

MANITOBA PUBLIC UTILITIES BOARD

Re:

MANITOBA HYDRO

GENERAL RATE APPLICATION

2014/15 AND 2015/16

Before Board Panel:

Regis Gosselin - Board Chairperson

Marilyn Kapitany - Board Member

Richard Bel - Board Member

Hugh Grant - Board Member

HELD AT:

Public Utilities Board

400, 330 Portage Avenue

Winnipeg, Manitoba

May 28, 2015

Pages 959 to 1230

960

1 APPEARANCES
2 Bob Peters) Board Counsel
3 Sven Hombach (np))
4
5 Odette Fernandes) Manitoba Hydro
6 Brent Czarnecki)
7
8 Bvron Williams) Consumer Coalition
9 Jared Wheeler (np))
10
11 William Gane) GAC
12 Peter Miller (np))
13 David Cordingley (np))
14
15 Antoine Hacault) MIPUG
16
17 Michael Anderson (np)) MKO
18 George Orle)
19
20 Tomas Masi) MMF
21 Kris Saxbera (np))
22
23 Denise Pambrun (np)) City of Winnipeg
24
25

961

	TABLE OF CONTENTS	
1		
2		Page No.
3	Undertakings	962
4		
5	MANITOBA HYDRO WITNESS PANEL 3 - PLANNING AND	
6	OPERATIONS RESUMED:	
7	DARREN RAINKIE, Previously Sworn	
8	DAVID CORMIE, Previously Sworn	
9	TERRY MILES, Previously Sworn	
10	SANDY BAUERLEIN, Previously Sworn	
11	ROB ELDER, Previously Sworn	
12	DAVE BOWEN, Previously Sworn	
13	MICHEL MORIN, Previously Sworn	
14	DAVID SWATEK, Previously Sworn	
15	NICK READ, Previously Sworn	
16	Continued Cross-examination by Mr. Bob Peters	965
17		
18	Certificate of Transcript	1230
19		
20		
21		
22		
23		
24		
25		

962

1	UNDERTAKINGS		
2	NO.	DESCRIPTION	PAGE NO.
3	12	Manitoba Hydro to compare the sales to the deliveries to determine whether or not Manitoba Hydro financially settled any of its contractual obligations during the months of October and November 2014 when a 500 kV transmission line was taken out of service	1029
11	13	Manitoba Hydro to determine whether Manitoba Hydro sold power during the 500 kV outage last October with energy that was purchased above and beyond the amounts that are shown as delivered in the NEB table	1034
18	14	Manitoba Hydro to provide updated supply/demand tables consistent with the Power Resource Plan consistent with the assumptions in the IFF related to thermal generation	1063
23	15	Manitoba Hydro to provide the seven (7) year drought analysis with the finance costs included	1094

963

1	UNDERTAKINGS (Con't)	
2	NO.	DESCRIPTION
3	16	Manitoba Hvdro to provide the range that Minnesota Power has given for the three (3) alternate routing selections that they are considering
7		1104
8	17	Manitoba Hvdro to file the six (6) series of amendments or addendums to the CPJ on the Bipole III project
11		1134
12	18	Manitoba Hvdro to provide a written explanation as to whv the costs of Keewatinohk increased and Riel decreased
15		1151
16	19	Manitoba Hvdro to quantifv in aggregate the megawatt months that the generating stations at Jenpea, Pointe du Bois, Slave Falls, and Great Falls have been out of service from 2010 to 2014
21		1178
22		
23		
24		
25		

964

1	UNDERTAKINGS (Con't)	
2	NO.	DESCRIPTION
3	20	Manitoba Hvdro to provide a chart similar to page 42 of Exhibit MH-36 with the power train assets for the Nelson River plants and Grand Rapids, giving the age of each asset, type, and the anticipated retirement
4		
5		
6		
7		
8		
9	21	Manitoba Hvdro to provide the intended typical average year operation for the Bipoles which achieve equal losses
10		
11		
12		
13	22	Manitoba Hvdro to make inquiries as to whether or not Manitoba Hvdro examined an alternative to Bipole III that involved the hardening of the Bipole I and II system with respect to the tower design, spare converters, foundations, and other infrastructure
14		
15		
16		
17		
18		
19		
20		
21	23	Manitoba Hvdro to provide the project description and the budget amount that's included in CEF14 specifically
22		
23		
24		
25		

1 --- Upon commencing at 9:02 a.m.

2

3 THE CHAIRPERSON: Good morning. I
4 think that we're ready to resume the proceedings of
5 this hearing, so I'll turn the microphone over to you,
6 Mr. Peters. Good morning.

7 MR. BOB PETERS: Thank you. Good
8 morning, Mr. Chairman. Good morning, Board members.
9 Good morning, ladies and gentlemen.

10

11 MANITOBA HYDRO WITNESS PANEL 3 - PLANNING AND
12 OPERATIONS RESUMED:

13 DARREN RAINKIE, Previously Sworn

14 DAVID CORMIE, Previously Sworn

15 TERRY MILES, Previously Sworn

16

17 CONTINUED CROSS-EXAMINATION BY MR. BOB PETERS:

18 MR. BOB PETERS: Near the end of the
19 day yesterday Mr. Rainkie confessed that he prays for
20 lower interest rates in the evening and he also
21 suggested that Mr. Cormie prays for rain. So clearly
22 with this morning's rain, Mr. Cormie has a higher place
23 in heaven, so I'm going to start with him and ask if we
24 could turn up page 40 of Board counsel's book of
25 documents, Volume I, which is PUB Exhibit 20. All

1 Board counsel books of document will be Exhibit 20 and
2 there is different volumes.

3 On page 40, Mr. Cormie, we have a -- a
4 chart and -- or sorry, a -- a graph that has been used
5 previously, including at the NFAT. And it -- it really
6 is just tracking historically what has happened in
7 respect of Manitoba Hydro's export unit forecasts to
8 what has actually happened, correct?

9 MR. DAVID CORMIE: Yes, that's correct.

10 MR. BOB PETERS: And yesterday we
11 talked about how Manitoba Hydro's export revenue
12 forecasts had dropped, by going through the chart from
13 the NFAT from the MMF exhibit. And here we can see the
14 average unit export revenue prices have likewise
15 dropped from back in 2004/'05. They were relatively
16 steady, it looks like, until 2008/'09, correct?

17 MR. DAVID CORMIE: Yes.

18 MR. BOB PETERS: And then they dropped
19 to below the four (4) cent, probably closer to the
20 three (3), three and a half (3 1/2) cent range?

21 MR. DAVID CORMIE: That's correct.

22 MR. BOB PETERS: And the -- the rate
23 has remained certainly under four (4) cents, but three
24 and a half (3 1/2) to four (4) cents since then?

25 MR. DAVID CORMIE: Yes.

1 MR. BOB PETERS: And the reasons for
2 that we've talked about in previous times, but it's
3 much like you talked about yesterday where there's been
4 new supply coming on.

5 There's been renewables, which have
6 attracted some attention, and some of the favourable
7 pricing that some renewables get also influences these
8 prices?

9 MR. DAVID CORMIE: Yes, and, you know,
10 the primary factor is probably the -- the price of
11 natural gas.

12 MR. BOB PETERS: And it's -- that
13 coincides with when shale gas became more economic to
14 produce and to deliver?

15 MR. DAVID CORMIE: Yes.

16 MR. BOB PETERS: On page 41 there's a -
17 - in the response from Manitoba Hydro, I want to make
18 sure the panel understands, that there was a suggestion
19 by Manitoba Hydro that there would be carbon pricing in
20 the United States by the EPA as early as 2016/'17, but
21 it appears that that preamble is not correct.

22 Have I understood Manitoba Hydro's
23 evidence now, Mr. Miles?

24 MR. TERRY MILES: That's -- that's
25 correct.

968

1 MR. BOB PETERS: And can you remind the
2 panel, at the NFAT, when was Manitoba Hydro expecting
3 carbon pricing in the United States to -- to come in?

4 MR. TERRY MILES: At the NFAT it was in
5 around that -- in around that time frame, depending on
6 --

7 MR. BOB PETERS: In around 2016/'17?

8

9 (BRIEF PAUSE)

10

11 MR. TERRY MILES: Yeah. I believe more
12 or less, yes.

13 MR. BOB PETERS: And Manitoba Hydro now
14 is telling the panel that in IFF14 Manitoba Hydro is
15 assuming there's no carbon pricing in the United States
16 before 2020.

17 MR. TERRY MILES: We -- we are not
18 assuming that there's no carbon price in the forecast.
19 That's essentially a combined perspective of the export
20 market forecast consultants.

21 MR. BOB PETERS: I'm sorry, Mr. Miles.
22 I didn't understand your answer. Are you telling the
23 Board that Manitoba Hydro thinks there will be carbon
24 pricing, and the export consultants are telling you
25 there won't be?

1 MR. TERRY MILES: No. I'm saving that
2 the -- the IFF is based on -- in terms of the
3 electricity export price forecast, it is based on a
4 consensus forecasting that is derived from our expert
5 consultants. And based on that information, there is
6 no CO2 in -- in the forecast or affecting the forecast
7 on a whole bunch of fronts. Pricing, emissions, any
8 sort of feedback there is with retirements of
9 generation, et cetera, out to the -- 2019/'20.

10 So it's based on that overall market
11 perspective. That ends up being the underlying
12 assumption that's there but it is not Manitoba Hydro
13 saving. There will be no carbon in the forecast. It's
14 based on information that comes from those expert
15 consultants.

16 MR. BOB PETERS: Okay. Put -- put
17 another way, what Manitoba Hydro is telling this panel
18 is that there is no carbon now in the forecast until
19 2020.

20 MR. TERRY MILES: That's correct.

21 MR. BOB PETERS: And just on page 42, I
22 won't stop long on it but there's an example that
23 Manitoba Hydro provided under 'Regional Carbon Trading
24 Programs.' And an assumption was made by Manitoba
25 Hydro that carbon would have a value of thirty dollars

1 (\$30) a tonne.

2 Where does Manitoba Hvdro come -- how
3 does it come to that conclusion that it'll be that
4 high?

5 MR. TERRY MILES: It's not Manitoba
6 Hvdro's conclusion. That's a number that was actually
7 used, as I say, as a value consistent with preliminary
8 regional transmission organization assessment. So
9 that's studies that were done within -- within MISO, I
10 believe, that have that value in their studies as one
11 of the options for a car -- value of carbon. So that's
12 what they've considered.

13 I believe actually they were asked to
14 include that value by regulators. So that is not
15 Manitoba Hvdro's assumption. This is an example; if
16 carbon were that value, that's what it would be. But
17 it's based on studies that were done in the US.

18 MR. BOB PETERS: And I'm only using it
19 -- that, Mr. Miles, and thank you. That -- if it does
20 have a value of thirty dollars (\$30) a tonne, and based
21 on a combined cycle combustion turbine generator with
22 certain emissions of half a tonne of carbon per
23 megawatt hour, then the carbon cost would be one point
24 five (1.5) cents a kilowatt hour?

25 MR. TERRY MILES: For that unit, yes.

1 MR. BOB PETERS: And just as the panel
2 is sitting here, just to remind the panel that Manitoba
3 Hydro's current electricity rate that this Board
4 approved on an interim basis is approximately seven
5 point three-eight (7.38) cents a kilowatt hour?

6 MR. TERRY MILES: I'll take that as
7 being correct, yeah.

8 MR. BOB PETERS: All right. I just
9 wanted that for the order of magnitude, Mr. Miles, in
10 terms of where -- where the panel was today.

11 MR. TERRY MILES: Okay.

12 MR. BOB PETERS: On page 46 of Board
13 counsel's --

14 MR. DAVID CORMIE: Mr. Peters --

15 MR. BOB PETERS: Yes, sorry, Mr.
16 Cormie.

17 MR. DAVID CORMIE: I think it -- it
18 would be important to add that when we are entering
19 into the long-term contracts, I believe customers are
20 pricing the risk of carbon into those -- in -- putting
21 value on that, and that's one (1) the reasons we're
22 achieving higher prices for some of those dependable
23 sales.

24 So although it may be not be in the
25 dispatch price in the opportunity market, we are -- we

972

1 -- we are -- are seeing -- are seeing that -- the price
2 of carbon reflected in the -- in -- in the higher
3 prices that we're getting for that -- for that
4 contracted energy. So it -- you know, I think our
5 customers are saving. We can't -- we -- we're not going
6 to be able to time that. We're going to enter into a
7 twenty (20) year agreement. We're going to put value
8 on the value of carbon.

9 And so it's -- it -- it's -- we're --
10 we're seeing it not necessarily through the
11 marketplace, but through the bilateral market.

12 MR. BOB PETERS: And you're telling the
13 Board that in -- in your toolbox of negotiating skills,
14 Mr. Cormie, you have the sceptre of there a carbon
15 price coming. And it's generally thought by many that
16 it may be coming.

17 You may not know when, you don't know
18 how much, but that's a factor that you use to build in
19 a higher fixed price in your dependable energy
20 contracts.

21 MR. DAVID CORMIE: Yes. You know, dish
22 soap is sold as being phosphate free. We say we're
23 carbon free. And -- and that -- that works. And we
24 have a lot of our -- our counterparts calling for a
25 carbon tax because they -- they are taking the

1 initiative on -- on behalf of those utilities. But
2 they see others who are still investing in natural gas,
3 and they think it's unfair. And -- and -- but -- but
4 essentially they're paving up now.

5 MR. BOB PETERS: Mr. Miles, back to
6 page 46, what we see in the response is that the no
7 carbon pricing scenario was included in IFF14 as the
8 low export reference case price, if I understood your
9 answer correctly?

10 MR. TERRY MILES: So you asked me
11 whether or not there was carbon in the forecast in the
12 NFAT, and -- and at which time -- or in what time
13 period that would have included, in that 2016/'17 time
14 period, that would include likely the reference --
15 reference case, the -- the low case -- the low case
16 that's here includes a whole mix of other factors that
17 are in there, as described in the response.

18 And in the -- if you look at the -- if
19 you actually put up the response, look up page 46 and
20 look at the paragraph that's in there, it describes
21 that this is actually a -- so:

22 "It's a plausible low bound that
23 includes factors such as low economic
24 growth, aggressive energy
25 conservation policies, low growth and

974

1 energy demand, lower natural gas
2 prices and coal prices, and the US
3 move to self-sufficiency."

4 So there's -- including addition -- the
5 no carbon prices. So this has lots of factors that are
6 -- that are in there that are resulting in the low
7 price, not just whether or not there's carbon in the
8 factor.

9 MR. BOB PETERS: And if we turn to the
10 -- to the graph on page 47, we can make the point to
11 the panel that the -- the low dotted black line, if it
12 -- if you will, is the -- is the scenario that's the
13 low export price scenario that you talked about.

14 It has a number of factors, one (1) of
15 which is no carbon.

16 MR. TERRY MILES: That's correct.

17

18 (BRIEF PAUSE)

19

20 MR. BOB PETERS: When we look at page
21 47, Mr. Miles, we see the lowest dotted black line, and
22 there's an arrow off to the right about 2024 saying,
23 "No CO2 pricing."

24 We've just talked about that, saying
25 that's the -- the low export scenario forecast that you

1 used at the NFAT, correct?

2 MR. TERRY MILES: That's correct.

3 MR. BOB PETERS: And now if we go to
4 the dotted line just above that, again the black dotted
5 line, and maybe we pick 2020, we see that the -- the
6 line increases in 2020.

7 Is it -- the Board to understand that,
8 that too reflects a carbon price increase in
9 approximately 2020?

10 MR. TERRY MILES: I believe there'd be
11 carbon impact. I don't know if -- the increase after
12 2020, is that what you're referring to?

13 MR. BOB PETERS: Correct.

14 MR. TERRY MILES: That's a result, I
15 think, of export sales that -- that we have coming on
16 after that point, I believe.

17 MR. BOB PETERS: And so as Mr. Cormie
18 had indicated, those export sales, they may have an
19 amount embedded in them on account of carbon on their -
20 - on the dependable energy?

21 MR. TERRY MILES: They may have lots of
22 factors that are driving the price that -- that they
23 have --

24 MR. BOB PETERS: Including carbon.

25 MR. TERRY MILES: -- including carbon.

1 It could be carbon. It could be their alternative
2 supply that they need. It could be a number of factors
3 that -- that they have, yes. It could be their own
4 individual state requirements. We can't say exactly
5 all the factors behind it. All we can say is that the
6 price in the export contract that was negotiated
7 resulted in that increase, I think is probably a fair
8 statement.

9 MR. BOB PETERS: Should the Board
10 understand that second from the bottom dotted black
11 line to contain carbon pricing, or no carbon pricing,
12 or is the Corporation not able to indicate?

13 MR. DAVID CORMIE: Mr. Peters, you'll
14 notice that that -- that increase is about five (5)
15 years long, and that coincides with the 125 megawatt
16 sale agreement we have with North -- Northern States
17 Power. And at the time we were negotiating that
18 agreement, carbon wasn't the issue. It was high
19 natural gas prices. So I -- I think back in 2010 when
20 those discussions were going -- going on, it wasn't --
21 it wasn't the fear of carbon that was driving our
22 customer, it was the fear of high natural gas prices.

23 MR. BOB PETERS: So then, Mr. Miles,
24 the question, I don't know that you've answered it, is
25 that does that dotted black line that is the second

1 from the bottom, does that include carbon or does it
2 not include carbon?

3 MR. TERRY MILES: It includes carbon.

4

5 (BRIEF PAUSE)

6

7 MR. TERRY MILES: I think much -- like
8 I said yesterday in my -- in my testimony when we were
9 talking about the EPA ruling and whether or not -- how
10 the EPA ruling may affect Manitoba Hydro's forecast
11 going forward and whether or not there was carbon or
12 not on our forecast. I think my general comment was
13 that there was carbon in our forecast and that ruling
14 wouldn't cause an absolute increase or decrease in the
15 forecast.

16 It would be an incremental increase
17 based on how much above or below, if you will, the EPA
18 ruling drove assumptions related to what our export
19 forecast consultant's assumptions were over that longer
20 term, if that helps.

21 MR. BOB PETERS: And on page -- just to
22 conclude, Mr. Miles, would the Board be correct then
23 that with the low export price scenario, including the
24 no carbon adders in that forecast, electricity prices
25 would be more than two (2) cents below the six (6) cent

1 forecast now shown for 2020?

2

3 (BRIEF PAUSE)

4

5 MR. TERRY MILES: I'm not sure about
6 the math, but the bars that are there are twenty
7 dollars (\$20) per megawatt hour, which would be two (2)
8 cents a kilowatt hour and it's, I don't know, one and a
9 half (1 1/2) cents, maybe, if that's the bar. So the
10 averaging of revenues would go down one and a half (1
11 1/2) cents. It wouldn't necessarily be the export
12 price change, but the overall averaging of revenue,
13 which includes, as we've talked about, the opportunity
14 revenues, the contract revenues, and any other market
15 revenue that -- that is associated with the exports.

16 MR. BOB PETERS: The Board should
17 understand then from your answer, Mr. Miles, that
18 opportunity revenue is not going to attract a carbon
19 price unless and until it is actually enacted?

20 MR. TERRY MILES: In the market it
21 won't, but there would be assumptions, I believe, that
22 opportunity -- and opportunity of product would have
23 some -- some carbon value that would get translated
24 into the market cost. If, for example, the -- the
25 carbon ends up being a cost back to a generator then

1 that's an operating cost. And when their generator
2 gets offered into the marketplace that cost is included
3 in the -- in their cost, which then ends up resulting
4 in the clearing price at whatever node they're at.

5 So -- so for something like a combined
6 cycle that might -- if it was thirty dollar (\$30)
7 carbon, that might be fifteen dollars (\$15) then get --
8 that gets added into their dis -- dispatch cost and
9 that would affect nodal pricing if that's how it's
10 translated into the marketplace. For a simple cycle
11 that might have a lower heat rate, that -- that cost,
12 that thirty dollar (\$30) carbon could be a twenty
13 dollar (\$20) adder that's into there.

14 So that can translate into the actual
15 opportunity market as well depending on how the EPA
16 ruling translates into the implementation of -- of the
17 carbon.

18 MR. BOB PETERS: But in my example to
19 you, Mr. Miles, I was assuming that there was no carbon
20 legislation. Does -- does your answer still hold in
21 that case?

22 MR. TERRY MILES: Whether or not there
23 is carbon and there is a function of how legislation
24 gets implemen -- implemented, yes.

25 MR. BOB PETERS: Turning to page 52 of

1 Exhibit 20, PUB-20, Volume I, would the Board have the
2 understanding correct that in the absence of CO2
3 emissions pricing, Manitoba Hydro's opportunity export
4 prices since approximately 2008/09 were driven by low
5 natural gas supply prices which were in the four
6 dollars (\$4) US per MMBTU?

7 MR. TERRY MILES: That's opportunity
8 prices?

9 MR. BOB PETERS: Yes, sir.

10 MR. TERRY MILES: I believe that would
11 be correct.

12 MR. BOB PETERS: So if the Board's
13 looking at the column that says, "Average Annual Henry
14 Hub Price -- Gas Price, US Dollars, MMBTU," and we go
15 '09/'10, '10/'11, '11/'12, '11/'13 (sic), we're seeing
16 the prices down under four dollars (\$4), eventually
17 down -- in 2012 down to three dollars (\$3), correct?

18 MR. TERRY MILES: That's correct.

19 MR. BOB PETERS: And if we follow the
20 2012/'13 line across, the three dollars (\$3) for
21 natural gas prices, we go over to the efficient CCT
22 (sic) variable cost based on average annual gas price,
23 and we see thirty (30) dol -- or twenty-nine point six
24 dollars (\$29.6) per megawatt hour, correct?

25 MR. TERRY MILES: That's correct.

1 MR. BOB PETERS: So the three dollars
2 (\$3) gas in the market translates into cost on gas
3 production of thirty dollars (\$30) a megawatt, or three
4 (3) cents a kilowatt hour, correct?

5 MR. TERRY MILES: In that order, yes.

6 MR. BOB PETERS: And then if we follow
7 that order -- over to the second from the right column,
8 the opportunity exports on peak average price, Manitoba
9 Hydro's getting about three (3) cents for their export
10 prices on-peak --

11 MR. TERRY MILES: I believe that's --

12 MR. BOB PETERS: -- on the opportunity
13 side?

14 MR. TERRY MILES: I believe that's
15 correct, yes.

16 MR. BOB PETERS: On page 53, if we
17 think of that relationship we just talked about, Mr.
18 Miles, we go to page 53, we see the forecast price at
19 Henry Hub is for 2015 is three dollars and five cents
20 (\$3.05), and then three dollars and forty-seven cents
21 (\$3.47).

22 Does that tell Manitoba Hydro and this -
23 - and this Board that the opportunity revenues for '15
24 and '16 are likely to achieve prices in the range of
25 three (3) cents on-peak, and probably two and a half

1 (2.5) off peak?

2 MR. TERRY MILES: I guess ultimately --
3 ultimately, it depends what the dispatch is, so what
4 the generation mix is at the various times that are
5 there. Typically to these types of costs and the gas
6 cost, you would add a -- an O&M cost for a -- a
7 combined cycle to be order -- in the order of five
8 dollars (\$5) a megawatt hour. So if you were to do
9 that math, it would -- if it was a -- if it was a
10 combined cycle, that was -- that was the -- combined
11 cycle at that gas price could be in the -- in the order
12 of thirty-five dollars (\$35) a -- a megawatt hour, say.

13 So it does depend what's there, but if
14 you were to make the assumption on average over the
15 entire year, based on what was dispatched at that gas
16 price, thirty (30) to thirty-five dollars (\$35) would
17 be in the -- in the ballpark. I don't know if Mr.
18 Cormie would disagree with that or not, but in essence,
19 based on these numbers that are there, ultimately, the
20 price that is achieved in the marketplace is a function
21 of other things like transmission, congestion, other
22 outages in the marketplace, et cetera. But from the
23 basic fundamentals, yes, that would translate to thirty
24 (30) to thirty-five dollars (\$35).

25 MR. BOB PETERS: Would you expect, Mr.

1 Miles, that on the previous page on page 52 that we had
2 looked at in that chart, that the five dollars (\$5) for
3 O&M costs under the column that says, "Efficient CCT
4 (sic) variable costs based on average annual price."
5 that too would have included the -- the five dollars
6 (\$5) for the OM&A costs?

7

8 (BRIEF PAUSE)

9

10 MR. TERRY MILES: Yes. Yes, it would.

11 MR. BOB PETERS: I want to turn to a
12 discussion on page 57, and you just mentioned it in a
13 previous answer to me about three (3) minutes ago, Mr.
14 Miles, was dealing with the EPA. And I'd like to make
15 sure I have this clearly understood so that I'm sure
16 the record will be clear, that the EPA announced its
17 proposed Clean Power Plan to cut carbon pollution from
18 power plants, and your answer says, On June 2nd of
19 2014, correct?

20 MR. TERRY MILES: Yes.

21 MR. BOB PETERS: And it's Manitoba
22 Hydro's expectation that this US EPA Clean Power Plan
23 timetable for emission control will impact the market
24 prices for electricity?

25 MR. TERRY MILES: I'd suggest that's

1 Manitoba Hydro's assumption as well as, I think, the
2 industry assumption as well.

3 MR. BOB PETERS: And that impact on
4 electricity prices in the marketplace, Mr. Miles, will
5 happen before 2020 when coal plant closures are going
6 to be -- or thought to be mandated?

7 MR. TERRY MILES: I -- I believe it can
8 start being a factor in that time frame, yeah, kind of
9 that one (1) to three (3) years out in the future. It
10 depends, I guess, how long it takes to implement
11 various initiatives, but it would be -- I'd suggest it
12 would be a progression into the implementation and
13 impacts.

14 MR. BOB PETERS: And the last sentence
15 on the page in front of you, page 57 of the book of
16 documents, says that the:

17 "The final rule is not -- is expected
18 to be released during the summer of
19 2015."

20 Is that still the case?

21 MR. TERRY MILES: I believe that's
22 still the case.

23 MR. BOB PETERS: And what does Manitoba
24 Hydro expect the rule will indicate?

25

1 (BRIEF PAUSE)

2

3 MR. DAVID CORMIE: Mr. Peters, maybe I
4 can help out here. The EPA is going to issue their
5 final rule shortly, and then the states have a year to
6 file back with the EPA what their plans are in -- with
7 -- in regard to how they will achieve the targets by
8 the year 2030. If the states decide as a region to --
9 to deal with the problem regionally, then they have two
10 (2) years to get their act together, and -- and set in
11 place a plan for achieving the targets in 2030.

12 And -- and so the -- the effect on
13 Manitoba Hydro will be whether hydro energy from Canada
14 is -- can be considered it to be part of the solution.
15 And -- and so there's -- the -- the issue that's
16 important to us is whether we will be an attractive
17 source of -- of renewable energy with -- a carbon-free
18 energy, and whether that will enhance the demand for
19 our long-term power.

