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MANITOBA PUBLIC UTILITIES BOARD

Re: MANITOBA HYDRO'S APPLICATION
FOR APPROVAL OF NEW ELECTRICITY RATES
FOR 2010/11 AND 2011/12

Before Board Panel:

- Graham Lane - Board Chairman
- Robert Mayer, Q.C. - Board Member
- Len Evans - Board Member

HELD AT:

Public Utilities Board
400, 330 Portage Avenue
Winnipeg, Manitoba
January 19, 2011
Pages 1522 to 1700

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1 --- Upon commencing at 9:32 a.m.

2

3 THE CHAIRPERSON: Okay, good morning,
4 everyone.

5 Ms. Ramage, you have some undertakings?

6 MS. PATTI RAMAGE: Yes, I do. And good
7 morning, Mr. Chair, Vice Chairman Mayer and Mr. Evans.

8 Manitoba Hydro is filing two (2) responses
9 to two (2) undertakings this morning. We have again
10 taken the liberty of assigning sequential exhibit numbers
11 on the undertakings. The first is Manitoba Hydro
12 Undertaking number 5, which, for the record, has been
13 assigned Exhibit number MH-21, which is the category --
14 categorization of import transactions shown in PUB/MH
15 Round 2 193B and 'C'. And there's two (2) parts to that
16 question.

17

18 --- EXHIBIT NO. MH-21: Response to Undertaking 5

19

20 MS. PATTI RAMAGE: The second undertaking
21 is Manitoba Hydro Undertaking number 8, which has been
22 Manitoba Hydro Exhibit number 22, where Manitoba Hydro
23 was to calculate the cost of ownership on the computers
24 over the period 2004/'05 to 2011/'12 on a corporate-wide
25 basis.

1 --- EXHIBIT NO. MH-22: Response to Undertaking 8

2

3 THE CHAIRPERSON: Thank you very much.

4 Mr. Peters...?

5 MR. BOB PETERS: Thank you and Good

6 morning. For the Board, Witness Panel, ladies and

7 gentlemen

8

9 MANITOBA HYDRO PANEL RESUMED:

10 VINCE WARDEN, Resumed

11 DAVID CORMIE, Resumed

12 HAROLD SURMINSKI, Resumed

13

14 CONTINUED CROSS-EXAMINATION BY MR. BOB PETERS:

15 MR. BOB PETERS: In the Board Counsel

16 book of documents, Volume II, marked as Exhibit PUB 16,

17 under Tab 27, there are three (3) extracts from three (3)

18 separate Power Resource Plans. Mr. Surminski, you've had

19 an opportunity to see those and you're familiar with

20 those?

21 MR. HAROLD SURMINSKI: Yes, I saw it up

22 there.

23 MR. BOB PETERS: Are you the person on

24 the panel most responsible for the Power Resource Plan?

25 MR. HAROLD SURMINSKI: Yes, I am the

1 closest member of the panel to this. I am involved and I
2 review the reports every year.

3 MR. BOB PETERS: Do you have input into
4 the preparation of the Power Resource Plans?

5 MR. HAROLD SURMINSKI: Yes, I do.

6 MR. BOB PETERS: And just so the Board is
7 clear, we have in the book of documents, under Tab 27,
8 starting on page 16 on the top right-hand corner, the
9 '08/'09 Power Resource Plan, that's an extract from
10 Appendix 46, Mr. Surminski? You'll accept that?

11 MR. HAROLD SURMINSKI: Yes, I accept
12 that.

13 MR. BOB PETERS: And starting on page 18,
14 the '09/'10 Power Resource Plan, which is an extract from
15 Appendix 47?

16 MR. HAROLD SURMINSKI: Yes, I accept
17 that.

18 MR. BOB PETERS: And starting on page 20,
19 there's an extract from the Power Resource Plan for 2010
20 and '11 and that's a more recent filing under Appendix
21 84.

22 MR. HAROLD SURMINSKI: Yes, I accept
23 that.

24 MR. BOB PETERS: When Manitoba Hydro
25 filed their General Rate Application for I -- with -- it

1 was underpinned by IFF-09, correct?

2 MR. HAROLD SURMINSKI: Yes.

3 MR. BOB PETERS: And the Power Resource
4 Plan that was, I guess, synched with that IFF-09, would
5 that have been the Power Resource Plan for fiscal 2010?

6 MR. HAROLD SURMINSKI: Yes, that's
7 correct. I think of it as '09/'10, yes.

8 MR. BOB PETERS: Right. I think I called
9 it fiscal 2010, but you're right, it's the -- Manitoba
10 Hydro often refers to it as 2009/2010?

11 MR. HAROLD SURMINSKI: Yes, correct.

12 MR. BOB PETERS: And we're agreeing that
13 that's the year ending March 31st of 2010?

14 MR. HAROLD SURMINSKI: Yes.

15 MR. BOB PETERS: Mr. Surminski, can you
16 briefly tell the Board what procedure there is for the
17 annual updating of the Power Resource Plan?

18 MR. HAROLD SURMINSKI: It's a drawn out
19 procedure that begins with the load forecast. The load
20 forecasts the new updated load forecast for every year
21 and that's done on an annual basis and kicks off the
22 process; ongoing with that is the export price forecast.
23 Once we have the load forecasts we require the long-term
24 export price forecast in order to do our evaluation for
25 the year.

1 We consider our changes that have taken
2 place in resource development, whether there are new
3 resources that have been defined more clearly like the
4 wind energy resource; in one (1) year it was estimated to
5 be three hundred (300), and then it gets defined, more
6 information comes forward, negotiations take place. So
7 the new resources get incorporated into the -- the new
8 forecast, the retirement date or the considerations of
9 operations, for example, the Brandon coal plant, the
10 restricted operations came about and we had to factor
11 that in differently in -- in the new resource plan.

12 So any -- any updates that we have on our
13 current resources and -- and any development plan for
14 future resources gets incorporated. If negotiations on
15 export sales are -- are more clearly defined we modify
16 our assumptions or insert new long-term export sales into
17 the plan, so those are all factors. The economics
18 factors, the -- the discount rates, those are factors
19 that come in to each new resource plan.

20 MR. BOB PETERS: Can -- thank you for
21 that, Mr. Surminski. Are there any appendices to the
22 plan that haven't been filed with the Board?

23 MR. HAROLD SURMINSKI: It's more than
24 appendices, we do not provide the -- the main body of the
25 report of each year either. Our resource plans contain

1 evaluation of -- of export sales which are confidential,
2 so the resource plan that we provide is an abbreviated
3 version where the economic and sensitive information has
4 been removed. And it's -- the resource plan we provide
5 is not -- does not show all the background involved in --
6 in making decisions on long-term expansion plans.

7 MR. BOB PETERS: What specifically is in
8 that material that's not filed with the Board that is
9 claimed to be confidential by Manitoba Hydro?

10 MR. HAROLD SURMINSKI: Many of the
11 aspects of new power contracts. The -- the economics and
12 the net present value and the benefits to Manitoba Hydro
13 associated with a new power contract, the -- the prices
14 we pay for those, all those kind of things that we treat
15 as confidential.

16 MR. BOB PETERS: To allow the Board, Mr.
17 Surminski, to have an idea as to the -- the timelines
18 that are used to prepare the various planning documents
19 that Manitoba Hydro uses, we know that the IFF is the
20 culmination of all of the forecasts, would that be
21 correct?

22 MR. HAROLD SURMINSKI: Yes, that's
23 correct.

24 MR. BOB PETERS: And the IFF is
25 traditionally finished by the Corporation in September or

1 October of a calendar year?

2 MR. VINCE WARDEN: It's the -- Mr.
3 Peters, it's typically presented to the Board of Manitoba
4 Hydro for approval in November of each calendar year.

5 MR. BOB PETERS: And it's completed, Mr.
6 Warden, in October or September of the year?

7 MR. VINCE WARDEN: No, it's usually last-
8 minute scrambling to make the board meeting, so.

9 MR. BOB PETERS: All right. So -- and
10 the November board meeting, that's in the latter part of
11 the month traditionally?

12 MR. VINCE WARDEN: Yes.

13 MR. BOB PETERS: And so if we back up and
14 the IFF is being brought in -- into the Manitoba Hydro
15 Electric Board in November, when does the Power Resource
16 Plan and the underpinning load forecasts and export price
17 forecasts have to be marshalled and available, Mr.
18 Surminski?

19 MR. HAROLD SURMINSKI: The load -- the
20 load forecast has become the constraint and they wait
21 till the end -- the results at the end of the fiscal year
22 are in, so, and that's March 31st, and they take a month
23 or so. So we normally expect the first indications of
24 the load forecasts in the first week of May, first or
25 second week of May, and that -- that's before we can

1 begin our full assessment of -- of balances of -- on the
2 supply side.

3 MR. BOB PETERS: Do you have to wait for
4 the export price forecast or is that already in hand at
5 the time you get the load forecast?

6 MR. HAROLD SURMINSKI: It's not required.
7 we often have it in hand, although last year we didn't.
8 But it's not required until we get into the assessment of
9 our resources after we have the load forecast.

10 The load forecast is an absolute
11 requirement in our modelling, so we if we get the export
12 prices coincident with the load forecasts it's -- it's
13 adequate.

14 MR. VINCE WARDEN: Mr. Peters, if I could
15 just clarify my response with respect to the timing of
16 the IFF going to the Board. It does in fact go to the
17 November Board. I should, though, point out the
18 important role of the audit committee of Manitoba Hydro.
19 So prior to going to the Manitoba Hydro Electric Board
20 the IFF is presented to the audit committee of the Board
21 which would typically precede the Board meeting by a week
22 to ten (10) days.

23

24

(BRIEF PAUSE)

25

1 MR. BOB PETERS: That's the -- that's the
2 audit committee of the same Board?

3 MR. VINCE WARDEN: Yes, that's right.

4 MR. BOB PETERS: So, Mr. Surminski, would
5 the Board be correct now in gathering from your evidence
6 that you can start the Power Resource Plan preparation in
7 earnest by the second week in May?

8 MR. HAROLD SURMINSKI: Yes, that's
9 correct.

10 MR. BOB PETERS: And when would it
11 normally be completed? "It" being the Power Resource
12 Plan.

13 MR. HAROLD SURMINSKI: For an approved
14 document going to executive, it's August in order to --
15 to get things flowing into the IFF.

16 MR. BOB PETERS: And when you say an
17 approved document, Mr. Surminski, what -- what approvals
18 are you talking about?

19 MR. HAROLD SURMINSKI: We first go to our
20 internal planning review committee, and that's normally
21 in July, late July. And secondly, to -- to the executive
22 committee.

23 MR. BOB PETERS: Do you need any capital
24 expenditures forecasts to -- to work on your Power
25 Resource Plan? Do you need those finalized as well?

1 MR. HAROLD SURMINSKI: Yes, we do.

2 MR. BOB PETERS: And when do you receive
3 the finalized capital expenditure forecast?

4

5 (BRIEF PAUSE)

6

7 MR. HAROLD SURMINSKI: Yes, we need those
8 pretty well the same time as -- as the load forecast
9 comes in once we -- in order to do our overall economic
10 evaluation capital costs are a big factor of it.

11 MR. BOB PETERS: When doing the Power
12 Resource Plan are a number of different options
13 identified and pursued and run through the model?

14 MR. HAROLD SURMINSKI: Yes, that's
15 correct.

16 MR. BOB PETERS: And when you say a
17 number of different alternatives, what are we talking,
18 ten (10), fifteen (15), a hundred?

19 MR. HAROLD SURMINSKI: No, less than ten
20 (10). You know it's been seven (7), depending on -- on
21 the number, but it -- to be manageable it should be less
22 than ten (10).

23 MR. BOB PETERS: But those ten (10) are
24 run based on, again, all of the same information? That
25 is, the load forecast and the export price forecasts and

1 the capital forecasts? Those -- those are all run as
2 options or alternatives off of that data?

3 MR. HAROLD SURMINSKI: We utilize all
4 that, and annit -- and additional input is the economic
5 outlook, and that's -- that's another report that -- that
6 is provided and -- as part of the -- the process.

7 MR. BOB PETERS: Again, that's another
8 report by May?

9 MR. HAROLD SURMINSKI: Yes.

10 MR. BOB PETERS: Why is it that there
11 more than one (1) or two (2) alter -- or possible Power
12 Resource Plans, Mr. Surminski? Why do you evaluate as
13 many as seven (7) to ten (10)?

14 MR. HAROLD SURMINSKI: Because there is
15 many -- well, some of the -- some of the options are
16 variations and timing. They may be Keeyask and Conawapa,
17 but one (1) may be Keeyask only, one (1) may be Conawapa
18 only, different combinations of export sale, different --
19 having wind energy in at a lower level or a higher level,
20 or another option may be a thermal development sequence
21 with no hydro, just going forward and -- and looking at
22 alternative development through thermal resources or
23 purchase resources.

24 MR. BOB PETERS: I take from that answer,
25 Mr. Surminski, that the Corporation makes some

1 assumptions that some of the future plans may change from
2 -- in the different scenarios?

3 MR. HAROLD SURMINSKI: Yes, very much so.

4 MR. BOB PETERS: And by way of an example
5 some of the term sheets may not be consummated into
6 binding contracts?

7 MR. HAROLD SURMINSKI: Yes, that's one
8 (1) of the possibilities.

9 MR. BOB PETERS: Is that the major
10 possibility?

11

12 (BRIEF PAUSE)

13

14 MR. HAROLD SURMINSKI: As far as being
15 drastic changes in the resource plan, yes, the -- the new
16 term sheets, for example, are major sales and they would
17 be the most significant. What I also did not mention is
18 in our alternatives we study, when we do the thermal or
19 purchase alternative we -- that's reflective of the least
20 capital.

21 We -- we study a case where the least
22 capital is required to expand and -- and as -- have that
23 as -- as one (1) of the reference points because hydro
24 developments are capital intensive versus others that
25 could be much less capital intensive.

1 MR. BOB PETERS: When you say you do
2 these alternatives, Mr. Surminski, are they summarized
3 much in the same way as the information that is provided
4 to the Board in the appendices that contain the Power
5 Resource Plans?

6 MR. HAROLD SURMINSKI: We pick at -- no,
7 they're not. There is -- there's much more economic or
8 financial net present value type of detail. We pick a
9 reference case and compare alternatives to their
10 reference to -- to indicate the incremental costs and
11 benefits relative to that reference, so there is -- there
12 is much net present value and -- and internal rate of
13 return type of numbers for each of the comparisons.

14 MR. BOB PETERS: Would the reference case
15 be a domestic load served only scenario? Is that a
16 baseline that you would use?

17 MR. HAROLD SURMINSKI: Yes, with existing
18 committed sales continuing till -- till expiry that would
19 be one (1) of the cases.

20 MR. BOB PETERS: When you say "existing
21 sales" you mean long-term contract agreements?

22 MR. HAROLD SURMINSKI: Yes, long-term
23 agreements. They -- there -- there would be a scenario
24 if we just continue with the existing long-term contracts
25 until their expiry.

1 MR. BOB PETERS: Mr. Surminski, can the
2 Corporation undertake to file summaries only of those
3 alternative reference cases and alternatives?
4

5 (BRIEF PAUSE)
6

7 MR. VINCE WARDEN: Mr. Peters, would it
8 be possible for you to ask a specific question that we
9 could respond to rather than provide summaries of
10 information that -- and our concern is that we -- we may
11 be straying into an area that will be the subject of
12 another proceeding. As you know we're -- there will be a
13 need -- what's referred to as a "needs for" and
14 "alternatives to" review process, or commonly called the
15 NFAAT review, that we're possibly eighteen (18) months
16 away from that hearing. But they'll be -- I guess it's a
17 question of where we draw the line between this
18 proceeding and the -- and -- and that upcoming
19 proceeding.

20 And if there is a specific question that
21 we can respond to, I think we'd prefer to take that
22 approach rather than start to provide information which
23 may lead to the filing of more information. So before we
24 go down that path, it would be good to have that more
25 focussed if we could.

1 MR. BOB PETERS: Why don't you leave that
2 with me then, Mr. Warden, and I've got your position and
3 I'll get back to you and/or your counsel as to whether
4 any specific questions or further undertakings are
5 required relative to the --

6 MR. VINCE WARDEN: Good, thank you.

7 MR. BOB PETERS: -- other Power Resource
8 Plans.

9 MR. ROBERT MAYER: Before we -- we leave
10 the subject, I do have a specific question.

11 Mr. Surminski, I'm looking at page 19 of
12 the -- of Tab 27. Could you tell me what the difference
13 is between gross power and net power? I note at
14 Wuskwatim you're 200 megawatt gross, 200 megawatt net,
15 but the other two (2) bigger projects show a gross power
16 and a net power. Who's deducting the power?

17 MR. HAROLD SURMINSKI: When they -- Mr.
18 Mayer, whenever a plant, hydro plant, is developed
19 adjacent to other plants on the river it can affect the -
20 - either the upstream or the downstream plant. Because
21 the forebay, for example, at -- at Conawapa ends up as
22 being the tailrace, the downstream level Limestone. So,
23 in effect, you -- you build at Conawapa, that's fourteen
24 hundred and eighty-five (1,485) but it reduces the output
25 of limestone because you've lost some of the head; you

1 flood out some of the tailrace so we have a net addition
2 as a result. And -- and the reason for the flooding is
3 it's a net, most economic level to be at.

4 So whenever the plants are -- are close
5 together where one (1) impacts the other in terms of
6 water levels we'll have a reduction. Whereas Wuskwatim
7 is the only plant on that river and -- and -- and net and
8 the gross are the same because there's no other plant to
9 be affected or -- or to affect.

10 MR. ROBERT MAYER: I understand the
11 Conawapa issue and the issue if you back the water up too
12 high you'll eliminate some of the head at Limestone. I'm
13 having a little more difficulty with Keeyask because the
14 Kettle gener -- the Kettle forebay, which is I think
15 Stevens Lake, is already there; has been for a number of
16 years. The next upstream power facility is Kelsey. To
17 go that high you're going to have to -- you'll be
18 flooding back up the Burntwood River. Where's the net
19 and the gross there?

20 I'm assuming you're not going to -- you're
21 not going to touch -- or I would assume you ordinarily
22 wouldn't touch the level of Split Lake, the same way you
23 avoided doing any further flooding on Wuskwatim Lake. I
24 -- I see those two (2) somewhat similar, so how is the --
25 what -- what is the net and the gross with respect to

1 Keeyask?

2 MR. HAROLD SURMINSKI: Yes, that one --
3 you're -- you're perfectly correct, Mr. Mayer. The
4 upstream -- there's no upstream effect from Keeyask, it
5 does not flood into Split Lake. So the -- the effect of
6 Keeyask is -- is the downstream effect.

7 And Stevens Lake is -- does have an effect
8 on -- on Keeyask downstream, tailrace levels. So -- and
9 Stevens Lake can draw -- has a range of operation. So
10 this maximum capacity of 695 megawatts assumes that
11 Stevens Lake has been drawn down several feet. And when
12 Stevens Lake is down that means there's more head at
13 Keeyask, more head to produce -- waterhead to produce
14 power.

15 And we will, in that short period of --
16 it's not very often that we would draw Key -- Stevens
17 Lake and get Keeyask at 695 megawatts, but there are
18 possibilities when Keey -- when the Stevens Lake forebay
19 is drawn down low that the Keeyask will be able to
20 produce 695 megawatts. But the more common -- 630
21 megawatts is a more average type of operation of Stevens
22 Lake being at the -- at the upper end of the range or --
23 or the average level of that reservoir.

24 MR. ROBERT MAYER: Okay. If you draw
25 down Stevens Lake you'll then either be running water --

1 obviously, fairly short of water I'm assuming because
2 then you will be affecting the forebays at either Long
3 Spruce, Limestone, or -- or eventually Conawapa.

4 So I'm assuming you're only going to get
5 those forebays drawn down in lower water conditions,
6 right? Your reservoir are at maximum now, so you
7 wouldn't be doing any of that today.

8 MR. DAVID CORMIE: Mr. Mayer, the
9 reservoir at Stevens Lake provides regulation for all the
10 plants on the lower Nelson River including Keeyask. So
11 in periods of high demand, like we're experiencing even
12 today, we're drawing water out of Stevens Lake. And at
13 the end of a cold snap -- maybe, you know, in a week or
14 so Stevens Lake will get to the lowest level. There will
15 be a reduction in power capable of being generated at
16 Kettle, but under those circumstances the output of
17 Keeyask will go up because there's -- Kettle forebay is
18 lower, the head at -- at Keeyask will be higher. So it -
19 - there an -- there's an offsetting increase in output at
20 Keeyask when the output of Kettle goes down as a result
21 of -- of a short-term ener -- increased energy demand.

22 MR. ROBERT MAYER: Well, just following
23 on that, I'm assuming that like all your other
24 reservoirs, you have upper/lower limits. While you would
25 have an upper limit on -- on Stevens Lake and --

1 MR. DAVID CORMIE: Yeah --

2 MR. ROBERT MAYER: -- that upper limit,
3 how close does it get to the bottom end, or would it get
4 to the bottom end of Keeyask?

5 MR. DAVID CORMIE: Oh, when -- when
6 Stevens Lake is full at its full supply level of four
7 hundred and sixty-three (463) feet it backs right up into
8 the tailrace at Keeyask, but Stevens Lake has a range of
9 ten (10) feet between the highest level and the lowest
10 level.

11 The levels -- the forebay levels at
12 Limestone and Long Spruce and at Conawapa, there will --
13 there is an upper and lower level, but generally those
14 downstream plants are operated at -- at the -- at a
15 constant level and it's only the level of -- of the
16 Kettle forebay that goes -- goes up and down that --
17 because that's where the regulation for the river is
18 provided; the other plants are operated relative -- at a
19 relatively fixed level.

20 So the effect -- the reduced output is
21 only at -- is -- is generally only at Kettle when the
22 Kettle forebay is drawn close to that 10 feet, so if
23 there is a circumstance when that happens the output of -
24 - of -- output of Keeyask will go up because we've
25 designed the station to operate under those low Kettle

1 forebay conditions and you need to have generator
2 capacity. And we don't want to shut Kettle -- we don't
3 want to be able to -- have to shut Keeyask down because
4 the -- the tailrace drops too low outside the -- outside
5 the range. So that's -- that explains why there's a
6 difference between the maximum output possible at Keeyask
7 and the average output, which is the six hundred and
8 thirty (630).

9 MR. ROBERT MAYER: So -- so net is
10 average and gross is the highest level?

11 MR. DAVID CORMIE: The gross will be at
12 the lowest level of Kettle forebay or the highest head
13 conditions at Keeyask.

14 MR. ROBERT MAYER: Thank you, sir.

15

16 CONTINUED BY MR. BOB PETERS:

17 MR. BOB PETERS: If we can turn to the
18 2008/'09 Power Resource Plan at Tab -- or page 16 at Tab
19 27 of the board counsel second volume of book of
20 documents, Mr. Surminski. Let's just briefly run through
21 this. This would've been the Power Resource Plan that
22 was prepared after the last general rate application,
23 would that be about right in the timing?

24 MR. HAROLD SURMINSKI: Yes, that's
25 correct. If I recall the -- the hearing was in then

1 spring of 2008.

2 MR. BOB PETERS: In the -- in the
3 document on page 16 there is the -- I guess Manitoba
4 Hydro calls it the preferred development plan, would that
5 be fair? And then you also put in on the second page the
6 alternative development plan?

7 MR. HAROLD SURMINSKI: Yes, correct.

8 MR. BOB PETERS: And is the alternative
9 development plan the next most likely development plan
10 that would be needed?

11

12 (BRIEF PAUSE)

13

14 MR. HAROLD SURMINSKI: No, it's not the -
15 - the next most economic if that was the -- the question.
16 It's -- it's a scenario approach saying if we -- in one
17 (1) case we have the term sheets, we have the -- the new
18 WPS and EMP and the other scenario is if we do not.

19 So it's -- it's not the -- there are other
20 variations other than economic -- or economics are not
21 the -- the driving factor between these two (2).

