there a requirement to keep an

1 energy reserve in excess of that lower limit?

2 MR. DANIEL PEACO: That's -- I believe
3 there is. Though, I think as we talk here somewhere,
4 we really didn't get to the point where we have a good
5 documentation of their operating policy and -- to get
6 to the exact answer to your question.

7 MR. BOB PETERS: And you -- there's
8 also then reference to the drought storage requirement.
9 Is that to recognize the lower licence limit of 711
10 feet?

11 MR. DANIEL PEACO: Well, that's -- I --
12 I think that that's -- that's talking about the reserve
13 that they will establish and how much water they need
14 to hold. There clearly is operating decisions as to --
15 as to how much water to hold to protect against the --
16 the effects of -- of drought versus how much they can
17 use for current operations.

18 MR. BOB PETERS: If we turn to 5-6,
19 please...

20

21 (BRIEF PAUSE)

22

23 MR. BOB PETERS: And I'm looking down
24 at the bottom of the page under, "Drought Management
25 Plan."

1 MR. DANIEL PEACO: Yes.

2 MR. BOB PETERS: It says that Manitoba
3 Hydro provided a confidential document entitled,
4 "Energy Operations Planning Drought Management 2013
5 Draft"?

6 MR. DANIEL PEACO: Yes.

7 MR. BOB PETERS: And it says that Hydro
8 did not provide a drought operating plan on page 5.7 --
9 5-7?

10 MR. DANIEL PEACO: Right.

11 MR. BOB PETERS: Did La Capra examine
12 Hydro's actual drought operations from the last most
13 serious drought in Manitoba in 20 -- 2003?

14 MR. DANIEL PEACO: No, we didn't -- we
15 didn't get an opportunity to review that in detail.

16 MR. BOB PETERS: And in terms of this
17 energy operations planning drought management, that's
18 Manitoba Hydro's Drought Management Plan?

19 MR. DANIEL PEACO: Or what they -- what
20 they produced to us when we asked for it.

21 MR. BOB PETERS: Does that suggest that
22 you got a piece of what it was, or do you -- do you
23 know?

24 MR. DANIEL PEACO: Well, what we got
25 was not quite to the point where we understood exactly

1 what their plan was. And there was draft documents and
2 -- and different pieces, but we didn't find in those
3 documents what we were looking for to answer the
4 question -- some of the questions that we were -- we
5 were asked to pursue in terms of what the -- what the
6 operating policy would be.

7 So that's what we're characterizing
8 here, is what we did have and what we can infer from
9 the documents that were provided.

10 MR. BOB PETERS: Was this energy
11 operations planning document also labelled a power
12 resource plan?

13 MR. DANIEL PEACO: I'm not sure that it
14 was. I think this was a separate -- what we were
15 looking for was a separate ope -- document of their
16 operations.

17 MR. BOB PETERS: All right. I -- I'm
18 going to ask Mr. Monnin to -- to undertake to provide a
19 copy of that as CSI to the Public Utilities Board, if
20 it's in the possession of La Capra. And -- or was this
21 a SharePoint document that was provided?

22 MR. DANIEL PEACO: I believe it's a
23 SharePoint document. I have to check our list. We've
24 -- we've got a listing of all the documents. I --
25 could you -- could you scroll down to the bottom of the

1 page and see what the footnote says. If it doesn't
2 have a reference there we'll have -- we have to
3 verify...

4 MS. PATTI RAMAGE: If I could jump in,
5 Mr. Peters. There's already an undertaking on the
6 record for Manitoba Hydro to file that document.

7 MR. BOB PETERS: All right. Thank you.
8 Then, Mr. Monnin, your -- your workload got lighter.

9

10 CONTINUED BY MR. BOB PETERS:

11 MR. BOB PETERS: In the -- in the
12 drought modelling has La Capra been able to form an
13 opinion either to agree or disagree with Hydro's
14 rationale and conclusion that the 1987/'88 to '91/'92
15 period is an adequate reflection for calculating
16 drought risks?