20 So I -- I think that's -- that's what --
21 I -- I think that's the -- the issue is whether
22 companies that we trade with, as they -- as they
23 implement the strategies that the States set, and they
24 shut down their coal-emitting and carbon-emitting
25 resources, whether they replace them with wind, solar,

1 or they come to Manitoba Hydro and contract for -- for
2 power from us.

3 MR. BOB PETERS: One of the options,
4 Mr. Cormie, is that the EPA -- excuse me -- could fully
5 credit -- excuse me -- could fully credit any increase
6 in imports of hydro power from Canada as a carbon-free
7 product?

8 MR. DAVID CORMIE: Yes. And --

9 MR. BOB PETERS: That would be the best
10 scenario for Manitoba Hydro?

11 MR. DAVID CORMIE: Absolutely. And,
12 you know, the -- each of the states that we sell
13 electricity into have filed comments with the EPA that
14 have recommended that -- that imports of hydroelectric
15 energy be included as an option for them to use to meet
16 their -- their 2030 targets.

17 MR. BOB PETERS: Manitoba Hydro has
18 filed those comments?

19 MR. DAVID CORMIE: No. I -- what I was
20 saying is that the States, like the state of Minnesota,
21 the state of Wisconsin, have filed comments recognizing
22 the importance of imported hydroelectricity to their
23 supply portfolio, and -- and they have recommended in
24 their comments to the EPA that -- that they be given
25 the option of including that in meeting their targets.

1 MR. BOB PETERS: One of the options the
2 EPA has is not to give credit to imported hydro power
3 at all?

4 MR. DAVID CORMIE: That's cor -- that -
5 - that's correct.

6 MR. BOB PETERS: Or the EPA could
7 provide credit for imports but only from newly built
8 projects?

9 MR. DAVID CORMIE: Yes.

10 MR. BOB PETERS: And that would then
11 impact Manitoba Hydro in terms of its existing fleet,
12 but provide perhaps an advantage to plants that are
13 going to be newly built, such as Keevask.

14 MR. DAVID CORMIE: Yes. And I think
15 today that -- that was proposed by most comment -- comm
16 -- by -- by most parties was around the 2015 date so
17 that projects like Keevask would qualify.

18 MR. BOB PETERS: So ultimately you're -
19 - you're telling this panel that it's going to be the
20 EPA who decides whether or not Manitoba Hydro's
21 electricity will qualify as carbon-free -- carbon-free
22 product in the -- pursuant to the Clean Power Plan?

23 MR. DAVID CORMIE: I think it's -- it -
24 - it's going to be a success -- a successive set of
25 decisions. The EPA has to allow it, and then the

1 States then have to say that. Yes, that's -- they'll
2 want -- they'll want to do that. And Utilities will
3 have to say to Manitoba Hydro -- so, you know, you have
4 to have a -- you have to have a permissive regulatory
5 regime established. And -- and then the question is:
6 Is -- is Manitoba Hydro an economic supplier.

7 THE CHAIRPERSON: Mr. Cormie, there's a
8 couple of -- with respect to what you just said, I
9 mean, there's two (2) components to that, right, it's
10 the new generation electricity, the -- the electricity
11 produced by the future Keevask dam, that's one (1)
12 component. But there's also the energy that is
13 currently being produced, whether or not that will be
14 qualified for -- by EPA for the original power plants.

15 There's two (2) components, isn't it?

16 MR. DAVID CORMIE: Yes, there --
17 there's the existing fleet. And -- and the argument
18 not to recognize the existing fleet is it doesn't
19 change anything. It doesn't -- you know, the existing
20 fleet is already being -- is producing carbon free and
21 it -- it won't result in a reduction in carbon. So you
22 have to actually have a new resource come along.

23 So a -- a utility chooses to contract
24 with Manitoba Hydro, we develop new hydro generation as
25 opposed to building a combustion turbine. And

1 essentially, that's what Minnesota Power did. They
2 said, We have a choice, let's enter into that 250
3 megawatt sale agreement, that'll trigger Keewask. Our
4 alternative is a combustion turbine and their emissions
5 would have gone up about half a million tonnes a year
6 of carbon had they made the choice to put a combustion
7 turbine in.

8 THE CHAIRPERSON: But to the point that
9 -- to this issue of old power, if I could call it that
10 way, I mean, you would -- it would be uncommitted old
11 power that would -- would -- I guess, would be of
12 interest to you, right? I mean, you -- Manitoba Hydro
13 would want to be able to use old power to meet EPA
14 guidelines. And that -- if we're talking about
15 Wuskwatim then and other sources?

16 MR. DAVID CORMIE: Yes, we would -- we
17 would like to -- to do that, but I -- I don't think
18 using old power would -- it actually helps them from a
19 policy perspective.

20

21 CONTINUED BY MR. BOB PETERS:

22 MR. BOB PETERS: Mr. Cormie, to follow
23 up on a question from the Chair, under -- and again, I
24 -- I gave a blanket CSI warning at the start. I'm
25 hoping that Mr. Czarnecki and Mr. Rainkie have shared

990

1 it with all witnesses, but if I'm treading where it's
2 commercially sensitive, you're going to tell me that.

3 Under your contracts that you have now
4 with the counterparties, the American utilities, I
5 think somewhere in the materials I have here you call
6 them system participation agreements.

7 Have I got that right? Is that a...

8 MR. DAVID CORMIE: Yes.

9 MR. BOB PETERS: And -- and that really
10 means they participate in the Manitoba Hydro system in
11 total. They don't just get to stream electrons from
12 limestone and exclude any that would come from Brandon
13 coal, or Brandon gas. They get part of the system,
14 whatever it is?

15

16 (BRIEF PAUSE)

17

18 MR. DAVID CORMIE: I think -- I think I
19 can say, Mr. Peters, that the contracts in -- in
20 general, provide for the renewable cert -- energy
21 certificates. Some may be -- may point to a specific
22 generating station, some may not. Some may just get
23 the -- you know, some will get a -- a few renewable
24 credits from Pointe du Bois, and Slave Falls, and Seven
25 Sisters, and, you know, they'll get a piece of the

1 system, but some contracts are very specific to
2 specific plans.

3 And I -- I can't go into the -- the
4 details of that, but -- but generally everybody gets
5 the renewable credits. Some people get better credits
6 than -- newer credits than -- than others.

7 MR. BOB PETERS: Is there a -- and I
8 don't need to -- and I'm not interested in -- in an
9 answer related to those, Mr. Cormie, so thank you, but
10 are those -- are those existing arrangements in
11 jeopardy under the EPA's Clean Power Plan if they are
12 system participation agreements as opposed to streaming
13 it from a particular asset in the Manitoba Hydro hydro
14 fleet?

15 MR. DAVID CORMIE: No, they're not --
16 not in jeopardy.

17 MR. TERRY MILES: Can I just add a -- a
18 point? I -- I misspoke back when we were talking about
19 -- back on page 47 we were talking about the chart and
20 when carbon enters into the NFAT forecasts that were
21 there. I'd indicated it was in the 2016/'17 time
22 frame. I've been advised, and can confirm, that it is
23 consistent with IFF14.

24 The 2012 assumptions in the NFAT also
25 have no carbon through to 2019/'20.

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: I want to turn to page
4 63, please. And Mr. Cormie, yesterday, you mentioned
5 foreign exchange rate and the impact it was having on
6 exports. And we've reviewed this table previously. In
7 many ways, from 2001, maybe through to 2006, exchange
8 rate revenues were probably as much as \$140 million a
9 year, which would be once you converted from US into
10 Canada.

11 Do you accept that, sir?

12 MR. DAVID CORMIE: Yes, when the
13 exchange rate is at a dollar sixty (\$1.60), we look a
14 lot better than when it's at a dollar (\$1).

15 MR. BOB PETERS: And if we look at the
16 bottom of the chart, looking in the exchange rate
17 that's used for 2015/'16 and '17, we see that it's ten
18 (10) cents, twelve (12) cents.

19 That would have been used by Manitoba
20 Hydro in the IFF?

21 MR. DARREN RAINKIE: Good morning, Mr.
22 Peters. Maybe I'll get into this. Yes, sir. I think
23 you said one-twelve (112) and one (1) -- one-twelve
24 (112)? Are those two (2) years fifteen -- the '15/'16 and
25 '16/'17?

1 MR. BOB PETERS: Yes.

2 MR. DARREN RAINKIE: Yes, that's
3 correct.

4 MR. BOB PETERS: And then, Mr. Rainkie,
5 thank you. Excuse me. When we look forward to the
6 2017/'18 and the 2018/'19, '20 -- '19/'20 years, you're
7 showing exchange rates on page 63, Mr. Rainkie, again
8 of a dollar twelve (\$1.12), a dollar twelve (\$1.12),
9 and a dollar ten (\$1.10), respectivelv.

10 Are those what is built into the IFF?

11 MR. DARREN RAINKIE: That's correct,
12 Mr. Peters.

13 MR. BOB PETERS: And on page 67 of the
14 Board counsel's book of documents, Mr. Rainkie, we've -
15 - see that from a Coalition answer, that the RBC has
16 provided a September of 2014 update, indicatina
17 exchange rates going up to a dollar sixteen (\$1.16) for
18 2014/'15, and about a dollar seventeen (\$1.17) for
19 '15/'16, correct?

20 MR. DARREN RAINKIE: I haven't done the
21 average for these. This is by quarter, but that is the
22 relative magnitude, Mr. Peters.

23

24 (BRIEF PAUSE)

25

994

1 MR. BOB PETERS: These higher exchange
2 rate, Mr. Rainkie, have not been used in IFF14, have
3 they?

4 MR. DARREN RAINKIE: No, Mr. Peters.
5 This was an update several months after the preparation
6 of IFF14.

7 MR. BOB PETERS: And likewise, on page
8 67 at the bottom, we see that the Royal Bank, in
9 February '15, again after the IFF was prepared, they're
10 coming out with exchange rates of a dollar thirty-three
11 (\$1.33) for '15/'16, and a dollar thirty (\$1.30) for
12 '16/'17.

13 And again, there's been no update by
14 Manitoba Hydro relative to these foreign exchange rate
15 changes, has there?

16 MR. DARREN RAINKIE: No. We haven't
17 produced another forecast, Mr. Peters, but -- and I'm
18 sure we'll get into it in due course. But Manitoba
19 Hydro hedges the -- our -- our exposure to foreign
20 exchange changes. So, Mr. Peters, the -- to the extent
21 that we have an effective hedge, changes in foreign
22 exchange rates do not affect our results, even -- even
23 the significant changes that we've seen in the -- or
24 not -- do not significantly affect our results, even
25 the significant changes we've seen in the last number

1 of months.

2 MR. BOB PETERS: No, but it does affect
3 Mr. Cormie's report card in terms of his export
4 revenue, his actual export revenue income?

5 MR. DARREN RAINKIE: Yes. I'm just
6 pointing out that's one (1) component when we look at
7 the overall revenue requirement, and I wasn't talking
8 about Mr. Cormie's report card, which is usually pretty
9 stellar by the way.

10 MR. BOB PETERS: No, but -- but my
11 point, Mr. Rainkie, is -- is in terms of what the
12 export revenue forecast is, it may change because of
13 the foreign exchange rate, like we've seen.

14 You're -- you're jumping past that to
15 say that. Well, there may be some effective hedging in
16 the -- in the other areas of the Corporation.

17 MR. DARREN RAINKIE: That's right, Mr.
18 Peters. I'm sure we'll chat about that in due course.

19 THE CHAIRPERSON: I -- I just want to
20 explore. I mean, you indicated yesterday that you
21 watch interest rates, but do you watch the value of the
22 American dollar? I mean, are you truly indifferent as
23 to the value of the American dollar?

24 MR. DARREN RAINKIE: Yes. We -- we
25 maintain an active exchange rate management program.

996

1 And so we have both revenues that come in. They're
2 denominated in US dollars. We also have finance
3 expense. We have quite a bit of US debt that goes out
4 in terms of US dollars.

5 So to the extent that we can maintain
6 the cash inflows and the cash outflows of all US
7 dollars in relative balance, if you like, we're
8 insulated. The effect won't be zero, but we can
9 usually nullify the effect to be less than five (5) to
10 \$10 million, even -- even with a fairly large change in
11 the foreign exchange rate.

12

13 (BRIEF PAUSE)

14

15 MR. BOB PETERS: Mr. Miles, yesterday
16 you told the panel that even though interest rates had
17 declined, there was an expectation by Manitoba Hydro
18 staff that export revenues were also going to decline
19 based on Manitoba Hydro's staff position, correct?

20

21 (BRIEF PAUSE)

22

23 MR. TERRY MILES: It's based on
24 Manitoba Hydro's review of what's in the marketplace.
25 As to whether or not it's Manitoba Hydro's position on

997

1 that, we're looking at the information that's available
2 and particularly with respect to the gas -- the low oil
3 prices and low gas prices in the fall, and how that is
4 expected to translate and affect the market prices in -
5 - in the near term, and potentially out into the lar --
6 long term.

7 We were discussing that particular IR,
8 and I think that -- that analysis that was done was a -
9 - was a scenario in essence to capture in particular in
10 -- in the marketplace we're in now, that you can't
11 necessarily just look at one (1) factor and update one
12 (1) factor or change one (1) factor as you go forward.

13 So with interest rates changed, market
14 prices changed, cost might change. There is
15 interacting factors for those types of things that
16 affect -- affect that. The economy -- so the low
17 natural gas prices. There is still high production
18 there, and you wonder why. Well, has their supply
19 changed? Factors affecting the industry as a whole.

20 So when we do an update in the IFF, and
21 it's all integrated and do our -- for example get our
22 full forecast update from our market forecasters, all
23 those aspects will be factored into that. Any changes
24 in legislation. Any changes in the economic factors
25 that are there.

998

1 The analysis that we did was to be a bit
2 of a -- not necessarily an update, but to reflect what
3 some of the current market factors were. So from that
4 sort of limited perspective and review, and an
5 adjustment to the forecast that was produced for IFF --
6 or the revenue forecast that was produced for IFF, the
7 outcome from that was what was provided in 10(b).

8 So from that perspective, our thoughts
9 on how the current market -- what's happening currently
10 in the market and how that may translate over the
11 number of years is reflected in there. I think as we
12 go further out in time, I think we have to take that --
13 you know, the longer-term projections in that -- in
14 10(b), the Attachment B -- 10(b), with a little bit of
15 a grain of salt as we go forward.

16 But overall, we do expect that revenue
17 projections -- subsequent -- the export revenue
18 projections, I won't say overall, but export revenue
19 projections, will be -- will be lower. How that
20 translates into the overall IFF and net revenue
21 projects and requirements, I don't believe is possible
22 until, as Mr. Rainkie said, we do a full update of all
23 of the parameters around that, so.

24 MR. BOB PETERS: On page 34 of PUB
25 Exhibit 20, which is Volume I, there's a spreadsheet

999

1 that was the average unit revenue cost calculations.

2 And I don't want to bog on this information, but --

3 maybe we could actually go back to page 13, which we

4 looked at yesterday.

5 And we'll see the chart at the bottom of

6 the page. This provided more of a summary. The -- the

7 question, Mr. Miles, is that if -- if we see the

8 foreign exchange rate forecast changing as we've gone

9 through, did the scenario where Manitoba Hydro updated

10 for extraprovincial revenues use the updated foreign

11 exchange rates, or did you stay with the same exchange

12 rates that Mr. Rainkie used in IFF14?

13 MR. DARREN RAINKIE: Mr. Peters, we --

14 we didn't change -- vary the exchange rates for the

15 reason the Chairman and I chatted about a couple

16 minutes ago. We -- we are insulated from changes in --

17 in foreign exchange. So that wasn't part of this

18 update.

19 MR. BOB PETERS: Thank you, Mr.

20 Rainkie. Turning to Tab 12, page 88 of PUB Exhibit 20,

21 Volume I, Mr. Cormie, can you confirm that the NSP 500

22 megawatt sale, I think it's under Permit 224, expired

23 in April of 2015?

24

25 (BRIEF PAUSE)

1000

1 MR. DAVID CORMIE: Yes, I can.

2 MR. BOB PETERS: And it was replaced.

3 Mr. Cormie, in May of 2015 by a three hundred and
4 seventy-five (375) summer five (5) by sixteen (16) sale
5 and a three twenty-five (325) winter five (5) by twelve
6 (12) contract with NSP?

7 MR. DAVID CORMIE: Yes.

8 MR. BOB PETERS: Mathematically that
9 new contract is for less energy, probably at a stronger
10 price than in the expiring contract, Mr. Cormie?

11 MR. DAVID CORMIE: Yes.

12 MR. BOB PETERS: Would the Board be
13 correct in understanding that Manitoba Hydro could have
14 provided the same volumes of energy in that new
15 contract as it did in the old one, had the
16 counterparties so requested or agreed?

17

18 (BRIEF PAUSE)

19

20 MR. DAVID CORMIE: The volume went from
21 500 megawatts to a lower amount, because as we proceed
22 from 2015 to 2020, the Manitoba load continues to rise.
23 And so we have to gradually reflect that in the amount
24 of firm power that is available for sale. And at the
25 time we were negotiating this, the three seventy-five

1001

1 (375) is what we could commit, because that was the
2 amount that was surplus.

3 The -- the amount goes back up to five
4 hundred (500) when Keevask comes in. And that's when
5 you'll see the -- the 125 megawatt bump-up contract
6 kicks in. But if -- if you look at the history of our
7 dependable sales going back to 2000, you'll see that
8 every year the volume of dependable sales is going
9 down, because we only have so much dependable energy
10 and we need to -- we need to serve the growing Manitoba
11 load.

12 And -- and this -- and this sale
13 extension reflects that. The quantity, we couldn't
14 continue to maintain that at the 500 megawatts. And so
15 we only offered the customer a lower amount until new
16 generation was going to come in. And the -- and the
17 125 megawatt sale has a condition precedent in it that
18 said, If you build Keevask, then we can offer you --
19 get you back up to where we were before.

20 So that -- that's the -- that's the
21 reason that it's -- that it's been downsized. We just
22 don't have the surpluses available to -- for -- until
23 Keevask comes in to meet that.

24 MR. BOB PETERS: Those negotiations
25 were based on Manitoba Hydro's load forecast at the

1002

1 time of the negotiations?

2 MR. DAVID CORMIE: Yes, and -- and the
3 -- and the other resources that we had available.

4 MR. BOB PETERS: And would it be fair
5 to say that to some extent, maybe a large extent, the
6 expected pipeline load would require Manitoba Hydro to
7 scale back on its exports agreement from the 500
8 megawatt sale to NSP to a lower 375 megawatt sale?

9 MR. DAVID CORMIE: This agreement was
10 negotiated back in 2008. It was done a long time ago,
11 before the pipeline load was -- was on the horizon, Mr.
12 Peters. So this -- this was done a long time ago.

13 I think our term sheet to them was --
14 the -- it -- the term sheet wasn't -- was -- was signed
15 in 2008, and we started having these discussions a -- a
16 year before that. And -- and this was at a period of
17 time when gas prices were skyrocketing, and the
18 customer wanted a -- a hedge against that, and -- and --
19 - but we didn't have the pipeline load on -- on the
20 horizon at that point.

21 MR. BOB PETERS: So the new contract to
22 NSP will have a total firm energy obligations decline
23 from about 2,100 gigawatt hours a year to 3,100
24 gigawatt hours a year?

25 MR. DAVID CORMIE: Yes, that's --

1003

1 that's correct.

2 MR. BOB PETERS: And Mr. Cormie, on
3 page 87 of the book of documents, the NSP Permits 33
4 and 34 are diversity agreements.

5 Is that correct?

6 MR. DAVID CORMIE: Yes, and those
7 agreements terminated on May the 1st of this year as
8 well. And they were replaced with a 350 megaw -- one
9 (1) single 350 megawatt sale -- divers -- the diversity
10 sale agreement, and that agreement goes till 2025.

11 THE CHAIRPERSON: Just a -- just a
12 technical question, just for my information. To what
13 extent are those contractual commitments that you make
14 notional? In a -- in the sense you just described as a
15 hedge, you know, you have a hedge, they have a hedge,
16 and in buying your power, does that necessarily follow
17 -- does it necessarily follow the -- the power that
18 actually flows? You know, having made a commitment to
19 buy 'X' and end up using less than that, you still get
20 paid, and your costs are lower. Their costs are lower
21 as well.

22 So I -- I guess the question is: Is it
23 notional?

24 MR. DAVID CORMIE: The -- the capacity
25 obligation isn't notional. We have to have the

1004

1 capacity at all times. And the energy doesn't have to
2 come from the Manitoba Hydro system. It can come from
3 the market. So we can source the energy from the
4 cheapest los -- wherever it -- where it can be produced
5 at least cost. And that may, at times, be just to buy
6 it in the market in the United States and serve the
7 sale with that. So in -- in some regard, it is -- it
8 can -- it can be just financially settled on the
9 energy. The capacity has to be always available, and
10 it -- it is -- it is a physical requirement.

11 Now, that's only been possible since the
12 MISO market came along. Prior to that, it was always
13 physical. We had to make physical delivery.

14 THE CHAIRPERSON: But to the extent
15 that the power does not flow, that's favourable to you
16 and favourable to the counterparty, isn't it? I mean,
17 in -- in a sense, that their costs would encompass what
18 do -- they pay you, plus whatever transactional costs
19 related to that -- that -- related to that electron.
20 They save that by -- by --

21 MR. DAVID CORMIE: If the -- if the
22 power doesn't -- if Manitoba Hydro doesn't deliver the
23 power from our system, we deliver it from the market,
24 we still get paid exactly the same amount. The revenue
25 stream is -- is guaranteed. The question is: What's

1005

1 Manitoba Hydro's production costs going to be?

2 And if we've run out of low-cost hydro
3 to serve the sale, and we have to -- we have to choose
4 between our combustion turbine, say, at fifty dollars
5 (\$50) a megawatt hour, buying it in the market at
6 thirty (30), we'll buy it from the market and -- and
7 purchase power in the United States to serve the sale.
8 And we'll resp -- we'll be responsible for those costs.

9 The alternative is to start up the
10 combustion turbine at Brandon and paying it, you know,
11 by the natural gas, and make physical delivery. So we
12 have on a -- on a daily basis, we have the -- we have
13 the option of optimizing the source of the power in
14 order to do it at least cost.

15

16 CONTINUED BY MR. BOB PETERS:

17 MR. BOB PETERS: Mr. Cormie, along the
18 same lines as your discussion with the Chairman,
19 dealing with the NSP summer diversity arrangement for
20 350 megawatts, what I understood you to be telling the
21 Chairman is that Manitoba Hydro has to have generation
22 of 350 megawatts available 24/7 throughout the entire
23 summer, if called upon by your diversity partner.

24 MR. DAVID CORMIE: Yes. We have to
25 have the capacity available at all times.

1006

1 MR. BOB PETERS: And so you cannot use
2 that capacity for something else unless you know that
3 your diversity counterparty doesn't want it?

4

5 (BRIEF PAUSE)

6

7 MR. DAVID CORMIE: It doesn't -- it
8 doesn't sit stranded, Mr. Peters. We'll use the --
9 we'll -- we will -- we will use the capacity if it's
10 not necessary to serve our sale obligation.

11 MR. BOB PETERS: So could the Board
12 understand from that answer, Mr. Cormie, that even
13 though you've got 355 megawatts earmarked for NSP under
14 this diversity arrangement, those generators may be
15 spinning out electrons that are being sold in the
16 opportunity market, but as soon as NSP calls for them
17 or looks for them, they've got to be diverted to that
18 counterparty?

19 MR. DAVID CORMIE: We -- we -- what we
20 have to do, Mr. Peters, is we must offer the 350
21 megawatts into the market on a day-ahead basis for a
22 minimum of four (4) hours. And if -- and if our market -
23 - if our -- if our price is attractive, the market will
24 accept it. If it's unattractive, we -- we won't have
25 an obligation to supply.

1007

1 So there's a must-offer obligation of at
2 least four (4) hours a day. And -- but that capa -- so
3 and -- and the must-offer obligation is because the --
4 the 350 megawatts, MISO has accredited that to the
5 account of -- of the customer. And -- and so we have
6 to be prepared at least for four (4) hours a day to --
7 to provide energv.

8 Now, that -- that energv may be off our
9 combustion turbines, and it -- like I said it may be
10 very expensive energv and -- and the market will say,
11 Well, you know what, thanks for the offer but we have a
12 better option with -- with another utility. So that's
13 how our -- that's how our capacity is -- it has to be
14 there. We have to offer it in. But it doesn't
15 necessarily have to flow.

16 And we wouldn't want a -- we wouldn't
17 want to generate sixty dollar (\$60) energv if the
18 market is at thirty dollars (\$30) because it doesn't
19 make economic sense. So we -- we wouldn't want it to
20 flow anyway. But if we were -- if we were offering in
21 hydro at -- at our cost of hydro, which might be five
22 dollars (\$5) and the market is at twenty (20), we'll
23 off -- might offer it in for four (4) hours, we'll
24 offer it in for twenty-four (24) hours because there's
25 money to be made by selling energv under that capacity.

1008

1

2 Does that help, Mr. Peters?

3 MR. BOB PETERS: I believe so. Thank
4 you. The NSP --

5 MR. DAVID CORMIE: It's much easier if
6 you start thinking about it as your own money because
7 you sharpen your pencil quite quickly, and -- and you
8 only do the things that make economic sense.

9 MR. BOB PETERS: Understood. Thank
10 you.

11 THE CHAIRPERSON: Just a -- just
12 another technical question. So you have a -- you know,
13 you have a contract commitment that has to be
14 fulfilled. Your counterparty will tell you -- how
15 quickly or how late will he tell, I don't need that
16 power, I'm not going to -- so that you can offer it up
17 to another buyer?

18 MR. DAVID CORMIE: Generally the -- the
19 financial obligations are dealt with between the
20 customers on a bilateral -- the actual dispatch of the
21 energy is done through the MISO market. So MISO
22 determines whether energy will flow under that contract
23 or not, depending upon the market clearing price and
24 Manitoba Hydro's offer price.

25 Whether there's -- money needs to flow.

1009

1 That's done financially between the -- between --
2 between the companies. All the customer wants to know
3 is that they have a 350 megawatt capacity resource
4 available, and that -- and that that will be offered
5 into the market. And then -- and then MISO determines,
6 among all the six thousand (6,000) generators in the
7 market, which one (1) should run. The contract doesn't
8 determine that.

9 All the customers -- all the -- all the
10 suppliers at the end of the contract they just settle
11 financially whatever -- whatever they have to do. But
12 -- but MISO does the actual dispatch of the resources.

13

14 CONTINUED BY MR. BOB PETERS:

15 MR. BOB PETERS: On page 87, Mr.
16 Cormie, NSP has no minimum purchase obligation but
17 appears to have been buying about 300 megawatt hours a
18 year during the summer months since about 2008,
19 probably around four (4) cents a kilowatt hour.