22 MR. BOB PETERS: It's one (1) of the
23 seven (7) to ten (10) alternatives that the Corporation
24 runs?

25 MR. HAROLD SURMINSKI: Yes.

1 MR. BOB PETERS: And how does it make it
2 to be the alternative development plan? How does it move
3 up the ladder to get to that status over and above all of
4 the other ones that have been not included as the
5 alternative development plan?

6 MR. HAROLD SURMINSKI: It's more -- it's
7 -- as I indicated, it's the scenario approach. If the --
8 if the scenario of the term sheets being finalized does
9 not materialize we -- we need a fallback plan because the
10 -- there is a chance that the sales may not materialize,
11 so our alternative is the scenario of not having the
12 sales.

13 MR. BOB PETERS: It is an alternative
14 plan much the same as the no new hydraulic generation
15 that you spoke of earlier this morning? It's just
16 another -- another alternative plan?

17 MR. HAROLD SURMINSKI: It's -- it happens
18 to be that in this case, yes, because we do not have
19 those sales.

20 MR. BOB PETERS: But it's also then
21 comparable to the alternative plans much akin to the
22 thermal and imports to serve domestic and existing export
23 contracts?

24 MR. HAROLD SURMINSKI: No, the
25 alternative could be a hydro development if I interpret

1 your question correctly. In this case the alternative is
2 not a non-hydro development, it's a hydro development
3 with -- with maybe only one (1) of the plans. The terms
4 sheets required Keeyask and Conawapa. An alternative
5 without the sales is -- is just to have one (1) of the
6 hydro plans. And it's -- it -- it fill -- fulfills the -
7 - the requirement, domestic requirements, at -- at
8 possibly the least cost.

9 MR. BOB PETERS: Maybe my question wasn't
10 -- wasn't as clear as it should've been, Mr. Surminski,
11 and for that I apologize, but the -- the alternative
12 scenario here is -- is -- but one (1) of the alternatives
13 much like the thermal and imports to serve domestic
14 customers is an alternative?

15 MR. HAROLD SURMINSKI: Okay. Just as a
16 comparison of alternatives, yes.

17 MR. BOB PETERS: Could you provide -- see
18 if Mr. Warden will accept this undertaking request.
19 Could you provide a list of the alternatives that the
20 Corporation considered. You've given us a couple of
21 them, but without providing copies of them, are you
22 prepared to provide the -- the basis under which the
23 alternatives are prepared?

24 I'll ask for that undertaking and maybe
25 you can consider that with your counsel and Mr. Warden

1 and let us know at a -- whether or not that's going to be
2 something that the Corporation can provide at this time.

3 MS. PATTI RAMAGE: We'll take that under
4 consideration.

5

6 (BRIEF PAUSE)

7

8 MR. ROBERT MAYER: While everybody's
9 still considering I found -- find this the very
10 interesting part of the hearings -- hearing process. I'm
11 looking at page 18 again of the book, and it, "Additional
12 north/south transmission beyond Bipole 3," I take it that
13 would be Bipole 4 or some new technology that would allow
14 you to do that with AC?

15 MR. HAROLD SURMINSKI: Yes. Bipole 3 at
16 2,000 megawatts is -- is not sufficient to -- to deliver
17 the new -- combination of the new Keeyask and Conawapa
18 plants. We're not thinking of Bipole 4, however, we do
19 not require something that large at this time. It's --
20 it could be an AC alternative or it could be an expansion
21 of the Bipole 3 to -- to be a larger size than 2,000
22 megawatts.

23 MR. ROBERT MAYER: If you could expand
24 Bipole 3 beyond 2,000 megawatts, is there any possibility
25 of expanding Bipole 1 and 2 -- 1 and/or 2? I understand

1 Bipole 2 is more advanced than Bipole 1.

2

3

(BRIEF PAUSE)

4

5 MR. HAROLD SURMINSKI: No, the
6 possibility of expanding and increasing the capability of
7 Bipole 1 and 2 is -- is not under consideration. That's,
8 you know, the -- all the facilities are designed for that
9 capacity and it's -- it -- it would be a -- a major
10 undertaking to try to increase the rating of those.
11 Bipole 3 is -- is still being investigated as a
12 possibility to increase it above the two thousand
13 (2,000).

14

15

16

MR. ROBERT MAYER: And I trust you can
only do that before you actually be -- begin construction
and buy the parts?

17

18

19

20

MR. HAROLD SURMINSKI: Yes, once you have
to purchase the parts, the line probably isn't much of an
issue, it's the converter stations that -- that would be
the issue.

21

22

23

CONTINUED BY MR. BOB PETERS:

24

25

MR. BOB PETERS: Mr. Surminski, as I try
to catch up to the Vice Chair here, I -- I have a

1 question back to the -- to the alternatives that you
2 indicated to the Board that are run, and only -- only the
3 preferred plan and one (1) alternative are put forward in
4 the Power Resource Plan that's filed with the Board.
5 That's correct?

6 MR. HAROLD SURMINSKI: Yes. And I could
7 add to why the alternative plan is there. What the --
8 what our resource plan, in effect, ends up doing in the
9 Corporation is it's causing these resources to be planned
10 for and to be put on the drawing Board to be ready for an
11 in-service.

12 So by having a Conawapa in-service date of
13 2021, in the alternative it means that the activities in
14 the Corporation have to be taking place to protect that
15 date because there is such a long lead time and we, you
16 know, this -- this initiates the process and -- and gets
17 everybody working on protecting that date and -- and you
18 could pro -- provide -- and developing a schedule for the
19 regulatory and all the steps that are required in order
20 to meet that in-service date. For example, Conawapa is
21 very tight right now to -- to try to meet the date that
22 we have here.

23 MR. BOB PETERS: Well, we'll -- we'll
24 come to that, Mr. Surminski. But can you explain to the
25 Board what is the screening process used to rank each of

1 the alternative scenarios in terms of likelihood of -- of
2 coming to fruition?

3

4

(BRIEF PAUSE)

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MS. PATTI RAMAGE: Mr. Peters, maybe if I
could interject here. I might be able to provide some
insight into Manitoba Hydro's hesitation to provide this
information.

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It might assist the Board to understand
perhaps the sensitivities associated with the
information. For example, if our counterparties to those
term sheets were to understand and have information on
the -- on our alternatives and the pricing of -- on the
alternatives and then down the road to the pricing of
those alternatives or what we were looking at, it could
have serious impacts on the negotiations moving forward.

21

22

23

24

25

So from that perspective, Manitoba Hydro
would decline on the basis that the information is
commercially sensitive.

Further, in terms of this Board today,
Manitoba Hydro is seeking a two (2) year rate approval of
2.9 percent, and -- and these alternatives have -- have
not -- will not impact that 2.9 percent increase. So
this Board should be able to rest assured that when those

1 decisions are ultimately made it will have that
2 information before them. And -- and Manitoba Hydro is --
3 is quite confident that those decisions will not be made
4 without regulatory approval, it's -- we are -- are fully
5 expecting an NFAAT hearing that will review those
6 alternatives in detail. So at this time it's simply not
7 the time to review this, we don't have the signed
8 contracts and it can impact those signed contracts.

9 And further it's -- we expect that a -- a
10 -- a -- the government will be appointing a -- a tri -- a
11 regulatory tribunal to review that exact information.

12

13 (BRIEF PAUSE)

14

15 MR. BOB PETERS: Well, Mr. Chairman, I'll
16 -- I'll move on. I have a question that -- of an
17 undertaking that is being taken under advisement by
18 Manitoba Hydro. And likewise, Mr. Warden has asked
19 whether there can be specific questions posed rather than
20 the summaries of the various alternatives and references
21 used. So we'll -- we'll deal with those first before we
22 come back, if at all, to this -- to this topic. And I'll
23 thank Ms. Ramage for her comments at this time.

24

25 CONTINUED BY MR. BOB PETERS:

1 MR. BOB PETERS: Mr. Surminski, let's see
2 if we can catch up to the Vice Chair, I'm still back on
3 page 16 of the book of documents. And in the '08/'09
4 Power Resource Plan there was thought to be some near
5 term deficits that would have to be filled with
6 contracted imports, correct?

7 MR. HAROLD SURMINSKI: Yes, correct, for
8 that load forecast.

9 MR. BOB PETERS: And did we not already
10 hear in this proceedings that presently Manitoba Hydro
11 does not have contracted imports?

12

13 (BRIEF PAUSE)

14

15 MR. HAROLD SURMINSKI: I'm not sure what
16 your question is. We do have some contracted imports
17 associated with our diversity sales. They are return
18 energy associated with long-term export contracts.

19 MR. BOB PETERS: Is what is listed here
20 on the '08/'09 Power Resource Plan for near term deficits
21 to be filled with contracted imports a reference to
22 diversity contracts, Mr. Surminski?

23 MR. HAROLD SURMINSKI: No, in that case
24 they were additional to -- to our expected contracts or
25 the contracts that we had written -- written contracts

1 that we may have had, yes.

2 MR. BOB PETERS: What -- what's intended
3 here is that Manitoba Hydro would go out and enter into a
4 -- a contract with a counterparty for a firm price and a
5 firm volume to fill what would otherwise be seen as a
6 deficit under the load forecast?

7 MR. HAROLD SURMINSKI: Yes.

8 MR. BOB PETERS: And presently, Manitoba
9 Hydro doesn't have any of those types of contracts was my
10 third-last question to you.

11 MR. DAVID CORMIE: Mr. Peters, the -- we
12 don't have any purchase contracts from extraprovincial
13 suppliers at a fixed price. Those are all -- we can
14 affect call options on dependable energy. And it would
15 be the intention if we were to use that same mechanism to
16 fill these near term deficits that we would go and
17 contract for -- on a similar basis.

18 And our -- because our deficits occur only
19 one (1) year in the ninety-four (94) years of river
20 flows, it -- it wouldn't be economic to -- to contract
21 for a must take fixed price supply. The least expensive
22 option is to buy a call option on energy and -- and carry
23 the price risk rather than committing to a purchase that
24 would rarely be needed.

25 MR. BOB PETERS: And that call option on

1 energy gives Manitoba Hydro the option to have physical
2 delivery of it or Manitoba Hydro can settle it out
3 financially?

4 MR. DAVID CORMIE: That's correct.

5 MR. BOB PETERS: In the '08/'09 Power
6 Resource Plan from page 16, the Keeyask and Conawapa had
7 in-service dates as indicated in Keeyask 2018/Conawapa
8 2022, Mr. Surminski?

9 MR. HAROLD SURMINSKI: Yes, that's
10 correct.

11 MR. BOB PETERS: And in addition, there
12 was a reference here to the 300 megawatts of wind power,
13 which you've already referenced a couple of times
14 indicating that -- that number isn't on the table at this
15 point in time?

16 MR. HAROLD SURMINSKI: Yes, that was
17 reduced to 138 megawatts.

18 MR. BOB PETERS: This Power Resource Plan
19 references signed term sheets with Northern States Power
20 starting in 2015. What was the date of that term sheet,
21 do you know? What year? Let's just go by what year, it
22 was...

23 MR. DAVID CORMIE: I believe, Mr. Peters,
24 that was in 2006.

25 MR. BOB PETERS: And the reference, Mr.

1 Cormie, to the Wisconsin Public Service and the Minnesota
2 Power sales, were there term sheets signed also back at
3 the time the 2008/'09 Power Resource Plan was prepared?
4

5 (BRIEF PAUSE)
6

7 MR. HAROLD SURMINSKI: I recall we were
8 in the middle of the 2008 GRA where MP was -- was signed
9 in December of 2007 and -- and the WPS in March of 2008.
10 So I remember, Mr. Peters, you bringing these forward
11 during that hearing as -- as they were nego -- as the
12 announcements were being made.

13 MR. BOB PETERS: In terms of supply side
14 enhancement projects, the only one (1) of note here on
15 the '08/'09 Power Resource Plan is that Pointe du Bois
16 rebuild was -- was planned back in those days, correct?

17 MR. HAROLD SURMINSKI: Yes, that's
18 correct.

19 MR. BOB PETERS: And you've told the
20 Board yesterday that that -- that is no longer the plan?

21 MR. HAROLD SURMINSKI: I wasn't here for
22 that, but --

23 MR. BOB PETERS: Sorry, I meant Manitoba
24 Hydro has told the Board yesterday that the -- the Pointe
25 du Bois rebuild is no longer in the Power Resource Plan

1 as -- as the preferred alternative?

2 MR. HAROLD SURMINSKI: Yes, I understand
3 that.

4 MR. BOB PETERS: All right. And it might
5 be helpful to the Board if they're following on page 17
6 of Tab 27 of the book of documents to -- to get out their
7 pens, and when we look at the new generation that's shown
8 on page 17 the Wuskwatim cost there is \$1.159 billion,
9 would that be correct?

10 MR. HAROLD SURMINSKI: Can you repeat
11 that number again, please?

12 MR. BOB PETERS: One point five-nine-one
13 (1.591).

14 MR. HAROLD SURMINSKI: Yes.

15 MR. BOB PETERS: And Keeyask was \$3.7
16 billion back in the '08/'09 plan? You'll take that
17 subject to check?

18 MR. HAROLD SURMINSKI: Yes. It's not in
19 -- in this document at all.

20 MR. BOB PETERS: I'm sorry.

21 MR. HAROLD SURMINSKI: Oh, it's not in
22 the pages that you've provided.

23 MR. BOB PETERS: We'll come to that. I -
24 - you'll take my number, subject to check? I thought I
25 put in a schedule of that that we'll -- we'll come to,

1 Mr. Surminski. I just can't put my finger on it right
2 now.

3 MR. HAROLD SURMINSKI: Yeah, subject to
4 check.

5

6 (BRIEF PAUSE)

7

8 MR. BOB PETERS: You could look at page
9 34 if you're going to flip ahead in the book, under Tab
10 29 there's -- there's a compilation of capital
11 expenditure forecasts, but if I can keep you and the Vice
12 Chair under wraps for a bit we can -- we can catch up to
13 that.

14 The Conawapa project comes in under \$5
15 billion at four point nine-seven-eight (4.978) in the
16 '08/'09 capital -- or under the '08/'09 Power Resource
17 Plan, Mr. Surminski; you'd accept that?

18 MR. HAROLD SURMINSKI: Yes, I'll accept
19 that.

20 MR. BOB PETERS: And when we look at the
21 alternative, also on page 17, one (1) of the points that
22 -- that's shown is that not only will near-term deficits
23 be filled with contracted imports that we've already
24 talked about but there's the reference here of a 400
25 megawatt combined cycle gas turbine for 2019 in-service

1 date, correct?

2 MR. HAROLD SURMINSKI: That is in the
3 alternative case, yes.

4 MR. BOB PETERS: And I think we -- we put
5 a high -- a ballpark price on that at about four (4) to
6 \$500 million for such a turbine.

7 MR. HAROLD SURMINSKI: I -- if that's
8 what we have established, yes.

9 MR. BOB PETERS: Well, I won't hold you
10 to that number but I think we talked about it in previous
11 testimony that looking at about a million dollars in
12 previous testimony that looking at about a million
13 dollars in my rough math per megawatt, and maybe a bit
14 more for the combined cycle gas turbine relative to the
15 single cycle.

16 MR. HAROLD SURMINSKI: Yes, I recall
17 that.

18 MR. BOB PETERS: And where's the plan --
19 where would be the plant siting of this combined cycle
20 gas turbine for 2019 under this alternative plan in the
21 '08/'09 Power Resource Plan?

22 MR. HAROLD SURMINSKI: No, we -- we don't
23 have a -- a site for it. A combustion turbine can be
24 built in a relatively short time so it does not have the
25 long lead time that's required for a hydro plant.

1 MR. BOB PETERS: Okay. My question was a
2 bit more specific, Mr. Surminski. I mean, is it planned
3 for southern Manitoba as opposed to northern Manitoba?

4 MR. HAROLD SURMINSKI: Yes, it would be
5 southern Manitoba.

6 MR. BOB PETERS: And it would be closer
7 to Winnipeg than it would be Brandon, that would be the
8 intent?

9 MR. HAROLD SURMINSKI: No, not
10 necessarily. It would be -- the best place would be near
11 a gas supply line.

12

13 (BRIEF PAUSE)

14

15 MR. BOB PETERS: The TransCanada
16 Pipeline?

17 MR. HAROLD SURMINSKI: Yes.

18 MR. BOB PETERS: So it could be anywhere
19 across the province?

20 MR. HAROLD SURMINSKI: Yes.

21 MR. BOB PETERS: In southern Manitoba.
22 Would -- wouldn't you want to locate it near the load?
23 Wouldn't you want to locate a -- a gas turbine relatively
24 close to the load it's intended to serve?

25 MR. HAROLD SURMINSKI: Yes, but the

1 Brandon area requires support, generation support, so it
2 is a -- a good reason to build in that area.

3 MR. BOB PETERS: But as you say, had a --
4 no final decision had been reached at the time this
5 alternative was prepared?

6

7 (BRIEF PAUSE)

8

9 MR. HAROLD SURMINSKI: Sorry, Mr. Peters,
10 I -- I don't remember your last question.

11 MR. BOB PETERS: It wasn't that
12 memorable.

13 MR. ROBERT MAYER: The question was no
14 final site has -- had yet been designated for Bra -- for
15 a new combined cycle.

16 MR. HAROLD SURMINSKI: Yes, very much so,
17 and that was just what my back row support was
18 indicating, that -- that our report stated that there is
19 no definitive plans for location.

20 MR. BOB PETERS: In the alternative
21 development plan for 2008/'09 Power Resource Plan, Mr.
22 Surminski, Conawapa shows up with a 2021 in-service date.
23 And because the alternative assumes the term sheets with
24 WPS and MP are no longer active, is that to supply
25 domestic Manitoba load only or is that with some export

1 in mind as well?

2

3

(BRIEF PAUSE)

4

5 MR. HAROLD SURMINSKI: That was the --
6 the earliest -- at that time, was the earliest
7 development date that we could have expected for the
8 plant and I believe it might have been a one (1) year
9 advancement, but it's very close. When -- when the load
10 forecast is going up and down you -- you know, you could
11 say that it's for domestic purposes.

12 MR. BOB PETERS: Was there an assumed
13 long-term contract underpinning it?

14 MR. HAROLD SURMINSKI: No, we would not
15 require a long-term contract necessarily if we require it
16 for domestic purposes.

17 MR. BOB PETERS: If we turn to the next
18 Power Resource Plan found on page 18 of the book of
19 documents under Tab 27 this is for the 2009/2010 fiscal
20 year, Mr. Surminski?

21 MR. HAROLD SURMINSKI: Yes, correct.

22 MR. BOB PETERS: And the preferred or
23 recommended power resource development plan still assumes
24 that there will be con -- long-term contracts with WPS
25 and MP, correct?

1 MR. HAROLD SURMINSKI: Yes, correct.

2 MR. BOB PETERS: And it appears that
3 Keeyask had been pushed back a year in terms of it's in-
4 service date, it's put a year further into the future in
5 this Power Resource Plan compared to the one that we just
6 saw, would that also be correct?

7 MR. HAROLD SURMINSKI: No, I do not
8 believe that's correct. I think we kept it the same.

9 MR. BOB PETERS: Then maybe I misread it,
10 but if you go back to page 16 Keeyask is in-service in
11 2018, and when I look at page 18 Keeyask is in-service
12 2019. I interpreted that to mean it was pushed back a
13 year.

14 MR. ROBERT MAYER: And if you look at
15 page 17 it says Keeyask is in service 2018/'19.

16

17 (BRIEF PAUSE)

18

19 MR. HAROLD SURMINSKI: There was no
20 change in date between 2008 and 2009. It's only in 2010
21 that we have -- delayed by one (1) year, both Keeyask and
22 Conawapa.

23

24 CONTINUED BY MR. BOB PETERS:

25 MR. BOB PETERS: All right. And that --

1 that was my next question. There's no intention in this
2 Power Resource Plan to put Conawa ba -- Conawapa back a
3 year?

4 MR. HAROLD SURMINSKI: I don't know what
5 you mean by put it back one (1) year.

6 MR. BOB PETERS: Delay the in-service
7 date.

8 MR. HAROLD SURMINSKI: Yes. No intention
9 in 2009.

10 MR. BOB PETERS: Let me rephrase the
11 question, and I think maybe the Vice Chair has found the
12 answer for us, but on page 16 Conawapa is shown as a 2022
13 in-service date, correct? On page 16 of Tab 27 of the
14 book of documents.

15 (BRIEF PAUSE)

16
17 MR. HAROLD SURMINSKI: Okay. I think
18 part of the confusion is we -- we do not deal in -- in
19 year-ending numbers in resource planning, and that's why
20 early this morning when I -- when I referred to a year I
21 referred to the physical year '09/'10 and it's called '09
22 in our report. So when we say 2022 we do not mean fiscal
23 year ending.

24 MR. BOB PETERS: Well, if it's any
25 comfort, it always confuses me as well, Mr. Surminski,

1 but this was your document. You were just -- what you're
2 telling the Board is when you write in Conawapa for 2022
3 you equate that to 2022/'23?

4 MR. HAROLD SURMINSKI: Yes, correct.

5 MR. BOB PETERS: As did the Vice Chair
6 point out on page 17 of the Tab 27 that the full fiscal
7 year is -- is written out in that time?

8 MR. HAROLD SURMINSKI: Yes, that
9 clarifies thing.

10 MR. BOB PETERS: All right. Well, you
11 didn't change the in-service dates, you certainly changed
12 the prices of Keeyask and Conawapa, didn't you? Well,
13 let's start with Keeyask. I think you agreed with me
14 that it was \$3.7 million in the previous Power Resource
15 Plan and it's now gone up to \$4.592 billion?

16 MR. HAROLD SURMINSKI: Yes, and that's on
17 page 34 that I'm flipping back to.

18 MR. BOB PETERS: And Conawapa went up
19 from \$5 billion to \$6.325 billion in these -- in the --
20 in the one (1) year of change in the Power Resource Plan?

21 MR. HAROLD SURMINSKI: Yes, I confirm
22 that.

23 MR. BOB PETERS: The Pointe du Bois
24 rebuild is still in the Power Resource Plan for 2009/10,
25 correct?

1 MR. HAROLD SURMINSKI: Yes, it's only in
2 the last year that we scaled it back.

3 MR. BOB PETERS: And Wuskwatim at \$1.591
4 billion hasn't changed in price in this Power Resource
5 Plan or the capital expenditure forecast that goes along
6 with this Power Resource Plan?

7 MR. HAROLD SURMINSKI: Yes, as discussed
8 yesterday or the day before the -- the cost of that has
9 not changed for three (3) years.

10 MR. BOB PETERS: And I'm not sure the
11 Vice Chair's question quite covered this, it perhaps did,
12 but shown under the '09/'10 recommended power resource
13 development plan is the additional north/south
14 transmission beyond the bipole as required by both
15 Conawapa and Keeyask with a 2024 in-service date.

16 Did -- did the -- did you and the Vice
17 Chair conclude that would be served by way of an AC line?
18 That was what's intended in this Power Resource Plan?

19 MR. HAROLD SURMINSKI: The specifics of
20 that have not been determined. The dollars are -- and
21 the -- it's more of a placeholder. We need some type of
22 additional transmission and the specifics of it have not
23 been determined.

24 MR. ROBERT MAYER: I think you further
25 said that one (1) option that you're looking at is to

1 increase the capacity of Bipole 3 over and above the two
2 thousand (2,000) megawatts?

3 MR. HAROLD SURMINSKI: Yes, and that
4 would come with some costs, so that's why there is --
5 there's a placeholder of dollars in the plan.

6

7 CONTINUED BY MR. BOB PETERS:

8 MR. BOB PETERS: The -- the placeholder
9 is \$345 million?

10 MR. HAROLD SURMINSKI: Can you tell us
11 where you're getting that number, please, Mr. Peters?

12 MR. BOB PETERS: It's much easier to ask
13 the questions. But, I think if you go to the capital
14 expenditure forecast you -- there was a reference to a
15 north/south transmission line for an additional \$345
16 million.