17 MR. DANIEL PEACO: We examined the --
18 the effects of a number of different stream flow
19 sequences from the period of record included in this --
20 in this technical appendix, and showed some of the
21 sensitivity that -- I think that we found -- we didn't
22 find that there was substantial added exposure for
23 extended periods of drought consideration. But we did
24 present some analysis to show the sensitivity of
25 results to a number of different configurations in --

1 in our analysis.

2 MR. BOB PETERS: All right. Thank you.
3 Mr. Chairman, those are the questions that I have for
4 La Capra on the public record. I do have more relating
5 to some of the contract specifics that I think are best
6 kept at the CSI level, and I would ask those this
7 afternoon.

8 I recognize this is to be the end of the
9 public session, although My Friend opposite may have a
10 question with respect to a spreadsheet that I saw for
11 the first time from Mr. Athas today, although it's
12 probably one (1) of his working documents. So perhaps
13 Ms. Ramage has a question.

14 MS. PATTI RAMAGE: Oh, I have a few
15 questions. They don't relate to the spreadsheet. It
16 just relates to some of the information -- their
17 responses during the course of Board counsel's cross-
18 examination.

19

20 RE-CROSS-EXAMINATION BY MS. PATTI RAMAGE:

21 MS. PATTI RAMAGE: And, Mr. Peaco, in
22 your review of Manitoba Hydro's plans is it fair to say
23 you've recognized advantages to coordinating plans with
24 neighbouring utilities so as to provide benefits to the
25 Manitoba Hydro system?

1 MR. DANIEL PEACO: Yes.

2 MS. PATTI RAMAGE: And one (1) of those
3 benefits would be Manitoba Hydro selling surplus power
4 and energy.

5 Is that right?

6 MR. DANIEL PEACO: Yes.

7 MS. PATTI RAMAGE: Another benefit
8 would be the ability to purchase energy during a
9 drought.

10 Is that correct?

11 MR. DANIEL PEACO: Correct.

12 MS. PATTI RAMAGE: Another benefit
13 would be increased power system reliability.

14 Is that right?

15 MR. DANIEL PEACO: Yes.

16 MS. PATTI RAMAGE: And another benefit
17 would be in permitting and constructing international
18 power lines.

19 Is that right?

20 MR. DANIEL PEACO: Correct.

21 MS. PATTI RAMAGE: And would you agree
22 that -- that when we're doing this with our neighbours,
23 anything we do is going to have to bring value to our
24 neighbours' plans and their customers also? It's not a
25 one-way street?

1 MR. DANIEL PEACO: Yes. yes.

2 MS. PATTI RAMAGE: Okay. Yeah. And so
3 in response to Board member Bel's question regarding
4 doing the 750 line, relaxing the import restriction and
5 delaying Keeyask, can you confirm that under the terms
6 of the Minnesota Power Agreement if Keeyask is not
7 built, MP has no obligation to build any transmission
8 line, be it a two fifty (250) or a seven fifty (750)?

9 That's one of the benefits we're
10 deriving from that deal, is gaining that cooperation?

11 MR. DANIEL PEACO: I'm not recalling a
12 specific condition precedent in favour of Minnesota
13 Power with respect to whether Keeyask is built or not
14 built.

15

16 (BRIEF PAUSE)

17

18 MS. PATTI RAMAGE: Do you recall if
19 Manitoba Hydro delays Keeyask for one (1) year, will
20 the contract continue?

21 MR. DANIEL PEACO: Yes.

22 MS. PATTI RAMAGE: And if the contract
23 is delayed for two (2) years, will the contract
24 continue?

25 MR. DANIEL PEACO: Yes.

1 MS. PATTI RAMAGE: And if the contract
2 is delayed three (3) years, will the contact continue?

3 MR. DANIEL PEACO: Well, it depends on
4 whether Manitoba Hydro decides to waive its condition
5 precedent.

6 MS. PATTI RAMAGE: And we may have to
7 deal with specific clauses in the CSI session. I'm
8 trying to do as much in the public session as I can.

9 Sir, if I put to you that Manitoba Hydro
10 is required to build Keeyask within two (2) years or
11 that contract is at an end, does that -- is that
12 correct?