20 MR. DAVID CORMIE: I'm sorry, Mr.
21 Peters, which -- where are you referencing again?

22 MR. BOB PETERS: I -- I was just trying
23 to take -- I think it's Permits 33 and 34, and -- and
24 look to see what Manitoba Hydro has been doing under
25 the divers -- diversity sales in -- in response to the

1010

1 Chairman's question where they first of all have no
2 minimum obligation, that is NSP has no minimum
3 obligation, correct?

4

5 (BRIEF PAUSE)

6

7 MR. DAVID CORMIE: Under the -- the
8 diversity agreements that expired, there was a minimum
9 obligation to purchase energy at -- at a 20 percent
10 capacity factor in the summer season. And -- and if
11 you look back at the history of this contract, each
12 summer they were taking their minimum obligation. And
13 that -- and -- and the prices that you see at the NEB
14 are -- are the prices that were in those contracts.

15 MR. BOB PETERS: Okay. Thank you.

16 And, Mr. Cormie, pursuant to a prior Board Order
17 Manitoba Hydro's been filing with the Board its
18 hydraulic generation data, the flow data, and some
19 export information relative to the US and Canadian
20 exports?

21 MR. DAVID CORMIE: Yes.

22 MR. BOB PETERS: Is that data available
23 for the January/February/March 2015 time frame?

24

25 (BRIEF PAUSE)

1011

1 MR. DAVID CORMIE: We're just checking.
2 Mr. Peters, to see if it's already been filed.

3 MR. BOB PETERS: Yeah, and I -- I
4 couldn't check on mv -- I -- I know I've talked to Ms.
5 Fernandes about it, so I just saw it in my notes and I
6 thought maybe I better mention it.

7 And if it hasn't been filed, it'll --
8 it'll be filed?

12

13 (BRIEF PAUSE)

14

15 MR. BOB PETERS: All right. We'll --
16 we'll check and see if that has all the information
17 sought. Mr. Cormie, Great River Energy is also a
18 diversity contract for summer capacity?

19 MR. DAVID CORMIE: Yes, they are. We
20 have a diversity exchange agreement with that company.

21 MR. BOB PETERS: Is there a minimum
22 purchase obligation for that utility under that
23 diversity agreement, or are you able to tell us that?

24

25 (BRIEF PAUSE)

1012

1 MR. DAVID CORMIE: As you might
2 remember, Mr. Peters, at the NFAT hearing we announced
3 that we had renegotiated and extended the diversity
4 exchange agreement with Great River. It had been at
5 150 megawatts, and that agreement was extended to 2030
6 -- 2035 or 2040 at a -- at an amount of two hundred
7 (200). And that agreement began at the end of -- on
8 November 1st last fall.

9 And so the existing 150 megawatt
10 agreement expired on that -- on that date. There was
11 no -- there's no minimum obligation to sell energy
12 under that previous contract. It had been revised
13 several years prior to that.

14 MR. BOB PETERS: Even with no minimum
15 obligation, Great River Energy has been purchasing the
16 maximum seven (7) by sixteen (16) energy available each
17 summer month?

18 MR. DAVID CORMIE: That's an
19 interesting contract, Mr. Peters. The -- the contract
20 is tied to Great River Energy's grandfather
21 transmission rights. And so the price that energy was
22 sold under that contract was not the Manitoba Hydro
23 nodal price at the border, but it was at the price that
24 Great River had in central Minnesota.

25 And so we had an arrangement with them

1013

1 to use that transmission service to -- to sell as much
2 energy as possible into the MISO market on that
3 transmission, because we -- we had a pricing advantage
4 by using that grandfathered transmission. So you'll
5 notice that for the last several years, a lot of energy
6 -- as much energy as possible was being -- of our
7 surplus energy was being sold on that transmission
8 reservation under that contract.

9 It wasn't seasonal diversity energy. It
10 was just market energy. But -- but we were able to get
11 a premium for that power by using that. And so that's
12 why you'll notice that the volumes of -- of energy sold
13 under that contract up to last November were -- were at
14 the maximum possible, because there was a significant
15 premium to be had by selling our energy on that
16 transmission than if we had used our normal MISO
17 transmission reservations.

18 MR. BOB PETERS: So that wasn't sold.
19 Mr. Cormie, at the real-time or day-ahead price?

20 MR. DAVID CORMIE: All I can say, Mr.
21 Peters, is it was sold as -- at a premium to the
22 Manitoba Hydro nodal price. I can't tell you what that
23 price was.

24 MR. BOB PETERS: And --

25 MR. DAVID CORMIE: It's confidential.

1014

1 MR. BOB PETERS: -- and then staying
2 with Great River, if we turn to page 101, at PUB
3 Exhibit 20, Great River also purchased 300 to 400
4 gigawatt hours of winter energy as well, Mr. Cormie?

5 MR. DAVID CORMIE: Yes, and what --
6 what happened there is that -- that that transmission
7 reservation, that 200 megawatt reservation that Great
8 River had, it was a year-round reservation. And so we
9 were able -- even in the wintertime when we had surplus
10 energy to sell, we would sell that on that
11 grandfathered transmission and -- and attract a premium
12 by doing that.

13 And so you'll see that although the
14 contract is a seasonal diversity contract, the contract
15 allows additional energy to be sold on that
16 transmission path. And that allowed us to -- to
17 attract a premium price year round. And -- and that's
18 why you have that unusual pattern of sales that -- if
19 you looked at prior to 2011 it wasn't there previously.
20 But we found an opportunity and we grabbed and -- and I
21 -- and both companies were very satisfied with the
22 result.

23 MR. BOB PETERS: I hear what you're
24 saying, Mr. Cormie. This is all pursuant to a
25 diversity agreement, or is there a second agreement for

1015

1 the winter -- winter volumes?

2 MR. DAVID CORMIE: It is all pursuant
3 to a diversity agreement. But under a diversity
4 agreement, you can divert -- you can deliver diversity
5 power and energy, or you can additio -- you can -- you
6 can deliver additional energy. And so all the energy
7 that you're seeing here is additional energy. It's not
8 -- it's not seasonal diversity energy.

9 And -- and that's -- that -- when you --
10 when you look at the National Energy Board reports, for
11 example, it doesn't tell you what type of energy is
12 being sold. It just says, This is the energy that's
13 being sold under that contract. It could be seasonal
14 diversity power and energy, or it could be additional
15 energy, or supplemental energy, or -- the -- the
16 contract allows for various types of energy.

17 And there seems to be some confusion
18 that you can only sell seasonal diversity power under
19 the seasonal diversity contract. You can sell anything
20 that you want under that if you choose to.

21 MR. BOB PETERS: Just call it something
22 different. You call it additional energy?

23 MR. DAVID CORMIE: Right. Like -- it's
24 like we have a -- we have a contract to sell them
25 fruit. Some of it's apples that is -- is premium and

1016

1 then there's some other stuff. It's just -- there are
2 different types of energy that can be sold.

3 MR. BOB PETERS: And, Mr. Cormie,
4 again, I'm not trying to put any CSI on the public
5 record, but you've indicated there was a premium
6 attached.

7 Can you indicate where there's a
8 capacity charge included in the winter portion of those
9 sales of additional energy?

10 MR. DAVID CORMIE: No, the -- the capac
11 -- there's no capacity behind the winter sales. The
12 capacity is exchanged seasonally. Now, with the --
13 it's just that happens in the -- in the wintertime.
14 Manitoba Hydro has so much -- an energy that it wanted
15 to sell into the market. And by using the transmission
16 service that's available under that contract, we can
17 attract the premium. But it's -- it's not capacity
18 backed.

19 MR. BOB PETERS: And -- and -- but yet
20 Manitoba Hydro still considers it to be a firm sale?

21 MR. DAVID CORMIE: No. No, it's not
22 firm energy. Only the seasonal diversity energy is
23 firm. Unfortunately, the definition that the -- the
24 National Energy Board uses for firm energy is not the
25 definition that's in the contract. And so you'll see

1017

1 that the National Energy Board talks about firm power,
2 firm energy. That's the gen -- that's the generic
3 definition they use for all energy that's sold under
4 the permit.

5 And -- but -- but contractually,
6 Manitoba Hydro has the choice of using various types of
7 energy. And -- and this is just surplus energy that's
8 not backed by capacity. It's -- it's a very
9 complicated issue, Mr. Peters, but -- well, it's not --
10 and not backed capacity.

11 MR. BOB PETERS: Well, don't take this
12 the wrong way, but if we turn back to page 5 of the
13 book of documents, Mr. Cormie, there's a table that was
14 -- we started off so well on, in terms of dependable
15 sales.

16 Is -- is what you're telling the Board
17 about Great River Energy included in the dependable
18 sales column?

19 MR. DAVID CORMIE: No, the surplus
20 energy --

21 MR. BOB PETERS: The additional energy,
22 if I can interrupt.

23 MR. DAVID CORMIE: Additional energy
24 dependable sale, Northern -- or Great River Energy would
25 have to call for seasonal diversity power before we

1018

1 would clas -- So the prices that you see here in that
2 -- in that chart on page 5 are essentially the fixed
3 prices that the contract stipulates for firm power. If
4 the contract stipulates that you can sell market-priced
5 energy under the contract, that won't be in that fixed-
6 price power column. That'll be in -- we will consider
7 that as an opportunity sale.

8 MR. BOB PETERS: All right. Thank you.

9 I've got your point --

10 MR. DAVID CORMIE: What happened is
11 that you -- you couldn't see the value of the firm
12 sales then.

13 MR. BOB PETERS: You gave us the
14 National Energy Board definition of 'firm' as being
15 their generic term under the -- when delivered under
16 the permit. Do you know any more about how they define
17 'firm'?

18

19 (BRIEF PAUSE)

20

21 MR. DAVID CORMIE: National Energy
22 Board provides Manitoba Hydro a perm -- a permit for a
23 contract that contains capacity. That -- that will
24 create a -- a firm permit. Under that contract, you
25 can sell additional energy. So they will then classify

1019

1 the energy that's sold, although it's not firm energy,
2 they will still classify it as firm for the purposes of
3 reporting.

4 MR. BOB PETERS: And Manitoba Hydro's
5 definition of 'firm', or dependable energy, still means
6 it comes from a dependable resource in Manitoba?

7 MR. DAVID CORMIE: That's right, and
8 it's generally at that fixed -- that fixed price.

9 MR. BOB PETERS: All right. Thank you.
10 I think that clarifies a number of questions that I
11 had.

12

13 (BRIEF PAUSE)

14

15 MR. BOB PETERS: Mr. Cormie, back --
16 over to page 104, and I know the pricing was -- is back
17 in some of the other pages that we've flipped over, but
18 Manitoba Hydro also sold 200 gigawatt hours of firm
19 energy under an -- an -- a -- what I think is a new
20 permit, 379, to Wisconsin Public Service?

21 MR. DAVID CORMIE: Yes, Mr. Peters, and
22 -- and as we responded in the IR, you'll see in our
23 response, that is a surplus energy sale. And -- and
24 that contract, we have a permit from the National
25 Energy Board, and the National Energy Board will -- has

1020

1 called that a firm sale. But we have no obligation to
2 sell them capacity under that sale. And again, this is
3 the -- this is the difference between what the National
4 Energy Board calls 'firm' and what Manitoba Hydro calls
5 'firm'.

6 MR. BOB PETERS: I've got your point.

7 Is this a new sale since the NFAT?

8 MR. DAVID CORMIE: No. This was
9 reported at the NFAT, and -- and the history of this
10 sale is that we have 108 megawatts of firm transmission
11 going into Wisconsin, and we -- and we -- we put a
12 transaction on to -- on -- on that -- on -- on that
13 transmission that -- that brings value to Wisconsin
14 Public Service.

15 It was a -- and -- and it is today a
16 surplus energy sale. As of next spring, that -- that
17 now -- that sale becomes a firm sale, and it's -- and
18 then it will truly, Mr. Peters, have a capacity
19 obligation, and we will -- we will deliver -- well,
20 we're required to deliver capacity and dependable
21 energy to Wisconsin Public Service. But for -- for the
22 reporting period that's the National Energy Board is
23 shown to date, that has just been surplus energy.

24 MR. BOB PETERS: When does -- when does
25 it switch over to a firm arrangement?

1021

1 MR. DAVID CORMIE: That begins -- I
2 think it's in 2016, Mr. Peters. And we announced that
3 at the NFAT, and that's a five (5) year sale that -- a
4 firm sale of 108 megawatts that takes us up to 2021.
5 And in 2021, we have another 100 megawatt sale to
6 Wisconsin Public Service that's coming out of Keevask.

7 MR. BOB PETERS: That's the 308
8 megawatt system?

9 MR. DAVID CORMIE: No -- no, it's --
10 it's -- it is -- it's included in the -- no, it -- it
11 is -- it is 100 megawatt sale that goes until 2029, I
12 think, Mr. Peters. And it only goes up to three
13 hundred and eight (308) if Conawapa is built prior to
14 2030. I believe that's the date. But all these sales
15 with Wisconsin were included in the NFAT.

16 MR. BOB PETERS: That 308 megawatt sale
17 that was also reported at the NFAT was January of 2027
18 to May of 2036, correct?

19 MR. DAVID CORMIE: Approximately, yes.

20 MR. BOB PETERS: And you've indicated
21 that was tied by contract to Conawapa.

22 MR. DAVID CORMIE: Yes.

23 MR. BOB PETERS: What's the status of
24 that contract?

25 MR. DAVID CORMIE: That contract is

1022

1 still -- it's been signed by both companies, and it is
2 still subject to regulatory review in Wisconsin. And
3 there are many condition precedents in the contract
4 that if Conawapa is not built, that contract will not -
5 - will essentially expire.

6

7 (BRIEF PAUSE)

8

9 MR. BOB PETERS: I'm not sure if all
10 those conditions precedent are foremost on our minds,
11 Mr. Cormie, as they are yours.

12 But at whose behest or insistence would
13 that contract be cancelled because of Conawapa not
14 being constructed?

15

16 (BRIEF PAUSE)

17

18 MR. DAVID CORMIE: That contract, Mr.
19 Peters, as I described at the NFAT, is conditional on
20 the third unit at Conawapa going into service. If
21 Manitoba Hydro does not build Conawapa, that contract
22 dies.

23 MR. BOB PETERS: When -- when you say
24 it dies, Manitoba Hydro can cancel it or the
25 counterpart can cancel it?

1023

1 MR. DAVID CORMIE: The counterparty can
2 cancel it.

3 MR. BOB PETERS: So until they do
4 cancel it, they may still be prepared to take energy
5 from an alternate source if it's available?

6 MR. DAVID CORMIE: Well, Mr. Peters, we
7 -- we -- as I described in my direct yesterday, we have
8 the 500 megawatts of firm transmission into Wisconsin,
9 and to the extent that this trans -- that -- this 300
10 megawatt transaction disappears, there -- there may be
11 an opportunity to replace it with something else.

12

13 (BRIEF PAUSE)

14

15 MR. BOB PETERS: Mr. Cormie, another
16 area you might be able to help the Board with is Tab 17
17 of PUB Exhibit 20, page 118. When looking at the sales
18 by Manitoba Hydro, would it be correct that the five
19 (5) by sixteen (16) sales total was about 70 percent of
20 the peak US tie-line capacity?

21 MR. DAVID CORMIE: Do you have a
22 reference for the 70 percent?

23 MR. BOB PETERS: I'm on page 118, and I
24 added up the -- well, let me start it this way, Mr.
25 Cormie.

1024

1 Would it be correct that the on-peak
2 tie-line capacity is about 7,000 gigawatt hours per
3 year?

4

5 (BRIEF PAUSE)

6

7 MR. DAVID CORMIE: I haven't done the
8 math, Mr. Peters, but I -- I would expect that if we
9 had sufficient surplus to load the tie-line at 100
10 percent year round, it would be much higher than that.

11 MR. BOB PETERS: It would be higher
12 than 7,000 gigawatt hours a year?

13

14 (BRIEF PAUSE)

15

16 MR. DAVID CORMIE: Mr. Peters, I think
17 you're close.

18 MR. BOB PETERS: I'll take that today.
19 Thank you, Mr. Cormie. So when we look at page 118,
20 and we look at the on peak, which is the left-hand --
21 two (2) -- well, it's the column that says, "Firm
22 contracts." It also says, "Non-firm five (5) by
23 sixteen (16)" --

24 MR. DAVID CORMIE: Right.

25 MR. BOB PETERS: -- but both of those

1025

1 are considered on-peak products?

2 MR. DAVID CORMIE: Yes.

3 MR. BOB PETERS: And if you add them
4 up, and I may not have the accuracy of Mr. Rainkie, but
5 if -- if I came out with about five (5) -- or sorry,
6 5,070 gigawatt hours in total for those two (2)
7 columns, and I have approximately seven (7) hundred --
8 7,000 gigawatt hours of tie-line peak capacity, it
9 appears that Manitoba Hydro was not maximizing the peak
10 sales.

11 Would that be true?

12 MR. DAVID CORMIE: Mr. Peters, in the --
13 - in the wintertime, when Manitoba load is at, let's
14 say, 4,000 megawatts, our -- our generating capacity is
15 around, let's say, 5,000 megawatts, we only have 1,000
16 megawatts of capacity, of surplus generating capacity.
17 The tie-line is capable of 2,000 megawatts. So we
18 don't have the generating capability to fully load the
19 tie-line. So the -- the Manitoba load is using up the
20 -- all the -- most of the capacity in our -- in our
21 hydro system in the wintertime, which leaves little
22 capacity in the on-peak hours to -- to load the tie-
23 line.

24 Conversely, in the -- in the summertime,
25 when the Manitoba load is only 3,000 megawatts, say, at

1026

1 night and may -- we have 5,000 megawatts of generating
2 capacity. There is -- there's ample generating
3 capacity to load the tie-line.

4 So when you look at the loading of the
5 tie-line over the whole year, sometimes it can be fully
6 loaded when Manitoba load is down, but sometimes it
7 hardly gets loaded at all, because we just don't have
8 the surplus. So this -- this is -- reflects, you know,
9 the nature of the Manitoba Hydro load shape.

10 MR. BOB PETERS: Thank you. You
11 indicate, while we're on this chart, you had talked to
12 the Chairman on the day 1 of the -- of your evidence in
13 respect of a 500 kV line that was taken down for
14 maintenance, if I recall your evidence.

15 Did I get that right?

16 MR. DAVID CORMIE: Yes, and -- and
17 these numbers will reflect that outage in -- in October
18 and November. You can see October and November was at
19 182 megawatt hours under the firm contracts. September
20 was at three hundred and eighty-three (383). So a
21 significant reduction in deliveries, not because of
22 Manitoba load, but because of that unusual outage.

23 MR. BOB PETERS: Well, the unusual
24 outage, you tied that to the Riel converter station --

25 MR. DAVID CORMIE: Yes.

1027

1 MR. BOB PETERS: -- and it being
2 activated.

3 MR. DAVID CORMIE: Yes, it -- it -- we
4 needed to take the line out of service so that can --
5 the -- the wires could be (inaudible).

6 MR. BOB PETERS: I wanted to make sure
7 the Board understood your evidence also at that time,
8 Mr. Cormie, is that when Manitoba Hydro takes the line
9 out of service, Manitoba Hydro's obligations under its
10 firm export agreements is suspended?

11 MR. DAVID CORMIE: To the extent that
12 we have transmission service and we can make delivery,
13 we -- we have to do that. But to the extent that we're
14 prevented from making -- fulfilling our obligations,
15 then, no, we have no obligation to deliver.

16 MR. BOB PETERS: Did Manitoba Hydro
17 financially settle any of those arrangements while it
18 couldn't physically deliver the electrons?

19

20 (BRIEF PAUSE)

21

22 MR. DAVID CORMIE: I'll have to check
23 on that, Mr. Peters. The numbers that are shown in
24 this table are physical deliveries, as reported to the
25 NEB. In -- in -- so the -- the numbers that we report

1028

1 to the NEB are -- actually reflect the megawatt hours
2 that actually flow on the line, and so they are called
3 'deliveries', and that's different from sales. So I
4 have to compare the sales numbers to the deliveries to
5 know whether we financially settled and purchased the
6 power in the United States and -- and made delivery.
7 I'll have to -- I'll have to check on that.

8 MR. BOB PETERS: I appreciate that.
9 But Board member Kapitanv, I think, asked you whether
10 or not there was a -- there -- there could be a
11 negative impact on the reputation of Manitoba Hydro for
12 not delivering as a result of taking the transmission
13 line out service.

14 And I understood you to say, Well, no,
15 there would be no reputational disadvantage or harm
16 done, from your perspective.

17 MR. DAVID CORMIE: That's right,
18 because we would fulfil our obligations under the
19 contract, and if the contract allows us not to deliver
20 because of a transmission outage, you know, nobody's --
21 Manitoba Hydro's reputation is not at stake for doing
22 that.

23 MR. BOB PETERS: All right. And --
24 yeah, I think what we've come to is, Mr. Cormie has
25 undertaken to compare the sales to the deliveries to

1029

1 determine whether or not Manitoba Hydro financially
2 settled any of its contractual obligations during the
3 months of October and November 2014, when a 500 kV
4 transmission line was taken out of service.

5 You agreeable to that, Mr. Cormie?

6 MR. DAVID CORMIE: Yes. I might
7 actually be able to tell you that right now, but carry
8 on and if I can answer that immediately, I will.

9

10 --- UNDERTAKING NO. 12: Manitoba Hydro to compare
11 the sales to the deliveries
12 to determine whether or not
13 Manitoba Hydro financially
14 settled any of its
15 contractual obligations
16 during the months of
17 October and November 2014
18 when a 500 kV transmission
19 line was taken out of
20 service

21

22 CONTINUED BY MR. BOB PETERS:

23 MR. BOB PETERS: Well, in...

24

25 (BRIEF PAUSE)

1030

1 MR. BOB PETERS: Mr. Cormie, while --
2 there's one (1) more undertaking I'm going to ask of
3 you because on the microphone I can't get the math to
4 work. And that deals with the diversity agreements
5 that we've talked about not being included in the firm
6 energy reports. On page 118 that's on the screen, in
7 July there's 460 gigawatt hours of on-peak deliveries
8 that have been made, correct?

9 MR. DAVID CORMIE: Yes.

10 MR. BOB PETERS: Could you check the
11 source of those documents to determine whether that
12 four sixty (460) is made up of any diversity
13 agreements, going back to page 87 of Board counsel's
14 book of documents, for the month of July of 2014?

15 MR. DAVID CORMIE: Your question is if
16 any -- it includes any seasonal diversity, or what are
17 you asking?

18 MR. BOB PETERS: Yes. If -- if the
19 firm on peak July of '14 includes seasonal diversity.

20 MR. DAVID CORMIE: It does, sir.

21 MR. BOB PETERS: It does?

22 MR. DAVID CORMIE: Yes. We have an
23 obligation to deliver to NSP their 350 megawatts during
24 that month, and we did.

25 MR. BOB PETERS: I just may need the

1031

1 coffee break to clear my head on that, Mr. Cormie. I
2 had understood that because it was diversity, it was
3 not going to be included in the firm column.

4 MR. DAVID CORMIE: We have three (3)
5 diversity -- we had -- during the summer of 2014 we had
6 three (3) contracts: two (2) with Northern States Power
7 under export Permit 34 and -- 33 and 34, and one (1)
8 with Great River Energy that's Permit 35. Under
9 thirty-three (33) and thirty-four (34), we had an
10 obligation to deliver the firm energy under those --
11 under those two (2) contracts, and we did. That number
12 includes the diversity to NSP.

13 MR. BOB PETERS: All right. Then --
14 then maybe I don't have the math challenge I thought I
15 did. But it -- it -- does that mean for every month it
16 was considered firm for NSP?

17 MR. DAVID CORMIE: No, it's -- it's a
18 20 percent capacity factor, so I think the numbers are
19 probably around three (3) -- we have to deliver to them
20 three (3) -- about -- between 3 and 400,000 megawatt
21 hours a summer, and they chose to -- chose to schedule
22 those into the most valuable hours, generally between
23 the middle of June and the middle of September.

24 And you can see in -- if you look --
25 turn to page -- your page 87, Mr. Peters --

1032

1 MR. BOB PETERS: Which is on the
2 screen, I believe.

3 MR. DAVID CORMIE: In July of '14
4 you'll see the -- Permit 33 and 34 aren't highlighted
5 in yellow, and that will be seasonal diversity energy.
6 Permit 35, which you've highlighted, that will be
7 additional energy.

8

9 (BRIEF PAUSE)

10

11 MR. BOB PETERS: Thank you for that,
12 Mr. Cormie. Mr. Chairman, I'm going to turn to a new
13 topic and maybe this might be an opportune time for our
14 morning recess.

15 THE CHAIRPERSON: Okay. Let's -- let's
16 take ten (10) minutes. I just should have said earlier
17 this morning that we intend to adjourn for the day at
18 4:30, no later than 4:30 today, so.

19 MR. BOB PETERS: I saw the clock was
20 installed as a -- perhaps a reminder to me, Mr.
21 Chairman, so I've got the hint. Thank you.

22

23 --- Upon recessing at 10:31 a.m.
24 --- Upon resuming at 10:48 a.m.

25

1 MR. BOB PETERS: Thank you, Mr.

2 Chairman.

3

4 CONTINUED BY MR. BOB PETERS:

5 MR. BOB PETERS: Just prior to the
6 morning recess I had tried to phrase an undertaking
7 that I think Mr. Cormie was prepared to accept, but he
8 was prepared to even go further and try to answer it on
9 the spot.

10 And I wondered if that answer isn't at
11 hand, whether we could just expect a written answer,
12 Mr. Cormie, at a subsequent time?

13 MR. DAVID CORMIE: Yes, we'll provide
14 it in writing, Mr. Peters.

15 MR. BOB PETERS: Yes, thank you, sir.
16 This is the same undertaking that we had talked about,
17 Mr. Cormie.

18 Would you like to rephrase it for the
19 transcript or do you want me to and then you can
20 correct me?

21 MR. DAVID CORMIE: What we'll do, Mr.
22 Peters, is undertake to determine whether we deliver --
23 or sold power during the 500 kV outage with energy that
24 was purchased above and beyond the amounts that are
25 shown as delivered in the NEB table during that --

1034

1 during that 500 kv outage last October.

2

3 --- UNDERTAKING NO. 13: Manitoba Hvdro to determine
4 whether Manitoba Hvdro sold
5 power during the 500 kv
6 outage last October with
7 energy that was purchased
8 above and beyond the
9 amounts that are shown as
10 delivered in the NEB table

11

12 CONTINUED BY MR. BOB PETERS:

13 MR. BOB PETERS: Thank you. And that
14 will tell the panel, Mr. Cormie, as to whether or not
15 Manitoba Hvdro financially settled any contractual
16 provisions.

17 MR. DAVID CORMIE: Yes. I'm -- I've
18 looked at it. I'm comfortable that we did, but -- but
19 I have some billing people that can provide 100 percent
20 certainty on that.

21 MR. BOB PETERS: All right. Thank you.
22 Mr. Miles, if we turn into some power resource planning
23 issues, on page 127, would the Board be correct in
24 understanding, looking at page 127 of PUB Exhibit 20,
25 which is Volume I of Board counsel's book of documents,

1035

1 that Manitoba Hydro's retained earnings are higher when
2 Manitoba Hydro spends 50 percent less than what is
3 included in IFF14 for its DSM?