17 MR. HAROLD SURMINSKI: Yes, I -- I
18 recall. I think you're correct on that.

19 MR. BOB PETERS: And would I also be
20 correct that that \$345 million for the either bolstering
21 of the DC, or adding of an AC, is due to the west side
22 routing of Bipole 3?

23 MR. HAROLD SURMINSKI: No, it's not
24 related in any way. The capability of the Bipole is the
25 same whether you go east or west.

1 informed and confirmed that it -- it is emergency
2 operations and I'll -- I'll agree that under those emerg
3 -- emergency operations there is a difference between
4 having Bipole 3 east or west.

5 MR. BOB PETERS: Thank you. Turning to
6 the 2010/2011 Power Resource Plan, starting on page 20
7 and ending on page 20 of Tab 27 of the book of documents,
8 this is where both Keeyask and Conawapa have been, I
9 called it, pushed back or delayed in service by one (1)
10 year, Mr. Surminski?

11 MR. HAROLD SURMINSKI: Yes. I prefer the
12 term delayed.

13 MR. BOB PETERS: All right, I'll try to
14 remember that. The reason for the delay, sir, is what?

15 MR. HAROLD SURMINSKI: Several reasons,
16 but just the ability to -- to get all the -- the
17 regulatory process and -- and the earliest in-service
18 date of these plants.

19 MR. BOB PETERS: So Keeyask has been
20 pushed back to 2020 -- I'm sorry, Keeyask has been
21 delayed until 2020 in the new Power Resource Plan partly
22 because of the time to get regulatory approvals and the
23 time to construct the -- the bricks and mortar?

24

25 (BRIEF PAUSE)

1 MR. HAROLD SURMINSKI: Yes, it -- it is
2 the -- the earliest date. The -- the regulatory process
3 becomes clear to us as -- as we progress and -- and it is
4 a major obstacle. The construction is well defined but
5 the up-front regulatory process is very time consuming.

6 MR. BOB PETERS: The delay in the
7 regulatory process, is that due to Manitoba Hydro's
8 delay?

9

10 (BRIEF PAUSE)

11

12 THE CHAIRPERSON: Mr. Peters, it would be
13 advisable to take our break now.

14 MS. PATTI RAMAGE: I might just quickly
15 attempt to assist the Board, because I -- I don't think
16 it would be reasonable to ask Mr. Surminski to try to
17 answer that because it -- it ultimately boils down, I
18 believe, to a legal question. And I'm not sure I should
19 be the one trying to assist the Board either on it.

20 But if I could just provide some insight,
21 is that there's federal approvals required and there's
22 multiple approvals, and there's many components to that
23 approval. And Manitoba Hydro simply isn't in a position
24 to -- to move forward with those -- those many different
25 components to that approval process and, therefore, the

1 in-service date was moved back.

2 But Manitoba isn't in a -- Manitoba Hydro
3 really can't point to one (1) particular item, it's --
4 it's the overarching regulatory process that it ha --
5 that has to be addressed in order to move forward.

6 MR. BOB PETERS: I suppose with that we
7 can take our break and we'll pick it up there after the
8 break.

9 THE CHAIRPERSON: Very good.

10 MR. BOB PETERS: Thank you.

11

12 --- Upon recessing at 10:40 a.m.

13 --- Upon resuming at 11:05 a.m.

14

15 THE CHAIRPERSON: Okay, Mr. Peters...?

16

17 CONTINUED BY MR. BOB PETERS:

18 MR. BOB PETERS: Yes, thank you. I
19 recognize that Mr. Warden is not here but he and I
20 haven't been talking much lately so we'll -- we'll --
21 we'll continue without him, and only if the panel needs
22 his assistance would you be welcome to just pause and
23 call me up.

24 Mr. Surminski, I want to continue. When
25 Manitoba Hydro is protecting an in-service date -- those

1 are words that you've used, sir, "protecting an in-
2 service date"?

3 MR. HAROLD SURMINSKI: Yes. Correct.

4 MR. BOB PETERS: What that means is
5 Manitoba Hydro is doing the minimum amount of work to
6 still get the generating station on track so it could be
7 in service on that particular date? Would that be --
8 would that be true?

9 MR. HAROLD SURMINSKI: Yes, that's a fair
10 characterization. Ensuring that that -- that particular
11 in-service date in fact could be met.

12 MR. BOB PETERS: I also said doing the
13 minimal amount of work.

14 MR. HAROLD SURMINSKI: That's where -- I
15 don't know what the distinction is in that.

16 MR. BOB PETERS: Well, you're not going
17 flat out to build the new generating station because you
18 don't know if you're going to need it. Isn't that part
19 of the point?

20 MR. HAROLD SURMINSKI: Yes, correct.
21 Yes.

22 MR. BOB PETERS: So you -- what you're
23 doing is instead of going -- instead of proceeding as if
24 you're going to need it, you're proceeding as if you need
25 it you want to be in a position to -- to get there, and

1 sometimes those are -- those are two (2) different work
2 schedules?

3 MR. HAROLD SURMINSKI: Two (2) different
4 -- whereas if you actually knew you required on that date
5 you would do something different, is that what you're
6 saying?

7 MR. BOB PETERS: That's what I'm
8 suggesting.

9 MR. HAROLD SURMINSKI: No, I don't see a
10 difference really.

11 MR. BOB PETERS: So what the Board can
12 take from your answers is that Manitoba Hydro is building
13 Keeyask and Conawapa right now for the in-service dates
14 that -- for the in-service dates of Keeyask in 2020 and
15 Conawapa in 2024 whether or not they're needed for the
16 export contracts?

17

18 (BRIEF PAUSE)

19

20 MR. HAROLD SURMINSKI: Manitoba Hydro is
21 doing whatever is necessary to have those stations
22 produce power in that in-service year.

23 MR. BOB PETERS: And I -- I think I
24 understood your answer previous to be that you're going
25 down that route whether or not Manitoba Hydro has a

1 binding long-term contract, correct?

2

3 (BRIEF PAUSE)

4

5 MR. VINCE WARDEN: Mr. Peters, I think
6 what we're doing is protecting those in-service dates.

7 MR. BOB PETERS: And, Mr. Warden, I
8 apologize for jumping the gun -- gun in maybe your brief
9 absence, but I'm just exploring what protecting those in-
10 service dates means and it's my understanding, I'm not
11 sure how the Board understands it at this point, but
12 Manitoba Hydro wants to be able to generate first power
13 on whatever those in-service dates are -- are set at.
14 That's what protecting an in-service date means?

15 MR. VINCE WARDEN: It does. So two (2) -
16 - 2019 for Keeyask, 2020 as you call it. But 2019/'20
17 for Keeyask and 2023/'24 for Conawapa.

18

19 (BRIEF PAUSE)

20

21 MR. BOB PETERS: And so, Mr. Surminski,
22 did you have anything further to add to that before I
23 move on?

24 MR. HAROLD SURMINSKI: Well, the only
25 further comment there is -- there is no commitment to

1 either Keeyask or Conawapa at this point. All activities
2 are -- are in line with meeting those potential dates.

3 MR. BOB PETERS: I -- I understand that.
4 What you're telling the Board is you want to put the
5 first kilowatt hours out of Keeyask in 2019/'20 and
6 you're proceeding to do that even though Manitoba Hydro
7 does not yet have a binding contract with a counterparty
8 for the long-term export of that energy?

9 MR HAROLD SURMINSKI: Yes. There are
10 certain activities that are required to be completed in
11 order to be on track to be able to meet that date. So
12 Manitoba Hydro is undertaking those activities that are -
13 - that are on the critical path that are required for
14 those particular in-service dates.

15 MR. BOB PETERS: That includes the
16 spending of hundreds of millions of dollars every year to
17 proceed so that the first electricity can flow from
18 Keeyask in 2019/'20 even though there's no binding export
19 contract to deliver that energy to?

20 MR HAROLD SURMINSKI: Yes, that's
21 correct. And whatever the cost to -- to maintain that
22 schedule is Manitoba Hydro undertakes those expenses.

23 MR. ROBERT MAYER: Let me try to get in
24 here for a bit. Ms. Ramage mentioned earlier this
25 morning about the multiple approvals required. I am

1 aware unless they've changed Manitoba's Environmental
2 Protection Act a hydro generating station is -- requires
3 a mandatory hearing by the Clean Environment Commission.

4 It's further my understanding that it
5 requires federal environmental approval which with --
6 judging from our last experience meant Fisheries and
7 Oceans went everywhere they could to find the minnow to
8 make sure it didn't get killed by a road. What if any of
9 those approvals have been applied for to date in order to
10 protect the in-service dates that you suggested?

11

12 (BRIEF PAUSE)

13

14 MR. VINCE WARDEN: Mr. Mayer, we haven't
15 -- the licences that you refer to or the approvals that
16 we require, we haven't filed officially yet. The -- the
17 process that's underway, there's a schedule for that of
18 course but there is -- there's certain things that have
19 to be met before the -- we're ready to file for those
20 approvals.

21

22 We don't spend any money before we have
23 to. Part of what we're doing is working with our First
24 Nation partners, as well, and those are fairly major
25 expenditures that we're accruing -- incurring at this
time.

1 MR. ROBERT MAYER: But, Mr. Warden, I
2 read the fanfare that surrounded the signing of the
3 agreement with -- with Tataskweyak, Fox Lake, and War
4 Lake I think, so I thought that was the deal. And I
5 recognize that before you can make any applications under
6 either the Federal or Provincial Environment Act somebody
7 needs to do a -- an environmental assessment which could
8 take, as I believe, a significant period of time.

9 Have you done -- has -- is anybody doing
10 an environmental assessment of either Keeyask or Conawapa
11 as we sit?

12 MR. VINCE WARDEN: Mr. Mayer, the best
13 answer we can give you at this time is the process is
14 underway, but the application -- official application for
15 those approvals has not yet been filed.

16 MR. HAROLD SURMINSKI: I can add to that.
17 I know that the environment assessment has -- is been
18 taking place, I've been involved in some of that and it's
19 well underway, you know, past the first draft stage.

20 So when we'll kick off the process is when
21 Hydro applies under the Environmental Act proposal form,
22 or they -- they actually kick off the EIS process by
23 filing that, so -- and that has not taken place for
24 Keeyask. And Keeyask is -- is further ahead because it's
25 earlier in time, so the -- all the Environmental

1 assessment work is much more advanced on Keeyask relative
2 to Conawapa.

3 MR. ROBERT MAYER: I get some comfort
4 from the fact that somebody's at least doing something
5 about the Environmental Assessment requirements. Thank
6 you very much.

7 MR. HAROLD SURMINSKI: Oh, yes, a great
8 deal of work has been done on that.

9
10 CONTINUED BY MR. BOB PETERS:

11 MR. BOB PETERS: Before the morning
12 recess, Ms. Ramage provided some information about
13 sensitivities to the Board respecting the processes that
14 are -- that are needed and this was all in response to
15 questions as to why the delays in the in-service dates of
16 Keeyask and Conawapa. And I'd like to ask a further
17 question on that, and that is: Can the Board interpret
18 the comments from Ms. Ramage to mean that there are
19 prerequisites that have not yet been completed that will
20 allow the processes to obtain the various regulatory
21 approvals to roll out?

22 MR. VINCE WARDEN: Mr. Peters, I think
23 that's a fair statement, yes.

24 MR. BOB PETERS: Mr. Surminski, we talked
25 before about the alternative development plan. And I

1 guess if we take the 2009 base load forecast, the
2 alternative development plan assumed no sales under the -
3 - the two (2) term sheets to WPS and MP, correct?

4 MR. HAROLD SURMINSKI: Yes, that's
5 correct.

6 MR. BOB PETERS: And even though those
7 export sales were not to proceed, there was a suggestion
8 by you that the alternative plan that's -- I guess it's
9 one of the alternative plans, is to have Conawapa with an
10 in-service date of 2021, correct?

11 MR. HAROLD SURMINSKI: Yes, correct.

12 MR. BOB PETERS: And Conawapa's in-
13 service date under Manitoba Hydro's most recent Power
14 Resource Plan is 2023/24, correct?

15 MR. HAROLD SURMINSKI: Yes, correct.

16 MR. BOB PETERS: So the alternative would
17 be bringing Conawapa in-service -- I'm not sure about
18 this, it's either two (2) or three (3) years earlier than
19 the recommended plan; certainly two (2) years earlier,
20 correct?

21 MR. HAROLD SURMINSKI: No, the -- the
22 earliest date for Conawapa of 2021 can no longer be met.

23 MR. BOB PETERS: All right. So -- so
24 Conawapa would -- would have to be pushed back to
25 2022/23.

1 MR. HAROLD SURMINSKI: Yes, correct.

2 MR. BOB PETERS: And the reason Conawapa
3 could not be in-service in 2021 is because the steps that
4 are needed to do the construction can't be fast-tracked
5 to accommodate that date?

6 MR. HAROLD SURMINSKI: Construction
7 combined with the regulatory process in front. The
8 construction is -- is not the bottle neck, it's the
9 regulatory approvals and -- and all the processes
10 connected to approvals that have held it up.

11 MR. BOB PETERS: But in this case, we --
12 the -- Manitoba Hydro's not waiting for any regulatory
13 approvals outside of Canada, it's simply Manitoba and
14 Canadian regulatory approvals?

15 MR. HAROLD SURMINSKI: Yes, correct.

16 MR. BOB PETERS: When the Board looks at
17 Tab 28 of the book of documents to tab -- to page 23, Mr.
18 Surminski, the Board will see an alternative development
19 plan, system firm energy from dependable resources shown
20 on this -- on this table. And while the numbers are
21 large, they are certainly not printed large, they -- this
22 is to show the Board what energy is available under
23 dependable low flow conditions, correct?

24 MR. HAROLD SURMINSKI: Yes, that's
25 correct.

1 MR. BOB PETERS: And just help me out.
2 If I -- if I jump to the last year on the chart,
3 2026/'27, would I be correct in interpreting it that the
4 domestic load forecast, which is five (5) or six (6)
5 lines from the bottom, shows a 2009 base load forecast
6 for that year at about 31,000 gigawatt hours in 2026/'27?

7 MR. HAROLD SURMINSKI: Yes, I confirm
8 that.

9 MR. BOB PETERS: And so this plan that's
10 shown on this paper on page 23 of the second book of
11 documents is to show how Manitoba Hydro would meet that
12 load under the low flow conditions or under dependable
13 flow conditions, correct?

14 MR. HAROLD SURMINSKI: Yes, correct.

15 MR. BOB PETERS: And in my example to
16 you, sir, if -- if Manitoba Hydro was to remove Conawapa
17 from the equation, it looks like the dependable energy
18 from Conawapa is about 4,500 gigawatt hours a year?
19 Third line from the top.

20 MR. HAROLD SURMINSKI: Yes, 4,550
21 gigawatt hours.

22 MR. BOB PETERS: All right. And so where
23 it says "total power resources," two-thirds (2/3) of the
24 way down the page, the thirty-three nine seventy-four
25 (33,974) number, that would have to be reduced if

1 Conawapa wasn't -- wasn't in service. It would have to
2 be reduced by the 4,550 gigawatt hours.

3 MR. HAROLD SURMINSKI: Yes, that's fair.

4 MR. BOB PETERS: And so that would leave
5 Manitoba Hydro with about 2,950 gigawatt hours of
6 dependable resources available for domestic, correct?

7 MR. HAROLD SURMINSKI: Yes, twenty-nine
8 thousand (29,000).

9 MR. BOB PETERS: And if you need thirty-
10 one thousand (31,000) to serve the domestic load, there's
11 a shortfall, correct?

12 MR. HAROLD SURMINSKI: Yes, correct.

13 MR. BOB PETERS: Now, the shortfall, if
14 it's 1,500 gigawatt hours or maybe your numbers are
15 closer to 2,000 gigawatt hours, there's a number of
16 different ways that that shortfall can be met, correct?

17 MR. HAROLD SURMINSKI: Yes.

18 MR. BOB PETERS: And one (1) of them that
19 was -- one (1) of the methods of meeting the shortfall
20 that you had previously had in the -- in the Power
21 Resource Plans that we'd looked at was there was mention
22 of a 400 megawatt CCCT.

23

24

(BRIEF PAUSE)

25

1 MR. HAROLD SURMINSKI: Yes, I was just
2 confirming whether we ever had a scenario where we had a
3 combustion turbine before Conawapa. But it occurs in
4 some cases because we needed a resource before the
5 earliest date of Conawapa. So your statement that it --
6 it is possible to -- to -- and we do have a scenario of
7 only a combustion turbine only.

8 MR. BOB PETERS: And if you had that
9 scenario, I don't think it's filed in these proceedings
10 though, is it?

11 MR. HAROLD SURMINSKI: It's not filed,
12 no.

13 MR. BOB PETERS: No. You have lots of
14 scenarios that -- that haven't been filed, Mr. Surminski
15 --

16 MR. HAROLD SURMINSKI: Yeah.

17 MR. BOB PETERS: -- and you've told me
18 about those this morning, correct?

19 MR. HAROLD SURMINSKI: That's correct.

20 MR. BOB PETERS: All right. So all I was
21 suggesting is that when -- when -- when you're faced with
22 this shortage under dependable flow conditions, Manitoba
23 Hydro has to plan on how is it going to meet that
24 shortage?

25 What's going to be the resource put in

1 place to provide the energy to meet the shortfall?

2 MR. HAROLD SURMINSKI: Yes. But when
3 it's further out in time there's -- there's a lot more
4 lead time and -- and the -- the options don't have to be
5 quite as definitive as opposed to being on -- on a
6 critical path for a long lead time Hydro resource.

7 MR. BOB PETERS: I think that intuitively
8 makes sense. You can have some ideas in different ways
9 to meet the shortfall but the -- the day by which you
10 have to pull the trigger on that decision isn't for many
11 years to come.

12 MR. HAROLD SURMINSKI: Yes.

13 MR. BOB PETERS: And I was suggesting to
14 you that one (1) of the ways that that shortfall could be
15 met would be through the use of a combined cycle
16 combustion turbine and you agreed that's one (1) of the
17 ways that could be done?

18 MR. HAROLD SURMINSKI: Yes.

19 MR. BOB PETERS: Now, I'll just try to
20 keep the -- the numbers simple, but a 400 megawatt
21 combustion turbine, would I be correct in assuming that
22 that would put out about 3500 gigawatt hours a year?

23

24

(BRIEF PAUSE)

25

1 MR. HAROLD SURMINSKI: Are you -- I'm not
2 sure where your sources -- are you assuming a hundred
3 percent of the time operation of 400 megawatts?

4 MR. BOB PETERS: That's what I built into
5 my assumption.

6 MR. HAROLD SURMINSKI: Okay. Mr. Cormie
7 informs me that 80 percent would be a more realistic
8 assumption.

9 MR. BOB PETERS: If you use my number
10 it's close to thirty-five hundred (3,500), if you use Mr.
11 Cormie's it's closer to twenty-eight hundred (2,800)?

12 MR. HAROLD SURMINSKI: Yes, correct.

13 MR. BOB PETERS: All right. And so there
14 would be sufficient energy available to meet the
15 shortfall in 2026 by using a combustion turbine, correct?

16
17 (BRIEF PAUSE)

18
19 MR. HAROLD SURMINSKI: No, there would
20 not be a shortfall.

21 MR. BOB PETERS: Correct. The shortfall
22 would be covered by whatever the turbine could put out?

23 MR. HAROLD SURMINSKI: Yes.

24 MR. BOB PETERS: All right. And that's -
25 - and that's one (1) option that may be of many options

1 to service a shortfall that far into the future?

2 MR. HAROLD SURMINSKI: Yes. And a
3 combustion turbine has -- does not have to be 400
4 megawatts, these were the unit size that we had selected
5 here.

6 MR. BOB PETERS: I don't usually shop for
7 these, but these combustion turbines come in any size you
8 want, would that fair? They'll -- they'll manufacture
9 them to your specifications?

10 MR. HAROLD SURMINSKI: Yes, there is a
11 significant range.

12 MR. BOB PETERS: And when we look this
13 far out in the alternative development plan, the NSP
14 agreement has already lapsed by this point in time,
15 correct?

16 MR. HAROLD SURMINSKI: Yes, correct.

17 MR. BOB PETERS: So there's -- so there's
18 not a large export commitment shown under the
19 alternative scenarios, what's presented on page 23 at Tab
20 28 of the book of documents?

21 MR. HAROLD SURMINSKI: Yes, in the
22 alternative development plan that's right.

23 MR. BOB PETERS: Let's turn from the
24 alternative development plan back to the recommended
25 plan, and for 2010/'11 we've already talked about the

1 delay in the in-service dates of one (1) year for each
2 Conawapa and Keeyask, I'm not sure if I got so far, Mr.
3 Surminski, and I -- I -- I -- we have an update on the
4 capital costs of both of those plants if people want to
5 write them in their margin as well. On the 2010/'11
6 Power Resource Plan Keeyask is now costed at \$5.37
7 billion.

8 Have I got that right?

9

10 (BRIEF PAUSE)

11

12 MR. VINCE WARDEN: Mr. Peters, I believe
13 the number is 5.6 billion -- 5.637.

14 MR. BOB PETERS: All right. I'll write
15 in pencil next time. So what we've seen Mr. Warden, Mr.
16 Surminski, is that in the 2009 fiscal year Power Resource
17 Plan, Keeyask is at 3.7 billion, the next year it's 4.6
18 billion, and one (1) year later it's now 5.6 billion, if
19 I follow the escalation correctly.

20 MR. HAROLD SURMINSKI: Yes, that's
21 correct.

22 MR. BOB PETERS: What is the major reason
23 for those -- you'd consider those escalations to be
24 significant, would you, Mr. Warden, Mr. Surminski?

25 MR. VINCE WARDEN: They're definitely

1 significant, Mr. Peters. They are reflective, though, of
2 the updated estimates and the cost to -- to our best
3 estimate to build those facilities in those -- in those
4 years.

5 MR. BOB PETERS: And before these
6 projects are in a stage that Wuskwatim now is, it's
7 reasonable to expect that that \$5.7 billion number will
8 increase further?

9 MR. VINCE WARDEN: No, not necessarily.
10 That does represent our -- our best estimate with
11 escalation built in, so, no, I don't think it's a given
12 that that number will increase further.

13 MR. BOB PETERS: You would've given me
14 that same answer had I asked you that question based on
15 the 2009 number, though, wouldn't you have, Mr. Warden?

16 MR. VINCE WARDEN: It would've been my --
17 my best estimate at the time or Manitoba Hydro's best
18 estimate, so, yeah, that's what we do. We update those
19 numbers when we have better estimates to provide.
20 Sometimes they -- believe it or not, they do go down.

21 MR. BOB PETERS: Well, make sure you
22 phone me. Now -- well, seriously though, Mr. Warden,
23 Keeyask with an in-service date of 2019/'20, we're
24 looking the better part of a decade out, are you sitting
25 here telling the Board that with precision the cost will

1 be in today's dollars \$5.637 billion or is it likely that
2 that cost is going to escalate further?

3 MR. VINCE WARDEN: No, that's the in-
4 service dollars, so that's the dollars of -- of the --
5 the day and escalation is built into that number.

6 MR. BOB PETERS: Okay. And help me with
7 the escalation that's built in, is this a contingency
8 amount that's included in the forecasts or is there a --
9 an annual escalator or how -- how does a -- how does a
10 escalation clause get built in?

11 MR. VINCE WARDEN: There -- there is an
12 annual escalator that would be applied to the base dollar
13 estimate.

14 MR. BOB PETERS: Is that amount public?
15 Is that just simply based on inflation or is there a -- a
16 non-residential construction price index that you use or
17 how do you -- how do you come to a -- an escalator in
18 these contracts?

19

20 (BRIEF PAUSE)

21

22 MR. VINCE WARDEN: Mr. Peters, there
23 would be different escalators applied to different
24 components of the facility -- facility to be constructed.

25

1 MR. BOB PETERS: I want to make sure that
2 the Board is aware and understands the comment you made,
3 Mr. Warden, in that the \$5.637 billion most current
4 estimate of the Keeyask costs, you call that an in-
5 service price, correct?

6 MR. VINCE WARDEN: Yes.

7 MR. BOB PETERS: In -- in what -- when
8 you say "in service," is that the net present value in --
9 today as to what it's going to cost?