13 MR. DANIEL PEACO: I would want to
14 review the conditions.

15 MS. PATTI RAMAGE: And further, with
16 respect to Dr. Bel's question, if you relax the
17 criteria, would you agree that, as per our discussion
18 yesterday, you no longer have the additional import
19 energy for emergencies, and you're going to be counting
20 on it?

21 MR. DANIEL PEACO: I'm sorry, could you
22 ask the question again?

23 MS. PATTI RAMAGE: If you relax the --
24 the generation planning criteria and you allow
25 additional import -- or you will -- you'll -- you will

1 be using that energy when you relax the criteria for
2 your regular system operations, correct?

3 That's the purpose of relaxing it? To -
4 - to gain the benefit of more power?

5 MR. DANIEL PEACO: Yes.

6 MS. PATTI RAMAGE: Right. And that
7 means that the power that you're importing, that you're
8 counting on for everyday operations, is no longer
9 available for an emergency.

10 Is that correct?

11 MR. DANIEL PEACO: Well, I think that's
12 the -- that's the assessment that would need to be
13 done, determine where the economic tradeoff is there.

14 MS. PATTI RAMAGE: Would you agree that
15 tie-lines are Manitoba Hydro's lifeline in the event of
16 an emergency? Emergencies like drought, catastrophic
17 failure, and -- or extreme weather events, like we
18 discussed yesterday?

19 MR. DANIEL PEACO: As I spoke -- spoke
20 with your colleague yesterday afternoon, I -- I now
21 understand the explanation that Manitoba Hydro relies
22 substantially on reserves in MISO for -- for
23 contingencies coverage in -- within the system.

24 MS. PATTI RAMAGE: But Manitoba Hydro
25 is not a full MISO member, is that correct?

1 Is that your understanding?

2 MR. DANIEL PEACO: Correct.

3 MS. PATTI RAMAGE: And Manitoba Hydro -
4 - a full MISO member in -- is able to rely on MISO's
5 obligation to serve them.

6 Is that correct?

7 MR. DANIEL PEACO: Right. I was
8 referring to the reserve agreement.

9 MS. PATTI RAMAGE: But Manitoba Hydro -
10 - MISO has no obligation to serve Manitoba Hydro?

11 MR. DANIEL PEACO: Under the reverse
12 agreement?

13

14 (BRIEF PAUSE)

15

16 MS. PATTI RAMAGE: You would agree that
17 we have a contractual reserve agreement with a start
18 and end date that right now provides us with reserves,
19 but on an ongoing basis MISO has no obligation to plan
20 for Manitoba Hydro's needs?

21 MR. DANIEL PEACO: But my understanding
22 was the -- the reliability construct for Conawapa was
23 dependent upon the reserve agreement. That's the only
24 reason -- reason you can -- you can configure the
25 system with Conawapa and the transmission to keep

1 reliabilities, is if you've got reserves in MISO to
2 cover the loss of Bipole.

3 MS. PATTI RAMAGE: But you'd agree
4 that's to the extent that we have exports.

5 MR. DANIEL PEACO: I guess I'm losing
6 your question. Are you saying you're -- you're not
7 capable of extending the reserve agreement without
8 Conawapa?

9

10 (BRIEF PAUSE)

11

12 MS. PATTI RAMAGE: Let's try this.
13 Energy supplies over a tie-line, you'd agree, are not
14 under Manitoba Hydro's control.

15 Is that right?

16 MR. DANIEL PEACO: I guess I'm not
17 understanding your question.

18 MS. PATTI RAMAGE: They're -- they're
19 not -- we're not generating them. We're relying on a
20 third party to generate at that point.

21 MR. DANIEL PEACO: That's correct.

22 MS. PATTI RAMAGE: And if we are
23 looking to the United States, we will -- it will be
24 subject to the laws of another country.

25 Is that correct?

1 MR. JOHN ATHAS: I would presume so,
2 yes.

3 MS. PATTI RAMAGE: And it will be
4 subject to the market rules of a -- of organizations of
5 which Manitoba Hydro is not a full controlling member.