4 MR. TERRY MILES: I believe that's what
5 this particular chart shows and details behind it. I
6 think Mr. Rainkie is prepared to speak to some of the -
7 - some of the specifics if there are any, but in
8 general that's what this chart shows.

9 MR. BOB PETERS: And if we turn to the
10 next page, 128, would you accept that if Manitoba Hydro
11 spent 100 percent of the DSM utility costs, but only
12 achieved 50 percent savings, the Utility would be just
13 only marginally better off in 20 -- in IFF14?

14

15 (BRIEF PAUSE)

16

17 MR. TERRY MILES: I'll -- I'll accept
18 that as being correct, yes.

19 MR. BOB PETERS: And so the -- would
20 the Board be correct in understanding that Manitoba
21 Hydro is better off financially if Manitoba Hydro does
22 not achieve its targeted DSM results?

23 Mr. Rainkie, do you want to assist on
24 that?

25 MR. DARREN RAINKIE: Mr. Peters, I'm

1036

1 trvina to remember this one. I've reviewed so many
2 Information Requests over the last number of months. I
3 -- that's the -- that's the -- certainly what the lines
4 are implving on the calculation here.

5 What I'm not sure is in the other
6 sixteen (16) pages of the IR if there's any additional
7 perspective that I should be aware of.

8 And I can check with Ms. -- Ms.

9 Carriere, who produced this, and just -- I'm not sure
10 if it's critical to your line of cross. I think we
11 could accept it and -- and move on. If there's any
12 other perspectives we need, we could put them on the
13 record at that time.

14 MR. BOB PETERS: And I -- and we can do
15 that through that panel, Mr. Rainkie, I'd be happy with
16 that. But I just wanted to start off because, Mr.
17 Miles, the power resource planning considers DSM,
18 correct?

19 MR. TERRY MILES: It does. It
20 considers a DSM plan, that's correct.

21 MR. BOB PETERS: And then to start with
22 what appears to be, Mr. Rainkie's prepared to accept
23 subject to check, is that Manitoba Hydro is financially
24 better off if Manitoba Hydro does not achieve its
25 targeted results, and it's even better off if it spends

1037

1 50 percent less than what was included in the -- in the
2 IFF.

3 Does that in any way, Mr. Rainkie,
4 surprise the corpor -- surprise you from just a
5 theoretical perspective?

6 MR. DARREN RAINKIE: I'm not sure of
7 the word 'surprise,' Mr. Peters, but it -- it is a --
8 it is a result that is a bit -- not perplexing but is -
9 - it's a result that is something that requires, I
10 think, understanding and analysis of why it's...

11 MR. BOB PETERS: On the face of it, it
12 appears a perverse result. Is that what you're
13 suggesting?

14 MR. DARREN RAINKIE: Well, it's -- it's
15 -- there's also shifting of time frames, Mr. Peters,
16 and I suppose there's the customer's perspective, too,
17 in terms of the savings on the customer side. So this
18 is -- this is the financial calculation scenario that
19 we've been asked to do, but there's the customer
20 benefits from DSM as well, I suppose, to consider.

21 But I'm going to have to refresh my
22 memory on this one, Mr. Peters, and -- and see if there
23 was any other context that we had in preparing this.

24 MR. DAVID CORMIE: Mr. Peters, what
25 would happen, I believe, is that we would -- we would

1038

1 achieve domestic sales to residential customers, for
2 example, at the runoff rate and -- as opposed to the
3 export market. And so that differential -- residential
4 customers are -- are paying an all-in rate.

5 For example, right now you're paying
6 seven and a half (7 1/2) cents a kilowatt hour compared
7 to a three and a half (3 1/2) cent export market. So
8 if you can -- if you fail to incent customers to reduce
9 their demand you're going to get that domestic revenue,
10 and you're going to get the premium that otherwise --
11 from them because otherwise -- compared to the export
12 market.

13 MR. BOB PETERS: What you're telling
14 the panel, Mr. Cormie, is it's no surprise to you when
15 you see these charts because if it was used by a
16 Manitoban residential customer they'd pay seven point
17 four (7.4) cents, and if you were selling -- if you
18 sold it on the opportunity export market you may only
19 be getting three (3) cents.

20 MR. DAVID CORMIE: Yes. And -- and,
21 you know, there's a strong incentive there for us to
22 charge customers separately for their energy as opposed
23 to a bundled-in rate so that you're -- they don't --
24 they don't get this result.

25 MR. BOB PETERS: It also may appear

1039

1 that there's no incentive for Manitoba Hydro to achieve
2 new DSM from a financial perspective.

3 MR. DARREN RAINKIE: Mr. Peters, that -
4 - that's nothing that we've ever talked at a -- at the
5 executive table, that we would not achieve it to
6 achieve better financial results. We're committed to a
7 solid DSM program, as we've had in the past.

8 MR. BOB PETERS: No, and I -- I
9 understand your point, Mr. Rainkie. You know, this
10 morn -- this morning, Mr. Cormie, you and I were
11 chatting and you -- you explained carefully about your
12 existing contracts and the -- the attributes that were
13 either the clean power attributes or the renewable
14 attributes that -- that went with those.

15 Are those tracked by an independent
16 agency?

17 MR. DAVID CORMIE: Yes, they are.
18 We're a member of M-RETS, Midwest Energy Tracking
19 System (sic), I believe that's the -- what the M-RETS
20 acronym stands for. And we're a member of that, and --
21 and all our generation is recorded in that system.

22 MR. BOB PETERS: And as a result of
23 their tracking it, do they provide an annual audit
24 that's sent to the state regulators?

25

1040

1 (BRIEF PAUSE)

2

3 MR. DAVID CORMIE: I'm not -- I'm not
4 sure of that, but it is independent. And whv you would
5 go to them is because they're independent, and they --
6 and they will audit, they -- you know, they -- they
7 will audit that.

8 So I -- I don't know whether they are
9 audited and what -- what kind of reporting they do to -
10 - to show that.

11 MR. BOB PETERS: What's the benefit to
12 Manitoba Hvdro of -- of their doing this independent
13 review and audit?

14 MR. DAVID CORMIE: Well, it -- it -- so
15 that there's no double counting. If I'm selling a
16 megawatt hour of hvdro power to a US utility and I'm
17 also selling it to a Canadian utility and I can just
18 print up certificates on my copving machine, how does
19 the purchaser know that I haven't already sold that to
20 someone else.

21 And so we -- we register all our
22 generation. And -- and those -- those certificates are
23 issues bv the M-RETS and they're -- then -- and then
24 they're trad -- they're -- they're traded. It's like
25 air miles. You can't print up your own air miles.

1 There's only one (1) accounting for that and it's the
2 same kind of system.

3 MR. BOB PETERS: And I don't want to go
4 too far here, Mr. Cormie, but when you're selling these
5 attributes, does Manitoba Hydro's wind generation give
6 rise to attributes as well as its hydro generation?

7 MR. DAVID CORMIE: Yes, they do.

8 MR. BOB PETERS: Are they in a
9 different -- are -- are there more air miles for wind
10 as opposed to hydro or is it the other way around?

11 MR. DAVID CORMIE: Yeah, there are --
12 there are different types of attributes. There's --
13 there's large hydro, there's small hydro, there's wind.
14 And every one of those different attributes attracts a
15 different price.

16 MR. BOB PETERS: And would those prices
17 be publicly available on the -- the website of the --
18 of the agency you've --

19 MR. DAVID CORMIE: No, they -- the --
20 all they're doing is tracking them to ensure that
21 there's no double counting. But we take the -- we take
22 the RECs to the market and we deal with brokers in
23 Ontario, for example, Bullfrog Energy. They will buy
24 Manitoba Hydro's wind energy RECs and then they will
25 sell them to their -- to their retail market.

1042

1 You can have companies like -- you know,
2 like Walmart, for example, they want to be able to say
3 that all their energy that they're buying is renewable.
4 And so they'll go to a -- a market -- a middleman like
5 Bullfrog and they'll say, We want to buy so many RECs
6 and -- and then that company will come to Manitoba
7 Hydro and say, Do you have any RECs for -- to sell, and
8 we will sell them.

9 Last year we made about \$3 million
10 selling the RECs from -- from our -- from our
11 production.

12 MR. BOB PETERS: And -- and REC is the
13 acronym for the Renewal Energy Credit?

14 MR. DAVID CORMIE: Right. And -- and
15 even a station like Pointe du Bois, because it's a
16 small station, it -- it generates RECs, small hydro
17 RECs and we -- we generate income from that. But the
18 large -- the large hydro like Kettle and Long Spruce,
19 they're too big. So there's -- there's not a -- a
20 market for them.

21 MR. BOB PETERS: Where will we -- where
22 would the Board find the relative credits that are
23 available for the different sizes of hydro, or wind, or
24 solar?

25 MR. DAVID CORMIE: There's one (1) --

1043

1 one (1) REC for every megawatt hour of generation from
2 a project. So Ket -- Kettle generating station
3 produces about 7 million megawatt hours a year of
4 energy. It'll have 7 million megawatt hour --
5 megawatts of RECs.

6 So in my inventory I have 30 million
7 RECs and I might be able to sell three (3) -- 3 million
8 of them. So I have a lot of inventory that's going
9 stale and -- and they only have a -- you know, they
10 only have a shelf life of, I think, two (2) or three
11 (3) years, and -- but the -- the midwest tracking
12 system keeps track of those.

13 And -- and when we do sell them the
14 buyer is -- is comfortable that Manitoba Hydro actually
15 did generate that and it hasn't sold that -- that wind
16 REC to -- to another -- to another buyer.

17 MR. BOB PETERS: Would you have just
18 put on the record, Mr. Cormie, the order of magnitude
19 of what carbon pricing may -- may mean to Manitoba
20 Hydro in terms of being able to sell these renewable
21 energy credits?

22 MR. DAVID CORMIE: No, I think this is
23 a different -- this is a -- this is the value of the
24 REC. And then -- you know, that's what the market is
25 willing to pay to be able to say that their energy is

1044

1 renewable. Carbon pricing is -- is a -- is a different
2 -- is a different beast.

3 MR. BOB PETERS: And so when Keevask
4 comes in service the forecast goes up for these RECs?

5 MR. DAVID CORMIE: Under the -- under
6 the Clean Power Plan, what -- what utilities need to be
7 able to show is that they're getting their electricity
8 from a -- a renewable source. And -- and they'll be
9 able to use the REC to demonstrate that. That doesn't
10 mean it has a value, it just means that they're able to
11 then meet their regulatory requirement.

12 And -- and so when we -- when we offer
13 the customer the ability to have those RECs from a
14 particular generating station, and he has a regulatory
15 requirement, say, 30 percent of his retail load has to
16 be served from a renewable source. He can say, Here's
17 my RECs that Manitoba Hydro has registered with the
18 Midwest tracking system and -- and can demonstrate to
19 the regulator.

20 And so this is the -- one (1) of the
21 issues that the -- the EPA is -- is struggling with.
22 How do we track all these things? How do we avoid
23 double-counting? How do we deal with the issues? And,
24 well, maybe Manitoba Hydro's selling us all their good
25 power, and -- and they're generating power with carbon

1045

1 in Manitoba is -- instead. And -- and that's what
2 they're trying to wrestle with when they're deciding
3 what -- how to acknowledge -- how to value energy that's
4 produced outside of the United States.

5 MR. BOB PETERS: In terms of the
6 Keevask project itself, will they'll -- will there be
7 these renewable energy credits available over and above
8 what contractual sales you've made?

9

10 (BRIEF PAUSE)

11

12 MR. DAVID CORMIE: The -- the
13 contractual sales that -- that are attached to Keevask
14 are only a portion of the Keevask production. So there
15 will be -- in -- in most water years, there will be a -
16 - a surplus of Keevask RECs that we will dedicate to
17 serve Manitoba load, or we may be able to take them to
18 the market and supply someone else.

19 MR. BOB PETERS: And some of those
20 contracts have assigned these renewable energy credits
21 to the counterparty?

22 MR. DAVID CORMIE: Yes.

23 MR. BOB PETERS: In terms of the --

24 MS. MARILYN KAPITANY: Mr. Cormie, can
25 -- can you just say why they only have a two (2) or

1046

1 three (3) year shelf life, these credits?

2

3 (BRIEF PAUSE)

4

5 MR. DAVID CORMIE: The air shed,
6 instead of the water shed, is global, and -- and, you
7 know, emissions of -- of carbon into the atmosphere.
8 Whether they're taking place in Manitoba or in
9 Minnesota, it doesn't really matter.

10 And -- and customers really like to know
11 that the electricity that they're buying at this moment
12 is actually matched with electricity that's been
13 generated from a renewable source -- so -- supply at
14 that moment. But we don't track -- perfectly match the
15 production of renewable energy with the -- with the use
16 of electricity. And the customers are happy to say,
17 you know, Last month, I bought 10,000 kilowatt hours of
18 electricity, and last month, I -- I bought credits off
19 a wind farm that produced 10,000 kilowatts. So I know
20 last month that, you know, there's no perfect match,
21 but in the month, that there's a match.

22 And so the -- you know, the -- the first
23 year value -- the credits that are -- that are fresher
24 have more value than credits that are three (3) years
25 old. So the market for three (3) year old credits

1047

1 isn't as strong as it is for the -- the credits that
2 are -- that are fresh.

3 And if -- and ultimately to say, Well,
4 you know what? After three (3) years, it's pretty hard
5 to link my -- my use of electricity today with
6 electricity that Manitoba Hydro produced three (3)
7 years ago. Like, it -- there -- it doesn't match. So
8 it -- it -- so the value is -- deteriorates over time,
9 and at three (3) years, they just say, you know, Those
10 -- those credits are stale. You throw them -- throw
11 them out. They're -- they're no longer good. It's like
12 -- it's like, you know, your fridge. You know, you've
13 got -- ultimately, the celery's no good, and that you --
14 - you get rid of it.

15 So they have a life, and it -- that --
16 and that life is based upon, you know, you should be
17 some kind of real-time tracking. Right now, we track
18 them on a monthly basis. The market lasts a year -- or
19 three (3) years. You can imagine that with computers,
20 you could actually track moment-by-moment, and -- and
21 we -- and we -- and because we -- we record our
22 generation moment-by-moment, we could probably issue a
23 RECs for last hour, the hour before, and I -- but the --
24 - the customers don't need that kind of assurance.
25 They just want to know that last month, or last year, I

1048

1 -- I was essentially carbon-neutral.

2

3 CONTINUED BY MR. BOB PETERS:

4 MR. BOB PETERS: Mr. Cormie, when you
5 sell to US counterparties under your long-term
6 dependable contracts, you've indicated that the
7 renewable energy credits are included in the
8 consideration in -- in that -- in those arrangements?

9 MR. DAVID CORMIE: Yes. It's part of
10 the package that we supply them with.

11 MR. BOB PETERS: And is it then open
12 for the US counterpart to sell the RECs in their
13 market if they -- if they so choose?

14 MR. DAVID CORMIE: Yes, if -- if they -
15 - let's say they need ten thousand (10,000) RECs to
16 meet their regulatory obligation, but they receive
17 twelve thousand (12,000) RECs from Manitoba Hydro.
18 They have two thousand (2,000) that they don't -- they
19 don't need to serve their load, so they'll have two
20 thousand (2,000) RECs that they could take to the
21 market and -- and sell if they chose to.

22 MR. BOB PETERS: And you've indicated
23 that you actually sold last year about \$3 million worth
24 of these renewable energy credits?

25 MR. DAVID CORMIE: That was -- yes.

1049

1 MR. BOB PETERS: And where -- where
2 does Mr. Rainkie record those in the financial
3 statements? Mr. Rainkie...?

4

5 (BRIEF PAUSE)

6

7 MR. DARREN RAINKIE: I believe those
8 are recorded in the export revenue line. Either that
9 or as a net against the fuel and power purchases, Mr. -
10 - Mr. Peters.

11 MR. BOB PETERS: Is this a lucrative
12 area going forward in the forecast, Mr. Rainkie or Mr.
13 Cormie, or is this somewhat de minimis in the terms of
14 the numbers we're talking about?

15 MR. DAVID CORMIE: The market is very
16 soft right now. There's so much new wind being
17 generated that -- for example Ontario essentially got
18 rid of all their coal plants and people are building
19 wind farms, and so the market is being -- being
20 saturated. So I don't expect that we'll come anywhere
21 close to making \$3 million this year. So it's not
22 going to make or break Manitoba Hydro.

23 MR. BOB PETERS: Mr. Miles, in terms of
24 the Power Resource Plan on page 132 of the book of
25 documents, it appears that --

1050

1 MR. DARREN RAINKIE: Sorry, Mr. Peters,
2 sorry, just to tidy up that last question. In our
3 original Application in Tab 5, page 10, we had our
4 forecast of extraprovincial revenue, and you can see
5 renewable energy certificates are in -- in that -- in
6 that table, and they were forecast at, as Mr. Cormie
7 indicated, the -- between a \$2 and \$3 million level
8 between 2014/'15 and '16/'17, so that's where we're
9 recording it. That's the magnitude of it.

10

11 (BRIEF PAUSE)

12

13

14 MR. BOB PETERS: On -- what's on -- on
15 the screen now, Mr. Miles, is a Power Resource Plan
16 showing the system firm winter peak demand and capacity
17 under a scenario that's called, "No new generation,"
18 or, "No new resources"?

19 MR. TERRY MILES: Yes, I see it.

20 MR. BOB PETERS: Okay. And what --
21 what -- by preparing this, what -- what was the
22 Corporation trying to demonstrate to the Board in terms
23 of its Power Resource Plan?

24 MR. TERRY MILES: Well, this particular
25 table we referred to as a -- it's a supply/demand

1051

1 table, so this refers to, as you said, winter peak
2 capacity. This is the second page of the table.
3 There's two (2) pages to this particular table. The
4 first one starts off in 2015/'16 and goes forward.

5 Excuse me. And what these tables do is
6 they put in place the system supply that we have, and
7 our Manitoba -- Manitoba and -- and committed export
8 contracts at sale, so the total demand then that we
9 have on the Manitoba system. And then these tables
10 look at -- they sum those up, and in essence project
11 out where there's deficits in the future.

12 So if we look at these particular
13 tables...

14

15 (BRIEF PAUSE)

16

17 MR. TERRY MILES: So we see the first -
18 - the first block is new power resources. We see
19 Keevask in there. And Keevask is new. It's coming
20 into service in 2019/'20. That's 630 megawatts of
21 capacity associated with Keevask based on its winter
22 peak capacity.

23 There's another proposed contact that's
24 a -- it's a purchase. The next block is base supply of
25 power resources, existing hydro. We talked about

1052

1 existing hydro. This is capacity, so it's 5,067
2 megawatts of existing hydro capacity in the system. It
3 adds the thermal resources at Selkirk and Brandon.
4 Accumulates those, and you'll see total power resources
5 in -- in the line -- line four (4) plus five (5), which
6 is sixty-three-o-one (6,301).

7 Then the next block then looks at our
8 demand. It looks at the demand we have for the
9 Manitoba load and any contracts that we may have. Adds
10 up those numbers. Takes off a portion for reserves.
11 We talked about our planning criteria that has reserves
12 in there, 12 percent planning reserve criteria. That's
13 the six hundred and forty (640) number there. Then we
14 take the difference of the total supply, total
15 resources, and there'll be a system surplus.

16 In 2032/'33 it says there's 49 megawatts
17 of system surplus. So that's essentially what these --
18 this is our first case, with no new resources. It's
19 what we have. It's what's committed. It's what's
20 built. Any assumptions that we have on our assets
21 going forward, any assumptions on sales, et cetera,
22 factor into these tables.

23 And there's one (1) for energy as well,
24 so it looks at dependable energy as well.

25 MR. BOB PETERS: Staying with the

1053

1 capacity chart that's in front of us, Mr. Miles, in the
2 year 2033/'34, there appears to be the beginning of a
3 bit of a shortfall at that point in time by 21
4 megawatts at that time, correct?

5 MR. TERRY MILES: That's correct.

6 MR. BOB PETERS: Now, if we recall what
7 Mr. Cormie told the Board, the Great River diversity
8 arrangement will have expired by this time.

9 Is that correct?

10 MR. TERRY MILES: That's correct.

11 MR. BOB PETERS: And so if Mr. Cormie
12 is successful in renewing the Great River Energy
13 diversity agreement, this shortfall would be wiped out
14 and a -- there would be sur -- a greater -- there'd be
15 a surplus in capacity at that time?

16 MR. TERRY MILES: That's possible,
17 yeah.

18 MR. BOB PETERS: And, Mr. Cormie, it's
19 too early to determine whether that diversity agreement
20 is going to be extended.

21 Is that correct?

22 MR. DAVID CORMIE: Yes, we haven't had
23 any discussions with Great River to talk about
24 extending the diversity past the current contract.

25 MR. BOB PETERS: But Manitoba Hydro may

1054

1 have a reasonable expectation that it can enter into
2 another diversity agreement when the one (1) with Great
3 River expires?

4 MR. DAVID CORMIE: Yeah, I -- I think
5 that as long as they are our summer peaker and we are a
6 winter peaker and there's diversity that -- that that
7 possibility can be discussed.

8 MR. TERRY MILES: I guess, Mr. Peters,
9 I would -- I would say that there's probably a number
10 of options that we can use to fulfill the shortfalls
11 going forward and that's a whole mix of potential
12 supplier options. Diversity agreements are there.
13 Maybe there's diversity agreements with sale options
14 that are there. There's other resources that come in.
15 We talked about DSM before, but realistically going
16 forward, there's potentially other options there that
17 could be used to deal with the surplus.

18 So the GRE diversity agreement is one
19 (1) of them. There are many options that we have.
20 This being the no new resources table basically sets
21 the stage then to build on and assess the value as we
22 go forward of adding whatever resources or alternatives
23 there are to dealing with the shortfalls on an ongoing
24 basis.

25 And these are now quite a ways out in

1055

1 time that we have, 2032/'33. We're now looking sixteen
2 (16)/seventeen (17) years out. It's not that they're
3 lost on our mind, but we do start thinking about how to
4 deal with those, and what options we have, and how
5 those options might change over time. And that's our
6 annual resource planning process that we go through on
7 a regular basis.

8 MR. BOB PETERS: Can you indicate whv
9 Pointe du Bois is -- the -- the rebuild is shown on the
10 schedule?

11 MR. TERRY MILES: I think I've already
12 spoken to Pointe du Bois in my direct evidence as to
13 how -- as the treatment of Pointe du Bois. And there's
14 a bit of history as how we started with Pointe du Bois
15 in the plan back in 2008/2009. We were actively
16 pursuing the rebuild of the power house at Pointe du
17 Bois, along with the rebuild of the spillway that was
18 there. It was actively in our plans.

19 I think in the -- in the NFAT it was Mr.
20 Woiczynski, I think, that had testified around things
21 changing and how Manitoba Hydro had actually changed
22 plans and development plans based on costs, et cetera,
23 and -- and conditions at the time that might cause us
24 to move away from certain plans. Pointe du Bois was
25 one (1) of those.

1056

1 The cost associated with Pointe du Bois
2 had increased and we looked at alternatives to dealina
3 with that. One (1) of them was movina Pointe du Bois
4 out in time. At that time Pointe du Bois was moved out
5 to the 2029 time frame, because we said, You know what,
6 we'll deal with the existing system that's there.
7 We'll see what we can maintain there and see if we
8 can't come up with a -- a more reasonable cost
9 alternative and maintain the existing svstem.

10 Part of Pointe du Bois was around some
11 of the safetv issues. It's an old plant. Some of the
12 structural issues, safetv issues, around managament of
13 the water around that, building the new spillwav dealt
14 with a lot of the water risk that was there, the water
15 management risks that was there. Now, it has a -- a
16 new spillwav so the whole -- and anv issue with dam
17 safetv like that.

18 There's building -- there were building
19 issues being an old building, from electrical safetv as
20 well as other operational safetv things. Again, after
21 looking at what could be done with that, going through
22 now a number of years since 2008/'09 and figuring out
23 whether or not we could extend Point du Bois, operation
24 of the existing plant, the conclusion came out of that
25 that, you know what, we think we can defer it to at

1057

1 least 2039/'40 in this particular plan. And that
2 essentially was the assumption behind IFF14. And we
3 were continuing to do that now.

4 So in the Power Resource Plan in
5 2014/'15 the assumption was that we can maintain
6 operation of existing powerhouse at Pointe du Bois with
7 some replacement of units and with some of the plant
8 upgrades that are required just for the general
9 operation of the structure.

10 And in doing so, we were able to move
11 the plant out to 2039/'40. That's currently under
12 review, and will likely move Pointe du Bois right off
13 the end of this schedule -- the Pointe du Bois rebuild
14 anyways, right off the end of the schedule because
15 we're confident that we can maintain operation of the
16 existing station out in time.

17 MR. BOB PETERS: So what's shown on
18 this schedule, Mr. Miles, is the 87 megawatts of Pointe
19 du Bois as additional resources if it was rebuilt in
20 2039/'40?

21 MR. TERRY MILES: It's shown as
22 additional resources. If the entire -- if -- if the
23 plant -- powerhouse is -- was replaced, the new
24 powerhouse would have sort of the existing powerhouse
25 of about 40 -- 40 megawatts, plus the eighty-seven (87)

1058

1 in -- about 130 megawatt range.

2 MR. BOB PETERS: All right. But as I
3 understood your other -- your second last answer to the
4 panel, the plan is to continue to operate Pointe du
5 Bois as is with new turbines and generators, and not to
6 proceed with the rebuild.

7 MR. TERRY MILES: I'm -- I'm sorry, Mr.
8 Peters, I was -- wasn't paying direct attention to the
9 question. Could you, please, repeat it?

10 MR. BOB PETERS: It wasn't that good of
11 a question.

12 MR. TERRY MILES: All questions are
13 good I understand, so.

14 MR. BOB PETERS: Mr. -- Mr. Miles...

15

16 (BRIEF PAUSE)

17

18 MR. BOB PETERS: Just so that -- that I
19 am clear on the Pointe du Bois, the upshot of it is the
20 rebuild is going to be off this Power Resource Plan
21 because the current decision is it does not need to be
22 rebuilt.

23 Is that correct?

24 MR. TERRY MILES: Yeah, the correct
25 decision is we can maintain the existing facility, and

1059

1 move the decision to rebuild out in time. We may just
2 -- we -- we -- if -- somewhere out in the 2040, 2042
3 time frame, if we go through analysis and determine
4 that it's advantageous to -- to build Pointe du Bois as
5 opposed to do something -- you see there are some
6 deficits out in time, Pointe du Bois would now be
7 considered as another option that we would include
8 along with all our other options going forward.