10 MR. VINCE WARDEN: No, no, that would be
11 the dollars we -- when we put this generating station
12 into service we expect to have \$5.637 billion on the
13 books at Manitoba Hydro at that date, so the dollars of
14 the day.

15 MR. BOB PETERS: Which means the dollars
16 of 2019/'20?

17 MR. VINCE WARDEN: Well, the dollar --
18 some of those dollars -- many of those dollars will be
19 incurred before '19/'20, so.

20 MR. BOB PETERS: And if we use Wuskwatim
21 as a template in the one (1) or two (2) years before it
22 comes online that's when the -- the largest costs will be
23 charged through to CWIP?

24 MR. VINCE WARDEN: Well, it depends on
25 the payments to the contractors, but that's generally the

1 case with the generating station, yes.

2 MR. BOB PETERS: Mr. Warden, turning
3 briefly to Conawapa, in the 2009 Power Resource Plan I
4 think the witness has agreed that it was costed at that
5 time of \$5 billion, a year later in the 2010 Power
6 Resource Plan it was costed at \$6.325 billion, and now is
7 it correct that Conawapa is 7.771 billion?

8 MR. VINCE WARDEN: Yes.

9 MR. BOB PETERS: All right. And again,
10 that's the latest estimate the Corporation has for a
11 facility that is not going to come in service for over a
12 decade?

13 MR. VINCE WARDEN: Yes.

14 MR. BOB PETERS: It is subject to the
15 increases and, as you've reminded us, possible decreases
16 that will come about each and every year as the estimates
17 are updated?

18 MR. VINCE WARDEN: That's right. I'm
19 just harkening back to the construction of Limestone. We
20 had a -- we had an estimate originally of three (3) --
21 approximately \$3 billion for Limestone and Limestone came
22 in at one (1) point -- just under \$1.5 billion.

23 MR. BOB PETERS: All right. No need to
24 phone me, I got your point.

25 MR. ROBERT MAYER: To be fair, Mr.

1 Warden, that was quite an item when -- when Limestone
2 came in, I believe, under budget and -- and on time. And
3 the Bechtel Kumagai, I think, got quite a bit of praise
4 around the world for that particular achievement,
5 indicating to me that it isn't the usual practice.

6 MR. VINCE WARDEN: No, but I was just
7 wanting to point out that -- that estimates -- actual can
8 be lower than the estimates, they don't always go up.
9 And as Mr. Cormie just pointed out to me the -- just the
10 delay in the in-service date by the one (1) year that we
11 were talking about earlier would add another year of
12 escalation and interest to the -- to the cost, so that in
13 itself would be a reason for escalation -- part of it,
14 not all of it, but part of it.

15

16 (BRIEF PAUSE)

17

18 CONTINUED BY MR. BOB PETERS:

19 MR. BOB PETERS: Mr. Surminski, back to
20 the Power Resource Plan for 2010/'11, I'm on page 20
21 found under Tab 27 of the second book of documents.

22 Absent from what's shown here is a wind
23 resource for 2010/'11, correct?

24 MR. HAROLD SURMINSKI: Yes, correct.

25 MR. BOB PETERS: And I think we've

1 already heard in these proceedings that in the 2010 --
2 sorry, in the 2009/'10 Power Resource Plan Manitoba Hydro
3 was assuming 300 megawatts of wind, that was downgraded
4 to about 138 megawatts at some point, but it's not listed
5 now in this Power Resource Plan, correct?

6 MR. HAROLD SURMINSKI: Yes, correct, not
7 listed on this page, I'm sure it's -- it's within this
8 document.

9 MR. BOB PETERS: But it -- and, yes,
10 okay. And the -- and the level of wind involvement is --
11 is down to -- is it 138 megawatts? Is that the correct
12 sizing?

13 MR. HAROLD SURMINSKI: Yes, correct.

14 MR. BOB PETERS: Thank you. Mr.
15 Surminski, would it be correct that the northern AC has
16 been taken out of capital expenditure forecast of
17 2010/'11?

18 MR. HAROLD SURMINSKI: Do you mean the
19 additional north/south transmission?

20 MR. BOB PETERS: In 2009/'10 it was
21 called:

22 "Additional North/south transmission
23 beyond a 2,000 megawatt Bipole 3 as
24 required for both Conawapa and
25 Keeyask."

1 So I think we're talking the same -- I --
2 quite frankly, I'm going to have to go to the transcript
3 because I'm not sure if it's a DC upgrade or if it's an
4 AC connection but that item is now no longer part of the
5 Power Resource Plan?

6 MR. HAROLD SURMINSKI: I do not believe
7 that's correct.

8 MR. BOB PETERS: Okay. Has it been taken
9 out of the capital expenditure forecast?

10 MR. HAROLD SURMINSKI: It should be in --
11 in the forecast, there has been no change in -- in that
12 area of planning.

13 MR. BOB PETERS: All right. Then my
14 apologies if that's the case. I'll check that further,
15 but -- I'll take that subject to check.

16 MR. HAROLD SURMINSKI: Okay.

17 MR. BOB PETERS: Thank you, Mr.
18 Surminski.

19 MR. VINCE WARDEN: Mr. Peters, just to be
20 clear, the capital expenditure forecast, if you're
21 referring to the official document, Capital Expenditure
22 Forecast, that extends out to 2019/'20, the current
23 version of that, that is, whereas the additional north-
24 south transmission that we're talking about is beyond
25 that point. So it wouldn't appear in the -- in the

1 official Capital Expenditure Forecast document.

2 MR. BOB PETERS: So the -- so the reason
3 it doesn't show is what you're telling the Board, Mr.
4 Warden, it doesn't show in the Capital Expenditure
5 Forecast for 2010/'11 is that it doesn't -- it doesn't go
6 out far enough to show that item?

7 MR. VINCE WARDEN: Yes, that's right.

8 MR. BOB PETERS: All right.

9 MR. VINCE WARDEN: It's -- it's in the
10 second ten (10) years.

11 MR. BOB PETERS: Okay. I've -- I've got
12 your point and I thank you for that.

13 To help close the loop for that -- on
14 that, Mr. Warden, for the Board, the full twenty (20)
15 year IFF-10, I think it was the IFF in any event, the
16 twenty (20) year was going to the Manitoba Hydro-Electric
17 Board this month or next, hopefully, was that -- have I
18 got that right?

19 MR. VINCE WARDEN: Yes. I -- I think I
20 indicated that because of some internal delays. It won't
21 be going to the January Manitoba Hydro Board. So it will
22 be on the agenda for the next Board meeting.

23 MR. BOB PETERS: Does that twenty (20)
24 year IFF go hand-in-hand with the twenty (20) year CEF,
25 Capital Expenditure Forecast?

1 MR. VINCE WARDEN: We -- we don't
2 actually produce a twenty (20) year CEF, although the
3 twenty (20) year financial outlook, we call it, does
4 include capital in -- out to those years as well, not
5 specifically identified capital other than items that --
6 like the north-south transmission line. But there's very
7 few specifically identified items in that second ten (10)
8 years.

9

10 (BRIEF PAUSE)

11

12 MR. BOB PETERS: I want to turn to a
13 comparison of the -- of the scenarios that have been put
14 forward in terms of the preferred or recommend scenario
15 together with the alternative development sequence
16 scenarios.

17 And does Manitoba Hydro run an analysis of
18 the preferred development scenario compared to the
19 alternative development scenario?

20 MR. HAROLD SURMINSKI: Certainly an
21 economic analysis of all scenarios, but in addition, the
22 financials -- a financial comparison is also done of the
23 preferred and the alternative.

24 MR. BOB PETERS: Just to discuss that a
25 bit further, Mr. Surminski, at Tab 28 of the book of

1 documents, on page 22, there's a table prepared that
2 takes some numbers out of Manitoba Hydro's IFFs, both the
3 preferred development and the alternative development
4 schedules. Have you had a chance to see that document?

5

6 (BRIEF PAUSE)

7

8 MR. HAROLD SURMINSKI: Yes, I had
9 reviewed this previously.

10 MR. BOB PETERS: Would I -- would the
11 Board be correct in understanding what you have done when
12 you analyzed the seven (7) to ten (10) serious
13 alternatives that are reviewed by the Corporation?
14 Manitoba Hydro would also run some analysis of -- of the
15 various scenarios against each other, they do what the
16 Board has done here?

17 MR. HAROLD SURMINSKI: These are -- this
18 is information provided by Manitoba Hydro and we run the
19 financial analysis of, particularly, these two (2)
20 scenarios, yes. We don't run a financial of each of the
21 many options because, well, first of all, they're labour-
22 intensive, and if we have the economic analysis it tells
23 us the attractiveness of one versus another.

24 MR. BOB PETERS: But you would run a
25 financial analysis of the preferred or recommended

1 development sequence against the alternative development
2 sequence?

3 MR. HAROLD SURMINSKI: Yes, correct.

4 MR. BOB PETERS: All right. When the --
5 when the Board does that would the Board be correct in
6 coming to the conclusion that on the basis of debt-equity
7 ratios, the equity is higher in the alternative
8 development plan than it is in the recommended plan?

9

10 (BRIEF PAUSE)

11

12 MR. VINCE WARDEN: Mr. Peters, would you
13 just repeat that question, please?

14 MR. BOB PETERS: Certainly, Mr. Warden.
15 In just comparing the recommended development plan with
16 the alternative development plan, some comparisons can be
17 made. And on page 22 found under Tab 28 of the book of
18 documents, I just want to talk about a couple of those
19 comparisons with you.

20 The first is on the debt-equity ratio.
21 And you would agree would you, Mr. Warden, that the debt-
22 equity ratios are better in the alternative development
23 plan rather than in the recommended development plan?

24 MR. VINCE WARDEN: For this time frame,
25 yes.

1 MR. BOB PETERS: And this is the time
2 frame that you presented on these materials, correct?
3 You're -- you're suggesting that it may change later?

4 MR. VINCE WARDEN: Oh, in fact, we know
5 it changes later. And I think if you refer to the twenty
6 (20) year financial outlook that was provided, and
7 presumably that was the source of this information, it
8 does refer to the crossover point occurring just after
9 2029/'30, I believe, was the last year of that financial
10 outlook and the crossover point occurs then.

11 So we -- not only do we prepare twenty
12 (20) year forecasts, we prepare forty (40) year
13 forecasts. It's just the nature of our -- long-term
14 nature of our business. But the crossover point does
15 occur after this point, I agree.

16 MR. BOB PETERS: And in terms of total
17 debt, you would agree that there's substantially less
18 debt under the alternative development plan?

19 MR. VINCE WARDEN: Well, I wouldn't -- I
20 wouldn't tite -- entitle this "total debt," I would -- I
21 would entitle this "total investment."

22 MR. BOB PETERS: Well, by not having to
23 construct the same generating stations as under the
24 preferred plan you'd expect there to be less investment
25 under the alternative plan, correct?

1 MR. VINCE WARDEN: That's right, yeah.
2 But we make investment with the expectation of return.
3 And that's -- my point was that really there -- there's
4 no surprise here that if you invest less than your
5 expected returns will be lower, and that's what we're
6 seeing here with the scenarios we've run.

7 MR. BOB PETERS: And the -- the lower
8 debt, or lower investment as you've called it, is \$4
9 billion, approximately, less under the alternative
10 development plan compared to the other one?

11 MR. VINCE WARDEN: Yes.

12 MR. BOB PETERS: Yeah. One (1) of the
13 points that I think you were also making, Mr. Warden, is
14 that the retained earnings under the alternative
15 development plan will be lower than what the retained
16 earnings are in the -- I'm sorry, let me rephrase that
17 question.

18 The retained earnings are lower by \$1.3
19 billion in the alternative development plan compared to
20 the preferred plan, correct?

21 MR. VINCE WARDEN: That is correct.

22 MR. BOB PETERS: But again --

23 MR. VINCE WARDEN: But that -- sorry.

24 MR. BOB PETERS: Sorry. Well, I'm going
25 to suggest that the retained earnings are lower under the

1 alternative development plan and so is the level of debt
2 or investment.

3 MR. VINCE WARDEN: Yes, and that's the
4 result you would expect for this time frame.

5 MR. BOB PETERS: All right. And so the
6 retained earnings are lower by 1.3 billion and the total
7 debt or investment is lower by \$4 billion, correct?

8 MR. VINCE WARDEN: That's correct. I
9 just caution, you can't come to any conclusion with that
10 difference at this -- at this point.

11 MR. BOB PETERS: And the reason the Board
12 can't come to any specific conclusion is that that's --
13 that's really only a twenty (20) year outlook and you're
14 saying that even a longer outlook needs to be taken?

15 MR. VINCE WARDEN: Yes, and that's the --
16 the reason we -- the document was filed with the -- in
17 the twenty (20) year outlook. We made that point very
18 clearly, the crossover point occurs after the twenty (20)
19 time frame.

20 MR. BOB PETERS: Under the alternative
21 development sequence there's less export contract
22 commitments, maybe it's fewer export contract
23 commitments, correct?

24 MR. VINCE WARDEN: Yes.

25

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: Mr. Warden, while you've
4 cautioned the Board in reaching a conclusion based on the
5 twenty (20) year outlook what precision does Manitoba
6 Hydro expect will be in the forty (40) year outlook
7 compared to the twenty (20) year outlook?

8 MR. VINCE WARDEN: Well, the reason for
9 preparing twenty (20) and forty (40) year scenarios is so
10 that we can compare one (1) scenario to the other. So we
11 have what are a base forecast which includes the
12 preferred development plan, which would run out for a
13 forty (40) year period and then we compare alternatives
14 without those sales, different generation sequence as
15 you've been discussing with Mr. Surmink -- Surminski.

16 So in order to come to a conclusion you
17 really have to look at those returns on investments over
18 the very long term. These assets after are -- are being
19 constructed and we expect them to be there for the very
20 long-term, and we expect to get returns on those
21 investments over that period of time.

22 MR. HAROLD SURMINSKI: And, Mr. Peters,
23 that's the type of evaluation we do using the economic
24 analysis approach. We considered a long life or the
25 salvage value of the plant at the end of the horizon, so

1 a financial analysis is not necessarily in -- in certain
2 years the best indicator of comparison of scenarios.

3 It's -- it's the long-term overall
4 comparison. So the economic analysis approach is the one
5 that is used for assessing the attractiveness of one
6 versus another, or at least one (1) of -- one (1) of
7 their big factors.

8 MR. BOB PETERS: Then, Mr. Surminski and
9 Mr. Warden, why doesn't Manitoba Hydro run a forty (40)
10 year IFF?

11 MR. VINCE WARDEN: Well, as I mentioned,
12 we -- we do run -- our -- our base forecast is our ten
13 (10) year IFF. We run a twenty (20) year financial
14 outlook which is published. The forty (40) years is
15 something that we do internally for scenario comparison
16 purposes.

17

18 (BRIEF PAUSE)

19

20 MR. VINCE WARDEN: Mr. Peters, I'm just
21 reminded that we in fact did file a forty (40) year
22 scenario in Appendix 15, so that information has been --
23 is on the record.

24 MR. BOB PETERS: Against what is the --
25 the forty (40) year scenarios compared when you -- when

1 you say you're comparing alternatives?

2 MR. VINCE WARDEN: Well again, we would
3 look at the preferred development sequence and then
4 compare different scenarios to that. So the preferred
5 development sequence would be referred to as our base
6 case.

7 MR. BOB PETERS: Mr. Warden, just maybe
8 one (1) area before we seek an adjournment for lunch, but
9 you've told the Board both in your direct evidence when
10 you spoke through your opening comments and I believe it
11 was maybe -- have been Mr. Ramage this morning, that
12 Manitoba Hydro expects its major capital projects to be
13 reviewed both on a needs and justification basis as well
14 as on an environmental compliance basis?

15 MR. VINCE WARDEN: Yes.

16 MR. BOB PETERS: And in fact previous
17 Board Orders have certainly recommended that a
18 comprehensive public review of those plans take place,
19 correct?

20 MR. VINCE WARDEN: Correct.

21 MR. BOB PETERS: And will that review
22 take place before there's a binding obligation on
23 Manitoba Hydro?

24 MR. VINCE WARDEN: A binding obligation
25 on Manitoba Hydro, in terms of the counterparties that we

1 were dealing with in the -- in the US?

2 MR. BOB PETERS: Yes, that's my
3 intention.

4 MR. VINCE WARDEN: Oh, yes, they'll --
5 but the agreements would be subject to -- they'll have
6 "subject to" provisions in the agreements.

7 MR. BOB PETERS: All right. And not to
8 put legal words into your mouth, but there will be
9 conditions precedent in the agreement that those
10 conditions have to first be met before Manitoba Hydro is
11 obligated to provide any energy under the term sheeted
12 contracts.

13 MR. VINCE WARDEN: Yes.

14 MR. BOB PETERS: And one (1) of those --
15 one (1) of those conditions is a -- either approval or
16 satisfactory result from a review of the needs and
17 justification in the environmental compliance?

18 MR. VINCE WARDEN: That's correct.

19 THE CHAIRPERSON: Mr. Peters, we have
20 another commitment over the lunch hour, so we're going to
21 shut it down now and we'll be back at 1:15. Thank you.

22 MR. BOB PETERS: Thank you, sir.

23

24 --- Upon recessing at 11:56 a.m.

25 --- Upon resuming at 1:19 p.m.

1 THE CHAIRPERSON: Okay. Welcome back.
2 Any time, Mr. Peters.

3

4 MANITOBA HYDRO PANEL RESUMED:

5 VINCE WARDEN, Resumed

6 DAVID CORMIE, Resumed

7 HAROLD SURMINSKI, Resumed

8 ROBIN WIENS, Resumed

9

10 CONTINUED BY MR. BOB PETERS:

11 MR. BOB PETERS: Mr. Chairman, I'm going
12 to change the pace a little bit and talk for a relatively
13 few minutes about diesel. And, Mr. Wiens, in my opening
14 comments in this proceeding I'd indicated that the diesel
15 application by the Corporation was considered separate
16 and apart from the general rate application, correct?

17 MR. ROBIN WIENS: I recall hearing that.

18 MR. BOB PETERS: And you'll also recall
19 that some of the costs attributable to the diesel zone in
20 Manitoba are costs that end up being paid by Manitoba's -
21 - Manitoba Hydro grid ratepayers, correct?

22 MR. ROBIN WIENS: In that the revenues
23 from the diesel customers, diesel zone customers, fall
24 below the costs that are actually incurred to serve those
25 customers, yes.

1 MR. BOB PETERS: In my words, the grid
2 customers provide a level of subsidization to the diesel
3 zone customers?

4 MR. ROBIN WIENS: Yeah, that would be
5 implied.

6 MR. BOB PETERS: And as a result of the
7 diesel hearing that I indicated in my comments concluded
8 just before this hearing began, I can correct that and
9 indicate that the Board issued Order 134 of '10 on
10 December 22nd. You've seen that order?

11 MR. ROBIN WIENS: Yes, I have.

12 MR. BOB PETERS: And then as a result of
13 the Board's order Manitoba Hydro filed for final rates,
14 implementing what the Board had directed in its order and
15 filed new rate schedules, and those were approved on or
16 about January the 4th?

17 MR. ROBIN WIENS: That's also my
18 recollection.

19 MR. BOB PETERS: And I want to turn to
20 the December 22nd order, sir, the Order 134 of '10, found
21 on the Board's website. The Board in that order, Mr.
22 Wiens, made certain directives with respect to what
23 Manitoba Hydro had applied for, correct?

24 MR. ROBIN WIENS: Yes.

25 MR. BOB PETERS: And one (1) of the

1 directives, it's Item Number 3A by number on page 68 of
2 72 of that order, is that the Board wanted Manitoba Hydro
3 to file with it confirmation that the settlement
4 agreement, which previously had been referred to as a
5 tentative settlement agreement, and in any event, which
6 arose out of two (2) -- out of 2004 minutes of settlement
7 had been fully executed.

8 MR. ROBIN WIENS: Yes, I see that.

9 MR. BOB PETERS: Did Manitoba Hydro fully
10 execute the document.

11 MR. VINCE WARDEN: Manitoba Hydro
12 absolutely did its part and executed the document but we
13 don't have a fully executed document in our hands yet.

14 MR. BOB PETERS: Mr. Warden, are you able
15 to tell the Board whether the federal government through
16 Indian and Northern Affairs fully executed the document?

17 MR. VINCE WARDEN: Unfortunately I can't
18 do that neither. We've had a number of email exchanges
19 back between Manitoba Hydro's legal counsel and counsel
20 for INAC and MKO, and they are aware of the urgency
21 associated with this and that we're as anxious as the
22 Board is to get this fully executed. They assure us it's
23 underway but we don't have it in hand yet.

24 MR. BOB PETERS: Let me -- let me --
25 since I've got -- since I've got both of you near a

1 microphone, Mr. Warden and Mr. Wiens, would my memory be
2 correct in that the Board was told at the diesel hearing
3 that the document had been fully executed by the parties
4 that MKO was representing? Do you recall that being said
5 to the Board?

6 MR. VINCE WARDEN: Yes.

7 MR. BOB PETERS: And do you also recall
8 it being told to the Board that the document was signed
9 in counterpart, do you remember those words?

10 MR. VINCE WARDEN: Yes, I remember those
11 words. Yes.

12 MR. BOB PETERS: And -- and counterpart
13 means that each of the four (4) signatories that MKO was
14 representing would sign the document, but they wouldn't
15 all necessarily be in the same room and sign it at the
16 same time, that's your understanding?

17 MR. VINCE WARDEN: Correct, yes.

18 MR. BOB PETERS: And so while I expect
19 Ms. Fernandes has been trying to bring this matter
20 forward, you are telling the Board that even though the
21 Board was told that the documents had now been fully
22 executed Manitoba Hydro has physically not seen them?

23 MR. VINCE WARDEN: That's correct.

24 MR. BOB PETERS: Can the -- Manitoba
25 Hydro inform the Board as to a timeline in which Manitoba

1 Hydro expects it will not only see them, but have true
2 copies of those agreements?

3 MR. VINCE WARDEN: Well, we don't have a
4 commitment. We -- we do have a response to emails that
5 have been forwarded to MKO. The response is that their
6 offices were in the process of being renovated or that is
7 the -- the renovation is probably complete by now, but
8 the files were somewhat disrupted for that reason, and
9 they were in the process of putting them back together
10 and this would be a priority item.

11 But having said that, we haven't seen the
12 documents yet and there's no real indication as to when
13 we will, although the -- it's implied that it's any day
14 now.

15 MR. BOB PETERS: And are you at liberty
16 to disclose the date of the last communication from MKO
17 to Manitoba Hydro?

18 MR. VINCE WARDEN: Yes, the -- the last
19 date was on January the 7th from -- from MKO to Manitoba
20 Hydro.

21 MR. BOB PETERS: Mr. Wiens and Mr.
22 Warden, would I be correct in suggesting that as soon as
23 Manitoba Hydro has its hands on a fully executed version
24 of the settlement agreement it will be complying with the
25 directive in Board Order 134/'10?

1 MR. VINCE WARDEN: As soon as that
2 document is filed with the Board, yes.

3 MR. BOB PETERS: As soon as that document
4 is filed with Manitoba Hydro?

5 MR. VINCE WARDEN: No, I'm sorry, with
6 the Public Utilities Board, then Manitoba Hydro will be
7 in compliance with the directive.

8 MR. BOB PETERS: Yes, and Manitoba Hydro
9 will file that document as soon as its in possession of
10 it?

11 MR. VINCE WARDEN: Absolutely.

12 MR. BOB PETERS: Maybe -- this may be an
13 awkward way and your counsel may be needing to be helpful
14 on this one, but there are no conditions of trust or any
15 conditions that will prevent Manitoba Hydro from
16 providing that document as a public -- publicly disclosed
17 document?

18 MR. VINCE WARDEN: No, Mr. Peters, there
19 are -- there are no conditions.

20 MR. BOB PETERS: All right. Mr. Wiens,
21 another directive of the Board in Order 134 of '10 was to
22 receive confirmation that payments or adequate funding
23 arrangements for capital costs incurred by Manitoba Hydro
24 since 2004 were arranged?