6 MR. DANIEL PEACO: I -- that's what I
7 understand, yes.

8 MS. PATTI RAMAGE: And those tie-lines
9 are also subject to unforeseeable events, correct?

10 MR. DANIEL PEACO: That's correct.

11 MS. PATTI RAMAGE: And Manitoba Hydro
12 is on the periphery of the North American electric
13 grid.

14 Is that correct?

15 MR. DANIEL PEACO: Connected across the
16 border, yes.

17 MS. PATTI RAMAGE: But, for example,
18 compared to where you live in Boston, we don't have the
19 same number of options. There's not a lot of large
20 centres around Manitoba Hydro --

21 MR. DANIEL PEACO: Actually, I live in
22 Maine, and we're kind of on the periphery of everything
23 as well. So I feel your pain -- I feel your pain.

24 MS. PATTI RAMAGE: But we're not a
25 large centre like a Boston or --

1 MR. DANIEL PEACO: Yeah, I understand.
2 You don't have neighbours on -- on four (4) sides.

3 MS. PATTI RAMAGE: So the import
4 criteria will ensure that Manitoba Hydro has access to
5 -- the -- the goal of it, whatever level it's at, the -
6 - the -- it's to ensure Manitoba Hydro has access to
7 additional supply in events outside the planning
8 criteria.

9 Is that correct?

10 MR. DANIEL PEACO: I'm not sure if I --
11 I got your question.

12 MS. PATTI RAMAGE: The import criteria
13 portion --

14 MR. DANIEL PEACO: Of your planning
15 criteria.

16 MS. PATTI RAMAGE: -- of the planning
17 criteria assists Manitoba Hydro in accessing additional
18 supply in -- in events that are outside the planning
19 criteria. We reviewed that. That would be the drought
20 worse than record, the catastrophic failure of
21 generation, or extreme weather events. That's part of
22 what that --

23 MR. DANIEL PEACO: It defines -- it
24 defines the extent to which that -- you -- you allow
25 for that within your energy planning criteria, correct.

1 MS. PATTI RAMAGE: It also ensures that
2 Manitoba Hydro, or -- or any hydro utility, for that
3 matter, isn't overly reliant on others. That's the --
4 that's part of the --

5 MR. DANIEL PEACO: That's -- yeah. Any
6 -- any such criteria would -- would be seeking that
7 objective, yes.

8 MS. PATTI RAMAGE: And any criteria
9 would also want to avoid simultaneous reliance on non-
10 firm purchases to support firm exports in the same
11 market.

12 MR. DANIEL PEACO: I'm sorry. I'm --
13 say that one again?

14 MS. PATTI RAMAGE: You can't import and
15 export at the same time. It has to recognize what your
16 -- what your business --

17 MR. DANIEL PEACO: You mean across the
18 same interface?

19 MS. PATTI RAMAGE: Yes. If you have a
20 firm sale, you -- you shouldn't be relying on non-firm
21 imports to occur at the same time. And that's one (1)
22 of the -- what our planning criteria does.

23 MR. DANIEL PEACO: Well, some -- some
24 of your firm sales can be performed financially. So
25 the firm sales that require physical delivery would --

1 would -- that would apply.

2

3 (BRIEF PAUSE)

4

5 MS. PATTI RAMAGE: That's all our
6 follow-up questions. Hopefully we've been able to help
7 the panel understand the importance of the planning
8 criteria.

9 THE CHAIRPERSON: I wonder if we could
10 spend a few more minutes. I just want to explore
11 something with the witnesses. And if we could call up
12 LCA-45, page 70, Diana. Okay. I'm trying to -- I'm
13 trying to -- I'd like to explore with you the option of
14 substituting wind -- looking at -- I'm looking at Plan
15 5, which has got K19/Gas25/750, and

16 I'm looking at the -- if we were to
17 substitute wind into that mix instead of gas, can we --
18 can we draw the -- can -- can we use the LCA results
19 from line 3 to -- to conclude that it would make sense
20 to use wind instead of gas in that scenario?

21 MR. DANIEL PEACO: It -- it would be a
22 little tough to make too many inferences on that simply
23 because the -- the Wind/Gas case does not have any
24 additional hydro in there, in that plan. And with --
25 with Keeyask in the mix it's not clear to me how -- you

1 know, the wind obviously would operate when it
2 operates. And the gas can sort of work around -- will
3 operate when it's needed.