16 MR. BOB PETERS: No, I -- I -- we -- I
17 think we have your point, and thank you for that.

18

19 (BRIEF PAUSE)

20

21 MR. BOB PETERS: Mr. Miles, as I read I
22 think on page 135 of the book of documents, Manitoba
23 Hydro was saying that there's a possibility of using
24 gas out in 2037/'38 but then when we looked at those
25 sheets back on page 132 there was no gas unit put in

1060

1 for capacity.

2 Have I misunderstood the intention of
3 Hydro in the Resource Plan?

4 MR. TERRY MILES: No. I explained
5 actually on these sheets or the charts we were looking
6 at. Maybe I wasn't clear in my explanation of what
7 those tables show. The no new resources don't include
8 any new resources. It's what we currently have in our
9 system.

10 So a new resource that we would put in
11 in the 2037/'38 time frame, which we'd call our --
12 probably started the persistent deficits in our plan in
13 -- in the IFF we currently have it -- it's -- it's a
14 natural gas unit, as a -- as an option, just to have in
15 our -- in our long-term -- long-term planning, that
16 wouldn't appear in this table, the no new resources
17 table. That would appear in another table where we
18 actually meet the needs of our -- have a table where we
19 show how, if you will, we meet our deficits for energy
20 and supply.

21

22 (BRIEF PAUSE)

23

24 MR. BOB PETERS: Mr. Miles, are you
25 able to update these tables at pages 132, 33, 34 of the

1061

1 Board counsel book of documents to show the Board what
2 it looks like when there is, with Pointe du Bois, as
3 you now plan it, but perhaps a gas turbine brought in
4 when there's persistent shortfall?

5

6 (BRIEF PAUSE)

7

8 MR. TERRY MILES: Yeah, we're -- we can
9 provide that -- we can provide that -- that update. So
10 that would include a gas turbine out in time to 2037.
11 If that is required, we'll be happy to provide that.

12 MR. BOB PETERS: Would you also --
13 would you be considering of using additional imported
14 opportunities, in light of having the new transmission
15 line to the United States?

16 MR. TERRY MILES: No, not at this time.

17 MR. BOB PETERS: What would be the
18 reason for that?

19 MR. TERRY MILES: Because we don't want
20 to go through an analysis to look at what we might do
21 for that. This -- purpose of this power resource plan
22 was really just coming out of NFAT, dealing with the
23 recommendation out of NFAT, implementing the plan that
24 was in place that's there. We haven't done a fulsome
25 analysis going out in time to determine what options we

1062

1 would put in place out in the 2030 time frame, or 2037
2 time frame to meet our ongoing requirements. So
3 that'll be an ongoing process that we go through.

4 At this point in time, we haven't done
5 that exercise, so it would be premature, I think at
6 this point, to look at any of those types of
7 alternatives out in time.

8 MR. BOB PETERS: All right --

9 MR. TERRY MILES: We'll --

10 MR. BOB PETERS: -- that's perhaps a
11 segue, Mr. Miles, into the recommendation from the NFAT
12 was for there to be consideration of an integrated
13 resource plan, and you understand that process is -- is
14 being contemplated?

15 MR. TERRY MILES: That process is
16 underway, actually.

17 MR. BOB PETERS: And can you indic --
18 are you able to --

19 MR. TERRY MILES: I thought I was going
20 to slip that through -- no, just kidding. Sorry about
21 that.

22 So Manitoba Hydro will undertake to
23 provide updated supply/demand tables consistent with
24 the Power Resource Plan that includes the -- or -- or
25 that's consistent with the assumptions in the IFF

1063

1 related to thermal generation.

2 MR. BOB PETERS: And the -- and the con
3 -- assumptions related to -- the newest assumptions
4 related to Pointe du Bois?

5 MR. TERRY MILES: What new assumptions
6 were those?

7 MR. BOB PETERS: In terms of pushing it
8 out.

9 MR. TERRY MILES: To 2049/'50?

10 MR. BOB PETERS: Yeah, Pushing it off
11 the chart is what I think you said.

12 MR. TERRY MILES: We -- we don't have
13 that right now. I would update it for what's
14 consistent with the IFF. We have that readily
15 available.

16 MR. BOB PETERS: Okay. That's fair.
17 That's fair.

18

19 --- UNDERTAKING NO. 14: Manitoba Hydro to provide
20 updated supply/demand
21 tables consistent with the
22 Power Resource Plan
23 consistent with the
24 assumptions in the IFF
25 related to thermal

1064

1 generation

2

3 CONTINUED BY MR. BOB PETERS:

4 MR. BOB PETERS: In -- in terms of the
5 integrated resource planning, Mr. Miles, can you
6 indicate how power planning process has changed as a
7 result of the integrated resource planning process
8 being undertaken?

21 MR. BOB PETERS: I'm not understanding
22 that answer, Mr. Miles, in terms of you're going to the
23 -- you're going to your customers to talk about the
24 planning resource options that Manitoba Hydro is
25 investigating?

1065

1 MR. TERRY MILES: We're going out to
2 Manitobans, maybe is more specific.

3 MR. BOB PETERS: And you're asking them
4 specifically what?

5 MR. TERRY MILES: Consistent with an
6 integrating resource planning process, we're looking at
7 however the customers -- the people that use
8 electricity and our supply in Manitoba, what their
9 perspectives on -- are, and values are towards having
10 those needs met, which I think is a -- is a key part of
11 that.

12 That will be the -- the initial part of
13 it. There'll be more informed stakeholders and others.
14 We expect to get those types of perspectives, and we'll
15 build on that from what we hear back from those
16 stakeholders.

17 MR. BOB PETERS: And is there public
18 sessions that have been advertised?

19 MR. TERRY MILES: They haven't been
20 advertised as of yet, but we do plan to -- we do plan
21 to, in the not-too-distant future, send out requests
22 for those. A survey has been initiated, so a survey
23 that is being managed through -- through Ipsos to
24 obtain statistically significant information from the
25 broad range of Manitobans on -- on -- again, primarily

1066

1 on their values and perspectives on -- and -- and on
2 their electricity supply, resources that they'd be
3 interested in, and -- and...

4 MR. BOB PETERS: Can you lay out a
5 timeline that Manitoba Hydro is contemplating in
6 implementing an Integrated Resource Plan?

7 MR. TERRY MILES: From the planned
8 perspective, our target -- our initial target now is
9 for the end of 2016. So we're looking at having our
10 first, we'll call it public IRP, if you will, produced
11 by 2016. That will take the information that we get
12 from the public engagement process, build on things
13 that we've learned through the -- through the NFAT
14 process, and we'll move towards that as being the first
15 step in going forward.

16 Obviously, it will evolve as we build
17 that -- the capability and -- and look at expectations
18 and input from others, and determine how best to
19 address that, how best to meet that, and -- and how we
20 evolve to -- to incorporate -- incorporate those things.

21 So we're looking at -- at this as a 2016
22 -- end of 2016. We're not looking at major resource
23 planning decisions at that point, given where we are
24 today, I think, with the Power Resource Plan and
25 otherwise. So we're anticipating going through the IRP

1067

1 cycle, initially anyways, without having a decision at
2 the end of it. We're having -- it'll -- it'll help --
3 not a formal, major capital decision, if you will,
4 around new investment and new resources.

5 So this will help us go through that
6 process, test that, get feedback on that, and adjust
7 that as we -- as we go forward, so.

8 MR. BOB PETERS: Can the Board conclude
9 from those answers, Mr. Miles, that nothing related to
10 the power -- to the integrated resource planning
11 process shows up on the Power Resource Plan?

12 MR. TERRY MILES: In -- in what
13 perspective, Mr. Peter?

14 MR. BOB PETERS: Well, I was just
15 saying that -- that whatever information Manitoba Hydro
16 is attempting to gather or learn, it's not -- it hasn't
17 been incorporated into the Power Resource Plan that's
18 before the Board?

19 MR. TERRY MILES: Not specifically the
20 Power Resource Plan before the Board. As I indicated,
21 the purpose was really just to document the planning
22 assumptions, the base planning assumptions for the
23 2014/'15 planning year and -- and a development
24 sequence that would support ongoing planning. It
25 wasn't to do a major review of all options and

1068

1 alternatives.

2 The Resource Plan -- our next resource
3 plan process -- our ongoing resource planning process,
4 much like the one we have, will look at those
5 alternatives with the additional -- with the addition
6 of the input from external perspectives.

7 MR. BOB PETERS: And the current Power
8 Resource Plan before the Board, I think, is dated
9 September 18th of 2014. And you've indicated the IRP
10 will be perhaps ready in the fall of 2016.

11 Will there be an intermediate Power
12 Resource Plan done a year from now, or later this year?

13 MR. TERRY MILES: Not specifically a
14 Power Resource Plan. I think on an ongoing basis we
15 have a need to support our corporate processes, so the
16 IFF process. If we have some intermediate analysis
17 that's required to do that, to support those, we would.
18 But we -- we wouldn't consider that a Power Resource
19 Plan like we have here. That would be more an internal
20 -- internal report to support those -- those processes,
21 if you will.

22

23 (BRIEF PAUSE)

24

25 MR. TERRY MILES: In -- in essence,

1069

1 we're envisioning a -- you know, a two (2) to four (4)
2 year cycle around the IRP, recognizing that as we build
3 it we expect there to be additional processes around
4 it, and take additional time to go through processes.
5 Potentially some expanded analysis. Maybe a broader
6 consideration and documentation of those aspects. So
7 supply side, demand-side, sort of the major
8 transmission associated with those. And a more fulsome
9 consideration of -- of the alternative options, like
10 the DSM-type options that are there.

11 However, we'll have to see really where
12 that goes, as well, in the future and how that's
13 incorporated, as well.

14 MR. BOB PETERS: But in the fall of
15 2016, when you've done the first version of the -- of
16 the Integrated Resource Plan, you're not expecting
17 there to be concrete decisions in that plan as to next
18 generation? MR. TERRY MILES: At -- at this point I
19 don't believe so. You know, I mean, anything can
20 happen. Things can change between now and then, but --
21 but we're approaching it now that that's -- we're not
22 at a major decision point at that -- at that point,
23 from the IRP process.

24

25 (BRIEF PAUSE)

1070

1 MR. BOB PETERS: And while you're doing
2 that, Mr. Miles, I had understood from reading the
3 filing that Mr. Cormie was busy trying to work on the
4 business case for Conawapa.

5 Mr. Cormie, you still are in contact
6 with prospective purchasers of Manitoba Hydro's energy?

7 MR. DAVID CORMIE: Yes, Mr. Peters.

8 MR. BOB PETERS: And in respect of
9 possible generation from Conawapa?

10 MR. DAVID CORMIE: Yes, Mr. Peters.

11 MR. BOB PETERS: And when, Mr. Cormie,
12 do you believe you'll be in a position to put forward a
13 business case in respect of Conawapa?

14

15 (BRIEF PAUSE)

16

17 MR. DAVID CORMIE: It -- it won't be
18 for a -- a couple of years, Mr. Peters.

19 MR. BOB PETERS: That's --

20 MR. DAVID CORMIE: And -- and the
21 reason I say --

22 MR. BOB PETERS: You're not putting an
23 end date on it is what you're telling me?

24 MR. DAVID CORMIE: Yeah. The reason
25 I'm saying that is our -- our market for a large sale,

1071

1 in addition to what we've already committed to
2 Wisconsin, is -- is in the United States. And -- and
3 until the EPA clarifies what the rules are under the
4 Clean Power Plan, and until the states say what their
5 implementation plans are going to be, utilities don't
6 know what to do. They need to know what the rules are.

7 And so to have a large US utility say
8 today that, We're going to commit to -- to a large
9 power purchase from Manitoba Hydro, they can't, because
10 the ground is shifting. And so, you know, we can have
11 discussions, but no one is going to commit to a term
12 sheet with Manitoba Hydro at -- at this point until
13 that -- that clarity is received.

14 And there is -- there is demand in
15 Saskatchewan and we're working with them, but that
16 demand isn't sufficient at this point to trigger
17 Conawapa. So it -- it will -- it will take us several
18 years to -- to have some clarity so that a -- a US
19 customer can say, You know, this is -- this is the
20 right thing for our customers; it's consistent with --
21 with the regulatory requirements of the federal
22 government and the state governments. And only then
23 would -- would they -- would they commit to signing
24 some agreement with Manitoba Hydro.

25 MR. BOB PETERS: It sounds like for all

1072

1 of those things to settle down, Mr. Cormie, it takes us
2 out to closer to 2020 or beyond?

3 MR. DAVID CORMIE: What -- what's
4 happening in addition to that though, Mr. Peters, is
5 that there's a huge amount of coal generation in
6 Minnesota that has to retire. And so when you look at
7 the supply and demand situation for the State of
8 Minnesota by 2030, it becomes very precarious. The
9 nuclear plants are reaching the end of their life.
10 Most of the coal is shut down. You can't run a state
11 electricity system on wind and solar power. It won't
12 work.

13 You need base load resources. And so,
14 you know, that's where Manitoba Hydro brings value to
15 the table. And if we wait till 2020, we can't meet the
16 need in 2030. It takes ten (10) years to build
17 Conawapa. It will take maybe five (5) years to get
18 through the regulatory process, to go through the
19 environmental things, to come before a panel such as
20 this to do the business case of Manitoba.

21 So, you know, as I said, a couple years.
22 If we don't have something in a couple years, it --
23 Conawapa won't be triggered by something in the United
24 States. It -- it essentially will fall off the table
25 as an opportunity to solve the issues that the State of

1073

1 Minnesota has.

2 It doesn't mean that Conawapa won't be -
3 - be built, but it'll be built based on the need in
4 Manitoba. That's something like Mr. Miles said, out in
5 2037 we're starting to run short of -- of resources, so
6 the question is: Do we build it for Manitoba? Not
7 because we're building it as -- based on a business
8 case that I've been able to put together with some --
9 some export customers.

10 2020 is too late. And we've told our
11 customers, and the regulators, and the politicians, the
12 United States, if you think that Manitoba Hydro will be
13 part of the solution to meeting the EPA requirements in
14 2030, you need to tell us now, because it's going to
15 take many years for us to prepare and to build that
16 plant, so that by the time you get to 2030, or 2031, or
17 2032, that we can help you.

18 MR. BOB PETERS: Mr. Cormie, has
19 Manitoba Hydro ruled out Conawapa as a merchant plant?

20 MR. DAVID CORMIE: Well, that -- that's
21 what I've been talking about. Building a business case
22 so that the risks of -- of Conawapa aren't borne -- of
23 Conawapa advancement aren't borne by the domestic
24 customers. There has to be enough of -- of firm
25 commitments so that, you know, if the risk of building

1074

1 the plant isn't -- isn't borne by -- by the -- the
2 costs of -- of advancing Conawapa for ten (10) years is
3 fully borne by the people who are buying the power.

4 And -- and fundamentally, that was the
5 problem with the case that -- that was presented at the
6 NFAT, is that we were only halfway through that process
7 of -- of bringing the customers to the table. And
8 that's why we weren't asking for approval of Conawapa.
9 We weren't prepared to reach a segment. We're -- we're
10 going down that path.

11 And we would only come to the -- to the
12 Board when the business case was robust and that --
13 that the uncommitted portion of the output of the plant
14 wasn't -- the risk of that weren't being borne by the
15 customers. So we're -- we're working on that, but
16 it'll take several years for it to happen.

17 MR. BOB PETERS: Thank you. Turning to
18 page 160 of the book of documents, Exhibit PUB-20,
19 there's a number of listings here of export contracts
20 after 2015, Mr. Cormie and Mr. Miles, that are
21 considered dependable from an energy perspective. Page
22 160. Thank you.

23 I'm going to ask if there could be an
24 undertaking from you gentlemen to quantify the
25 dependable energy required under each of the listed

1075

1 contracts for two (2) specific years, those being
2 2016/'17 as well as 2022/'23. And once you calculate
3 those, if you could reconcile them back to page 133 of
4 the book of documents, to the Power Resource Plan, Mr.
5 Miles, where the contracted energy -- the contracted
6 export energy is shown for 2016/'17 as well as for
7 '22/'23.

8 Is that something you can provide the
9 Board?

10 MR. DAVID CORMIE: Well, that -- that's
11 what that -- that -- that's what that supply and demand
12 table shows, Mr. Peters, what all the dependable energy
13 contracts come to.

14 MR. BOB PETERS: And -- and I'm
15 wondering if you can provide it to us by contract?

16 MR. DAVID CORMIE: No, we can't. We
17 can give you the total, but we can't give you the
18 individuals.

19 MR. BOB PETERS: But you're telling the
20 Board what the product is?

21 MR. DAVID CORMIE: Well, but we're not
22 telling you what the number is. We're telling you the
23 product. And -- but we can't -- we can't give you the
24 actual quantities. I'm sorry.

25 MR. BOB PETERS: There's certainly been

1076

1 no undertaking. And -- and I understand that, but I --
2 I'm not sure how far I can go here, Mr. Cormie, but is
3 it not just a mathematical exercise to take the product
4 and -- and do the math?

5 MR. DAVID CORMIE: We -- and -- and
6 we've done the math and that's -- that's what the --
7 the total is what's shown on the table. And I can
8 vouch that that number is correct.

9

10 (BRIEF PAUSE)

11

12 MR. BOB PETERS: So you're saving that
13 the energy total from the contracts listed up on page
14 160 will total what it shows in the bottom of the Power
15 Resource Plan?

16 MR. DAVID CORMIE: That's -- they will,
17 yes.

18 MR. BOB PETERS: And if I couldn't get
19 and duplicate those numbers, it's because I am doing
20 the math wrong, or there's other factors at play that
21 might be more than mathematics?

22 MR. DAVID CORMIE: Yes, you have to
23 consider our must offer obligations. You have to
24 understand all the -- the details of that. And
25 unfortunately, we're -- we -- because of

1077

1 confidentiality, we -- we cannot provide that -- those
2 numbers contract -- by contract.

3

4 (BRIEF PAUSE)

5

6 MR. BOB PETERS: Manitoba Hydro does
7 have to report those numbers through to NEB though,
8 does it not?

9 MR. DAVID CORMIE: We only report the
10 deliveries after the fact, Mr. Peters. Remember,
11 deliveries are different than our sale obligations.

12 MR. BOB PETERS: What you're telling
13 the Board is that deliveries are the physical electrons
14 that have moved. The sales will also add to that the
15 financial considerations that are between the
16 counterparties?

17 MR. DAVID CORMIE: That's right. So we
18 -- we can -- we can supply the energy from anywhere,
19 and to the extent that we don't supply it from
20 Manitoba, it doesn't get reported to the NEB.

21 MR. BOB PETERS: Are you showing sales
22 or deliveries in the Power Resource Plan?

23 MR. DAVID CORMIE: Those will be sales.

24 MR. BOB PETERS: Thank you.

25

1078

1 (BRIEF PAUSE)

2

3 MR. BOB PETERS: When you're seeking
4 NEB approval, Mr. Cormie, for your extra-provincial --
5 or your US sales, does the NEB quantify the volumes
6 under your contract?

7 MR. DAVID CORMIE: Yes. What -- what
8 we provide the NEB is, essentially, the supply and
9 demand tables that Mr. Miles prepares to show that
10 there are surplus resources available in Canada to
11 serve our sale obligations. And so we will show that
12 for an export sale contract, there will be a certain
13 energy quantity required, and we have to demonstrate
14 that -- that Canada has sufficient surplus in order to
15 deliver that. Canada, I mean -- I mean Mani --
16 Manitoba has to have sufficient, so that Manitoba
17 customers aren't put at risk because of a -- a
18 commitment.

19

20 (BRIEF PAUSE)

21

22 MR. BOB PETERS: When we look, Mr.
23 Cormie...

24 MR. DAVID CORMIE: Mr. Peters, maybe I
25 can help for your -- help you out, here. We did file

1079

1 this table in confidence with the energy quantities
2 filed. So I -- I believe you already have that to
3 answer, you know, if you look in the -- in -- in the
4 file -- the responses that are in there, filed
5 confidentially.

6 MR. BOB PETERS: Your answers have
7 assisted us, Mr. Cormie. Thank you.

8 And on 161, which might be on the
9 screen, 161, Manitoba Hydro's dependable energy, then,
10 Mr. Cormie, is -- is expected to serve both the five
11 (5) by sixteen (16) weekday sales, the two (2) by
12 sixteen (16) weekend sales, and the seven (7) by four
13 (4) summer export obligations?

14 Page 160 would have been a better page
15 for me to draw your attention to.

16 MR. DAVID CORMIE: Mr. Peters, if
17 you'll remember back to NFAT, we talked about Manitoba
18 Hydro having adverse water rights, and under certain
19 water conditions, we haven't -- have the right to
20 reduce the deliveries from it -- seven (7) days a week
21 down to five (5) days a week. So that weekend energy
22 isn't dependable energy. We have the right not to
23 deliver that. So the -- the customer has the
24 obligation to buy it if -- if we have it available.

25 And so we would show that on this table

1080

1 as sur -- as surplus enerav. Now, it may be surplus
2 firm enerav, but it's not -- we don't -- for the
3 purposes of planning. Mr. -- Mr. Miles will not plan
4 power resources in order to deliver that. It's --
5 because we're not required to -- under all conditions
6 to supply that.

7 And so you'll see that under -- under
8 several of the contracts that we can count on the
9 revenues from that sale because it's -- it's weekend
10 enerav, but -- but we have the right not to deliver it
11 so it -- it doesn't show up in our dependable enerav
12 calculations. So you have to know -- you have to
13 decide which deliveries we -- are from dependable
14 enerav, and which deliveries are -- are from surpluses.

15 And we -- we expect in -- in the vast
16 majority of years to be able to serve those weekend
17 obligations with surplus enerav. And -- and if we
18 don't have the surplus enerav, we have the right to
19 curtail and back down to a five (5) day of the week
20 delivery.

21 MR. BOB PETERS: On page 133 then on
22 that thought, Mr. Cormie and Mr. Miles, what you're
23 telling the Board is, at the bottom of the page about
24 four (4) lines off the bottom, Manitoba Hydro's
25 contract enerav obligations can be reduced in the

1 winter by invoking the adverse water clause?

2 MR. DAVID CORMIE: Yes. The -- the
3 numbers that are shown in the -- in the supply and
4 demand tables, that contracted energy is the energy
5 that we have no choice except to deliver under
6 contract, even under dependable flow conditions. So
7 this is the -- this is -- this is the minimum amount of
8 energy that we have to have on the system. We may have
9 -- if we have more than that, we can sell it under the
10 contract on the weekend at the contract price, but it's
11 -- Manitoba has that option. So this -- this supply
12 and demand table only includes the -- the energy that
13 we must sell.

14 MR. BOB PETERS: Can you explain to the
15 Board how the adverse water condition values were
16 determined?

17 MR. DAVID CORMIE: They will be
18 determined at the time based upon Manitoba Hydro's
19 forecast of whether we have surplus or not. And -- and
20 somebody, and it won't be me, will be sitting down and
21 saying, We're in a drought, we need that power to stay
22 in Manitoba, and we will declare adverse water. And --
23 and we'll reduce deliveries down by the -- by the
24 necessary amount.

25 The economics of doing that would

1082

1 suggest though that we wouldn't because the price is so
2 attractive on the week -- for weekend energy that you -
3 - we'd just go to the market, buy it at spot market
4 prices, and continue to sell at the firm price because
5 there's such a spread between the contracted price and
6 the weekend energy.

7 So, yes, we have the right. Yes, we
8 don't have to build for it. But will we do it?
9 Probably not because you're getting a premium price
10 under a long-term forward contract, and because we have
11 the option of buying energy in the market we'll buy the
12 energy in the market and -- and grab the spread, and --
13 and we'll be better off for that.

14 MR. BOB PETERS: But, Mr. Cormie, shown
15 on the screen under adverse water, if we follow along
16 on that line there's 370 megawatts listed there,
17 correct?

18 MR. DAVID CORMIE: Yeah, that's 370
19 gigawatt hours.

20 MR. BOB PETERS: I'm sorry, gigawatt
21 hour. How was that calculated? How was that -- how
22 was that number determined? I couldn't determine that
23 from your last answer.

24 MR. DAVID CORMIE: Well, that is the --
25 under that -- under that contract, that is the amount

1083

1 that we can reduce one (1) of our contracts by in order
2 to fulfill our obligations under that contract. So
3 you'll see in -- if you -- I can't see the year --

4 MR. BOB PETERS: Do you want to see
5 what year it is?

6 MR. DAVID CORMIE: Yeah, if you go to
7 say '22, '23, '24, okay, and you'll see the number goes
8 up to five hundred and twelve (512)?

9 MR. BOB PETERS: Correct.

10 MR. DAVID CORMIE: And it -- and it
11 fluctuates. There's a four eighty-nine (489), five
12 hundred and twelve (512), that's the amount that we
13 have to declare under the adverse water clause in order
14 to be able to meet our obligation under the sale. So
15 we don't -- even though we have the right to call in
16 adverse water, we only declare adverse water to the
17 extent that we need to in order to continue to serve
18 the sale.

19 So we -- we don't consider that's a
20 resource that we can sell to somebody else because
21 it's -- it's a contractual right we have to reduce
22 deliveries. So you don't want to be able to say to one
23 customer, I'm not selling to you but -- because I'm --
24 I've sold it to somebody else. So that's why that
25 number fluctuates, because it depends on -- on how --

1084

1 how short we are. And to the extent that we're short
2 in Manitoba, we will then tell the customer, We're
3 short in Manitoba, and we're going to curtail our sales
4 to you under this adverse water clause. But we're not
5 -- we're not short in order to sell Saskatchewan, in
6 order to, you know, so we're not -- we're not playing
7 one (1) customer off the other. That's why that number
8 isn't constant.

9 MR. BOB PETERS: Does that mean that
10 you can indicate which contracts are included in that
11 370 megawatt hours, or is that CSI? Well, we can pick
12 the five-twelve (512) number as well.

13

14 (BRIEF PAUSE)

15

16 MR. DAVID CORMIE: I -- I believe that
17 there is only one (1) contract that has that in there,
18 but I -- I -- I'm -- I -- I prefer not to -- to
19 actually say what it is.

20 MR. BOB PETERS: All right. Thank you.

21 Can you tell the Board, Mr. Cormie, what's Manitoba
22 Hydro's understanding of the FERC/MISO rule on
23 accredited capacity?

24 MR. DAVID CORMIE: Yes. MISO indicated
25 to Manitoba Hydro last year that they were going to

1085

1 change their tariff, such that external resources would
2 be subject to additional scrutiny. And -- and they did
3 change their tariff last summer, and that tariff change
4 was approved by the FERC last fall.

5 And what it means now is that on a go-
6 forward basis, so all the contracts that we have today,
7 where we have the right to curtail export deliveries in
8 -- in an emergency in Manitoba, we should -- we can
9 still do that.

10 But for new contracts that are signed
11 after last April, April 2014, we can -- if there is a
12 simultaneous emergency be -- in MISO, and at the same
13 time, there's the same emergency in Manitoba, so both
14 regions have to be in emergency, that we can no longer
15 just cut off the United States and preserve the
16 capacity in -- in Manitoba. We have to share the --
17 the curtailments.