25 MR. ROBIN WIENS: Yes, I'm familiar with

1 that.

2 MR. BOB PETERS: They're -- and I won't
3 put board -- words in the Board's mouth. They -- they
4 said what they said in their order, but there seemed to
5 be an air of optimism, if I can, that arrangements were
6 being made to deal with the capital costs that have been
7 long outstanding. Would I be overstating it at that
8 point or was that your understanding?

9 MR. ROBIN WIENS: I -- I think there was
10 a -- a statement in the order to the effect that the
11 Board considered that a possibility and that were
12 encouraging the parties in that direction.

13 MR. BOB PETERS: And in terms of
14 encouraging the parties in that direction are -- is
15 Manitoba Hydro in a position to provide confirmation as
16 to what funding of capital costs has been agreed to since
17 the -- since the hearing adjourned?

18 MR. ROBIN WIENS: We're not in that
19 position yet, Mr. Peters.

20 MR. BOB PETERS: Can you tell the Board
21 why Manitoba Hydro's not yet in that position?

22 MR. ROBIN WIENS: Manitoba Hydro has
23 entered into discussions with INAC, virtually, I believe,
24 at the same time as the order was being issued, if not a
25 day or so earlier, and those discussions haven't

1 proceeded to a resolution yet.

2 MR. BOB PETERS: Is there a prospective
3 timeline for the resolution of such indecision, or at
4 worst, a dispute?

5 MR. ROBIN WIENS: We are expecting to
6 have some idea of -- or, have a good idea of INAC's
7 position, vis-a-vis those capital costs and what their
8 level of contribution might be, sometime in February.

9

10 (BRIEF PAUSE)

11

12 MR. BOB PETERS: In the Board's order,
13 Mr. Wiens, Manitoba Hydro's request to include in the
14 revenue requirement of the diesel zone amounts on account
15 of interest expense and depreciation totalling close to,
16 I suppose, \$600,000 was denied, correct?

17 MR. ROBIN WIENS: Yes.

18 MR. BOB PETERS: And it was denied
19 indicating that there appears to have been some progress
20 made, and that's the progress you've now told the Board
21 about, you're hoping to have a final position on in
22 February of 2011.

23 MR. ROBIN WIENS: Yes.

24 MR. BOB PETERS: Has Manitoba Hydro given
25 thought to in the event that the capital expenditures are

1 not resolved to the satisfaction of the Utility and its
2 ratepayers that the Board's order would be the subject of
3 a review and vary request by Manitoba Hydro?

4 MR. ROBIN WIENS: I guess that's always a
5 possibility, Mr. Peters, but we prefer to -- we prefer to
6 continue on the path that we're on which is to come to a
7 resolution regarding contributions. And, ultimately, if
8 we're not successful in that way then we would have to
9 consider whether we wanted to make a review and vary or
10 some other application to this Board.

11 MR. ROBERT MAYER: Well, the orders are
12 only interim rates at this point in time. I'm assuming
13 that if the matter can't be resolved before this Board
14 will make those interim rates permanent, we would have to
15 have some indication that there's some resolution, so I
16 would be concerned about a review and vary because I
17 think that has some time limits on it.

18 But I -- I'm thinking that because they're
19 only interim rates and if there fails to be a resolution,
20 I'm sure this Board would consider dealing with that when
21 attempting to make those rates final.

22 MR. ROBIN WIENS: That would be our
23 expectation too, Mr. Mayer.

24

25

1 CONTINUED BY MR. BOB PETERS:

2 MR. BOB PETERS: And then just to
3 conclude, Mr. Wiens, on the very point that you and the
4 Vice Chair are speaking of, Manitoba Hydro was to seek
5 final rates from this Board supported by the consents of
6 the other parties involved in the matter before Manitoba
7 Hydro's fiscal year end?

8 MR. ROBIN WIENS: I'm looking at the
9 directive, Mr. Peters, and I -- I don't see the "before
10 Manitoba Hydro's fiscal year end". I'm -- I don't recall
11 everything that was said in the order in the body of the
12 report, I'm assuming that the -- that the fiscal year
13 end is included there.

14 Manitoba Hydro is currently in the process
15 of looking at what needs to be done in order to file,
16 what I expect would be, a very brief application seeking
17 to finalize those interim orders. And as -- as Mr. Mayer
18 has quite correctly pointed out, one (1) of the issues
19 that we would want to consider in formulating that
20 application is the status of the discussions regarding
21 the contributions.

22 MR. BOB PETERS: All right. With that
23 answer, Mr. Wiens, I thank you. We'll turn back to other
24 matters of the GRA. Thank you, sir.

25 MR. ROBIN WIENS: Thank you, Mr. Peters.

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: Mr. Warden, while Mr.
4 Wiens is taking his leave, if in fact he is, before the
5 lunch recess you had indicated that before Manitoba Hydro
6 had -- and be careful of the legal words here, but had
7 any binding legal obligations to serve export contracts
8 for which they would have to construct Keeyask and
9 Conawapa, Manitoba Hydro would go through a regulatory
10 review process, and if that was not favourable then there
11 would be no obligation to deliver on the electricity side
12 of it.

13 Have I -- have I said that correctly?

14 MR. VINCE WARDEN: Yes, you have, Mr.
15 Peters.

16 MR. BOB PETERS: And you will acknowledge
17 that for every month of time before that review process
18 takes place, Manitoba Hydro is incurring probably over a
19 hundred million dollars of costs related to these
20 projects?

21 MR. VINCE WARDEN: For every -- I'm
22 sorry, for every -- what time period did you reference?

23 MR. BOB PETERS: I said for every month
24 that Manitoba Hydro's probably running up a hundred
25 million dollars or more of costs related to Keeyask and

1 Conawapa?

2 MR. VINCE WARDEN: I -- that sounds a
3 little on the high side, actually.

4 MR. BOB PETERS: Well, I -- I, quite
5 frankly, didn't have a source for that, I made that up.
6 But -- but I -- what -- what I was looking at, Mr.
7 Warden, seriously, is that the -- the amount of money yet
8 to be spent to bring these projects in on time, and I
9 don't usually deal in billions of dollars, so I'm just
10 trying to work out the number of months left to get that
11 done. They'll be, on average, pretty -- pretty expensive
12 months of -- of --

13 MR. VINCE WARDEN: Well --

14 MR. BOB PETERS: -- expenditures.

15 MR. VINCE WARDEN: -- I -- I think if we
16 -- if you wanted to be a little more precise, Mr. Peters,
17 you're -- you could refer to the Capital Expenditure
18 Forecast in which there is a forecast of expenditures for
19 each of Keeyask and Conawapa.

20 MR. BOB PETERS: Since you've got it at
21 hand, Mr. Warden, what -- what on average is the monthly
22 expenditures related to Keeyask and Conawapa?

23 MR. VINCE WARDEN: For Keeyask it would
24 be about \$13 million per month thereabouts in 2011/'12.
25 And for Conawapa, about \$9 million per month.

1 MR. BOB PETERS: Those monthly payments
2 are going to have to -- or though -- those monthly
3 expenses are going to have to increase dramatically as
4 you come closer to your in-service times, are you -- are
5 they not?

6 MR. VINCE WARDEN: Oh, absolutely. They
7 do start ramping up significantly but not until 2016/2017
8 time frame.

9 MR. BOB PETERS: All right. So and --
10 and I shouldn't have been using an average monthly
11 estimate of a hundred million dollars because you're
12 saying the expenses are -- are 22, \$25 million, on
13 average per month, for the next couple of years during
14 which this review process would take place?

15 MR. VINCE WARDEN: Yes.

16 MR. BOB PETERS: What do you show as the
17 payments to date? And I think I have it in my materials,
18 but if you've got it handy for Keeyask and Conawapa and
19 Bipole 3.

20 MR. VINCE WARDEN: I don't actually have
21 that handy but I can give you round numbers. Keeyask is
22 about \$400 million, Conawapa is approximately \$200
23 million, and Bipole 3, I'd have to double-check that
24 number.

25 MR. BOB PETERS: I think I had the -- the

1 CWIP chart in one (1) of my previous books of document,
2 and we'll check on that further as well, so there's no
3 need to undertake to provide that, Mr. -- Mr. Warden.

4 MR. VINCE WARDEN: Okay. Thank you.

5 MR. BOB PETERS: In your direct evidence
6 in these proceedings, Mr. Warden, there was a suggestion
7 -- or was it a suggestion by Manitoba Hydro that the
8 province doesn't need to do a needs and justification
9 review on Hydro's future plans?

10 MR. VINCE WARDEN: Oh, no, not at all.

11 MR. BOB PETERS: So you're not
12 disagreeing with -- with the fact that it should be done,
13 you had a concern about the timeline then, is that what I
14 should take from your comments? You -- you thought doing
15 it in the next twelve (12) months was premature, and
16 you've told the Board today eighteen (18) months would be
17 probably more realistic?

18 MR. VINCE WARDEN: Well, it's going to --
19 it -- the timeline -- the best estimate of the timeline
20 that we have today is that the -- the panel or the -- the
21 body that's going to be reviewing Manitoba Hydro's
22 capital plans will be appointed in approximately twelve
23 (12) months from now, so in -- in January of next year.
24 The filing of our needs for and justification document
25 would probably be in the fall of 2012.

1 MR. BOB PETERS: That puts the hearing
2 essentially two (2) years out?

3 MR. VINCE WARDEN: It -- it will be
4 approximately two (2) years out, yes, by the time --
5 eight (8) -- eighteen (18) to twenty (20) months I
6 believe is when we think the hearing will likely be
7 underway.

8 MR. BOB PETERS: And when you said in
9 your second last answer, sir, the body to review the nee
10 -- the capital projects will be appointed, what did you
11 mean by that?

12 MR. VINCE WARDEN: Well, we do have
13 confirmation from government that, in fact, they will be
14 appointing a review body for Manitoba Hydro's NFAAT
15 review.

16 MR. BOB PETERS: When you say a review
17 body this would be a -- a separate review panel that
18 presently doesn't have jurisdiction like the Clean
19 Environment Commission did last time for Wuskwatim?

20 MR. VINCE WARDEN: Well, we don't have
21 any details of -- of just how that -- that review panel
22 will be constituted. That hasn't been divulged to
23 Manitoba Hydro; we just know that there will be one
24 appointed by government.

25 MR. BOB PETERS: Thank you, sir.

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: Mr. Warden, just to
4 backtrack on the amounts expended to date. You said
5 Keeyask 400 million, Conawapa 200 million, and by looking
6 at Tab 13 of the first volume of book of documents there
7 was PUB Manitoba Hydro First Round 19 and that was
8 subsequently revised by MIPUG, Manitoba Hydro fir --
9 Second Round Question 1A. And if you take, subject to
10 check, the expenditures on Bipole 3 to date are thirteen
11 point (13.) -- sorry.

12 The expenditures on Bipole 3 as of March
13 31, 2009, are \$13.9 million. Is that consistent with
14 your information, sir?

15 MR. VINCE WARDEN: Mr. Peters, I do
16 believe that the information in the table on page 67, I
17 believe that's where you're referring, was updated, so
18 there is a revision to that table.

19 MR. BOB PETERS: The -- the initial
20 number was 25 million but it appears to have been revised
21 downwards?

22 MR. VINCE WARDEN: I -- you know, I don't
23 have the re -- revised number, all -- I have the original
24 table here but I don't have the revised number.

25 MR. BOB PETERS: No, and I was quoting

1 from the revised. And you can just make note that it's
2 at MIPUG Manitoba Hydro Second Round Question 1A and
3 we'll leave it at that, subject to any revisions you'd
4 come back with.

5 MR. VINCE WARDEN: Okay. With the
6 qualification, of course, that this is March of 2009,
7 which is somewhat outdated now.

8

9 (BRIEF PAUSE)

10

11 MR. BOB PETERS: We're just discussing
12 amongst ourselves whether we've asked -- there is an
13 undertaking coming on the CWIP update and, if that's the
14 case, we'll have the new number with -- with that
15 information, so.

16 MR. VINCE WARDEN: Good. Thank you.

17 MR. BOB PETERS: And at that average rate
18 it may be \$25 million is what you're saying? It may have
19 gone up a million a month since that...

20 MR. VINCE WARDEN: I -- the level of
21 expenditures on -- on Bipole have escalated, so I -- I
22 believe the number is -- is higher, but I -- I -- we'll
23 get that for you.

24

25 (BRIEF PAUSE)

1 MR. BOB PETERS: Let's get back to the --
2 no, there's no undertaking on that. Thank you.

3 Can the Board take from the comments this
4 morning, Mr. Surminski, that Manitoba Hydro has run a
5 number of possible scenarios under its Power Resource
6 Plan, but for competitive reasons doesn't want those
7 publically disclosed?

8 MR. HAROLD SURMINSKI: Yes, correct.

9 MR. BOB PETERS: And those other plans
10 that Manitoba Hydro would have run as scenarios would
11 have included a variety of options to meet any energy
12 shortfalls that may otherwise occur with respect to
13 meeting the Manitoba load?

14 MR. HAROLD SURMINSKI: Yes, the -- the
15 plan is developed to avoid shortfalls, that's another way
16 of putting it.

17 MR. BOB PETERS: And you've got a number
18 of various alternatives to avoid the shortfalls using
19 different sources of new generation?

20 MR. HAROLD SURMINSKI: Yes, correct.

21 MR. BOB PETERS: Would those scenarios
22 also include different import scenarios?

23 MR. HAROLD SURMINSKI: Yes, they would.

24 MR. BOB PETERS: And they'd include
25 thermal options?

1 MR. HAROLD SURMINSKI: Yes.

2 MR. BOB PETERS: Would the Board be
3 correct in understanding that the myriad of those options
4 would have been reviewed by Manitoba Hydro prior to
5 signing the term sheets with the counterparties on the
6 long-term contracts?

7 MR. HAROLD SURMINSKI: Yes.

8

9 (BRIEF PAUSE)

10

11 MR. BOB PETERS: Can we conclude, Mr.
12 Warden, that Manitoba Hydro is saying that using its best
13 information, which includes admittedly forecasts, if the
14 conditions come in as forecast Manitoba Hydro will have a
15 resource plan that Manitobans will have to pay at least
16 3.5 percent more each and every year for electricity to
17 support that preferred development plan?

18 MR. VINCE WARDEN: Not 3.5 percent over
19 and above what they would have otherwise paid. We would
20 have to look at if we weren't going with the preferred
21 development plan we would have to look at the
22 alternative, look at the rate increases that would be
23 necessary to support that alternative to come to a
24 conclusion on that.

25 MR. BOB PETERS: So not in addition to

1 any -- not 3-1/2 percent in addition, but probably all-in
2 3 1/2 percent?

3 MR. HAROLD SURMINSKI: Well, that's what
4 we have in our forecast right now is a 3 1/2 percent rate
5 increase starting in 2012/'13 for the balance of the
6 forecast period.

7 MR. BOB PETERS: When we look at Appendix
8 15 that was filed, Mr. Warden, and you don't need to turn
9 it up unless you want to see specifics, but the
10 alternative development scenario which, you know,
11 includes the -- the no NSP -- sorry, the no WPS and MP
12 agreements, that also uses though the same rate increases
13 that you find in IFF-09, correct?

14 MR. VINCE WARDEN: Yes, we -- for
15 purposes of comparing alternatives, we look at it a
16 number of different ways. So one (1) is to keep the rat
17 -- hold the rate increases constant, look at the impact
18 on retained earnings at the end of that period, or we
19 might target a certain level of retained earnings and
20 look at the rate increases that are necessary to attain
21 that level of retained earnings or debt-equity ratios.

22 But the scenario you described is -- is
23 certainly one (1) way that we -- we look at alternatives.

24 MR. BOB PETERS: Mr. Warden, I checked
25 over the lunch hour and the -- Tab 28 of the book of

1 documents contains Manitoba Hydro's alternatives --
2 alternative scenario from Appendix 15. What the book of
3 documents doesn't include and you -- you referenced it
4 earlier, sir, was it doesn't include the last ten (10)
5 years of the run, or taking it out for the last twenty
6 (20) years in the case of the forty (40) year IFF.

7 MR. VINCE WARDEN: Yes.

8 MR. BOB PETERS: It was included in your
9 Appendix 15, I did not include it in the book of
10 documents, so I hope there's no confusion on that that it
11 was -- it was -- I didn't think it was needed in the book
12 of documents so I didn't put it in, but you were correct
13 to reference it.

14 But having done that, sir, I went back and
15 checked and I -- I don't see an IFF-09 for forty (40)
16 years to compare the alternative against.

17 MR. VINCE WARDEN: That could be, Mr.
18 Peters. I'm not sure exactly what we were doing, what the
19 purpose of filing that tab, I'd have to review that, but
20 it may very well not have been to do the comparison to
21 IFF-09.

22 I think the point I was making this
23 morning though, was if you do refer to the twenty (20)
24 year outlook IFF-09 or 10 there -- there is a -- sorry,
25 the twenty (20) year hasn't been filed yet for ten (10).

1 For -- so, going back to the twenty (20)
2 year outlook for '09, there's a reference in there to the
3 cross -- crossover point. And as a matter of fact, I
4 believe we even included a graph in there of the forty
5 (40) year showing the crossover point that occurs beyond
6 the -- the twenty (20) year forecast.

7 MR. BOB PETERS: Does Manitoba Hydro have
8 the base case out for the same number of years, Mr.
9 Warden?

10 MR. VINCE WARDEN: Well, yes, we would
11 have to have the base case in order to compare the
12 alternative to, yes.

13 MR. BOB PETERS: My next question is:
14 Are you prepared to file it in these proceedings?

15 MR. VINCE WARDEN: Sure.

16 MR. BOB PETERS: All right. Then we will
17 ask for an undertaking for Manitoba Hydro to file the --
18 I'll call it the forty (40) year base case, IFF-09.

19 MR. VINCE WARDEN: Yes, we can do that.
20 It's not a polished document, it would just be a --
21 simply a projection of financial statements for those --
22 for those years.

23 MR. BOB PETERS: But it's comparative in
24 form to the -- to what you have provided as the forty
25 (40) year alternative?

1 MR. VINCE WARDEN: It would be, yes.

2 MR. BOB PETERS: All right. Well, thank
3 you for that, Mr. Warden.

4

5 --- UNDERTAKING NO. 25: Manitoba Hydro to provide the
6 forty (40) year base case,
7 IFF-09

8

9 CONTINUED BY MR. BOB PETERS:

10 MR. BOB PETERS: Mr. Warden, Manitoba
11 Hydro acknowledges that the fact that Manitoba Hydro is
12 building new generating stations poses a risk to Manitoba
13 ratepayers?

14 MR. VINCE WARDEN: Absolutely.

15 MR. BOB PETERS: And the risk can be
16 brought back to financial terms, that being, if there's
17 insufficient revenues to cover the costs Manitoba
18 ratepayers may be looked to to pay the costs that aren't
19 being covered by exports.

20 MR. VINCE WARDEN: That's a risk, yes.

21 MR. BOB PETERS: And there's a risk in
22 having long term export contracts as well, correct?

23 MR. VINCE WARDEN: Well, depending on how
24 those export contracts are structured those risks can be
25 minimized.

1 MR. BOB PETERS: And to determine the
2 degree to which all the risks have been minimized, all
3 the terms and conditions of those documents would have to
4 be reviewed and studied against the various possible flow
5 situations that could result, correct?

6 MR. VINCE WARDEN: Correct.

7 MR. BOB PETERS: Would you say, Mr.
8 Warden -- or would Manitoba Hydro say that the risks of
9 long-term contracts are greater than the risks posed by
10 domestic customers?

11 MR. VINCE WARDEN: Well, we never think
12 of risks posed by domestic customers in those terms. I
13 mean, that's the reason we exist is to -- is to serve
14 domestic customers. Everything we do has some risk and
15 those risks are managed, but we'd never trade off or
16 compare risks in the export market versus the domestic
17 market because I -- I don't think that is a -- a
18 legitimate comparison.

19 MR. BOB PETERS: Does Mani...

20

21 (BRIEF PAUSE)

22

23 MR. BOB PETERS: To serve the domestic
24 customers, Manitoba Hydro wants to make sure it has the
25 electricity and the energy to serve them, correct?

1 MR. VINCE WARDEN: That's fundamental,
2 yes.

3 MR. BOB PETERS: And the risk to the
4 domestic customers is that in a situation where there's a
5 drought, let's say, and Manitoba Hydro doesn't have the
6 energy available through generation, it will have to go
7 out and obtain it?

8 MR. VINCE WARDEN: Well, we -- we make
9 sure that risk is virtually zero, yes.

10 MR. BOB PETERS: What you're saying in
11 that answer, Mr. Warden, is it's -- Manitoba Hydro
12 doesn't think it's a question of whether Manitoba Hydro
13 will have the energy but the question is at what price?

14 MR. VINCE WARDEN: That's fair, yes.

15 MR. BOB PETERS: The risk, if I can, to
16 the domestic customer, is a price risk, not a supply
17 risk?

18 MR. VINCE WARDEN: The risk to the
19 domestic customer would be more so on the sup -- on the
20 price side. You know, if we're -- if our forecasts
21 aren't reasonably accurate then there could be a risk on
22 the supply side, but that's something we monitor. And as
23 Mr. Surminski and Mr. Cormie went through earlier today,
24 we -- we take all the necessary steps to make sure that
25 our forecasts are reasonably accurate and that that

1 supply will not be in jeopardy.

2 MR. BOB PETERS: And if -- I gathered
3 from some of the comments this morning that if -- if
4 there was a supply side risk, Manitoba Hydro could --
5 these are my words, install a CCCT in relative short
6 order?

7 MR. VINCE WARDEN: That's correct.

8 MR. BOB PETERS: I have no idea what
9 short order is, Mr. Warden, but I'm suspecting it's
10 probably a matter of months as opposed to years?

11 MR. HAROLD SURMINSKI: It would be at --
12 be at least two (2) years.

13 MR. ROBERT MAYER: On -- on that issue,
14 as you're probably aware, we just got -- or I just got
15 Volume XXX of the documents when I arrived here on Monday
16 morning, and we've been -- we spent a fair bit of time on
17 the Power Resource Plan which appears to be Appendix 84.
18 I got on to page 20 and 21 of page (sic) 84, and all of a
19 sudden a whole bunch of new questions came up. And I'm
20 looking at the two (2) figures, Figure 3 and Figure 4 on
21 pages 20 and 21.

22 Firstly, on Figure 3, the dependable
23 energy with Keeyask and Conawapa in place appears to be
24 about 44,000 gigawatt hours. Am I interpreting that
25 correctly?

1 MR. HAROLD SURMINSKI: I believe you're
2 looking at the average, that's the average capability.
3 The dependable is the purple line below that, below the
4 orange shading.

5 MR. ROBERT MAYER: Okay. Yes, dependable
6 energy at forty-four thousand (44,000). You're down to
7 winter peak on the same exhibit, and we got total
8 capacity that's somewhere between 7,500 and 8,000
9 megawatts. Am I correct on that? Is that what that
10 picture shows?

11 MR. HAROLD SURMINSKI: First of all, you
12 were on the energy -- on the upper part, you were
13 commenting on the energy --

14 MR. ROBERT MAYER: Now I'm talking --

15 MR. HAROLD SURMINSKI: -- quantity?

16 MR. ROBERT MAYER: -- winter peak
17 capacity.

18 MR. HAROLD SURMINSKI: Right. You're on
19 winter peak capacity, yes, because capacity does not vary
20 between average or dependable.

21 MR. ROBERT MAYER: Okay. I -- I think I
22 get that. Then I go to Figure 4 and I become a little
23 bit concerned because I see that this is the alternative
24 plan, and we've heard about the combined-cycle gas
25 turbines but I find it surprising that you're also going

1 to go -- that you -- your alternate is to also go back
2 into single-cycle gas turbines in forty-one/forty-two
3 (41/42) and forty-five/forty-six (45/46) (phonetic).

4 I don't think we heard before in this
5 hearing any talk of new single cycle gas turbines. I
6 thought they were not as efficient and were -- and were,
7 although possibly cheaper certainly nowhere the quality
8 of item that the combined cycle is, and why would we
9 buying single cycle gas turbines under any scenario.