4 I haven't looked specifically at how the
5 gas facilities operate within that plan to know how
6 that would compare to wind and how it would interrelate
7 with the storage capability. So it's a -- there's a
8 lot of moving parts that we'd -- we'd have to sort of
9 speculate on without doing a -- doing the run.

10 But the -- to the extent that you've got
11 a plan that is -- will be more surplus energy and have
12 less -- less times when it's -- when the system is --
13 is not exporting, the wind economics will be -- would
14 be somewhat different in that kind of a configuration.

15 THE CHAIRPERSON: I guess what I'm
16 trying to establish is that the wind would be operating
17 during -- during the day and you could -- Manitoba
18 Hydro could be selling some of that firm capacity into
19 -- into the US market, couldn't it, at that point?

20 MR. DANIEL PEACO: Yeah, I think that
21 in any plan, particularly when you're -- when you're
22 operating as something we've seen even in the -- in the
23 Preferred Development Plan analysis that we've looked
24 at, when you're in average or below average water years
25 there's enough flexibility in the system, or, you know,

1 the reservoirs are operating sort of within the --
2 between the min and max and there's -- there's some --
3 some operating flexibility there.

4 We see that in the Gas plans they're
5 using the storage to -- to shape that -- the -- the
6 generation of the gas and -- and target additional on-
7 peak exports as a result. So in those circumstances
8 the Wind energy could be shaped in the same way.

9 Obviously, in -- in very high water
10 conditions there may be some limits on -- on the
11 flexibility of the reservoir, but in -- in other water
12 conditions so long as there's -- you're within the
13 normal operating range of the reservoir there would be
14 some ability to shape that energy into, you know, on-
15 peak exports.

16 MR. JOHN ATHAS: If I can just help out
17 a place where we can -- where you -- we've seen the
18 closest thing to that as the -- why the -- why the
19 question mark. In a -- in a lot of ways the -- the
20 introduction of DSM is not that different than wind.
21 Obviously it has a different cost, but it's ess -- it's
22 like a -- it takes away a set amount of energy that
23 needs to be satisfied with every -- all the other
24 assets.

25 What you -- what you saw in the wind

1 analysis that -- I mean, in the -- in the DSM analysis
2 performed by Manitoba Hydro is the same DSM levels with
3 the exact same costs and the exact same load effects
4 have different benefits depending on what system
5 they're added to.

6 And -- and that complexity that Mr.
7 Peaco was talking about are the same things that
8 contribute to the value -- to the benefit of the DSM as
9 it would be to the benefit of the wind. We -- we're
10 assuming that their modelling captures most of those
11 opportunities that you describe with the shifting of
12 wind when you actually use hydro generation and the
13 like, just as it would on the DSM cases.

14 But it's that -- but the wind cases are
15 just -- are -- I mean, the DSM cases are a good example
16 of how you can introduce some degree of -- the same
17 degree of cost into two (2) different places and the
18 same degree of -- the same energy change, which would
19 be like wind dispatch change into two (2) -- two (2)
20 systems. But because they had a different starting
21 point and different lev -- amount of other resources,
22 they have a different economic production cost benefit.

23 THE CHAIRPERSON: To the point that,
24 you know, if you introduce the higher capacity line,
25 the seven fifty (750) in there and you're -- you're

1 drawing in US power, you could argue that what you're
2 doing is you're substituting US wind power for gas,
3 aren't you?

4 MR. DANIEL PEACO: To your -- I'm not
5 sure if I understood fully your -- the -- the case that
6 you're wanting to ask about.

7 THE CHAIRPERSON: We've been discussing
8 the -- you know, the benefits flowing from the 750
9 line. And so the 750 line available to draw power from
10 the US would be presumably drawing some wind power from
11 the US?

12 MR. DANIEL PEACO: It could. It could.

13 THE CHAIRPERSON: So the introduction
14 of a higher capacity -- higher amounts of imported
15 power by lifting a restriction on the -- on the 10
16 percent, for example, would, in effect, be replacing
17 the gas component in some of these scenarios, wouldn't
18 it?