18 So -- so our -- our new contracts,
19 anything that we would sign in the United States on a
20 go-forward basis, we would have to share the emergency,
21 whereas today, our existing contract's saying, you
22 know, If it's an emergency in Manitoba, we don't care
23 whether there's an emergency in the United States. We
24 -- we have to we -- we can -- we can curtail the
25 exports.

1086

1 So that -- that's what that,
2 essentially, the tariff does. The new -- the new
3 tariff. And as I said, none of the contracts that --
4 that we have negotiated to date have been affected by
5 that.

6 Now, the likelihood that the United
7 States would be in emergency at the same time that
8 Manitoba's in emergency is very, very low. And so the
9 probability that there will -- that -- that this will
10 actually happen is -- is extreme -- is extremely low.
11 But there is -- there is that additional obligation on
12 -- on Manitoba Hydro.

13 MR. BOB PETERS: Has Manitoba Hydro
14 signed a new contract since April of 2014 where that
15 would be a new requirement?

16

17 (BRIEF PAUSE)

18

19 MR. DAVID CORMIE: We haven't sold any
20 additional power under long-term firm contracts with
21 that condition in it. But we do participate in the
22 MISO -- ZRC's Zone Resource Credit market, and -- and
23 those capacity sales would have that -- would be
24 subject to that -- to that risk. The quantity of those
25 ZRC sales are -- is quite small -- small, though.

1087

1 MR. BOB PETERS: And what -- what is
2 defined as an emergency?

3 MR. DAVID CORMIE: Of lights out.

4 MR. BOB PETERS: If we can bring that
5 back to -- to Manitoba, if we're experiencing --
6 experiencing a drought, and Manitoba -- and Minnesota's
7 experiencing a drought, does that necessarily mean we
8 have to now pro rata any new contracts -- pro rata
9 ration energy under the new contracts?

10 MR. DAVID CORMIE: No, I don't think
11 drought is -- is considered to be a -- an emergency
12 where this would apply. This -- this would apply in a
13 situation where the whole North American grid is about
14 to go down. And it's -- it is an emergency situation
15 similar to the -- the blackouts that -- that have --
16 have experienced in the past.

17 And -- and load needs to be curtailed to
18 maintain the stability of the system. And -- and so
19 not only does the -- you know, the emergency have to
20 happen in the United States, it also has to happen in -
21 - in Manitoba. And contractually what we -- what we're
22 now agreeing to is that if there is this -- if -- if
23 it's a lights out everywhere situation, we're going to
24 -- we're going to share the pain and Manitoba can't
25 selfishly call back the capacity that it's sold to MISO

1088

1 and MISO is counting on without -- with no consequence.
2 We now have to say, we'll -- we will -- we will bear a
3 pro rata share of -- of the interruption.

4 And as I said, Mr. Peters, this is
5 probably more a contractual thing than a practical
6 thing, because the operators of the power system -- the
7 power system is going down. It's going to go down in
8 the next five (5) minutes. They're not going to open
9 their contracts and say -- and so our -- our operators
10 are in contact with the MISO operators and they're
11 going to do whatever's necessary to maintain the
12 stability of the electrical grid.

13 And legally we'll have to do this, but
14 this is probably something we want to do anyway,
15 because it's not in our interest for there to be a
16 blackout in Manitoba or in MISO or anywhere. And --
17 and if it meant that we had to curtail load, a 100
18 megawatts of load in order to avoid us collapsing, we -
19 - I think we would do that out -- just out of -- out of
20 necessity and prudence.

21 And contractually will we be worrying
22 about that? No, I think we're going to do the right
23 thing. And I think we would do that today already,
24 because it's in nobody's interest to have -- have the -
25 - have the electricity to go off.

1089

1 MR. BOB PETERS: I understand from your
2 answers that existing contracts are essentially grandfathered,
3 or allowed to continue under the old tariff
4 rules?

5 MR. DAVID CORMIE: Yes.

6 MR. BOB PETERS: And --

7 MR. DAVID CORMIE: The -- the other
8 contracts only -- only looked at emergencies in
9 Manitoba if we had an emergency we had to curtail. And
10 generally that's -- that's okay, because at the same
11 time that we have an emergency MISO is not in an
12 emergency. And they're saving. Yeah, we've got our
13 reserves. We can pick it up.

14 This is -- this deals with the specific
15 instance of simultaneous emergencies. The world is
16 collapsing. We need to -- you -- you need to share in
17 that pain. You can't -- you can't just say. We're
18 going to protect Manitoba and -- and not deliver on the
19 capacity that we're contracting for.

20 MR. BOB PETERS: Mr. Chairman, if it
21 pleases the Board, I'd like to push through to probably
22 12:15, because these gentlemen are responsible for a
23 couple of other areas of questioning that I was going
24 to defer to the afternoon, but I -- I could do it and
25 then they would have a more enjoyable -- enjoyable

1090

1 afternoon if they probably weren't here.

2 So if that suits the panel?

3 THE CHAIRPERSON: I think that makes
4 sense.

5 MR. BOB PETERS: All right.

6

7 CONTINUED BY MR. BOB PETERS:

8 MR. BOB PETERS: And, Mr. Cormie, you
9 can confirm that this -- what we've been talking about
10 in terms of the accredited capacity change in rules has
11 no impact then on your adverse water or other load
12 shedding strategies?

13 MR. DAVID CORMIE: No, they're -- these
14 -- those are -- those are different issues.

15 MR. BOB PETERS: And on page 170, Mr.
16 Miles, there appears in the middle of the page,
17 conveniently not highlighted, a line -- a line item
18 called, "Hydro Adjustment."

19 Can you explain to the panel briefly
20 what that means?

21 MR. TERRY MILES: Sure. The -- they
22 hydro adjustment essentially refer to -- it applies
23 basically to our diversity agreements. And because we
24 exchange capacity winter for summer, we're able to
25 generate more efficiently in the summer because of no

1091

1 ice losses, no effects due to -- primarily effects due
2 to ice and efficiency, as well as we have to transfer
3 energy from the north to the south.

4 Being able to import in the wintertime
5 into the southern Manitoba, that actually ends up being
6 a very efficient operation for us. So we transfer
7 generation, if you will, to our customers in the south
8 if they request it under the diversity in the
9 summertime when we can actually generate more
10 effectively because of no ice conditions and then not
11 having to incur the additional losses, if you will,
12 north to south.

13 And then import in the wintertime when
14 we have inefficiencies due to ice, et cetera, and head
15 losses due to ice on our system. That -- that's in
16 essence what -- what happens. So we put the adjustment
17 in place, because from a -- an energy value in southern
18 Manitoba, it's a net benefit to Manitoba Hydro to have
19 the diversity agreements, from an energy perspective.

20 MR. BOB PETERS: All right. Thank you.
21 Turning to page 176, would the Board be correct in
22 understanding that the historical drought from 1929/'30
23 to 1943/'44 would result in about a \$4 billion
24 reduction in net revenues to the Corporation?

25

1092

1 (BRIEF PAUSE)

2

3 MR. TERRY MILES: And that's the
4 fourteen (14) -- I guess a fourteen (14) year drought -
5 - I think that is what that is? I -- I believe that's
6 -- I believe that's correct.

7 MR. BOB PETERS: And on the next page,
8 177, it -- it's considered a very low likelihood. Is
9 there a probability Manitoba Hydro attaches to that?

10 MR. TERRY MILES: I don't believe we've
11 calculated a probability for that, no.

12 MR. BOB PETERS: If there's a low
13 probability I'm going to win the lottery, but does
14 Manitoba Hydro have a -- a finer point on it in terms
15 of how real that is in light of the hydrology and the
16 information that we now have?

17 MR. DAVID CORMIE: I guess -- I guess,
18 Mr. Peters, whether we assign a probability or not,
19 what we -- what -- the way we plan the finances of the
20 Company is we assume that it -- it could happen,
21 because we assume that the historical river flows are
22 an indicator of what can happen in the future.

23 And there are, essentially, a hundred
24 and two (102) stream flow possibilities going out into
25 the future, starting in any particular year in the

1093

1 historical record. And -- and this event occurred in
2 the past, so we've built it into our -- into our
3 financial planning, assuming that it will -- it could
4 occur in the future.

5 So if there is one (1) stream flow
6 sequence that starts, the -- there's, like, one (1) in
7 a hundred and two (102) chance that that could start
8 this year, for example. And if you'd -- if -- if you,
9 over the next hundred and two (102) years, we're
10 assuming it has -- it will happen at least once. But
11 we all know that the future will be different than the
12 past, and it -- it could rec -- it could occur more
13 frequently or less frequently.

14 MR. BOB PETERS: On page 181 of the
15 book of documents, in terms of the risks of the
16 Corporation, Manitoba Hydro has quantified the five (5)
17 year and seven (7) year drought analysis as a reduction
18 of net -- I'm sorry, as a reduction of net revenue of
19 about 1.4 billion, and 2.1 billion, respectively, not
20 including the financing costs?

21 MR. DAVID CORMIE: Yes.

22 MR. BOB PETERS: And if Manitoba Hydro
23 had to add the financing costs to that, can you
24 indicate what the losses would be, including the
25 financing costs?

1094

1 MR. TERRY MILES: I believe that's
2 referenced in Tab 9. I'd have to check that, right at
3 the end of Tab 9, I believe you have those numbers.
4 And for the 1.5 billion, it goes up to one point seven
5 (1.7). For the...

6 MR. BOB PETERS: So the seven (7) year
7 drought at 2.1 billion, what's the financing bring it
8 up to?

9 MR. TERRY MILES: You know, I don't
10 have that specifically in here. I would expect it
11 would be more than the .2 billion, but I -- I can't say
12 off the top of the head.

13 MR. BOB PETERS: Mr. Miles, can you
14 just undertake to provide that seven (7) year drought
15 analysis with the finance costs included?

16 MR. TERRY MILES: That, I can do.

17 MR. BOB PETERS: Thank you.

18

19 --- UNDERTAKING NO. 15: Manitoba Hydro to provide
20 the seven (7) year drought
21 analysis with the finance
22 costs included

23

24 CONTINUED BY MR. BOB PETERS:

25 MR. BOB PETERS: Mr. Cormie, I think

1095

1 your president was supposed to warn you that we were
2 going to have questions related to the Great Northern
3 Transmission Line, for you to explain that, and we --
4 we would like to come to some succinct understanding as
5 to what the new arrangement is for the Great Northern
6 Transmission Line, and -- and we have seen the
7 Coalition Manitoba Hydro First Round Question 15(a),
8 but are you able to summarize that for the panel?

9

10 (BRIEF PAUSE)

11

12 MR. DAVID CORMIE: I don't have -- oh,
13 here it is.

14

15 (BRIEF PAUSE)

16

17 MR. DAVID CORMIE: Yeah, I -- I
18 believe, Mr. Peters, that that fifteen eighty (1.580)
19 just deals with the accounting treatment of the -- of
20 the project.

21 Manitoba Hydro is in a tenant-in-common
22 relationship with Minnesota Power with regard to the
23 Great Northern Transmission Line, and it's actually
24 Manitoba Hydro's subsidiary, 6690271. And during the
25 development period of the line prior to construction,

1096

1 we're sharing essentially equally in the costs of -- of
2 the development, the planning and the regulatory
3 process.

4 Our plans are, once construction
5 commence, is that we will assign to Minnesota Power 100
6 percent of the ownership of the Great Northern
7 Transmission Line. And -- and we're doing that
8 essentially because the US income tax risk to Manitoba
9 Hydro's entire activities is just too much for Manitoba
10 Hydro to tolerate because it could put us over the
11 tipping point where all our export activities are
12 subject to US income taxes.

13 We've looked at the alternatives of
14 finding someone else to -- to take ownership. There is
15 -- to date, there has -- none of the proposals we've
16 looked at result in the Manitoba Hydro ratepayer being
17 better off than having Manitoba Hydro just assign our
18 ownership position to Minnesota Power.

19 And you have to remember that ownership
20 doesn't give you the right to use transmission line,
21 and so the only benefit of ownership is that we would
22 be able to own it. We have the rights to use the line,
23 regardless of who owns it, and we -- and those rights
24 are granted under the MISO tariff. And we are in the
25 process of negotiating contractual con -- or contracts

1097

1 with Minnesota Power that, regardless of who owns it,
2 we will have the rights, and the rights to roll over in
3 perpetuity whether the MISO tariff changes or not.

4 So ownership only attracts risks, and --
5 and there -- there have been discussions with certain
6 companies about -- to the extent that they had lower
7 debt financing costs than Manitoba Hydro, it could have
8 been attractive for that company to own the line, and
9 then -- and then Manitoba Hydro would pay the cost --
10 because we have the right to use it, so we need to pay
11 for the cost. And that would result in a -- make it
12 financially attractive for them to invest -- earn on
13 that, but still result in the -- the ratepayer and
14 Manitoba Hydro paying less than what -- than -- than
15 maintaining -- than holding ownership.

16 We looked at about a dozen different
17 ownership models and development models. And some of
18 them were more attractive than the other. But we
19 always had the concern that this would push us over the
20 tipping point with regard to having to pay income tax
21 on all our US export sales.

22 And -- and I know Mr. Rainkie was
23 hopping up and down when I suggested that we might want
24 to consider something more complex. We cannot afford
25 to pay income tax on our \$400 million of US income. It

1098

1 -- it -- and pay that year after year. That -- that
2 risk is just -- is just too great.

3 And so although we're still open to
4 having discussions with another party besides Minnesota
5 Power to taking on the ownership, and I -- I had a
6 meeting a few weeks ago with -- with a developer who
7 was -- thought that the might be interested. I think
8 that by the time we get to construction in 2017 we'll
9 be -- we'll be going down the path that I described of
10 just turning the ownership of the asset over to
11 Minnesota Power.

12 We maintain the rights to use it.
13 Nobody can move the line. It -- the transmission line
14 is immovable, so it's not that -- if we -- by not
15 owning it somebody's going to move it. It's going to
16 start in Manitoba, and it's going to end in Duluth. We
17 -- we control the Canadian portion, and we own it. We
18 have the -- we -- we have the rights under the tariff.
19 And -- and it's not that somebody different can use the
20 US portion, and then -- and Manitoba Hydro controls the
21 Canadian portion. So we control the line essentially
22 by holding the northern end of the line. And because
23 our very attractive -- our -- our ability to borrow the
24 money to build the line at our cost of debt, nobody can
25 compete with that. There just doesn't seem to be

1099

1 another model where Manitoba ratepayers would be better
2 off.

3 So that's the issue of -- of ownership.
4 We are going to pay the costs of having the line above
5 -- the line -- the 500 kV line above what Minnesota
6 Power required to serve their export sales. So they're
7 going to pay their share up to the 250 megawatts and
8 then we're going to pay for more -- the additional costs
9 above and beyond that.

10 The -- the negotiations with Minnesota
11 Power became complicated because our electrical
12 engineers came along one (1) day and said, Well,
13 instead of 750 megawatts it's now capable of 883. So
14 the -- the idea that Minnesota Power would pay 33
15 percent of the capital costs and Manitoba Hydro would
16 pay the other 66 based upon seven (7) -- you know, two
17 fifty (250) out of seven fifty (750), that didn't work
18 anymore, because now we had an extra 133 megawatts of
19 capacity. And Minnesota Power says, We don't need
20 that. We're not going to pay for that.

21 And so our -- our cost share of the
22 capital costs went up to -- they're -- they're paying
23 28 percent and we're paying 72 percent of the cost of
24 the line -- of the cost of the line in the United
25 States. And -- and when we -- we've done the numbers

1100

1 now comparing the benefits of the bigger line. There
2 are more benefits because we're able to -- our DSM
3 programs look better, our export -- ability to export
4 power is better. We're -- we get more energy into the
5 on-peak market.

6 So although the -- the line is bigger,
7 we have to pay more, there are -- there are
8 significantly more benefits as a result of having a
9 bigger line. Not only that, our ability to import is
10 there and -- and as -- as you remember, during the
11 hearing, the -- the biggest benefit, I believe, is the
12 ability to now -- we've doubled our import capability.

13 And Minnesota Power is paying for that
14 import capability on their two fifty (25). And -- and
15 they're paying 100 percent of the import capability as
16 well as the export capability. So they're -- we think
17 that they're -- they're paying a fair -- a fair share
18 with even at 28 percent.

19 The issue of what the line will finally
20 cost, and I think the Chairman referred to this the
21 other day, until we actually know what the route is, we
22 -- the Utility has to maintain three (3) options. And
23 so the question is: Where -- where will the line
24 actually go? We can't finalize the cost estimate until
25 we actually have a -- a determination by the Minnesota

1101

1 Public Utility Commission on where the route will go.

2 Our plan is to -- and we have the right
3 to terminate the arrangement with Minnesota Power at
4 the point where we're required to actually start
5 construction. If they come back to us and say, You
6 know what, we were off on our estimate. The line is
7 going to cost more than you -- we anticipated.

8 Manitoba Hydro has the option of saying, You know what,
9 this doesn't work for us anymore. We -- we can back
10 out.

11 So what we're doing right now is we're
12 in the process of -- of negotiating a project
13 development agreement. A project development agreement
14 permits Manitoba Hydro to participate in the
15 development of the cost estimates for the line. We
16 have our engineering experts and our construction
17 experts like Mr. Bowen and Mr. Elder. We are working
18 with them as if we are -- we're able to sit at those --
19 those tables to understand how they intend to manage
20 the risks.

21 I need to be able to go to our board in
22 September of 2016 when we make the final commitment to
23 say, This -- the price of this line isn't just what
24 Minnesota Power told us it's going to be, the price of
25 this line is what we believe it's going to be because

1102

1 we've been at the table in all the negotiations
2 involving the design, the -- the construction
3 management of contracts, and all those things as if it
4 was our own project.

5 And -- and Manitoba Hydro expects to be
6 able to tell her -- tell its board that we are
7 confident that that's what the project will cost. And
8 if we can't say that, well then we -- we shouldn't be
9 going to our board making a recommendation to continue.
10 We can't write a blank cheque for Minnesota Power on
11 this project.

12 It has to -- we have to be able to say
13 as if it were our own, because we have -- our own line,
14 because we have the major state in this -- in this
15 project. So that -- that Project Development Agreement
16 is underway and we expect to have that finalized
17 relatively soon. And -- and once we have a route
18 selection, we will then know the final costs of the
19 line. We know how those -- the -- the project's going
20 to be managed, and we'll be able to come back to the
21 board of Manitoba Hydro and say, This is what the line
22 is going to cost.

23 We believe that the -- the economic case
24 for the line is very robust. There would have to be --
25 and I think I -- I advised you yesterday that there's

1 about \$150 contingency in the project budget just for
2 the matting for the -- to deal with the cold winter.
3 So we think that there's a huge amount of contingency
4 in the -- in the project estimate already, but there
5 has to be a -- a -- almost a doubling of the costs of
6 the line before the value of the project to Manitoba
7 Hydro goes to zero, the net present value goes to zero.

8 So we -- there is a very robust business
9 case to continue, and -- and -- but we will -- we will
10 be bringing that business case back to our board prior
11 to the date we make the commitment to construct, so
12 that they have full knowledge of -- of what the
13 ultimate cost of that project will be.

14 I think I covered the landscape there,
15 Mr. Peters. If -- if you had any specific questions, I
16 can speak to them.

17 MR. BOB PETERS: Now, if I'm permitted
18 to continue, and we'll see how long that lasts, your --
19 your 72 percent Manitoba Hydro pays of the capital
20 costs, and Minnesota Power pays 28 percent of the
21 capital costs of the line, which was now designed at
22 883 megawatts, as I understood your evidence?

23 MR. DAVID CORMIE: Yes.

24 MR. BOB PETERS: You -- trouble is, you
25 just can't tell the Board what the final capital cost

1104

1 total number is?

2 MR. DAVID CORMIE: Yes, and -- and, you
3 know, Minnesota Power has given us a range.

4 MR. BOB PETERS: Can you tell us what
5 that range is?

6 MR. DAVID CORMIE: I -- I don't have it
7 handy here, Mr. Peters, but it's...

8 MR. BOB PETERS: It's a matter of
9 public record, is it not?

10 MR. DAVID CORMIE: It's a public
11 record.

12 MR. BOB PETERS: So you'll undertake to
13 provide the -- the range that Minnesota Power has given
14 you for the three (3) alternate routing selections that
15 they are considering?

16

17 (BRIEF PAUSE)

18

19 MR. DAVID CORMIE: Yeah. We'll find
20 that number and provide it, Mr. Peters.

21

22 --- UNDERTAKING NO. 16: Manitoba Hydro to provide
23 the range that Minnesota
24 Power has given for the
25 three (3) alternate routing

1105

1 selections that they are
2 considering
3

4 CONTINUED BY MR. BOB PETERS:

5 MR. BOB PETERS: You also indicated
6 that, at some point, Manitoba Hydro has to be
7 introspective and decide whether or not they want to
8 con -- continue, and you can make that decision right
9 up until shovels go in the ground, as I understood your
10 evidence.

11 Is -- is that correct?

12 MR. DAVID CORMIE: Yes. We have the
13 right under our agreements with Minnesota Power to not
14 proceed.

15 MR. BOB PETERS: And is it a matter of
16 -- what -- what's the capital number that Mr. Rainkie
17 won't let you spend?

18 Like, where -- where's his limit of his
19 chequebook?

20 MR. DAVID CORMIE: Well, I -- I don't
21 think, Mr. Peters, it's a -- a matter of -- of what it
22 would cost. It's -- is -- is ultimately, is it the
23 best thing to do? And either... So I'm -- I don't
24 think I posed the question to Mr. Rainkie whether --
25 and that will be a decision that Manitoba Hydro will

1106

1 have to take.

2 MR. BOB PETERS: The best thing to do
3 from an economic perspective, is what you're saving?

4 MR. DAVID CORMIE: Well, it's an
5 economic, strategic, and from a reliability, and -- and
6 energy security perspective. Economics is only one (1)
7 part of the -- of the equation.

8 MR. BOB PETERS: I -- I suppose,
9 though, Mr. -- Mr. Cormie, at some point, the business
10 case won't make sense?

11 MR. DAVID CORMIE: Absolutely, and if -
12 - if --

13 MR. BOB PETERS: And -- and you can't
14 tell the Board --

15 MR. DAVID CORMIE: -- Minnesota Power
16 came back and said, The line's going to cost a billion
17 dollars, you -- I can tell you now, the answer is that
18 we won't proceed.

19 MR. BOB PETERS: I'm sorry, if the --
20 if the total cost is a billion doll --

21 MR. DAVID CORMIE: It's a billion
22 dollars.

23 MR. BOB PETERS: That's both Minnesota
24 Power's and your share?

25 MR. DAVID CORMIE: No, I'm talking

1107

1 about the Great Northern Transmission Line.

2 MR. BOB PETERS: But there may be other
3 reasons that you'd be prepared to overlook the capital
4 cost if you felt it added something less tangible?

5 MR. DAVID CORMIE: Well, I'm -- I'm --
6 you know, I -- I would -- I -- I would judge that the
7 economics is a very important matter. We -- you know,
8 we're not prepared to throw money away, Mr. Peters, and
9 clearly, it's -- that is a lot of money. And -- and
10 there are -- the benefits of the project are
11 significant, but they aren't -- they aren't infinite.

12 MR. BOB PETERS: I understand. Are you
13 quoting US currency with that billion dollars?

14 MR. DAVID CORMIE: In either currency,
15 it's a lot.

16 MR. BOB PETERS: All right. Thank you.

17 MR. DAVID CORMIE: Now -- but now that
18 my -- my bonus is tied to exchange rates, we'll have to
19 talk with Mr. Rainkie about that.

20 MR. BOB PETERS: The only other update
21 that I wanted to bring to the Board before the lunch
22 recess was the Manitoba-Minnesota 500 kV line.

23 And this is the 100 percent in Manitoba
24 line that will enable the Great Northern to have value
25 to Manitoba Hydro.

1108

1 MR. DAVID CORMIE: Yes. There -- there
2 are two (2) -- there are two (2) separate projects, but
3 it is in a sense one (1) line.

4 MR. BOB PETERS: And in terms of an
5 update on the Manitoba line in terms of costs and
6 developments, are there any?

7 MR. DAVID CORMIE: Those numbers are in
8 the -- in the capital expenditure forecast.

9 MR. BOB PETERS: And you indicated that
10 the line would allow Manitoba Hydro to have imports up
11 to about 1,400 megawatts?

12 MR. DAVID CORMIE: Yeah. Our existing
13 firm import capability is seven hundred (700), and we
14 get another six hundred and ninety-eight (698) from --
15 and the -- and the interesting thing is that -- that we
16 get that by contract. MISO is now guaranteed -- that
17 we signed the facility's construction agreement with
18 MISO last fall, and -- and they will do whatever is
19 necessary now in the United States to ensure that.

20 So they've identified. Here are the
21 facilities that you have to -- have to build. And to
22 the extent that there's other things that need to be
23 done in order to get that import capability, they will
24 do them and we are -- aren't on the hook in order to --
25 because we've contracted for that, and they will

1109

1 deliver.

2 MR. BOB PETERS: The -- the costs in
3 Manitoba, Mr. Cormie, of about \$350 million, that's for
4 wires and towers as opposed to station costs?

5 MR. DAVID CORMIE: I would think that
6 would be the total cost, Mr. Peters. I don't know why
7 we would split it out.

8 MR. BOB PETERS: All right.

9 MR. DAVID CORMIE: But it -- you know,
10 the line is starting in -- at Dorsev, so the station is
11 there. I'm sure that there's some transformation and
12 some -- you know, those would all be in that -- in that
13 estimate.

14 MR. BOB PETERS: Probably at Riel --
15 starting at Riel?

16 MR. DAVID CORMIE: No, it's not
17 starting at Riel. The -- the existing five hundred
18 (500) line terminates at -- at Riel. We don't want
19 both the lines to go from the same station.

20 MR. BOB PETERS: All right. Thank you.
21 Those are my questions, Mr. Chairman. Thank you for
22 the extension of time into the lunch hour, and I hope
23 you can still find it in your heart to provide Mr.
24 Williams with enough time to have lunch.

25 THE CHAIRPERSON: I do have a question

1110

1 that I wanted to clarify, and this is to do with the --
2 the recent report from NERC to the effect that the
3 reliability of the grid could be impacted by the EPA
4 Clean Power Plan.

5 And -- and I guess the question I have
6 is: To the extent that the US system is constrained
7 because of the transition to the new environment, what
8 does that mean for Manitoba in terms of importing power
9 from -- from the US?

10 MR. DAVID CORMIE: There's a -- there
11 will be a shut down of coal plants, and I'm -- I'm not
12 sure what the -- how many gigawatts it is but it is
13 significant, and -- and that's going to start in 2016.
14 There's a significant reduction.

15 However -- what's also happening is the
16 huge expansion in the amount of wind that's being
17 generated, and -- and because we're only counting on
18 the imports during the off peak hour for our energy, I
19 don't believe that that will be an -- that will be an
20 issue that we -- that we can't get energy. Had we --
21 had we required import energy in the on peak in the
22 summertime, especially during their peak season, you
23 know, that -- that could put us at risk.