10 MR. HAROLD SURMINSKI: Single or simple
11 cycle or a single cycle are -- are attractive for
12 capacity purposes for one (1) thing, if you just want
13 capacity for short durations of operation, economics or
14 the cost of operating, the fuel is not a factor. It's
15 often a balance out in time. It's a balance between how
16 much are you going to operate, how often do you expect to
17 operate these combustion turbines and a combined cycle
18 becomes more economic as you operate it for greater
19 number of hours.

20 So there's a balance between how often do
21 you require a peaking resource or a resource to be
22 operating and versus - well, just -- it's just a balance
23 between a simple cycle and a combined cycle, depending on
24 the number of hours that you require a resource to
25 operate.

1 MR. ROBERT MAYER: I've gotten the
2 impression over a number of these hearings that when we
3 talked about the present sing -- simple cycle/single
4 cycle gas turbines we presently have in Brandon that,
5 firstly, they're very expensive and the only time they
6 appear to be used is for training or some very short-term
7 work.

8 I -- I don't understand the acquisition of
9 two (2) more when you're telling because there's going to
10 be short-term usage that would require the acquisition
11 and operation of this type of equipment.

12 Have I got your answer correctly, sir?

13 MR. HAROLD SURMINSKI: Yes, you do, it's
14 a balance and out in time it's -- it's not -- after --
15 after you put several combined cycles in you have so much
16 energy capability that -- that the load shape grows
17 capacity-wise quicker than the energy or -- or just the
18 shape of the load. How much capacity you need relative
19 to ener -- you know, energy over a year. So it's always
20 a balance which -- which requirement is governing your --
21 your need. Is it capacity or is it energy?

22 MR. ROBERT MAYER: Okay.

23 MR. HAROLD SURMINSKI: So as -- as your
24 mix of generation to supply that growing need changes you
25 have to provide the resource that most economically

1 provides peak versus base load or, you know, more
2 constant operation.

3 MR. ROBERT MAYER: And on the issue of
4 capacity, I'm looking at the bottom of half of Figure 4,
5 and I know where the arrow points but I see total
6 capacity during winter peak at better than 8,000
7 megawatts, which is higher total capacity on winter peak
8 than your preferred -- your recommended plan on the
9 bottom part of Figure 3.

10 Is that because of the amount of trouble
11 you have feeding water to the Lower Nelson in the
12 wintertime or is there some other explanation for that?

13

14 (BRIEF PAUSE)

15

16 MR. HAROLD SURMINSKI: We're a little
17 confused as -- as to your conclusion of which scenario
18 has the greater quantity of capacity.

19 MR. ROBERT MAYER: The way I look at that
20 -- this is what I'm looking for clarification on. The
21 Figure 4 "Winter Capacity," although there's an arrow
22 there's a line that's driven above the 8,000 megawatts
23 portion of the chart. I'm therefore assuming that is
24 where total capacity is under the alternative plan during
25 the winter peak.

1 MR. DAVID CORMIE: Mr. Mayer, you're --
2 or, Mr. Mayer, are you referring to the horizontal line
3 beside the words total capacity? That's just the -- the
4 index. That's the index line. It's saying total
5 capacity is represented by -- that -- that's that short
6 line?

7 MR. ROBERT MAYER: Yes.

8 MR. DAVID CORMIE: Yeah, that's just the
9 legend.

10 MR. ROBERT MAYER: Okay. What is the
11 total capacity?

12 MR. DAVID CORMIE: It's the -- are you --
13 is yours in colour, Mr. --

14 MR. ROBERT MAYER: Yes, it is.

15 MR. DAVID CORMIE: It's the line -- the
16 purple line just above the yellow shaded area, and it
17 goes up and down --

18 MR. ROBERT MAYER: Yes --

19 MR. DAVID CORMIE: -- over time.

20 MR. ROBERT MAYER: -- above the
21 exportable surplus.

22 MR. DAVID CORMIE: That's right. And it
23 at no point goes higher than --

24 MR. ROBERT MAYER: Seven --

25 MR. DAVID CORMIE: -- it never actually

1 reaches eight thousand (8,000).

2 MR. ROBERT MAYER: Do you know what, it
3 looks like it's just over --

4 MR. DAVID CORMIE: That's right --

5 MR. ROBERT MAYER: -- 7,500 there.

6 MR. DAVID CORMIE: -- yeah.

7 MR. ROBERT MAYER: All right. Then that
8 -- sorry, I just misunderstood that little line up top.
9 Thank you.

10

11 CONTINUED BY MR. BOB PETERS:

12 MR. BOB PETERS: Gentlemen, before we
13 leave that if I could just pick up on the Figure 4, one
14 (1) question comes to mind. When you look at that
15 dependable energy curve that the legend says is a purple
16 or blue line and it's -- it's just underneath average
17 energy shaded area, what causes the drop-off in
18 dependable energy out around 2023/'24?

19

20 (BRIEF PAUSE)

21

22 MR. DAVID CORMIE: Under the NSP sale
23 agreement, Mr. Peters, we have the rights to adverse
24 water, both under the seasonal diversity contract and
25 through the call option in the wintertime. With the end

1 of the sale those dependable supplies disappear,
2 therefore, the system dependable energy drops with the
3 termination of the sale.

4 MR. BOB PETERS: All right. So it's an
5 import capability that gives you dependable energy?

6 MR. DAVID CORMIE: Yes. Mr. Peters, I
7 thought I -- I thought I might be able to add something.
8 Your -- you had a discussion a few minutes ago with Mr.
9 Warden on the -- the risks of -- of the export contracts
10 and of -- of building these large plants.

11 And I -- I wanted to suggest that -- that
12 -- because we still have to build for the domestic load
13 requirement there are risks associated with the
14 alternative plans. And the -- you know, the risks of a
15 thermal resource option, combined cycle combustion
16 turbine or simple cycle combustion turbine also exposes
17 the domestic customer, the Manitoba ratepayer, to risks,
18 and that's the risk of natural gas prices and carbon
19 regulation, and -- and so there's no risk-free
20 alternative.

21 They -- they all have risks. And I -- I
22 think this is a -- an issue of balancing those risks and
23 -- and the rewards and -- so I -- I just wanted to -- to
24 suggest that the alternative has risks, as well.

25 MR. BOB PETERS: Manitoba Hydro sees

1 Manitoba consumers as being risk adverse, would that be
2 true?

3

4 (BRIEF PAUSE)

5

6 MR. DAVID CORMIE: I -- I think that's
7 fair, but Manitoba customers have also supported the --
8 the direction that Manitoba Hydro and the province have
9 taken in the last forty (40) to fifty (50) years to
10 develop its hydro-electric resources, and -- and I think
11 that -- that our perspective is that they're -- they --
12 they're comfortable with -- with that direction.

13 And it's something that has paid rewards
14 in the past and -- and this is not -- we're not going in
15 a new direction with developing large hydro on the Nelson
16 River. We've -- we've already developed huge plants and
17 invested in huge transmission systems that had immense
18 risks with them, and I don't believe that new export
19 sales or new interconnections or -- or new hydro plants
20 are something that is -- is directionally different than
21 we've been going for -- in the direction we've been going
22 for the last -- since the mid '60s when -- when that --
23 that visionary direction was established and -- and
24 supported by the -- by the province and paid for by the
25 ratepayers.

1 MR. BOB PETERS: One (1) of the
2 differences, Mr. Cormie, is that Keeyask and Conawapa are
3 being contemplated as, I think your words or the
4 Corporation's words are "merchant plants," as opposed to
5 having them in the queue ready for Manitoba demand first.

6 MR. DAVID CORMIE: Well, I -- I -- I'm --
7 I think that -- that Manitoba Hydro's view is that we are
8 advancing these -- these plants several years to -- to --
9 from what they -- when they would otherwise be required
10 to serve the -- the domestic need.

11 Our load is projected to grow and so,
12 ultimately, we will building these plants to serve our --
13 our domestic requirements. And as we -- as we develop
14 these hydroelectric plants, approximately 40 percent of
15 the energy that's produced in an average year is non-firm
16 and it needs to get to the -- needs to get to the export
17 market or it has -- it gets -- it gets spilled.

18 And I think Manitoba Hydro views this as
19 an opportunity to enhance its interconnection capability
20 that ultimately will be -- provide the market outlet for
21 the surplus that will be ultimately generated from those
22 plants that would be needed for Manitobans. And -- and
23 that's which -- that's what's -- that's the opportunity
24 that exists today. And -- and clearly there are risks
25 associated with that, yeah.

1 MR. BOB PETERS: While you acknowledge
2 the risks, it sounds that the primary motiva -- or the
3 primary benefit is the enhanced interconnection. Would
4 that be correct?

5 MR. DAVID CORMIE: Yes, that's the -- I
6 think that's the -- that's the opportunity that we have
7 now.

8 MR. BOB PETERS: Mr. Cormie, when other
9 utilities file for regulatory approvals of long-term
10 contracts are they required to also provide a number of
11 alternative scenarios, do you know?

12 MR. DAVID CORMIE: Yes, and they -- they
13 -- in their -- in their approval processes they have to
14 show the alternatives and show that the power purchases
15 that they are making are in the best interest of their
16 ratepayers.

17 MR. BOB PETERS: Does that mean, show us
18 the lowest cost?

19 MR. DAVID CORMIE: Cost is one of the
20 factors; risk is also another factor.

21 MR. BOB PETERS: What do you mean by
22 "risk" in that sentence?

23 MR. DAVID CORMIE: Well, given that the
24 future is uncertain, under a scenario analysis they would
25 look at different scenarios of the future and try to

1 demonstrate that on balance their chosen alternative best
2 meets the needs of -- of their ratepayers and their --
3 you know, their customers.

4 MR. BOB PETERS: That ends up being a
5 subjective determination on behalf of the utility?

6 MS. PATTI RAMAGE: Excuse me, Mr.
7 Chairman. I -- we're entering these grounds with some
8 trepidation because I don't think, with due respect to
9 Mr. Cormie, he's an expert on the regulation of utilities
10 in other jurisdictions.

11 So I'm a little concerned with his -- his
12 ability to answer these questions. I could offend
13 parties on either side of the room with that one, but...

14 MR. BOB PETERS: Okay, Mr. Cormie, you
15 and I aren't experts. Let's talk about something else
16 then.

17 MR. DAVID CORMIE: Thank you, Ms. Ramage.

18

19 CONTINUED BY MR. BOB PETERS:

20 MR. BOB PETERS: Mr. Cormie, in putting
21 forward Manitoba Hydro's preferred development plan
22 Manitoba Hydro is making an admittedly subjective
23 decision on what it believes will be in the best interest
24 of its ratepayers going forward. Do you agree with that?

25 MR. VINCE WARDEN: I wouldn't agree with

1 your word "subjective," Mr. Peters. It's based on a huge
2 amount of analysis, so it's very objective.

3 MR. BOB PETERS: My point, Mr. Warden, is
4 that the future is uncertain and so your analysis as --
5 as detailed as it may be, relies on factors for which are
6 not facts, but forecasts, correct?

7 MR. VINCE WARDEN: Ultimately, a decision
8 has to be made based on the analysis and that requires
9 judgment, but I wouldn't call that subjective judgment.

10 MR. BOB PETERS: You'd call it what
11 instead?

12 MR. VINCE WARDEN: Well, I think I -- I
13 did say it's objective based on the analysis.

14 MR. DAVID CORMIE: And -- and I think,
15 Mr. Peters, when we look at the value of a new
16 interconnection, we see that it does a lot of -- a lot of
17 -- it provides a lot of benefits to -- to Manitobans. We
18 face a lot of uncertainty in the future, we're very
19 dependent upon the export market, we are at risks from
20 climate change, we are at risk of evolving market rules.
21 And so it -- it -- it's like -- it's like Mr. Warden has
22 indicated, there are lots of factors that -- that support
23 the -- the direction of enhancing our interconnected
24 capability because it helps us manage a lot of the risks
25 and the uncertainty that we -- that we face.

1 MR. BOB PETERS: When you tell the Board
2 that Manitoba Hydro is dependent on the export market,
3 what do you mean by that, Mr. Cormie?

4 MR. DAVID CORMIE: Manitoba Hydro is able
5 to price its electricity at well below market because
6 it's able to salvage the surplus energy that's available
7 from its hydro-electric system in the export market, and
8 should we go in a different direction and that -- that
9 doesn't involve developing our hydro-electric resources.
10 Ultimately, Manitoba Hydro's rates will end up
11 approaching market rates, and the -- the subsidy that
12 customers are enjoying today ultimately will -- will
13 diminish over time.

14 And so that's what I'm saying, is that --
15 that customers benefit from the export markets because of
16 the revenues that are generated there that help support
17 the -- pay the cost -- some of the costs of running the
18 Utility.

19 MR. BOB PETERS: All right, I'll -- I'll
20 come back to that, I promise. But as matters now sit,
21 with Wuskwatim nearing completion, is it correct that the
22 new three (3) component power sale to Northern States
23 Power, which commences in 2015, can proceed without any
24 new generation or transmission on Manitoba Hydro's side?

25 MR. DAVID CORMIE: That's correct.

1 MR. BOB PETERS: And that's correct with
2 perhaps a qualification, Mr. Cormie, that the -- the last
3 125 megawatts of the NSP agreements, which I think is the
4 third agreement, that's contingent on new generation in
5 Manitoba?

6 MR. DAVID CORMIE: Yes, but that is a
7 Manitoba Hydro condition precedent. And should we have
8 the surplus available in our system without having to
9 build, and Manitoba Hydro has the option of waiving that
10 condition precedent in exercising our right to sell the
11 power.

12

13 MR. BOB PETERS: So if the Manitoba load
14 forecast doesn't get to where it's forecast to be, you
15 can resource that hundred and twenty-five megawatt sale
16 from other sources of energy?

17 MR. DAVID CORMIE: Or -- or from a
18 reduction in domestic load.

19 MR. BOB PETERS: And we've also said, in
20 these proceedings, although we maybe debated it a little
21 bit, but the need for Manitoba generation for Manitoba's
22 own load is such that no new generation is needed until
23 approximately 2022?

24 MR. HAROLD SURMINSKI: Yes, that's
25 correct.

1 MR. BOB PETERS: And I think you and I
2 pushed at each other a bit, Mr. Surminski, because that -
3 - that could be a -- a greater period of time depending
4 on whether the load forecast bounces back, correct?

5 MR. HAROLD SURMINSKI: Yes, certainly,
6 very dependent on a load forecast.

7 MR. BOB PETERS: And --

8 MR. VINCE WARDEN: Just -- just to be
9 clear that's 2022 after Wuskwatim.

10 MR. BOB PETERS: Yes. And I -- I started
11 my questions, I thought, of prior to the Northern States
12 power agreement indicating that Wuskwatim's now in its
13 final stages of --

14 MR. VINCE WARDEN: Okay.

15 MR. BOB PETERS: -- completion.

16 MR. VINCE WARDEN: Okay.

17 MR. BOB PETERS: So -- so I accept your
18 qualification --

19 MR. VINCE WARDEN: Thank you.

20 MR. BOB PETERS: -- Mr. Warden.

21 But that makes it all the more
22 transparent, does it not, Mr. Warden, that Manitoba
23 Hydro's plans for new generation are -- are driven by the
24 export opportunities that are potentially available?

25 MR. VINCE WARDEN: In the short term,

1 yes.

2 MR. BOB PETERS: And just to put a price
3 tag on that, we've seen that Keeyask at 5.6 billion,
4 Conawapa at 7.8 billion, that's a total of 13.4 billion
5 dollars of additional costs for those two (2) generating
6 stations. And if those are both built and Bipole 3 is
7 also constructed that \$13.4 billion number can get up
8 closer to 16, \$17 billion?

9 MR. VINCE WARDEN: Yes.

10 MR. BOB PETERS: And that's the financial
11 risk that ratepayers are -- are facing with the
12 construction program that's recommended by Manitoba
13 Hydro?

14 MR. VINCE WARDEN: Well, as we discussed
15 earlier there is a fa -- financial risk with whatever
16 scenario is ultimately chosen to supply the Manitoba
17 load.

18 MR. BOB PETERS: But I was giving you the
19 numbers of the recommended option.

20 MR. VINCE WARDEN: Yes, but if you say
21 that's the financial risk, the financial risk would have
22 to be compared to the alternatives to -- to define or --
23 or determine exactly what that risk is to -- residual
24 risk is to ratepayers.

25 MR. BOB PETERS: And -- sure. And we can

1 do the math by -- by quantifying the costs of the asset
2 additions needed for the alternative plans, correct?

3 MR. VINCE WARDEN: Correct.

4 MR. BOB PETERS: All right.

5

6 (BRIEF PAUSE)

7

8 MR. BOB PETERS: Would you also agree,
9 Mr. Warden, Mr. Cormie, that from a risk perspective
10 those numbers are directly dependent on export prices in
11 the price assumptions that are made?

12

13 (BRIEF PAUSE)

14

15 MR. DAVID CORMIE: Could you ask the
16 question again, Mr. Peters.

17 MR. BOB PETERS: All right. Maybe put
18 another way. Payment of some of that \$17 billion of new
19 capital expenditures is to be recovered from the export
20 market, correct?

21 MR. DAVID CORMIE: Well, I think, Mr.
22 Peters, we're -- we're talking about the advancement of
23 plant, and this is plant that has a life of sixty-five
24 (65) to a hundred (100) years, and the entire cost of
25 these plants doesn't have to be amortized over the life

1 of the sale. And when we look at the economics of these
2 power sales it's the economics of advancing the plants
3 necessary and, ultimately, being able to terminate the
4 sales because that -- those plants in 2027 or 2035 are
5 required to serve domestic load.

6 And in -- we're not attempting to pay for
7 the plants over the life of the sale. But what we --
8 what we do achieve, though, is we achieve new
9 interconnected capability that's -- that's there in
10 perpetuity. The -- the transmission line will be built,
11 it will serve the sale for ten (10) or fifteen (15) years
12 and then it will be -- provide the outlet for surplus
13 energy in per -- perpetuity for those plants and for
14 other plants that are subsequently built.

15 So I -- I don't think we're trying to
16 suggest that these sales are -- are going to pay for the
17 entire cost of -- of new generation.

18 MR. BOB PETERS: I'm not sure I suggested
19 that but I can look at the transcript. Mr. Cormie, you -
20 - you then are agreeing that export should pay the annual
21 costs of the new construction during the years of
22 advancement?

23

24

(BRIEF PAUSE)

25

1 MR. VINCE WARDEN: Sorry to get you to do
2 this again, Mr. Peters, but could you repeat that
3 question?

4 MR. BOB PETERS: Certainly. If the
5 exports aren't going to pay the total \$17.4 billion that
6 we're talking about, Manitoba Hydro then expects exports
7 to at least pay the annual costs of Keeyask, Conawapa,
8 and Bipole 3 during the years of advancement, doesn't it?

9 MR. DAVID CORMIE: I think -- I think you
10 have to look at the -- the benefits to the Manitoba Hydro
11 system in perpetuity, and that's why our planning looks
12 out forty (40) years and says that with this new
13 interconnection that's being built that was possible
14 because of the -- of the firm power sales that were made
15 for the initial ten (10) years of the life of this
16 generation. Those benefits need to be included, as well.

17 And so the export sale doesn't have to pay
18 for itself on an annual basis, there just has to be
19 enough present value benefits from the development
20 sequence that -- that -- so that tho -- and those
21 benefits need to exceed the cost of advancing those
22 plants. And -- and I think that's how we look at it in
23 our economic analysis.

24 MR. BOB PETERS: Would you agree, Mr.
25 Cormie and Mr. Warden, that the benefits of which you're

1 speaking would come -- would only come in the later years
2 not the early advanced years?

3 MR. VINCE WARDEN: Well, I think the --
4 the benefits, and this is what we discussed in the -- the
5 twenty (20) year financial outlook that was prepared, is
6 there is a crossover point that occurs compared to the --
7 and you always have to compare it to the alternative,
8 which we've done -- compared to the alternative the
9 crossover point does come two (2) or three (3) years
10 after that twenty (20) year period, and it's there for
11 the -- for the duration of the -- of the life of those
12 plants.

13 I think you might have made a reference,
14 Mr. Peters, to Bipole 3 being advanced, Bipole 3 of
15 course is being built for reliability purposes not being
16 built for purposes of the sales.

17 MR. BOB PETERS: The power from Conawapa
18 can't get to export market, can it, without a Bipole 3?

19 MR. VINCE WARDEN: No, nor can Keeyask.

20 MR. BOB PETERS: Maybe I worded the
21 question wrong. You're agreeing that Bipole 3 is needed
22 to bring, you're saying, Keeyask and Conawapa power to
23 export market?

24 MR. VINCE WARDEN: Yes, and I think --
25 the only point I was making is you were linking Bipole 3

1 with the sales and -- and really we're not doing that.
2 We're regarding Bipole 3 as being built to improve the
3 reliability of the Manitoba system.

4 MR. BOB PETERS: But without Bipole 3
5 there are no sales, is what you're telling the Board?

6 MR. VINCE WARDEN: That is true, as well,
7 yes.

8

9 (BRIEF PAUSE)

10

11 MR. BOB PETERS: Mr. Warden, when you
12 reference your crossover dates and your crossover period,
13 you're indicating to the Board that's the point in time
14 in which the benefits are outweighing the costs, is that
15 the way to look at it?

16 MR. VINCE WARDEN: The benefits are
17 outweighing the alternative costs and benefits. So we're
18 comparing the preferred development plan to the -- to the
19 alternative and the crossover to the alternative comes
20 two (2) or three (3) years after the twenty (20) year
21 period that we've submitted information on.

22

23 (BRIEF PAUSE)

24

25 MR. BOB PETERS: Mr. Warden, I'm going to

1 have to go back into that at Appendix 15 and maybe just
2 check on a few points, but your answer seems to be
3 telling the Board that for the first twenty-three (23)
4 years the alternative scenario -- the alternative
5 development scenario may look better in terms of the
6 numbers, but after twenty-three (23) years there's a
7 crossover period and that's where the preferred or the
8 recommended plan looks better relative to the alternative
9 scenario?

10 MR. VINCE WARDEN: Yes.

11 MR. BOB PETERS: And just -- Mr.
12 Surminski, the capacity of Bipoles 1 and 2, is that about
13 30,900 gigawatt hours?

14 MR. HAROLD SURMINSKI: We measure the
15 capacity in megawatts, and it's less than 4,000
16 megawatts. Energy -- you're measuring ener -- energy
17 flow and that's not a way we measure the capability of
18 the Bipoles.

19 MR. BOB PETERS: I just tried to convert
20 what you told us into gigawatt hours, wouldn't that be
21 another measure of it?

22 MR. HAROLD SURMINSKI: That would be,
23 assuming a hundred percent flow, hundred -- a hundred
24 percent of the time, which does not happen.

25 MR. BOB PETERS: Meaning that there is

1 some unutilized capacity on Bipole 1 and 2?

2

3

(BRIEF PAUSE)

4

5 MR. HAROLD SURMINSKI: The power flow
6 depends on the generation that -- that must be
7 transmitted.

8 MR. BOB PETERS: If Keeyask is added then
9 would the energy that would have to be moved, is that
10 about 31,390 gigawatt hours? Have you ever done that
11 calculation?

12 MR. HAROLD SURMINSKI: No, I have not.

13 MR. BOB PETERS: Maybe then I can ask you
14 to undertake to provide a calculation on an energy basis,
15 Mr. Surminski, as to what portion of Keeyask wouldn't fit
16 on Bipoles 1 and 2 running at maximum capacity.

17 MR. DAVID CORMIE: Mr. Peters, the --
18 it's unrealistic to assume that the DC system would be
19 run at maximum capacity because that would mean that
20 every time there was an equipment interruption that the
21 power flow would have -- would -- would be interrupted.

22 And our -- our objective is to -- is to
23 protect against -- we want to provide firm power on that
24 transmission system and that means that we have to have
25 spare capacity. And spare capacity would involve having

1 a pole -- a spare pole in hand or two (2) valve groups so
2 that one (1) valve group can be out of service for
3 maintenance and then should another valve group go out of
4 service, that -- that valve group could go out of service
5 without interrupting the power flow.