19 MR. DANIEL PEACO: Sure. If you had --
20 if you had increased transfer limits into -- into Mani
21 -- into Manitoba Hydro's system, however you get there,
22 more transmission or -- or a change in the operating
23 policy, that would provide you access to either.

24 So the system power that may be surplus
25 when wind is blowing a lot in the -- in the US or

1 specific contracts tied to that production, that you
2 would -- you know, the -- the more import capability
3 you have, the more flexibility you have to take
4 advantage of that.

5 MR. JOHN ATHAS: Another example I'd
6 say that why it's dependent on the time, there are
7 periods where that -- where the increased import would
8 take a case that if -- with the lower imports and say,
9 Look at the day ahead, and Hydro wouldn't have
10 generated any electricity with their -- with their gas
11 plants.

12 What the opportunity of the import does
13 is it chan -- it might take some hydro that they would
14 have generated at night and let it generate during the
15 day. And then they could -- then they could actually
16 have gotten a higher value for -- out of that
17 transactions without really affecting gas is what I
18 would say because the gas is on -- at play so little in
19 a case with one (1) or more hydros, that it's very --
20 more often than not, it's the -- that economics of when
21 you're going -- when you're going to actually export.

22 THE CHAIRPERSON: Would you be able,
23 based on the data you have in hand, give us a scenario
24 -- the results from a scenario that would pull out the
25 Gas25 and Plan 5 case and simply have K19 750? Would

1 it be available? Would you have the data that would
2 allow you to give you the outcomes from a net present
3 value perspective, and the CPV as well?

4

5 (BRIEF PAUSE)

6

7 MR. JOHN ATHAS: One (1) second. I --
8 I think what you're describing is -- might be Plan 6.
9 I just have to check my recollection on all these.

10

11 (BRIEF PAUSE)

12

13 MR. JOHN ATHAS: What we -- what we do
14 have data on is -- and the detailed data that came in
15 after we did our update is Plan 6 has gas when it's
16 needed, which happens to be thirty (30) -- thirty-one
17 (31) and a 750 line. So that's maintaining the same
18 planning criteria, the equivalent of adding the -- it's
19 either one way or the other, either adding the 750 to
20 the Plan 4 or taking out the WPS sale on investment
21 from Plan 5.

22 And you -- either way -- whichever way
23 you're coming from you get to Plan 6, which is equal
24 liability criteria and a Gas31 timing.

25 MR. DANIEL PEACO: Yeah, the only --

1 the only other problem is that Plan 6 -- Plan 6 does --
2 I don't think has the contract in there, so there would
3 be a contract change, as well. I'm not sure that we
4 have exactly what you -- without running the -- the
5 dispatch over without the gas, you don't know exactly
6 how -- whatever energy would be otherwise produced by
7 the gas would be -- would be replaced and at what cost.

8 THE CHAIRPERSON: Because the DSM would
9 have the effect of pushing out the date for gas beyond
10 31, wouldn't it? I mean and in addition, you know, the
11 higher import capability -- and the -- the more cri --
12 the more critical point is that -- that DSM would have
13 a effect of putting out the need for gas in that kind
14 of scenario.

15 MR. DANIEL PEACO: That's right. And
16 we kind of -- and we -- if you recall we looked at a
17 chart. I had the -- the thermal generation for our No
18 Gen case and call it -- and with the DSM there of the -
19 - the thermal generation in the system was -- was
20 almost zero for quite some time in that plan, because -
21 - because of the reliance on imports and -- and the
22 DSM.

23 But I guess to your question, if -- if
24 you're looking for something that is just with --
25 withholding the gas from -- I guess one (1) thing we

1 could ask is if we could -- we could look at would be
2 whether the gas operation in those plans is
3 sufficiently limited such that it wouldn't have a
4 material effect on the change of the economics. Would
5 -- that would be a determination we'd be able to make.

6 But if gas is -- is playing a
7 significant role in some way in the dispatch, it's a
8 little bit trickier to figure out how much -- how that
9 would be replaced if it weren't there.