24 But we do have the -- the right to
25 import under our diversity contracts in the winter, but

1111

1 again that's the -- that's the MISO low power demand
2 season. They peak in the summer. So I -- I wouldn't
3 expect that that would be a -- that would be an issue.

4 But our -- our diversity agreements are
5 tied to specific utilities, and they have the
6 obligation as a utility to make sure that they have
7 enough resources, even if they're -- if -- even if
8 they're shutting down their generating resources, it's
9 -- it's them that have the -- have the obligation to
10 serve Manitoba Hydro, not MISO. MISO is just
11 dispatching the generation that's there. The utility
12 has the -- the load serving obligation.

13 So our -- our diversity agreements are
14 backed up by capacity that Great River Energy, and
15 Northern States Power have on their system. And
16 they're not going to shut down units that -- that put
17 our -- our supply at risk.

18 THE CHAIRPERSON: And I guess the --
19 the question I have is in relation to a scenario of a
20 drought, a major drought in Manitoba. I guess the
21 question is: In an environment where the US is
22 constrained, what does that mean for Manitoba in case
23 of a significant drought? Is it the answer is the
24 same? Don't...

25 MR. DAVID CORMIE: In a -- in a

1112

1 significant drought we need -- in Manitoba we -- we
2 need to be able to -- to import at least the firm
3 amounts of energy that Mr. Terry -- that Mr. Miles is -
4 - has indicated in the Supply and Demand Plan. To the
5 extent that we can import more, that will allow us to
6 avoid running our expensive combustion turbines and
7 running our coal plant at Brandon and our gas plant at
8 Selkirk.

9 But we plan our system assuming that we
10 can only import the -- the amounts that -- that Mr.
11 Miles has -- has indicated, which are essentially in
12 the off-peak. And they're a percentage of our import
13 capability. To the extent that -- that we -- that
14 there are constraints, it will just cost us more,
15 because we'll have to self-generate in the province.

16 I don't -- but as -- as of today, I
17 don't think drought in Manitoba affects the US's
18 ability to supply. It will be -- it will be reduced
19 because of the loss of the capacity. But even 40
20 gigawatt hour -- gigawatts of -- of thermal generation
21 in the MISO pool where there's several, you know,
22 hundred -- hundreds of thousands of -- of megawatts.
23 In the -- you know, in the United -- and I think on the
24 eastern interconnection there's probably 600,000
25 megawatts of generation.

1113

1 It's -- it's just a small percentage.
2 But that's one (1) of the reasons whv we -- you can't
3 sav twenty (20) years out can I import unlimited amount
4 of energies. The whole world can change in twenty (20)
5 years and so we have to be very cautious when we're --
6 when we're doing our planning. And -- and we talked
7 about that as part of our enerav planning criteria
8 during the NFAT.

9 THE CHAIRPERSON: Okav. I think that's
10 all for questions. And so I think we should recess and
11 resume at a quarter after 1:00. Thank you.

12

13 --- Upon recessing at 12:29 p.m.

14 --- Upon resuming at 1:14 p.m.

15

16 THE CHAIRPERSON: Good afternoon.

17 Welcome back to those who were here before. And I'll
18 turn the microphone over to Mr. Peters.

19

20 SANDY BAUERLEIN, Previously Sworn

21 ROB ELDER, Previously Sworn

22 DAVE BOWEN, Previously Sworn

23 MICHEL MORIN, Previously Sworn

24 DAVID SWATEK, Previously Sworn

25 NICK READ, Previously Sworn

1114

1 CONTINUED BY MR. BOB PETERS:

2 MR. BOB PETERS: Yes, thank you. I'm
3 going to ask Ms. Bauerlein to provide some initial
4 information in respect of her testimony of yesterday.
5 I believe she has some matters she wants to bring to
6 the Board's attention, so please do.

7 MS. SANDY BAUERLEIN: Thank you, Mr.
8 Peters. And good afternoon, Mr. Chairman and Board.
9 Yesterday in my presentation I had discussed the in --
10 certainly.

11

12 (BRIEF PAUSE)

13

14 MS. SANDY BAUERLEIN: In my direct
15 evidence yesterday I had quoted the increase in
16 investment dollars between CEF13 and CEF14 in both the
17 first ten (10) years, and then the latter ten (10)
18 years, and I had actually picked up the wrong numbers.
19 Upon going back, I realized I was picking up the
20 increase between CEF12 to CEF13.

21 So to correct that, the investment --
22 the added investment in sustaining capital between
23 CEF13 and CEF14 was approximately 400 million in the
24 first ten (10) years of the forecast, and then an
25 additional 1.6 billion in the latter ten (10) years of

1115

1 the forecast. Primarily, they're to address the aging
2 infrastructure issues associated with generation and
3 transmission.

4 Thank you for that.

5 MR. BOB PETERS: Yes, thank you. On
6 the screen in front of the witnesses and the Board is
7 PUB Manitoba Hydro First Round 17(c) revised, which is
8 an Information Request that provides a continuum of
9 various major capital projects and the -- and the CEF
10 values that were attributed to those over time.

11 When the Board looks at CEF13 total of
12 25 billion, and then looks at CEF14 and sees a \$17
13 billion total, that's only approximately \$8 billion,
14 correct?

15 MR. DARREN RAINKIE: Your math is
16 impeccable, Mr. Peters. I wasn't sure who to address
17 it to, Mr. Rainkie. If I knew it was you, I would have
18 made it easier. All right, enough of that. The -- the
19 point, Mr. Rainkie is, if the Public Utilities Board
20 was expecting that Conawapa, a \$10 billion project had
21 been removed, one might expect that the \$25 billion
22 number would have been down closer to 15 billion, but
23 that didn't happen, did it?

24 MR. DARREN RAINKIE: No, sir, it didn't
25 --

1116

1 MR. BOB PETERS: And the reason it
2 didn't happen is that other projects increased
3 approximately \$2 billion from CEF13 to '14?

4 MR. DARREN RAINKIE: Yes, sir, that's
5 correct.

6 MR. BOB PETERS: And -- and that would
7 be mostly the -- the Bipole project, Bipole III?

8 MR. DARREN RAINKIE: That would be the
9 largest factor, yes, Mr. Peters.

10 MR. BOB PETERS: And there was some
11 discussion by the chairman and, I believe, Mr. Elder
12 yesterday in respect to the Bipole project. But just
13 help...

14

15 (BRIEF PAUSE)

16

17 MR. BOB PETERS: Mr. Elder, what's your
18 understanding as to when a capital project
19 justification has to be done on a project such as
20 Bipole III?

21

22 (BRIEF PAUSE)

23

24 MR. ROB ELDER: Sorry. My
25 understanding is they're done when there's significant

1117

1 changes in the estimate.

2 MR. BOB PETERS: And I believe if I
3 recall correctly, the president, Mr. Thomson, said, in
4 my words, he triggered the last capital project
5 justification to be done on Bipole III.

6 Is that your understanding?

7 MR. ROB ELDER: Yes.

8 MR. BOB PETERS: Mr. Elder, have you
9 ever triggered a capital project justification to be
10 recalculated on the Bipole III project?

11 MR. ROB ELDER: Yes, I was involved in
12 -- yes, I was, yeah.

13 MR. BOB PETERS: Okay. We'll come to
14 that. And in this instance, why is it that your
15 president initiated the last one, rather than you?

16 MR. ROB ELDER: Sorry, I don't follow
17 the question.

18 MR. BOB PETERS: I understood that the
19 last CPJ on Bipole III was initiated by the president.
20 You agreed with that?

21 MR. ROB ELDER: Yes.

22 MR. BOB PETERS: And I'm wondering,
23 since you've obviously previously initiated or
24 triggered CPJs to be calculated, why you did not
25 trigger a CPJ on Bipole III?

1118

1 MR. ROB ELDER: Sorry, I'm not
2 understanding the question.

3 MR. BOB PETERS: All right. Let me
4 come at it from a different perspective.

5 MR. DARREN RAINKIE: Mr. Peters, maybe
6 I can help out here. I think what Mr. Thomson was
7 saying is that he took a very close hand on Bipole III,
8 given the significance of the project. I'd have to go
9 back in the transcript to look if he used the word
10 'triggered', but obviously the -- given the magnitude
11 and the size of the project the senior executive of
12 Manitoba Hydro is watching these projects very
13 carefully.

14 So I think that might be the confusing
15 part of the question for Mr. -- Mr. Elder, because he's
16 been working on this the whole way along, as well, to
17 provide a revised estimate on the project.

18 MR. BOB PETERS: Thank you, Mr.
19 Rainkie. Mr. Elder, we have a series of the CPJs
20 included in the book of documents, and maybe what we'll
21 do is we'll -- we'll head over there at this point in
22 time. Perhaps starting -- well, we can start on page
23 11 of the book of documents, and we see that for the
24 Bipole project in the capital expenditure of '14 -- I
25 apologize. I've turned to Volume II of Board counsel's

1119

1 book of documents. It's all part of PUB Exhibit 20.

2 And I'm turning to Volume II.

3 And we see that in this CEF the Bipole
4 project has been, in my words, subdivided into -- into
5 components, correct, Mr. Elder?

6 MR. ROB ELDER: Yes, that's correct.

7 MR. BOB PETERS: Was this the first CEF
8 where that happened, to your recollection?

9 MR. ROB ELDER: No.

10 MR. BOB PETERS: In -- in this
11 particular depiction in CEF14, the totals still come
12 out to the \$4.65 billion, correct?

13 MR. ROB ELDER: Yes. I haven't done
14 the math on the -- this page here but, yes.

15 MR. BOB PETERS: That's what you'd
16 expect them to come out to?

17 MR. ROB ELDER: Yes.

18 MR. BOB PETERS: Yeah, thank you.

19 Okav. The materials that Manitoba Hydro has filed show
20 that the rating of Bipole III used to be 2,000
21 megawatts, and it's been upsized to 2,300 megawatts.

22 Have I got that correct?

23 MR. ROB ELDER: Not with -- in essence,
24 yes, it's 2,000 megawatts with a 15 percent continuous
25 overload, but for our -- for discussion purposes, yeah,

1120

1 2,300 megawatts.

2 MR. BOB PETERS: How much did that
3 extra 300 megawatts cost?

4 MR. ROB ELDER: The incremental cost of
5 that was about \$50 million.

6 MR. BOB PETERS: And is that something
7 that could have been done at any point in time?

8 MR. ROB ELDER: No, it couldn't. It
9 was -- it -- it was part of the bid for the equipment.
10 We were -- and we were well into the bid for the HVDC
11 equipment. So the line and all the other components
12 were already sized at that. The incremental cost was
13 to upsize the -- the HVDC equipment for that additional
14 capacity.

15 MR. BOB PETERS: And was that upsize in
16 future contemplation of Conawapa?

17 (BRIEF PAUSE)

18

19 MR. ROB ELDER: Not specifically. What
20 that additional 300 megawatts does is gives you -- if
21 you want to think of the Bipoles as three (3) highways
22 coming down from the north, should you lose any -- any
23 of the other Bipoles, it gives you additional capacity
24 on there. So being a reliability project for the
25 incremental cost, it gives you that additional

1121

1 reliability.

2 As my colleagues were speaking
3 yesterday, we will have to do upgrades on Bipole I --
4 Bipole II, and eventually Bipole I. That additional
5 capacity gives you more flexibility, less outage time
6 and less impacts when you do those overhauls. And --
7 and, of course, if any future generation would also tie
8 into that.

9 MR. BOB PETERS: The additional 300
10 megawatts is not required for the Keevask project, is
11 it?

12 MR. ROB ELDER: That's correct.

13 MR. BOB PETERS: While we have this
14 screen-shot here, Bipole III community development
15 initiative, \$62 million, you mentioned that to the
16 Chairman yesterday, did you not?

17 MR. ROB ELDER: Yes, I did.

18 MR. BOB PETERS: What is a \$62 million
19 community development initiative?

20 MR. ROB ELDER: It was an initiative
21 that provides benefits to the communities and munic --
22 municipalities in the -- in the direct area of the line
23 for environmental sustainable resource rehabilitation
24 or any cultural or social developments, or for both
25 First Nations and -- and RM's and such.

1122

1 MR. BOB PETERS: How is it tied to the
2 Bipole III?

3 MR. ROB ELDER: It's -- it's a benefit
4 for communities that are in the area.

5 MR. BOB PETERS: It's, in essence, a
6 mitigation payment?

7 MR. ROB ELDER: No, a benefit.

8 MR. BOB PETERS: I appreciate it's a
9 \$62 million benefit to some communities. And it's not
10 conte -- it's not compensating them for anything?

11 MR. ROB ELDER: No, it's not.

12 MR. BOB PETERS: So this is in exchange
13 for Manitoba Hvdro being allowed, permitted to have
14 their Bipole in the relative vicinity, Manitoba Hvdro
15 is providing them with a financial benefit?

16 MR. ROB ELDER: Which can then be
17 turned into community initiatives, yes.

18 MR. BOB PETERS: At the behest of the
19 municipality or the First Nation or whoever it's paid
20 to?

21 MR. ROB ELDER: Yes.

22

23 (BRIEF PAUSE)

24

25 MR. BOB PETERS: The indication appears

1123

1 that only about \$8 million is going to be spent over
2 the next ten (10) years.

3 Can you tell the panel how much has been
4 spent to date?

5 MR. ROB ELDER: Sorry, can you be more
6 -- spent on which?

7 MR. BOB PETERS: I'm sorry, on the
8 community development initiative of \$62 million. I had
9 under -- I understand by looking at the -- at the
10 numbers that follow in the successive years, it looks
11 like approximately \$8 million will be spent in the next
12 ten (10) years?

13 Is that not your understanding?

14 MR. ROB ELDER: Yeah, my understanding
15 is it's about 6 million -- around 6 million over ten
16 (10) years.

17 MR. BOB PETERS: And when would the
18 balance of the 62 million be paid, or has it already
19 been paid?

20 MR. ROB ELDER: No, it hasn't been paid
21 -- paid out yet, no.

22 MR. BOB PETERS: And so if Corporation
23 is going to pay out between \$6 and \$8 million in the
24 next ten (10) years, when is the balance going to be
25 paid out, if at all?

1124

1 MR. ROB ELDER: One (1) moment, please.

2

3 (BRIEF PAUSE)

4

5 MR. BRENT CZARNECKI: Mr. Chairman, I'm
6 advised and reminded by Ms. Fernandes that the
7 president had taken an undertaking to check because we
8 took this under advisement because of the specifics of
9 those CDI arrangements and payments. We -- we needed
10 to check back on those. And I -- I understand Mr.
11 Peters is trying to understand at a higher level the --
12 the amounts, but I just want to be cautious and mindful
13 of that.

14

15 (BRIEF PAUSE)

16

17 MS. SANDY BAUERLEIN: I can perhaps
18 provide a little bit of clarification on this. What
19 you're actually seeing in this document here in front
20 of the Board is not the actual cash payments. This is
21 an accounting.

22 What we're doing is we've actually
23 discounted the present value of the obligation that
24 Manitoba Hydro has. And so when we do that we charge
25 the Bipole project in the year that we set that

1125

1 obligation up, and we have a corresponding liability
2 recorded on our books.

3 What this reflects is the accretion or
4 interest costs on that liability that are being charged
5 each and every year to the project up until in service.
6 So this isn't the actual cash payments. This is the
7 accretion on the liability. And the actual cash
8 payments will be drawn down from the liability.

9 So it's an accounting. It's -- it's an
10 accounting for it.

11 MR. BOB PETERS: Where would the Board
12 find the cash payment, Ms. Bauerlein, in your financial
13 records?

14 MS. SANDY BAUERLEIN: It would be
15 simply in our cashflow -- part of our cashflow
16 statement as a draw-down liability, but it wouldn't be
17 -- we don't specifically highlight for you each and
18 every payment, but we could provide you with a schedule
19 of the payment terms. I -- I think that's what Mr.
20 Rainkie was -- was referencing. Is that what you
21 referenced, no?

22

23 (BRIEF PAUSE)

24

25 MS. SANDY BAUERLEIN: Okay. So this is

1126

1 really -- this is -- this is the accretion or the
2 financing costs on the liability. It's not the actual
3 cash payments to communities.

4

5 (BRIEF PAUSE)

6

7 MR. BOB PETERS: So, Ms. Bauerlein, the
8 Board should understand then that of this \$62 million
9 for this item, the successive years add up the
10 approximate \$8 million of financing costs attributable
11 to the \$62 million community development initiative.

12 That's all you're showing on the -- on
13 the other years of this schedule?

14 MS. SANDY BAUERLEIN: I believe so. I
15 -- subject to check, but I'm -- I'm pretty sure that's
16 what we're seeing in this schedule.

17 THE CHAIRPERSON: So the actual
18 expenditures plus the interest would total \$62 million,
19 for example, on the CDI?

20 MS. SANDY BAUERLEIN: Right, because
21 that would be the present value plus the expected
22 accretion costs associated with that obligation.

23

24 (BRIEF PAUSE)

25

1127

1 MR. BOB PETERS: Ms. Bauerlein, while
2 we have this CEF14 shown here, are there any other
3 capital expenditures that are treated the same way as
4 you're treating the community development initiative
5 here?

6

7 (BRIEF PAUSE)

8

9 MS. SANDY BAUERLEIN: There would also
10 be some payments, the same type of adverse effects
11 payments were in the Keevask project where we would
12 have set up also a liability. They're just within the
13 Keevask generation. They're not broken out separately.
14 But there would be some other types of initiatives
15 similar to the Bipole CDI, where we've recognized a
16 liability for a payment to a particular community,
17 perhaps, and we record the present value of that
18 obligation in the project and then we set up a
19 corresponding liability.

20 So again, what would be reflected in the
21 project, the Keevask project, could be very similar to
22 the Bipole CDI.

23

24 (BRIEF PAUSE)

25

1128

1 MR. BOB PETERS: Mr. Elder, when we
2 look at the Bipole project, and we -- we saw on the
3 updated costs -- if we could just go back to the PUB
4 revised schedule, and we look at the Bipole line here,
5 it's -- for CEF10 we see \$3.28 billion, correct?

6 MR. ROB ELDER: Correct.

7 MR. BOB PETERS: And it stayed at that
8 number for four (4) years?

9 MR. ROB ELDER: That's correct.

10 MR. BOB PETERS: You were in charge of
11 the Bipole III project for -- for all the years that's
12 shown here, from CEF03 all the way through to CEF14?

13 MR. ROB ELDER: No. As I stated, up
14 until 2013 I was responsible for the converter station
15 portion. As of '13 forward, I was responsible for the
16 entire Bipole.

17 MR. BOB PETERS: Can you explain to the
18 Board, from CEF10 to CEF11-2, whv there wouldn't have
19 been a new capital project iustification for this
20 capital project?

21 MR. ROB ELDER: My recollection, there
22 was one (1) in...

23

24 (BRIEF PAUSE)

25

1129

1 MR. ROB ELDER: Yes, so it -- there was
2 a CPJ-6(a) up -- approved in 2011, but the number was
3 still three point two (3.2)

4

5 (BRIEF PAUSE)

6

7 MR. BOB PETERS: 6(a) represented a
8 time when -- and we can go to page 21 for example on
9 the screen, please. Page 21 from the book of
10 documents.

11 We, first of all, see this is Addendum
12 number 7(b), but if we scroll down to the chart near
13 the bottom we see that 6(a), there was revised
14 converter station estimates including assumption of VSC
15 technology for HVDC.

16 And your name is beside that, correct?

17 MR. ROB ELDER: Correct.

18 MR. BOB PETERS: Now, this was a CPJ in
19 September of 2014 that dealt with a portion of the
20 Bipole project, specifically the converter stations,
21 correct?

22 MR. ROB ELDER: That's correct.

23 MR. BOB PETERS: Is there a CPJ that
24 shows the Bipole at \$3.2 billion?

25 MR. ROB ELDER: Is your -- is your

1130

1 question, Do the three (3) CPJ-7(a), (b), and (c) add
2 up to three point two (3.2)?

3 MR. BOB PETERS: Correct.

4 MR. ROB ELDER: Yes.

5

6 (BRIEF PAUSE)

7

8 MR. BOB PETERS: If we go to page 32,
9 we see another CPJ.

10 Are you familiar with that one, sir?

11 MR. ROB ELDER: Yes. My recollection
12 is this -- is CPJ that was not approved, and -- and...

13 MR. BOB PETERS: Can you tell by
14 looking at the CPJ on page 32 of Board counsel's
15 Exhibit 20, Volume II book of documents, whether this
16 CPJ includes or excludes synchronous condensers?

17

18 (BRIEF PAUSE)

19

20 MR. ROB ELDER: Yes, it does.

21 MR. BOB PETERS: You're telling the
22 Board that this one does have synchronous condensers
23 included in the price?

24 MR. ROB ELDER: Yes, that's correct.

25 MR. BOB PETERS: And when you say this

1 one was not approved, was not approved by whom?

2 MR. ROB ELDER: By our executive.

3 MR. BOB PETERS: It was approved by the
4 vice presidents of Transmission and Power Supply?

5 MR. ROB ELDER: That -- that's correct.

6 MR. BOB PETERS: And when we look at --
7 at the -- at the numbers on page 32, up near the top,
8 in the -- in the box, this one has a previous budget
9 approval of three (3) point -- I'm sorry, of 2.247
10 billion, and the revised budget goes to 3.953 billion,
11 correct?

12 MR. ROB ELDER: That's correct.

13 MR. BOB PETERS: And this one
14 essentially leapfrogs the \$3.2 billion Bipole III
15 capital project justification?

16 MR. ROB ELDER: If it was approved.

17 MR. BOB PETERS: It would have?

18 MR. ROB ELDER: It would have.

19 MR. BOB PETERS: It was never enacted
20 by the executive?

21 MR. ROB ELDER: That's my
22 understanding, yeah.

23 MR. BOB PETERS: And the \$3.2 billion
24 CPJs, I think you've indicated those are broken down
25 into -- it was 6(a), 6(b), and 6(c)?

1132

1 MR. ROB ELDER: Yes. They're broken up
2 by -- by component. One (1) is the converter stations,
3 one (1) is the transmission line itself, and the third
4 is the collector lines in the north.

5 MR. BOB PETERS: And does that \$3.2
6 billion CPJ include or exclude synchronous condensers?

7

8 (BRIEF PAUSE)

9

10 MR. BOB PETERS: Maybe I could help.
11 Mr. Elder. You will tell me if this does help. If we
12 turn to page 34, and we scroll up to the Riel converter
13 station, there's discussion in this capital project
14 justification that the costs for synchronous condensers
15 have more than doubled, and studies have also
16 recommended the addition of a fourth synchronous
17 condenser for the Bipole.

18 Does that suggest to this Board, then,
19 that the previous CPJs also included synchronous
20 condensers?

24 MR. BOB PETERS: I -- I appreciate
25 that, sir.

1133

1 MR. ROB ELDER: -- so I just want to
2 make sure I'm giving you the right answer.

3 MR. BOB PETERS: I appreciate that.

4 Thank you.

5

6 (BRIEF PAUSE)

7

8 MR. ROB ELDER: So, yes, Mr. Peters,
9 your question on CPJ-6(b) does -- does not include
10 synchronous condensers.

11

12 (BRIEF PAUSE)

13

14 MR. BOB PETERS: Can you bring me to
15 the document? Is it -- is it in the materials that
16 were printed out for you, sir, or not?

17

18 (BRIEF PAUSE)

19

20 MR. ROB ELDER: Okay.

21

22 (BRIEF PAUSE)

23

24 MR. ROB ELDER: Sorry, Mr. Peters, I
25 was going through my notes. That -- that particular

1134

1 approved CPJ isn't in the evidence here.

2 MR. BOB PETERS: All right. And, Mr.
3 Bowen -- or, sorry, Mr. Elder. I'm calling everybody
4 Mr. Bowen, so I hope he's either -- either flattered or
5 can forgive me.

6 MR. ROB ELDER: I'm -- I'm flattered.

7 He's a lot better looking than me.

8 MR. BOB PETERS: Could you then, Mr.
9 Elder, undertake through your counsel to file the --
10 I'll call it the six (6) series of -- of amendments or
11 addendums to the CPJ on the Bipole III project?

12 MR. ROB ELDER: Sure. My understanding
13 they were as -- as part of the PUB hearings in '11, but
14 we can certainly do that.

15 MR. BOB PETERS: And are there four (4)
16 of them, in fact, or just three (3)?

17 MR. ROB ELDER: There's three (3).

18 MR. BOB PETERS: Okay.

19

20 --- UNDERTAKING NO. 17: Manitoba Hydro to file the
21 six (6) series of
22 amendments or addendums to
23 the CPJ on the Bipole III
24 project

25

1135

1 CONTINUED BY MR. BOB PETERS:

2 MR. BOB PETERS: Mr. Elder, I may have
3 been presumptuous but on page 29 of the Board counsel
4 Volume II book of documents, there's an addendum called
5 07(d) dealing with the Bipole III project. This
6 relates to the community development initiative, which
7 I take it would be a new addendum and therefore there
8 was no addendum 06(d)?

9 MR. ROB ELDER: That's correct. The
10 community development initiative was -- was approved by
11 our board in May of 2010, and a team was put together
12 to look at what that program would look like. And the
13 original CPJ for that was approved in 2013.

14 MR. BOB PETERS: While we're on my
15 notes here on transmission, when we got back to page 8
16 of Volume II of Board counsel's book of documents, we
17 see -- we see the Manitoba-Minnesota transmission
18 project as one (1) of the items in the chart at the top
19 of the page. And there was a 71 percent increase in
20 costs from CEF12 to CEF14.

21 Have I got that correct?

22 MR. ROB ELDER: Sorry, could you repeat
23 that?

24 MR. BOB PETERS: Yes, it's the
25 Manitoba-Minnesota transmission project. I'm not sure

1136

1 if that's one that -- that you are comfortable speaking
2 about but there appears to have been a 71 percent
3 increase in costs from CEF12 to CEF14.

4 Do you see that on the page?

5 MR. ROB ELDER: I do. I'm -- I'm --
6 unfortunately, I'm not the right guy to speak to that.

7 MR. BOB PETERS: You're not able to
8 explain what drove that increase?

9 MR. ROB ELDER: No, I'm not involved in
10 that project.

11 MR. BOB PETERS: And while we're on
12 that sheet, and Mr. Rainkie might be able to help me
13 out here, that we -- we note by its absence, Mr.
14 Rainkie, the Great Northern Transmission Line I think
15 is -- is absent from that sheet, correct?

16 MR. DARREN RAINKIE: That's correct.

17 It's not on this listing.

18 MR. BOB PETERS: And it doesn't show up
19 in your -- in your capital expenditure forecasts,
20 again, for accounting reasons?