6 So an assumption based on installed
7 capacity about how much energy can be reliably delivered
8 over the transmission system is not a -- that's not the
9 way the -- the power planners plan the system. We need
10 to have what -- we need to have firm transfer capability
11 which -- which recognizes the need to have equipment out
12 of service, and to have spare transmission capability in
13 case of forced outages.

14 MR. BOB PETERS: So you're saying that
15 rather than a hundred percent capacity, you run it at
16 what, 80, 90 percent?

17 MR. DAVID CORMIE: Well, that's the
18 problem right now is that -- that we have 3,800 megawatts
19 of DC capability and we have 3,650 megawatts of
20 generation. So every time that we lose a valve group
21 bigger than 250 megawatts we have to interrupt the flow
22 of power.

23 And -- and if we have the loss of one (1)
24 of the circuits or because of storm damage we don't have
25 sufficient redundant transmission capability to -- to

1 make -- to make delivery of the energy that's required to
2 serve a firm load.

3 And -- and so it's not a matter of
4 capacity factor, it's a matter of what's the contingency
5 that you're designing for and the -- and -- and providing
6 enough spare capacity so that the maintenance can be done
7 on equipment without interrupting customer's sup --
8 supply, that's what's driving the need to build Bipole 3.
9 We have insufficient firm transmission capability out of
10 the north and Bipole 3 is needed to provide the redundant
11 capability so that the supply of -- the -- the load can
12 be served without interruption.

13 MR. BOB PETERS: Are you able to give a
14 percentage, Mr. Cormie?

15 MR. DAVID CORMIE: A percentage is not --
16 doesn't -- it -- it -- no, I don't think we can, that's
17 not the -- we don't design the DC system on a percentage
18 basis.

19 MR. BOB PETERS: Well, then can you
20 provide it based on your -- you can use your megawatts --
21 your capacity information and quant -- and -- and qualify
22 what -- what levels of capacity are needed to meet the
23 firm domestic load only?

24 MR. DAVID CORMIE: And I -- I think what
25 we can provide for you is a -- what size of DC we would

1 need to get out the energy with Keeyask and to meet our -
2 - our valve group criteria and for the -- the -- the
3 number of megawatts that are needed for -- for
4 maintenance. And we'll provide an energy number based on
5 that.

6 MR. BOB PETERS: Well, Mr. Cormie, while
7 you can include that in the undertaking, can you also
8 provide your existing situation so that we can compare
9 the -- the actual capabilities of the -- of the Bipole 1
10 and 2 with the -- I guess, the assumptions you've made in
11 terms of having the required redundant capacity built in
12 so that you can service the various valve groups and the
13 like?

14 MR. DAVID CORMIE: We'll -- we'll --
15 we'll do our best, Mr. Peters.

16 MR. BOB PETERS: Thank you, Mr. Cormie.

17

18 --- UNDERTAKING NO. 26: Manitoba Hydro to provide the
19 size of DC it would need to
20 get out the energy with
21 Keeyask and to meet the valve
22 group criteria and the number
23 of megawatts needed for
24 maintenance; and to provide
25 the existing situation with

1 Bipole 1 and 2 to facilitate
2 comparison
3

4 MR. BOB PETERS: Mr. Chairman, perhaps we
5 could take a short afternoon recess and I'll just regroup
6 on my notes here and move on to the next topic.

7 THE CHAIRPERSON: Very good, Mr. Peters.
8

9 --- Upon recessing at 2:36 p.m.

10 --- Upon resuming at 3:02 p.m.
11

12 THE CHAIRPERSON: Okay, welcome back,
13 everyone.

14 Mr. Peters...?
15

16 CONTINUED BY MR. BOB PETERS:

17 MR. BOB PETERS: Thank you, Mr. Chairman.

18 I want to turn to capital expenditures
19 with the witness panel, and returning to Tab 29 in the
20 book of documents, for at least initial references, and
21 as the Board, Mr. Warden, looks at the capital
22 expenditure plan, turning to page 36, which is of the
23 second volume of Board counsel book of documents, it's
24 found under Tab 29. It's the -- the capital expenditure
25 forecast for twenty (20) year outlook.

1 MR. VINCE WARDEN: Yes, I have that, Mr.
2 Peters.

3 MR. BOB PETERS: And again, besides being
4 in small print, there's some large numbers there, but in
5 the -- in the 2011 year, Manitoba Hydro is planning on
6 spending on Keeyask \$85 million and then \$195 million in
7 the second test year? Can you make those out?

8 MR. VINCE WARDEN: Yes.

9 MR. BOB PETERS: I was correct?

10 MR. VINCE WARDEN: On Keeyask eighty-five
11 (85) and a hundred and five (105) (sic), yes.

12 MR. BOB PETERS: A hundred and ninety-
13 five (195)?

14 MR. VINCE WARDEN: Yes.

15 MR. BOB PETERS: And I think you had told
16 us previously that spending to date was in the \$400
17 million mark?

18 MR. VINCE WARDEN: Yes. And I have
19 confirmed that. We're 399.5 mil -- million, so we're --

20 MR. BOB PETERS: All right, thank you.

21 MR. VINCE WARDEN: -- almo -- almost bang
22 on 400 million.

23 MR. BOB PETERS: Yeah. Thank you. And
24 then on Conawapa in the test year 2011, \$60 million will
25 be expended according to the forecast, and an additional

1 \$60 million will be spent in the second test year on
2 Conawapa, correct?

3 MR. VINCE WARDEN: Yes.

4 MR. BOB PETERS: And I think your
5 evidence from earlier today was that \$200 million has
6 been spent, in total, on that project?

7 MR. VINCE WARDEN: Yes. And that number
8 is also correct.

9 MR. BOB PETERS: Thank you. I believe at
10 the last general rate application, Mr. Warden, there was
11 -- there was a suggestion when Manitoba Hydro was
12 discussing the construction of its new headquarters that
13 capital costs were escalating and the word "sticker
14 shock" was used. Do you have a recollection of that?

15 MR. VINCE WARDEN: No, not "sticker
16 shock," with respect to the head office building. No, I
17 don't. I don't. I think we -- were talking about
18 sticker shock with respect to a lot of other projects but
19 not -- not with specific reference to the head office
20 building.

21 MR. BOB PETERS: My question wasn't meant
22 to imply that the costs were escalating comparably, but
23 there was the discussion about construction costs on
24 major projects and there was a sticker shock concern that
25 those costs were escalating in the construction industry.

1 MR. VINCE WARDEN: Yes, we were looking
2 at component costs of steel and transformers and copper,
3 and commodity prices in general were escalating and --
4 and that's where the stick shock reference came from.

5 MR. BOB PETERS: Has that trend, or call
6 it business practice, continued?

7 MR. VINCE WARDEN: No, it's -- we've seen
8 last year a slight downward trend, levelling off in
9 prices, not -- definitely not escalating as they were.

10 MR. BOB PETERS: Have prices decreased?

11 MR. VINCE WARDEN: There have been some
12 decreases in -- in some -- some specific commodities but
13 overall no. No, it's -- I would say it's more of a
14 levelling off overall.

15 MR. BOB PETERS: And to what does
16 Manitoba Hydro attribute that levelling off?

17 MR. VINCE WARDEN: I think there -- there
18 -- there was such a huge demand -- the economic downturn
19 that's occurred largely in the US but also elsewhere in
20 the world has resulted in decreased demand, so therefore
21 the prices have levelled off accordingly.

22 MR. BOB PETERS: So when the Board turns
23 to Tab 29 of the second volume of book of documents
24 marked as PUB Exhibit 16, and looks at page 33 in
25 particular, that overview from CEF-10 will be Manitoba

1 Hydro's most current forecast summary of the major
2 capital expenditures?

3 MR. VINCE WARDEN: Yeah, from CEF-10,
4 yes, that's right.

5 MR. BOB PETERS: This is the last update
6 the Board has on the costs of Bipole 3, Conawapa, and
7 Keeyask?

8 MR. VINCE WARDEN: Yes.

9 MR. BOB PETERS: I think we've agreed
10 that there's no firm export contracts that require
11 Keeyask and Conawapa as we sit here today, is that
12 correct?

13 MR. VINCE WARDEN: Yes.

14 MR. BOB PETERS: And while Bipole 3 will
15 be needed for any energy coming out of Conawapa and
16 Keeyask as the Corporation has indicated, there's no
17 export contract that requires that at this point in time?

18 MR. VINCE WARDEN: That's right.

19

20 (BRIEF PAUSE)

21

22 MR. BOB PETERS: It's also correct that
23 none of the -- let me just clarify this point for the
24 record. When we talk about Northern States Power, NSP,
25 or Xcel contract, is it three (3) separate contracts or

1 is it one (1) contract in three (3) parts? Or how does
2 the Corporation consider that?

3 MR. DAVID CORMIE: They are three (3)
4 separate contracts that are -- are related to each other.

5 MR. BOB PETERS: They're not stand-alone
6 contracts, they're interrelated?

7 MR. DAVID CORMIE: They're interrelated
8 in that if -- if the seasonal diversity contract were to
9 be terminated early it would have ramifications for the
10 sister participation sale agreement and for the 125
11 megawatt agreement because of the linkage between them
12 associated with adverse water energy.

13 MR. BOB PETERS: So maybe it's better
14 that the Board consider it as one (1) contract with three
15 (3) components?

16 MR DAVID CORMIE: I think it's a package.

17 MR. BOB PETERS: Okay. The NSP package.
18 Mr. Warden and Mr. Cormie, the NSP package doesn't
19 trigger in and of itself the need for Bipole 3 or Keeyask
20 or Conawapa?

21 MR. DAVID CORMIE: Correct.

22 MR. BOB PETERS: And it doesn't even
23 trigger the need for let's say a -- a combined cycle
24 combustion turbine at any point as presently planned?

25

1 (BRIEF PAUSE)

2

3 MR. DAVID CORMIE: Correct.

4 MR. BOB PETERS: Previously I talked with
5 you, Mr. Warden, about the relative costs of energy
6 coming from the generating stations. We -- we did some
7 on-air math relative to Wuskwatim, do you recall that?

8 MR. VINCE WARDEN: Yes, I do.

9 MR. BOB PETERS: I threw out the figure
10 of Wuskwatim on a -- on an energy basis all-in coming out
11 at about ten (10) cents a kilowatt hour per year, do you
12 recall that?

13 MR. VINCE WARDEN: I do, Mr. Peters.
14 That was bases, as we agreed, on some very simple math,
15 and -- I think one (1) thing if I can just -- while we're
16 on that subject if I could just clarify one (1) point.
17 In the calculation of the ten (10) cents I believe you
18 included a component for interest and depreciation.

19 You didn't though allow for the interest
20 to decline as it would over time as the revenue is
21 generated from that plant. So typically what we would do
22 when we're looking at the costs of the plant, we would
23 look at the levelized costs which would factor in the
24 fact -- factor in the interest that will be reduced by
25 virtue of revenue being generated from that -- that

1 asset.

2 MR. BOB PETERS: My number was day 1
3 energy cost coming out of Wuskwatim?

4 MR. VINCE WARDEN: Yes.

5 MR. BOB PETERS: Yeah.

6 MR. VINCE WARDEN: Yes.

7 MR. BOB PETERS: It didn't go into the
8 long-term and it didn't bring in the concept of
9 levelizing the costs, correct?

10 MR. VINCE WARDEN: That's right.

11 MR. BOB PETERS: All right.

12 MR. VINCE WARDEN: That's right. But --
13 si it was -- as long as we accept that it was -- has its
14 limitations then -- and I believe we may even have an
15 undertaking to refine that for you.

16 MR. HAROLD SURMINSKI: Yes, Mr. Peters,
17 the undertaking I've -- I've seen a preview of it, but
18 when you said it was a day 1 cost in your discussion you
19 were comparing it to several years out, so that is a
20 difficulty in -- in use of -- you made in that number.

21 MR. BOB PETERS: How far out do you have
22 to go, Mr. Warden or Mr. Surminski, before the -- the ten
23 (10) cent number would -- would be -- would -- would come
24 down under your calculations?

25 MR. HAROLD SURMINSKI: First of all,

1 you'll see that it's not ten (10) cents in year -- in day
2 1 or year 1, it's -- it's lower than that, and we'll --
3 the undertaking, I think, will -- will clearly
4 demonstrate a better calculation.

5 MR. BOB PETERS: All right. I told you
6 it was simple. I'll look forward to the undertaking but
7 if we did the same -- the same math with Keeyask and we
8 take what I think is -- I had calculated at 4.6 billion
9 but I think that's been -- that's off by a billion
10 dollars, and we take the same 6 percent interest and 2
11 percent depreciation, then we add in 1 percent for OM&A,
12 I was coming out to about \$400 million a year carrying
13 costs and -- and upkeep on the Keeyask plant.

14 MR. HAROLD SURMINSKI: I'll give you a
15 clue. I think 7 percent is the -- all-in is a -- is a
16 better number to utilize.

17 MR. BOB PETERS: 7 percent rather than 9
18 percent?

19 MR. HAROLD SURMINSKI: Correct.

20 MR. BOB PETERS: All right. Well, we'll
21 -- we'll look and see what your undertaking says on that,
22 but at my -- at my 9 percent then the Keeyask Energy
23 comes in at just over nine (9) cents a kilowatt hour,
24 you'd accept that subject to -- you'd accept the math
25 maybe not the principle of it?

1 MR. HAROLD SURMINSKI: Yes.

2 MR. BOB PETERS: All right. And that was
3 premised on the previous capital expenditure forecast and
4 likewise on Conawapa, we'll come to that. But there, on
5 an energy basis, again using the 6 percent interest cost,
6 2 percent depreciation, and 1 percent OM&A, on an energy
7 basis, seven point one (7.1) cents a kilowatt hour again
8 premised on \$6.4 billion of costs. Same comments?

9 MR. HAROLD SURMINSKI: Same comment, yes.

10 MR. BOB PETERS: All right. If we did
11 the same math with Bipole 3, Mr. Surminski, and we used
12 \$2.3 billion as the cost of Bipole 3 and we again used
13 the 6 percent interest, 2 percent depreciation, and then
14 another 1 percent on OM&A, on an energy basis that brings
15 Bipole 3 in somewhere close to two (2) cents a kilowatt
16 hour. The same comment?

17 MR. HAROLD SURMINSKI: And plus
18 additional, it's -- it's more difficult to evaluate the
19 cost because it's -- it's the transmitter of power, it's
20 -- it's not a generator so it's -- there's further
21 qualifications probably on that one.

22 MR. BOB PETERS: All right. And if you
23 feel inclined you can provide your view on those or the
24 Corporation's view on those.

25

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: Mr. Surminski,
4 recognizing your undertaking was related to Wuskwatim,
5 are you prepared to include in your undertaking the
6 calculations by the Corporation related to Keeyask,
7 Conawapa, and even Bipole 3?

8

9 (BRIEF PAUSE)

10

11 MS. PATTI RAMAGE: Mr. Peters or Mr.
12 Chairman, I'm advised that the numbers you'd be seeking
13 would be potentially sensitive. They're with respect to
14 a plant that hasn't been committed at this point so there
15 is a reluctance to -- to provide that information.

16 MR. BOB PETERS: Well, in light of that,
17 Mr. Chairman, let's see what the undertaking says and we
18 can -- we can see what, if anything, further is going to
19 be sought as a result of that.

20

21 (BRIEF PAUSE)

22

23 CONTINUED BY MR. BOB PETERS:

24 MR. BOB PETERS: I want to try to get the
25 facts clearly on the record relative to Bipole 3, and is

1 it a correct understanding that initially Hydro planned
2 for Bipole 3 to be on the east side of Lake Winnipeg?
3 That was Hydro's plan?

4 MR. VINCE WARDEN: Yes, that was the
5 original concept.

6 MR. BOB PETERS: And the Board will see
7 looking at page 34 at Tab 29 of the book of documents
8 that back in 2003 the capital expenditure forecast and
9 also the capital expenditure forecast in 2004 were
10 premised on the assumption of an east side routing, would
11 that be true?

12 MR. VINCE WARDEN: Yes.

13 MR. BOB PETERS: And the previous costs
14 of Bipole 3 on the east side in 2003 was \$360 million and
15 then that escalated to 388 million in the capital
16 expenditure 2004?

17 MR. VINCE WARDEN: That's right.

18 MR. BOB PETERS: Back in 2003 and 2004,
19 Bipole was being considered as a transmission line
20 extension or a transmission line, and it wasn't tied to
21 any new specific generation, is that true?

22 MR. VINCE WARDEN: That is true, yes.

23 MR. BOB PETERS: The next generating
24 station in the queue would have been Keeyask back in
25 2003?

1 MR. VINCE WARDEN: We're passing over
2 Wuskwatim. But you -- you -- I think you meant after
3 Wuskwatim, is that right?

4 MR. BOB PETERS: Yes, sir.

5 MR. VINCE WARDEN: Yes.

6 MR. HAROLD SURMINSKI: Mr. Peters, as
7 further clarification, I believe those early costs were
8 line only not converters.

9 MR. BOB PETERS: And -- and that's
10 actually my next question, that those capital expenditure
11 forecast prices for Bipole 3 related only to a
12 transmission line only, as you've indicated. Were
13 converters needed, even on the east side planning?

14

15 (BRIEF PAUSE)

16

17 MR. HAROLD SURMINSKI: They were not
18 initially. We're trying to establish when but we don't
19 have that readily -- readily available.

20

21 (BRIEF PAUSE)

22

23 MR. BOB PETERS: And then according to
24 this chart, at approximately by the time CEF-05 was
25 coming out in 2005, Manitoba Hydro was directed to

1 explore a possible routing on the west side of the
2 province?

3 MR. VINCE WARDEN: That's right.

4 MR. BOB PETERS: And the CEF, the Capital
5 Expenditure Forecast for 2005 included \$1.88 billion for
6 both Bipole 3 plus converter station upgrades?

7 MR. VINCE WARDEN: Correct.

8 MR. BOB PETERS: And that update in 2005
9 was made to encompass possible west side routing,
10 correct?

11 MR. VINCE WARDEN: Yes.

12 MR. BOB PETERS: Both Keeyask and
13 Conawapa power being generated?

14 MR. VINCE WARDEN: Not directly linked to
15 the Bipole but -- but that is correct that Bipole -- or
16 Keeyask and Conawapa were part of the plan.

17 MR. BOB PETERS: And because Conawapa
18 power was included there would be need -- there would be
19 the need for the converter station upgrades?

20 MR. VINCE WARDEN: I think the reasons
21 for converter station additions related to more than just
22 Conawapa. They -- the routing on the west side
23 necessitated converter station equipment being added.

24 MR. BOB PETERS: Leaving aside our
25 discussion about Keeyask before the afternoon recess, if

1 Conawapa is built, Bipole 3 is mandatory to get all of
2 that northern power down to southern Manitoba?

3 MR. VINCE WARDEN: Yes.

4 MR. BOB PETERS: And let's -- even if
5 Keeyask was not going to be built, but Conawapa was, then
6 Bipole 3 is still needed to bring the Conawapa power
7 down?

8 MR. VINCE WARDEN: That's right.

9 MR. BOB PETERS: In prior GRA information
10 on Bipole 3, Manitoba Hydro had both west side and east
11 side cost estimates, and I'm looking at Tab 30 of the
12 book of documents, specifically on page 40, and this is -
13 - this is from the archives, this is PUB Manitoba Hydro
14 First Round Question 4F and it's dated 2007.

15 MR. VINCE WARDEN: Yes.

16 MR. BOB PETERS: But in that situation,
17 Mr. Warden, there was a comparison, I guess, if you will,
18 between different costing on different routing and the
19 west side routing appears to have added approximately
20 \$410 million of additional capital costs?

21 MR. VINCE WARDEN: Yes.

22 MR. BOB PETERS: And in addition to the
23 \$410 million of capital costs there would be \$181 million
24 of additional line losses?

25 MR. VINCE WARDEN: That's right.

1 MR. BOB PETERS: Those two (2) numbers
2 total up to about \$591 million of additional costs?

3 MR. VINCE WARDEN: Correct.
4

5 (BRIEF PAUSE)
6

7 MR. BOB PETERS: From the materials
8 filed, Mr. Warden and Mr. Surminski, it appears that
9 there is an inability to run Bipole 3 in parallel, if
10 that's the right word, with Bipoles 1 and 2 on the west
11 side routing without having some capacity impacts.

12 MR. HAROLD SURMINSKI: I'm not sure there
13 is an -- an ability to parallel. I'm not sure your last
14 comment about the capacity impacts.
15

16 (BRIEF PAUSE)
17

18 MR. BOB PETERS: Sorry, Mr. Surminski,
19 you were saying that there is an ability to run in
20 parallel or "inability"?

21 MR. HAROLD SURMINSKI: On the west side
22 it's not able to run in parallel, the capability was
23 there with the east side because of the more equal line
24 length.

25 MR. BOB PETERS: I'm not sure we want to

1 get much more technical than that so we can keep Mr.
2 Cormie away from the mic, but can you explain to the
3 Board what you -- when we talk in parallel what is the --
4 what's the layperson's understanding of -- of why the run
5 -- the attempt to run them in parallel would result in
6 about a thousand megawatts less being able to be carried
7 on the west side?

8 MR. HAROLD SURMINSKI: It's -- it's
9 simply -- the capability on the west side is 2,000
10 megawatts and if we have an Interlake corridor outage of
11 Bipoles 1 and 2 it's still 2,000 megawatts, we -- we
12 cannot -- we cannot get any more down that same 2,000
13 megawatts line.

14 Whereas on the east side there was a
15 capability of increasing the 2,000 megawatts to 3,000
16 megawatts through their parallelling process.

17 MR. BOB PETERS: I appreciate that and do
18 I take from that it's some physical phenomenon with
19 electrons running through an extension cord or a
20 transmission wire?

21 MR. HAROLD SURMINSKI: Yes, that it's got
22 to do with the length. If the length of the two (2)
23 relative to the Bipole Interlake corridor and the east
24 are relatively similar whereas the west is so much
25 longer, things are out of phase, if that's the word. Or

1 their harmonics don't work or it's some electrical aspect
2 of it that -- that the different length does not allow
3 that capability.

4 MR. BOB PETERS: And this is entirely
5 separate from the concept of line losses, isn't it, Mr.
6 Surminski?

7 MR. HAROLD SURMINSKI: Yes, completely
8 separate.

9 MR. BOB PETERS: Yeah. And it has to do
10 more with then, from what I'm hearing you saying,
11 approximating the lengths of Bipoles 1 and 2, the closer
12 it would be in len -- in comparable length to Bipoles 1
13 and 2 the better ability it would have to -- to be
14 operated in parallel such that it could carry perhaps
15 more than 2,000 megawatts?

16 MR. HAROLD SURMINSKI: That's right.

17 MR. BOB PETERS: And the longer the
18 length of the Bipole 3 the lower the ability of the
19 transmission system to carry any additional megawatts
20 beyond the two thousand (2,000) for which it will be
21 initially rated, I guess?

22 MR. HAROLD SURMINSKI: Yeah, it's more
23 than ability, it's just the impossibility, it's a -- it's
24 a step change. It's not that you can do a little bit,
25 it's just impossible to do.

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: There's been no firm
4 west side routing selected yet has there, Mr. Warden?

5 MR. VINCE WARDEN: The preferred
6 alternative has been identified but that's still subject
7 to discussion with landowners -- settlement with
8 landowners and finalization, yes.

9 MR. BOB PETERS: Is it correct, Mr.
10 Warden and Mr. Surminski, that on the west side routing
11 Bipole 3 will be in relative close proximity to AC lines?

12 MR. HAROLD SURMINSKI: Well, generally,
13 we have an AC network on the western part of the
14 province, so it would be near that, yes.

15 MR. BOB PETERS: Has the AC lines on the
16 west side of the province been subject to outage with
17 respect to storms, weather conditions?