10

11 (BRIEF PAUSE)

12

13 MR. BOB PETERS: Just by way of
14 clarification for the record, is the panel asking for
15 that undertaking now, or is the panel going to consider
16 it further and decide later if they wish to -- to make
17 that request of La Capra, is the question from the
18 court reporter.

19 THE CHAIRPERSON: I think this is
20 information that could go on the public record, so I
21 think that -- you know, if you could make an
22 undertaking to establish -- and I'm sure -- perhaps
23 it'd be better if you expressed what you can do.

24 MR. DANIEL PEACO: All right. First,
25 just to be clear, the -- the plan that you're

1 particularly interested in was the -- were -- you were
2 looking at Plan 4 in our chart, correct?

3 THE CHAIRPERSON: No, Plan 5 --

4 MR. DANIEL PEACO: Oh, Plan 5.

5 THE CHAIRPERSON: -- where the gas is -
6 - where the gas is removed from that mix and perhaps
7 put in at a later date, and beyond -- I mean, what I'm
8 seeking is the effect of eliminating the gas in that
9 mix, and pushing it out a later date and maintaining
10 the WPS sale, if that's possible.

11 MR. DANIEL PEACO: Okay. Let me -- let
12 me ask a couple more questions just to make sure we're
13 getting to where you want to be. The -- the version of
14 Plan 5 depicted in this table is the Plan 5 as filed
15 originally with 2012 assumptions with the only change
16 from that being updated capital cost. There's been a
17 further update -- and John probably is a little more
18 familiar with what we have in hand on -- on updated
19 Plan 5 from Manitoba Hydro.

20 So is it -- is it -- is your request to
21 -- to have that information based upon the Plan 5 as
22 originally filed, or do you want us to look to some
23 more current version of that that Hydro's produced?

24 THE CHAIRPERSON: More current version
25 of that, if possible.

1 (BRIEF PAUSE)

2

3 MS. PATTI RAMAGE: Mr. Chairman, if it
4 assists and perhaps assists in La Capra's work load
5 also, Manitoba Hydro -- I'm looking at the -- this
6 chart, it is filed as -- what number is that?

7 It's Mr. Wojczynski's presentation from
8 March 25th, and it indicates that Manitoba Hydro will
9 be providing -- has provided Plan 5 Keeyask19 W...

10 MR. CHRISTIAN MONNIN: I believe it's
11 129-7, Diana.

12 MS. PATTI RAMAGE: What Manitoba Hydro
13 has provided is K19 with 750 and WPS Gas in 2031. I'm
14 not sure if that will answer your question. And -- and
15 that's Level 2 DSM.

16 THE CHAIRPERSON: And that will include
17 DSM, but not increased imports.

18 MS. PATTI RAMAGE: No.

19 THE CHAIRPERSON: Okay, that -- I think
20 that's helpful. I think that addresses mostly what I
21 was looking for.

22 MR. DANIEL PEACO: So that -- that case
23 actually accomplishes what you're directly...

24 THE CHAIRPERSON: And if -- if over the
25 lunch hour we change our mind on that, we'll -- we'll

1 back -- get back on the --

2 MR. DANIEL PEACO: Sure.

3 THE CHAIRPERSON: Thank you. I think
4 that it's an appropriate time to break now. So I
5 suggest we break now and resume at ten (10) after 1:00.
6 Mr. Peters, is that --

7 MR. BOB PETERS: Yes. And we'll be
8 going into a commercially sensitive information --
9 information examination, so it'll be a closed session
10 to those who are entitled to be present. And the audio
11 and video feeds will be disconnected as we -- as we
12 deal with that. I do understand that I believe La
13 Capra will be able to make a presentation at the start,
14 and then Manitoba Hydro indicated they had thirty (30)
15 minutes of questions, and then we'll have some, as
16 well. Thank you.

17 THE CHAIRPERSON: Thank you. Have a
18 good lunch, everyone.

19

20 (PANEL RETIRES)

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22 --- Upon adjourning at 12:26 p.m.

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1 Certified Correct,

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6 Cheryl Lavigne, Ms.

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