18 MR. HAROLD SURMINSKI: I'm sorry, I'm not
19 in a position to -- to have that information.

20 MR. BOB PETERS: You're just not aware of
21 it, Mr. Surminski, or is it information that's not to be
22 put on the public record, according to Manitoba Hydro?

23 MR. HAROLD SURMINSKI: I'm not aware of
24 it.

25 MR. BOB PETERS: Is anyone on the panel

1 aware as to whether or not the AC lines on the west side
2 of the province have had outages as -- as a result of
3 weather?

4 MR. VINCE WARDEN: Transmission lines,
5 Mr. Peters, are subject to outages because of weather. I
6 think your question might be is it abnormally high on the
7 west side of the province compared to other regions of
8 the province.

9 MR. BOB PETERS: And your answer would
10 be?

11 MR. VINCE WARDEN: I don't know.

12 MR. BOB PETERS: Not only am I asking
13 questions you can't answer, you're now asking them, Mr.
14 Warden. Bu --

15 MR. ROBERT MAYER: On -- on that issue,
16 Mr. Warden or Mr. Surminski, if I recall correctly, and I
17 can't believe I could have forgotten since the last time
18 I drove, there are also AC lines virtually parallelling
19 the Bipole 1 and Bipole 2 on -- from Minago River all the
20 way down, I think, to Dorsey, am I correct?

21 MR. DAVID CORMIE: Mr. Mayer, that's
22 correct. The transmission lines that connect the Grand
23 Rapids generating station to southern Manitoba
24 essentially parallel the existing DC lines. But I think,
25 Mr. Peters, you know the AC transmission network is

1 operated such that at any point in time an outage can
2 occur as on -- on the grid without interruption to
3 customer because of the way the -- the network is
4 designed.

5 So the frequency of outages may be higher
6 or lower, but it doesn't affect customer loads because we
7 always protect against the loss of the largest element in
8 the transmission grid and operate it such that if that
9 were to happen there is an alternate path available.

10 With regard to the -- the location of the
11 DC line relative to the AC network on the western side of
12 the province, I think it would be fair that -- to say
13 that Manitoba Hydro's transmission line planners are
14 aware of that and are trying to minimize the -- the --
15 keeping them out of the -- keeping them out of -- trying
16 to keep them out of the same corridor.

17

18 CONTINUED BY MR. BOB PETERS:

19 MR. BOB PETERS: As I understand your --
20 your evidence, Mr. Cormie, you're suggesting to the
21 Board that if there's a Bipole 1 and 2 outage and let's
22 say it's in the Grand Rapids area it could also wipe out
23 a -- an AC line, as well, you'd acknowledge that?

24 MR. DAVID CORMIE: Yeah, there's the
25 potential that a -- a storm damage on the DC could also

1 affect the AC network as well. Yeah.

2 MR. BOB PETERS: Or the same storm could
3 affect the AC line as -- that would affect the DC lines?

4 MR. DAVID CORMIE: That's right.

5 MR. BOB PETERS: And wouldn't that same
6 situation exist on the west side of the province where a
7 storm that would affect the AC network could also affect
8 the DC network?

9 MR. DAVID CORMIE: Yes, but as I -- as I
10 mentioned, the transmission line planners will try and
11 create as much separation there as -- as they can.

12 MR. BOB PETERS: I'd understood from
13 something said this morning that the -- the AC line that
14 was included in the CEF-09 and I apparently mistakenly
15 thought it was excluded in CEF-10. That AC line has
16 nothing to do with whether Bipole 3 is built or not
17 built, have I got that right?

18 MR. HAROLD SURMINSKI: It's a supplement
19 to -- to Bipole 3. So it's either a larger Bipole 3 or
20 an additional capability for north/south transmission.

21 MR. BOB PETERS: Is that supplement
22 needed -- needed if -- if the Bipole was on the east side
23 routing?

24 MR. HAROLD SURMINSKI: Yeah. Yes, it's -
25 - it would be because it's 2,000 megawatts in either

1 case.

2 MR. BOB PETERS: Explain to the Board
3 what -- what you mean by the AC is a supplement then to
4 the -- to the Bipole 3.

5 MR. HAROLD SURMINSKI: It's just the --
6 for reliability purposes. There's just not sufficient
7 capability with 2,000 megawatts of Bipole 3 to -- to
8 transmit the new generation of Keeyask and Conawapa.

9 MR. DAVID CORMIE: Mr. Peters, as the
10 Manitoba load grows and it be -- it becomes more
11 dependant upon the Nelson River generation more
12 transmission is needed to serve -- to deliver that power
13 to -- to Manitobans.

14 And initially we don't need that
15 additional AC transmission because the incremental
16 generation that's being sent down that transmission is
17 going to serve our export loads. Export loads, as we've
18 talked about previously, are not firm power, they are
19 system participation. So if the lines were to go down we
20 can cut those -- those exports, while when -- but with
21 regard to Manitoba customers, if those lines go down we
22 have to have an alternate path.

23 So as the Manitoba load grows we need more
24 -- more firm transmission to ensure that the load can
25 continue to be served even if there's a contingency; as

1 opposed to the export customers, if there's a contingency
2 you can cut the sale.

3 So our -- our plans are to build Bipole 3
4 and as the need arises, in order to maintain the level of
5 reliability to domestic load, more transmission of the
6 nature that Mr. Surminski talked about will -- will have
7 to be built.

8 MR. BOB PETERS: And just to remind the
9 Board, Mr. Warden, as to when that \$345 million capital
10 expense on the AC line is -- is in the capital
11 expenditure forecast. Is it -- it's not in the portion
12 that was filed, but it's in the second --

13 MR. VINCE WARDEN: It's in the second ten
14 (10) years, I believe it was 2023.

15

16 (BRIEF PAUSE)

17

18 MR. BOB PETERS: I'm not sure if I could
19 tell you if it was on page 37 or 38 of the book of
20 documents, Mr. Warden, but that's the -- I believe the
21 latest capital expenditure forecast.

22 If I look on page 36 of the book of
23 documents, Mr. Warden, it's at Tab 29 and we look for
24 additional north/south transmission. It seems to be in -
25 - in 2021 there's some capital expenditures being

1 incurred and it proceeds right through the -- the twenty
2 (20) year planning horizon, if I read that correctly.

3 MR. VINCE WARDEN: Mr. Peters, I think
4 the reference that I had earlier was on, as you
5 indicated, Tab 29, page 36. So I believe that shows in
6 2023, is the additional north -- north/south
7 transmission.

8 MR. BOB PETERS: Thank you for that, Mr.
9 Warden. Mr. Warden, one (1) of the motivations for
10 seeking the west side route was to preserve east side
11 forests, correct?

12 MR. VINCE WARDEN: That's my
13 understanding, yes.

14 MR. BOB PETERS: And by doing the -- the
15 preservation of the forests, that would enhance the
16 province's bid to have a portion of the east side of Lake
17 Winnipeg designated as a UNESCO world heritage site?

18 MR. VINCE WARDEN: Again, that's my
19 understanding, yesterday.

20 MR. BOB PETERS: And is it your
21 understanding that that designation has or has not been
22 made?

23 MR. VINCE WARDEN: Has not been made at
24 this time.

25 MR. BOB PETERS: In the process of being

1 applied for, if that's the -- the methodology that one
2 would go about?

3 MR. VINCE WARDEN: You know, I don't -- I
4 wouldn't have knowledge of that.

5 MR. BOB PETERS: Are there additional
6 reasons as to why the west side routing was selected over
7 east side, Mr. Warden, other than the --

8 MR. VINCE WARDEN: Well --

9 MR. BOB PETERS: -- the one we've talked
10 about?

11 MR. VINCE WARDEN: -- there was a -- a
12 concern expressed by government, conveyed to Manitoba
13 Hydro, that the export sales to the US could be in
14 jeopardy if the routing was -- was on the east side.

15 MR. BOB PETERS: And why would the -- why
16 would the export sales to the US be in jeopardy if the
17 routing was on the east side as opposed to a different
18 routing?

19 MR. VINCE WARDEN: Because of various
20 lobby groups in the US that have that kind of influence.

21 MR. BOB PETERS: And who does Manitoba
22 Hydro understand those lobby groups would be
23 representing?

24 MR. VINCE WARDEN: Environmental
25 interests in -- in the US and -- and probably in Canada

1 as well.

2 MR. ROBERT MAYER: If I understand
3 correctly, the name Kennedy came up a number of times in
4 that kind of discussion when we dealt with environmental
5 issues. And something about rapage -- raping and
6 pillaging the boreal forest in the area and, therefore,
7 suggesting that it might not be as green in energy as the
8 Americans would like to think they're buying.

9 MR. VINCE WARDEN: Yes, Mr. Mayer, I
10 agree that name did arise.

11

12 CONTINUED BY MR. BOB PETERS:

13 MR. BOB PETERS: And those issues have
14 been quelled to Manitoba Hydro's understanding by the
15 west side route exploration?

16 MR. VINCE WARDEN: Well, our interest is
17 in building a transmission line for reliability and when
18 we were informed that the east side was not available to
19 us, we look for the next best alternative and that's
20 where we are now.

21 MR. BOB PETERS: On page 42 at Tab 30 of
22 the book of documents, there's some -- some lengths --
23 the length of the line has a direct relation to the cost
24 of the line, correct, Mr. Warden?

25 MR. VINCE WARDEN: Yes.

1 MR. BOB PETERS: And in 2007, it appears
2 that the -- the line length was somewhere in the
3 neighbourhood of 1,341 kilometres estimated?

4 MR. VINCE WARDEN: Yes, and that's still
5 our -- our current estimate.

6 MR. BOB PETERS: Oh, all -- all right.
7 Manitoba Hydro has a preferred routing, I think you said,
8 although it's not -- it's not finalized?

9 MR. VINCE WARDEN: Not finalized, yes.

10 MR. BOB PETERS: But the preferred
11 routing has been shared publicly?

12 MR. VINCE WARDEN: Yes.

13 MR. BOB PETERS: And is it still --
14 what's the length of the preferred route?

15 MR. VINCE WARDEN: To my knowledge, Mr.
16 Peters, the thirteen forty-one (1341) still represents
17 our best estimate of the line length.

18 MR. BOB PETERS: Okay.

19 MR. ROBERT MAYER: Oh, I thought I hit
20 it. I don't know what's going wrong here. I thought I
21 saw somewhere, and I don't know whether it was a
22 newspaper, magazine or something produced by Manitoba
23 Hydro that showed three (3) routes and showed the
24 preferred one. Did I not see a document like that
25 somewhere?

1 MR. VINCE WARDEN: Yes, yes, you did.

2 MR. ROBERT MAYER: Thank you.

3

4 (BRIEF PAUSE)

5

6 CONTINUED BY MR. BOB PETERS:

7 MR. BOB PETERS: I just want to talk
8 about those converter stations, Mr. Warden. Just --
9 these converter stations convert the AC energy when
10 generated into direct current for transmission to
11 southern Manitoba?

12 MR. VINCE WARDEN: Yes.

13 MR. BOB PETERS: And then once the energy
14 is in southern Manitoba the DC energy is converted back
15 in alternating current?

16 MR. VINCE WARDEN: Yes.

17 MR. BOB PETERS: Is it correct that the -
18 - back in 2007 the converter costs were estimated to be
19 \$1.166 billion?

20 MR. VINCE WARDEN: That -- that's right,
21 yes.

22 MR. BOB PETERS: And it appears by way of
23 an update that those converter costs are actually a
24 little bit lower, they're \$52 million lower now, at a
25 \$1.114 billion estimate?

1 MR. VINCE WARDEN: Yes, it was -- not so
2 much lower in total, it was simply a reclassification of
3 the \$52 million from the stations. It had to do with the
4 collector lines, so it reclassified from stations into --
5 into transmission. So the total costs remain the same.

6 MR. BOB PETERS: That \$1.13 billion
7 estimate that you see in page 44 at Tab 30 of the book of
8 documents, did that include land easement payments or
9 land purchases, Mr. Warden?

10 MR. VINCE WARDEN: That would be all-
11 inclusive to put -- to build the transmission line,
12 including land costs, yes.

13 MR. BOB PETERS: Are there more private
14 landowners on the west side routing than there are on the
15 east side routing?

16 MR. VINCE WARDEN: My guess would be yes,
17 but I don't have any facts to support that.

18 MR. BOB PETERS: Would the land easement
19 payments or land purchases expenses be higher on the west
20 side than the east side, would that intuitively follow?

21 MR. VINCE WARDEN: No, I think it relates
22 somewhat to the value of the land and I -- I wouldn't
23 like to confirm that one way or the other, actually.

24 MR. BOB PETERS: You're not aware as to
25 whether Manitoba Hydro's payments for land easements and

1 land purchases is greater on the west side than the east
2 side?

3 MR. VINCE WARDEN: Well, we never got
4 into any kind of a payment structure for the -- for the
5 east side, so I'm not sure that a comparison can be made.

6 MR. ROBERT MAYER: Mr. Warden, dealing
7 with that question specifically. Although intuitively
8 there's certainly more -- there's certainly more
9 population on the west side than the east side but it
10 would be my suspicion that there would be considerably
11 greater difficulty with the issue of Treaty land and
12 Treaty land rights on the east side than there would be
13 on the west side.

14 And because of certain provisions it could
15 in fact prove to be, in terms of acquisition, more
16 expensive than the acquisition and, the worst case
17 scenario, expropriation of private properties on the west
18 side.

19 MR. VINCE WARDEN: You could be right,
20 Mr. Mayer, and that's partly why I decline to provide an
21 answer to that question.

22

23 CONTINUED BY MR. BOB PETERS:

24 MR. BOB PETERS: Mr. Warden, yesterday
25 you made reference to -- just give me a minute, please,

1 to find my notes.

2 MR. ROBERT MAYER: At -- at the risk of
3 being mislead yet again, a couple years ago I -- I kind
4 of went on a wild goose chase to find Riel, and Mr.
5 Peters and yourselves were discussing where he could find
6 it if he went looking for it. I -- I subsequently find
7 out that, of course, that was a bit of a yuk and it
8 hadn't been built. I have now found the Riel station.

9 It does appear to be in fact be -- being
10 built. Could somebody tell me what the status of
11 Keewatinow is and where is it and where -- or where will
12 it be, which seems to be the other end of the converter
13 station for Bipole 3.

14 MR. DAVID CORMIE: The -- the new
15 northern converter station is within a -- a few miles of
16 the proposed site for Conawapa, Mr. Mayer. And we're
17 still exploring that area trying to find a footprint that
18 is sensitive to the archaeological area and -- and
19 acceptable to the local people.

20 MR. ROBERT MAYER: Thank you. I'll know
21 better than to go start looking for it for a while then.

22

23 CONTINUED BY MR. BOB PETERS:

24 MR. BOB PETERS: Mr. Warden, on November
25 the 6th of 2010 the Winnipeg Free Press quotes your

1 president, Mr. Brennan, of Manitoba Hydro as to a new
2 cost for Bipole 3, do you recall that media coverage?

3 MR. VINCE WARDEN: Not specifically,
4 actually. Was that in conjunction with the Pub Utilities
5 legislative session? I think it might have been.

6 MR. BOB PETERS: It's tough when you have
7 to answer for your president, isn't it. I'm not sure
8 what he said or where but I actually don't see reference
9 out of my quick scanning -- I have a -- an online
10 printout version that I can share with you if it's
11 important, but the sum and substance is that the
12 materials that Manitoba Hydro has filed here suggest that
13 -- and if we look at the bottom of page 44 in the book of
14 documents, the number that greets the Board is \$2.248
15 billion for the cost all-in of Bipole 3, correct?

16 MR. VINCE WARDEN: Yes.

17 MR. BOB PETERS: And then the newspaper
18 quotes Mr. Brennan as saying that the -- the price may be
19 as high as \$4 billion. That's the article I was
20 referencing, do you recall that?

21 MR. VINCE WARDEN: Well, I -- I do recall
22 some discussion around the \$4 billion number, but I -- I
23 don't specifically recall Mr. Brennan stating -- giving
24 any credibility to that number.

25 MR. BOB PETERS: Well, let's get down to

1 -- I mean in terms of Mr. Brennan's comment there was no
2 retraction or response from Manitoba Hydro relative to --
3 to what was written, to your knowledge?

4 MR. VINCE WARDEN: I'm -- I'm almost
5 positive that Mr. Brennan wouldn't have committed the
6 Corporation to a number of 4 billion. I believe there
7 was some suggestion it could be that high and Mr. Brennan
8 indicated that it -- the number was under review and
9 that's still the state -- status of that estimate; it's
10 under review.

11 MR. BOB PETERS: Not that I'm one to
12 quote the newspaper, but here's how it starts off. I'll
13 read it, Mr. Warden.

14 "The cost of building Manitoba Hydro's
15 new transmission line from the north
16 could escalate from an estimated 2.247
17 billion to almost double that amount,
18 Hydro CEO Bob Brennan said Friday."

19 He does go on. The next paragraph:

20 "But Brennan said the anticipated
21 higher cost is not due to building
22 Bipole 3 on the longer route on the
23 west side of the province, but because
24 of increased cost of equipment needed
25 to convert electricity for

1 transmission."

2 And then the article goes on for some
3 couple of pages and I can certainly share it with you if
4 you'd like to see it.

5 But as you testify here today, is it
6 Manitoba Hydro's evidence that the cost of Bipole 3 is
7 \$2.248 billion?

8 MR. VINCE WARDEN: That is the current
9 Board -- Manitoba Hydro Board approved estimate for
10 Bipole 3. I did indicate though that that number is
11 under review. There is some question about whether we do
12 have sufficient dollars in the estimate for converter
13 equipment. The schedule which you have an updated
14 estimate is, I believe, sometime into the March time
15 frame.

16

17 (BRIEF PAUSE)

18

19 MR. BOB PETERS: Mr. Warden, that answer
20 suggests that the Corporation is -- is reviewing the
21 costs of Bipole 3?

22 MR. VINCE WARDEN: Yes, as I -- as I
23 said, there is some question on -- on whether the
24 estimate that we currently have approved is adequate for
25 the costs of the converter equipment. The -- the line

1 itself there's not too much variation expected in the
2 line costs, but the converter equipment is still under
3 review.

4 MR. BOB PETERS: But we've just talked a
5 little while ago about converter equipment and we see on
6 the -- page 44, Tab 30 of the book of documents that the
7 converter equipment is in at about \$1.11 billion, and for
8 the \$4 billion number that was referenced in the media to
9 come into play that would have to increase by over 150
10 percent or \$1.7 billion. Does that seem even likely?

11 MR. VINCE WARDEN: Yeah, I -- I really
12 wouldn't want to give any credibility to the \$4 billion
13 number. That's -- I'm not aware of the source of that
14 number and I can't confirm one way or the other with
15 respect to that amount.

16 MR. BOB PETERS: Mr. Warden, when that --
17 when that review of Bipole 3 costs is finished is that
18 something you're prepared to file with this Board?

19 MR. VINCE WARDEN: Yes, it will be -- if
20 in fact the number changes, and -- and it's quite likely
21 it will, it will form part of our updated capital
22 forecast and -- and yes, will be filed with this Board.

23 MR. BOB PETERS: It's likely that if it
24 increases of the magnitude that you're not prepared to
25 give credence to that will impact on the debt-equity

1 ratio?

2 MR. VINCE WARDEN: Yes, it would increase
3 the amount that would be necessary to borrow to fund that
4 project and would have some impact on the debt-equity
5 ratio, yes.

6 MR. BOB PETERS: And while Mr. Surminski
7 wasn't happy with my calculating an energy cost
8 attributable to Bipole 3, it would in essence double it
9 from that approximate two (2) cents to approximately four
10 (4) cents if these numbers also escalate as the -- the
11 media reports.

12 MR. VINCE WARDEN: Again, I really don't
13 want to give any credibility to the -- to the higher
14 number at this time.

15 MR. BOB PETERS: Is Manitoba Hydro doing
16 a cost-benefit analysis on the Bipole 3? Is that part of
17 what's being considered to determine if there are
18 alternatives that are -- that now merit further
19 consideration?

20 MR. VINCE WARDEN: Well, Bipole 3, as
21 we've indicated earlier, is being built for reliability
22 purposes. And if there's a lower cost method of
23 providing that reliability, given the other
24 considerations that we do have, recognizing that it does,
25 as you pointed out earlier, also provide the transmission

1 necessary for Keeyask and Conawapa. If those are taken
2 into account then alternatives would definitely be
3 considered, yes.

4 MR. BOB PETERS: Well, just in terms of
5 domestic reliability, there may be options that are
6 inconsistent with keeping Bipole 3 in the plan.

7 Would that be true?

8 MR. VINCE WARDEN: If domestic
9 reliability was the only consideration, that absolutely
10 would be true, yes.

11 MR. BOB PETERS: If domestic reliability
12 was the only consideration, Manitoba Hydro could consider
13 moving a CCCT to Brandon?

14 MR. VINCE WARDEN: Possibly.

15 MR. BOB PETERS: All right. And I forget
16 what we've cost them at, about a million dollars a
17 megawatt, but that would leave a whole lot of money to
18 buy natural gas out of the \$4 billion?

19 MR. VINCE WARDEN: But it would be in,
20 you know, we -- we obviously can't assess those
21 alternatives here. But there would be many, many other
22 considerations that would have to be taken into account.

23 MR. BOB PETERS: And those considerations
24 are being taken, you're telling the Board, while this
25 review of Bipole 3 is ongoing?

1 MR. VINCE WARDEN: Yes.

2

3 (BRIEF PAUSE)

4

5 DR. LEN EVANS: Excuse me. Mr. Chairman,
6 I wonder if I could just interject a question here while
7 we're waiting?

8 I believe I read in the paper that a
9 Professor Ryan, I believe, a retired professor of
10 geography from the University of Winnipeg, this was in
11 the paper, oh, some many months ago, suggesting that a --
12 a serious look should be made at Lake Winnipeg, going
13 under the Lake, because in Europe there are lines that go
14 under the sea, you know, from country to country.

15 And I was wondering whether the
16 Corporation, whether the Hydro -- whether your colleagues
17 looked at that as an alternative? I'm not advocating it.
18 I'm just asking.

19 MR. VINCE WARDEN: Yes. Our -- our
20 transmission planners have actually had a number of
21 meetings with Professor Ryan and I think they've come to
22 the conclusion, collectively, including Professor Ryan,
23 that the underwater alternative would not be feasible for
24 Bipole 3, could be a consideration for Bipole 4 or future
25 transmission but -- but was not considered a viable

1 option for Bipole 3.

2 MR. ROBERT MAYER: Or -- or possibly for
3 that little addition to Bipole 3 or extra, whatever we're
4 calling that other item that has to be added to Bipole 3
5 to get the full amount of power down after Conawapa and
6 Keeyask? Is that the possibility that we won't call
7 Bipole 4 at this point, but are calling some wa -- some
8 other way to get the rest of the power south?

9 MR. VINCE WARDEN: That's a possibility,
10 Mr. Mayer, I'm not totally sure whether they discussed
11 specifically the -- the north/south transmission line
12 that we were discussing earlier.

13 MR. BOB PETERS: Mr. Chairman, I wanted
14 to turn into -- into the area of load forecasting, and I
15 had virtually assured my friend opposite that Mr. Kuczek
16 wouldn't be needed this afternoon, and I'm wondering if
17 rather than try to get into that area where we need his -
18 - his attendance, I could start there tomorrow morning?

19 THE CHAIRPERSON: Not tomorrow morning,
20 Mr. Peters.

21 MR. BOB PETERS: Oh, I'm sorry --

22 THE CHAIRPERSON: You --

23 MR. BOB PETERS: -- it may be --

24 THE CHAIRPERSON: -- may be alone in this
25 room.

1 MR. BOB PETERS: Well, at least I'd like
2 the answers then. I could continue on a different topic
3 or we could adjourn to the next sitting date, Mr.
4 Chairman.

5 THE CHAIRPERSON: Okay, we'll adjourn.
6 We'll see everybody on Monday at 9:30. Thank you.

7

8 (PANEL RETIRES)

9

10 --- Upon adjourning at 4:04 p.m.

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14 Certified Correct,

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Cheryl Lavigne, Ms.

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