21 MR. DARREN RAINKIE: Yes, because it'll
22 be accounted for as an intangible asset, not a --

23 MR. BOB PETERS: You know, I -- I --

24 MR. DARREN RAINKIE: -- a pre-planned
25 equipment asset.

1137

1 MR. BOB PETERS: -- I've read the
2 Coalition IR more than once. So when you come on the
3 finance panel you might want to take this as warning to
4 have a little chart with you that you're going to be
5 able to share with the Board to -- to show how -- in
6 light of Mr. Cormie's answers just before lunch today
7 in terms of the -- what to me appeared to be the new
8 sharing arrangement, which aren't apparently consistent
9 with that IR, if you can just explain to the Board how
10 that system works from an accounting perspective as
11 well.

12 So please take that as a bit of a
13 forewarning if you could, Mr. Rainkie, and we can talk
14 through your counsel afterwards if there's questions
15 you have on that as well.

16 MR. DARREN RAINKIE: Sure, Mr. Peters.
17 I thought after the discussion this morning we would
18 get to that on the finance panel, but... Sorry, did
19 you say that it's different than the IR? I'm not sure
20 I understood that part of your question. There was
21 actually a very nice IR somewhere in the package that
22 lays everything out from an accounting perspective that
23 we -- we would use as a prop to be able to explain our
24 --

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

1138

1 MR. DARREN RAINKIE: -- fairly com --

2 complex accounting for this.

3 MR. BOB PETERS: And maybe just write
4 down Coalition/Hydro-I-15. And that's where Manitoba
5 Hydro provides charts and provides explanations. But I
6 understood from Mr. Cormie that the percentage
7 responsibility now, of Manitoba Hydro, is different
8 than what I read on page 104 of Coalition/Manitoba
9 Hydro-I-15(c), so.

10 MR. DARREN RAINKIE: We'll -- we'll
11 clarify that, Mr. Peters, but the timing of the
12 preparation of that response I think was such that it
13 should be up -- up to date. But there's lots of
14 material for everybody here, Mr. Peters. We'll take
15 that under advisement and check that out before the
16 finance panel.

17 MR. BOB PETERS: All right.

18 THE COURT REPORTER: Is that an
19 undertaking?

20 MR. BOB PETERS: No. I'll come back to
21 Mr. Rainkie. But I'm reading, Mr. Rainkie, that
22 Manitoba Hydro's 54 percent share of projected pre-
23 certification and construction costs are quantified,
24 the 54 percent.

25 And I had understood from Mr. Cormie

1139

1 that the percentage was going to be different than
2 that.

3 MR. DARREN RAINKIE: I think the
4 confusion, Mr. Peters, is that there's the 133 megawatt
5 part of that, and who picks up the cost on -- on that.
6 So I think that IR, as -- as I sit here, Mr. Peters, is
7 updated. I think we just need to carefully go through
8 it and explain the various aspects of the deal, if you
9 like, and how they all work.

10 MR. BOB PETERS: All right. I'll --
11 I'll hold you to that, Mr. Rainkie, when we -- when we
12 next perhaps meet. But you're explaining to the Board
13 that it's not considered on the capital expenditure
14 forecast because Manitoba Hydro is going to treat it as
15 an intangible asset?

16 MR. DARREN RAINKIE: That's correct.
17 As Mr. Cormie indicated this morning, the -- we are --
18 we -- we don't want to own a -- a transmission line in
19 the United States. We're worried that owning that line
20 would constitute being a -- having a permanent
21 establishment in the United States and make all of our
22 activities in the United States subject to federal
23 income tax in -- in the US.

24 But the real value of that line is
25 having access to the line to export power and to import

1140

1 power. So we're looking for the transmission rights.
2 That's the benefit to Manitoba Hydro. We're not
3 looking to own and maintain a line for a small rate of
4 return in the United States and put our taxable status
5 at risk.

6

7 (BRIEF PAUSE)

8

9 MR. BOB PETERS: Did that line go
10 through a capital pros -- project justification, Mr.
11 Rainkie?

12 MR. DARREN RAINKIE: Subject to check,
13 Mr. Peters, I think because it was an intangible asset
14 it -- it didn't go through a CPJ process. But -- but
15 this arrangement was reviewed at the executive
16 committee and at the -- the board of directors. So it
17 -- I don't think it had a CPJ, but it shouldn't be
18 taken that that was something that wasn't looked at, at
19 all levels of management and understood before the
20 various arrangements were entered into.

21

22 (BRIEF PAUSE)

23

24 MR. BOB PETERS: While you call it an
25 intangible asset, Mr. Rainkie, I'm just not sure how --

1141

1 how the panel should understand that when probably we
2 could drive to when it's constructed and actually touch
3 it, if we were so foolish.

4 MR. DARREN RAINKIE: Because, yes, you
5 would be foolish, Mr. Peters. It's kind of like
6 sticking your tongue on a -- well, maybe it isn't like
7 sticking your tongue on a cold piece of metal. It's
8 probably worse than that.

9 But seriously though, Mr. Peters, as I
10 said what we're interested in with respect to this
11 business arrangement is the transmission rights, and
12 rights are an intangible asset. In the end, when the -
13 - when and if the line is constructed, Minnesota Power
14 would own -- have the -- the legal ownership of the
15 whole line.

16 Manitoba Hydro, by virtue of all the
17 arrangements, would have its portion of the
18 transmission rights. And as such we're not accounting
19 for it as a -- as a physical property, plant, and
20 equipment asset, but rather as an intangible
21 transmission right. And --

22 THE CHAIRPERSON: Mr. Rainkie -- Mr. --
23 I just to clarify for me one (1) point that we were
24 talking about at lunch time, and -- and namely there
25 will be transmission revenue generated by that line.

1142

1 Is -- you know, leaving aside the transmission rights,
2 there will be transmission revenue generated.

3 Will Manitoba Hydro be getting a piece
4 of that transmission revenue?

5 MR. DARREN RAINKIE: Subject to check,
6 I don't think so, sir. As I said, we're -- we are --
7 we won't have legal ownership of the line; MP will,
8 Minnesota Power will. We are there for the
9 transmission rights. I could be wrong on that one.
10 That's a fairly technical detail. We can follow up
11 with Mr. Cormie and -- unless somebody else on the
12 panel knows specifically.

13 MS. SANDY BAUERLEIN: I would confirm
14 that as a transmission owner you are entitled to the
15 transmission revenues, but we will not be considered a
16 transmission owner. We simply have transmission
17 rights.

18 THE CHAIRPERSON: Okay. But there's
19 more than one (1) way to skin that cat in the sense
20 that even though you've ceded ownership you can still
21 negotiate an income stream from the transmission
22 revenue. It seems to me that having ceded the rights,
23 at least you get some revenue from it.

24 MS. SANDY BAUERLEIN: We get the
25 revenue through the use -- these -- the -- the export

1143

1 sales contracts that we have with our customers, and
2 therefore the right to use that line to export energy
3 into the United States. So the revenue is coming
4 through the export contracts, not through the agreement
5 that we have with the Midwest ISO and Minnesota Power.

6 THE CHAIRPERSON: So then the quid pro
7 quo would be not having to pay US tax, and you've ceded
8 the rights to -- to the transmission revenue? That --
9 that summarize it?

10 MR. DARREN RAINKIE: Well, I don't -- I
11 don't think there -- those are -- are tradeoffs.
12 Certainly the deal would not make economic sense if we
13 lost our taxable status in the United States, so it
14 would be in -- that was a no fly zone, if you like, in
15 and of itself.

16 But as Ms. Bauerlein said, the -- the
17 revenue opportunity for us is having that capacity
18 there to sell additional export sales. And the other
19 huge benefit that we can't -- to Manitobans that we
20 can't forget is the import capability of that line, as
21 well, in terms of times of drought.

22 So here's the way I -- I think of it in
23 my own -- my own mind. If we were selling widgets down
24 in the States we don't want to own the Gardewine truck.
25 We don't want to, you know, make a dollar out of --

1144

1 after paying all the fuel and maintenance. What we
2 want is we want to reserve space on the Gardewine truck
3 to take energy down to the United States and sell it,
4 and be able to then on the -- on the return trip, if
5 you like, bring energy back when we need to import it.
6 That's -- that's why we want to be -- and -- and
7 without our -- our involvement in this transmission
8 line, the size -- and you'll remember this from the
9 NFAT, it -- it wouldn't be built.

10 MS. MARILYN KAPITANY: We don't have
11 any responsibilities for any maintenance of that line
12 either. Once it's built, are there any kind of
13 guarantees that Minnesota Power will keep it in the
14 kind of working condition that we would keep it in if
15 it was part of the Manitoba Hydro system?

16

17 (BRIEF PAUSE)

18

19 MS. SANDY BAUERLEIN: This is probably
20 actually best answered with Mr. Cormie. But it is my
21 understanding that there is an operations and
22 maintenance contract being negotiated with Minnesota
23 Power, which, again, Minnesota Power would have certain
24 obligations in order to maintain that line, but
25 Manitoba Hydro would also be obligated to have a type

1145

1 of cost-sharing arrangement with Minnesota Power.

2 But again, I -- I think the best person
3 to answer this would actually be Mr. Cormie.

4 MR. BOB PETERS: I'll indicate to Mr.
5 Czarnecki that we do appreciate the panel's best
6 attempt. And if they do provide an answer they can
7 always qualify it by saying, Subject to check with Mr.
8 Cormie or Mr. Miles, because we've had a discussion
9 about not needing the entire panel in the room.

10 So I -- I don't want to stop the flow of
11 information to the questions, but if there is found to
12 be some inaccurate information I would appreciate that
13 being revised.

14 MR. BRENT CZARNECKI: And that's fine,
15 Mr. Peters, and I expect Mr. Cormie will be back at
16 some point during my other friend's examination. So if
17 there's additional questions or more desire from the
18 Board to understand this further, perhaps we could wait
19 until them. That may be our best and most efficient
20 use of time.

21

22 CONTINUED BY MR. BOB PETERS:

23 MR. BOB PETERS: And I'm also going to
24 be talking to Mr. Rainkie about this further on the
25 finance panel in terms of how he's accounting for not

1146

1 only the -- what I'll call the capital costs, but the
2 OM&A and otherwise, so we may have a chance to address
3 it there as well.

4 MR. DARREN RAINKIE: Mr. Peters, I
5 think although accounting has been much to line thus
6 far in this proceeding, that when we go through the
7 accounting and go through that Information Request I
8 think it will become much more clear how the
9 arrangement works.

10 And that may be a time to have Mr.
11 Cormie sitting next to Ms. Baurelein and I for, you
12 know, a half hour of cross and just tidy up those
13 points for the Board.

14 MR. BOB PETERS: Can you tell, Mr.
15 Rainkie, to the panel, who at Manitoba Hydro has
16 responsibility for this project to, first of all, be
17 properly scoped, and developed, and built, and built on
18 budget and on time?

19 MR. DARREN RAINKIE: Well, that would
20 be the generation operations business unit. So all
21 projects ultimately are the responsibility of the vice
22 president and -- and the executive of the company, Mr.
23 Peters.

24 MR. BOB PETERS: So there'll be an
25 opportunity for approvals along the way to be provided

1147

1 by the VP?

2 MR. DARREN RAINKIE: Yes, as Mr. Cormie
3 enter -- indicated before lunch, we'll be reviewing the
4 economics of the project right up until the time that
5 we have to make a decision whether we're still in or
6 not. And -- and there will be ratifications at
7 executive committee and board at that point in time.

8 MR. BOB PETERS: But there won't be a
9 capital process -- project justification process as
10 there are with other capital projects to -- to chart
11 the course of the capital project from inception to
12 completion?

13 MR. DARREN RAINKIE: Well, Mr. Peters,
14 CPJ is just a piece of paper that we call a certain
15 name. As I -- as I said, there's -- there was lots of
16 discussion at both the executive committee and board
17 with respect to this important initiative. So while
18 there won't be something called a CPJ, there'll be
19 recommendations drafted with the appropriate materials.

20 So I can assure the Board that the lack
21 of a CPJ doesn't mean that there isn't the appropriate
22 review and diligence on this project.

23 MR. BOB PETERS: Mr. Elder, perhaps
24 back to you on page 43 of Board counsel's second book
25 of documents. I note here the Keewatinohk converter

1148

1 station, and that station, sir -- this is the 2010
2 price that's been highlighted on this page 43.

3 Is that part and parcel of your current
4 responsibilities?

5 MR. ROB ELDER: Yes.

6 MR. BOB PETERS: And if we turn the
7 page to -- well, we see it there at 948 million. If we
8 turn to page 44, the Keewatinohk converter station is
9 now coming in at \$1.5 billion dollars.

10 Can you explain to the Board why that's
11 happened?

12

13 (BRIEF PAUSE)

14

15 MR. ROB ELDER: So your question's just
16 specifically on the converter stations only?

17 MR. BOB PETERS: It was actually more
18 specific. It was the Keewatinohk converter station has
19 -- has increased significantly to \$1.5 billion from the
20 2010 CPJ.

21 And can you explain to the Board what
22 would precipitate that price increase?

23

24 (BRIEF PAUSE)

25

1149

1 MR. ROB ELDER: Sor -- sorry it's taken
2 me a couple minutes. I'm just trying to -- I've got a
3 reconciliation for all of the -- the entire project
4 here, so I'm just trying to make sure I'm keeping
5 straight which -- which of the four (4) CPJs, so.

6 On the converter stations, the -- the
7 HVDC contract from -- I'd prefer to talk to the -- the
8 three point two (3.2) number, because that was the
9 approved number. But the -- the major changes from
10 that, the HVDC contract did come in higher than was
11 originally estimated. We did also add the synchronous
12 condensers to that work. There was some additional
13 costs for camp. There was the additional costs for the
14 incremental cost to go from 2,000 to 2,300 megawatts.
15 And then additional -- additional contingency added --
16 added to that item as well, when we went through the
17 contingency analysis.

18 MR. BOB PETERS: Are those synchronous
19 condensers \$200 million a piece?

20 MR. ROB ELDER: No, sir.

21 MR. BOB PETERS: That's for all four
22 (4) of them?

23 MR. ROB ELDER: There -- there's four
24 (4) machines, and it's a little over two hundred
25 thousand (200,000) -- or 200 million.

1150

1 MR. BOB PETERS: For all four (4)?

2 MR. ROB ELDER: Yeah, that's correct.

3 MR. BOB PETERS: You -- can you tell
4 the Board or remind the Board if those are physically
5 going to be located at the Riel station?

6 MR. ROB ELDER: It's -- yes, they are
7 going to be delivered -- loc -- located at the Riel
8 station only.

9 MR. BOB PETERS: So when the
10 Keewatinohk converter station went up in price, how was
11 that related to the synchronous condensers?

12 MR. ROB ELDER: Sorry. I was referring
13 to -- to synchronous -- to synchronous -- the converter
14 station package itself. So you -- you're talking just
15 -- just Keewatinohk?

16 MR. BOB PETERS: Yes, and I wonder --
17 it -- it might be of value to the Board, if I could,
18 through your counsel, ask you to undertake to -- to
19 provide the -- the reasons the Keewatinohk converter
20 station increased in price, and on the same
21 undertaking, the reasons that the Riel converter
22 station decreased in price, because there may be some--

23 MR. ROB ELDER: Can you show me what to
24 refer to?

25 MR. BOB PETERS: Yes.

1151

1 MR. ROB ELDER: All right --

2 MR. BOB PETERS: On page 43, we are
3 looking at the Riel converter station at \$1.467
4 billion. And then if we turn the page to page 44, I
5 see the Riel converter station coming in at 1.179
6 billion.

7 Is that something you can review through
8 your counsel and provide a written -- a written
9 explanation to the Board as to why Keewatinohk
10 increased and why Riel decreased?

11 MR. ROB ELDER: Yes.

12 MR. BOB PETERS: That would be helpful.

13 Thank you, sir.

14

15 --- UNDERTAKING NO. 18: Manitoba Hydro to provide a
16 written explanation as to
17 why the costs of
18 Keewatinohk increased and
19 Riel decreased

20

21 CONTINUED BY MR. BOB PETERS:

22 MR. BOB PETERS: On page 49, we deal
23 with a -- a breakdown of the major contracts for Bipole
24 III, and the answer at the top of the page indicates
25 that the information on contract dollar values is

1152

1 being filed in confidence with the PUB, which means
2 it's not on the public record.

3 But can you explain, yourself or Mr.
4 Rainkie, as to why the fixed-price contracts that are
5 listed -- and let's start with the -- the first one
6 that's been awarded, why the fixed-price contract price
7 cannot be publicly disclosed?

8

9 (BRIEF PAUSE)

10

11 MR. ROB ELDER: So the -- the reason
12 for that is as you start to populate this with the
13 contracts that aren't let, somebody could back
14 calculate. So as we're going out with the transmission
15 line and you know the budget, you can figure out how
16 much Manitoba Hydro has allocated for that. And if
17 you're one of the -- one of the bidders on some of
18 those later packages, you'd know what our -- our
19 estimate is for that, so.

20 MR. BOB PETERS: Okay. Thank you. I
21 hadn't thought of it from that perspective, and I
22 appreciate your answer.

23 Is it -- is it then -- once the contract
24 is fully -- once all the contracts are fully let, would
25 it be Manitoba Hydro's intention that that information

1153

1 would -- would be publicly available if requested?

2 MR. BRENT CZARNECKI: Mr. Peters,
3 perhaps we could cross that bridge when we get to it.
4 I'm just not thinking it fully through of the risks of
5 doing that at that time right at this moment, so I'm
6 not sure at this juncture why we need to have the
7 answer to that. But I will certainly take it under
8 advisement.

9 MR. BOB PETERS: All right. I
10 appreciate that.

11 MR. ROB ELDER: Maybe if I could just
12 add, and what I was trying to work through in my mind
13 is we've got a -- we've got a contract with another
14 party. We need to think through whether -- yeah,
15 whether making that information public is -- is
16 prudent, and what we'd -- steps we'd have to go
17 through.

18 MR. BRENT CZARNECKI: And that's the
19 kind of thing I was referring to in terms of what, if
20 any, risks there may be to other counterparties who
21 have provided bids, and what consents we may need from
22 them, and how their bids were received. So I just want
23 to be very careful in committing to a 'yes' to your
24 answer before knowing that.

25 MR. BOB PETERS: No, and I -- I'm

1154

1 accepting your suggestion, Mr. Czarnecki, to take that
2 under advisement. And I guess that's a bridge we will
3 cross perhaps in the future.

4

5 CONTINUED BY MR. BOB PETERS:

6 MR. BOB PETERS: I want to turn to page
7 66, and I think Mr. Bowen -- the real Mr. Bowen will --
8 will assist in some of these answers relating to the
9 Keevask generation station.

10 And would the Board's understanding, Mr.
11 Bowen, be correct that in CEF13, which was I think
12 available at the NFAT, Manitoba Hydro did not reflect
13 the bid prices for the general civil contract, and the
14 turbine and the generator contracts?

15 MR. DAVE BOWEN: That's correct. The
16 information wasn't available -- available at that time.

17 MR. BOB PETERS: And do we take from
18 what's in the chart on CEF14 in front of the panel for
19 Keevask, now it includes the bid prices for the general
20 civil contract, and the turbine and the generators?

21 MR. DAVE BOWEN: Yes. The CEF14
22 includes the general civil contract, and turbine and
23 generator contracts where actually we've awarded -- as
24 I mentioned just the other day, we've awarded 90
25 percent of the value of our contracts to date, so it

1155

1 includes almost all those values.

2 MR. BOB PETERS: We can see at the
3 chart from CEF13 to CEF14 approximately \$600 million
4 difference between the generating station, including
5 the general civil contract and the infrastructure
6 project?

7 MR. DAVE BOWEN: Yes.

8 MR. BOB PETERS: Can you explain to the
9 Board the reason for that \$600 million difference?

10 MR. DAVE BOWEN: The -- the various
11 explanation that I provided during the NFAT is -- is
12 the -- is the same. It -- it hasn't changed. The
13 numbers in this table are grouped differently than how
14 they were presented at the NFAT, which means that you
15 can't have an apples-to-apples comparison.

16 But what I can tell you, there is -- the
17 numbers that were presented at the NFAT, we went
18 through an exercise after the NFAT in -- in March to
19 basically do a formal update of our budget because we
20 never had time to complete that process during the
21 update. We were giving you live numbers. We were
22 estimating.

23 But to disseminate all that information
24 in the -- into our cost accounting system so we know
25 which bucket was which, and we had that clarity and had

1156

1 a -- could use as a control basis, took about -- about
2 a three (3) month process. And -- and that -- that
3 basically provided greater clarity here.

4 There are no differences in changes as
5 to what those costs and variances were. The -- the
6 main drivers for the cost increases was the increase in
7 the general civil bid prices, as I mentioned in -- in
8 the NFAT.

9 1 There was also the -- the adverse
10 effects, as was mentioned today, the post-construction
11 adverse effects agreement and increases in costs.
12 There were additional costs for our construction
13 management team, which -- which was noted. Those were
14 still the -- the same contributing factors.

15

16 (BRIEF PAUSE)

17

18 MR. BOB PETERS: Back on page 56, Mr.
19 Bowen, I see the changes in the -- in the estimate
20 included the addition of a performance bonus.

21 Refresh my memory, was that -- was that
22 known -- known at the time of the NFAT?

23 MR. DAVE BOWEN: I believe it was, yes.

24 MR. BOB PETERS: Was it quantified?

25 MR. DAVE BOWEN: The -- the reason why

1157

1 I'm hesitating is -- is that -- that it was quantified,
2 but there was a change in the contract. I can't
3 remember the exact date that that happened, but there
4 is a performance bonus and -- and that value was -- was
5 in there. As to the exact number, I'd have to verify
6 what the change was at the time.

7 MR. BOB PETERS: Are you aware of what
8 the current total performance bonus is or how it's
9 awarded?

10 MR. DAVE BOWEN: Yes.

11 MR. BOB PETERS: Can you explain that
12 to the -- to the panel?

13 MR. DAVE BOWEN: There -- there's a --
14 a performance bonus in the general civil contract
15 that's -- that's there to enc -- encourage -- encourage
16 the contractor to plan their work, to provide certain
17 deliverables, deliverables that are part of the early
18 contractor involvement process. That's part of the
19 bonus.

20 The bonus is actually paid out on a
21 quarterly basis throughout the duration of the contract
22 and that monies -- the monies in the bonus are -- are
23 divvied up approximately proportionately for that
24 quarterly basis. And -- and so those values -- the --
25 the reasons for the bonus will actually differ in time

1158

1 depending on the exact part of the work we're in.
2 But things that were -- that -- that
3 were -- that we've used it in the last ten (10) months
4 for is -- is things like developing a -- a contract
5 schedule and providing that information on time,
6 ensuring that the contractors, their top management
7 staff, that the ones that were proposed stay part of
8 the contract, those different types of things. Meeting
9 their -- their safety rea -- obligations for their
10 safety performance. So those are a few examples of --
11 of what it's there for and what -- how it gets paid.

12 MR. BOB PETERS: Can you place on the
13 public record the total quantification of the
14 performance bonus?

15 MR. BRENT CZARNECKI: Mr. Peters,
16 again, I -- I don't think we're in a position to do
17 that, because it does compromise our ability, maybe in
18 the future or even now, with that particular vendor as
19 to what Hydro is paving on these contracts. If at all,
20 I think we would have to do that in confidence with the
21 PUB and not to put it on the public record such to
22 jeopardize or prejudice our negotiating position with
23 these types of contracts into the future.

24

25 CONTINUED BY MR. BOB PETERS:

1159

1 MR. BOB PETERS: All right. I'll --
2 I'll get back to you should we want some additional
3 information. But speaking of performance bonuses, Mr.
4 Elder, I neglected to ask you in respect to the Bipole
5 project, are there penalties or costs that would have
6 to be paid by Manitoba Hydro if the project was delayed
7 or cancelled?

8 MR. ROB ELDER: No.

9 MR. BOB PETERS: Are there any
10 penalties or costs by the contractors if they don't
11 comply with the -- with the schedule?

12 MR. ROB ELDER: In general, yes. The
13 mechanism is different depending on the type of work
14 and what the contract is. So just to add, on the HVDC
15 contract there's -- there's set time frames and there
16 is a mechanism in there if they don't meet, as I
17 mentioned yesterday, both performance and schedule,
18 then there's a mechanism there to recoup some of those
19 costs.

20 MR. BOB PETERS: Mr. Bowen, back to --
21 to Keevask and you showed the Board in your
22 presentation some of the pictures.

23 What's the most current information from
24 where you're seated as to what the in-service cost of
25 Keevask will be?

1160

1 MR. DAVE BOWEN: Six point five (6.5)
2 billion.

3 MR. BOB PETERS: There's been no new --
4 new CPJ in respect of it since we've -- since the NFAT?

5 MR. DAVE BOWEN: No. No. I -- I did
6 mention that we're within our control budget. We're
7 year one (1) of a seven (7) year project. There's
8 numerous pressures on a job like this. We -- we did
9 have an event with the cofferdams this year that we
10 talked about. I think that was asked of Mr. Thomson
11 the first day.

12 And so we have -- we have had some risk
13 events that have occurred that -- we had a blockade.
14 We had the higher water that cost more money than we
15 had planned in our contingency. However, we're still
16 within the contingency. The value of the cofferdam
17 cost for the ice was in the -- in around the \$50
18 million mark, so we're still within our control budget.
19 However, it is early in the game.

20 MR. BOB PETERS: The event with the
21 cofferdam, just so I'm clear, is what Mr. Thomson told
22 us it had to be constructed at a higher elevation
23 because of ice build up, or something related to the
24 water level?

25 MR. DAVE BOWEN: Yes. Yes. At the --

1161

1 the Keevask site there's a bit of a unique
2 characteristic in terms of the -- the -- how the river
3 flows there. What it means is that you could get a ice
4 dam at the Keevask rapids where -- where the -- the
5 solid ice is for Stevens Lake. That event has been
6 known to happen in the past, and happened in the past.

7 We had an ice boom to basically prevent
8 that from happening. Unfortunately, that ice boom
9 failed during the initial freeze up and -- and caused
10 this event to occur. And what I meant is that we had
11 to top up our cofferdams, the powerhouse cofferdam that
12 I showed you just two (2) days ago. We had to -- we
13 had to raise that structure about 7 metres to pre --
14 keep our work areas dry. And -- and that work there
15 cost in or -- in or around \$50 million.

16

17 (BRIEF PAUSE)

18

19 MR. BOB PETERS: I didn't understand
20 from your presentation to the panel, Mr. Bowen, as to
21 whether or not the spillway timing had started to be
22 constructed already?

23 MR. DAVE BOWEN: The -- the spillway
24 cofferdam we started that work back in January. The
25 spillway cofferdam that I showed, it was -- it was the

1162

1 two (2) rock growings that I had mentioned there, so
2 the -- the rock growing work is -- is done today.

3 We're just -- we're just starting or
4 just getting ready to start the impervious core. And
5 so that work is underway. It is on track. And we're -
6 - we're hopeful to get that completed in the next
7 couple months here so we could start our -- our
8 overburden and rock excavation for the spillway
9 structure.

10 MR. BOB PETERS: What about in terms of
11 timing for the main dam itself? What -- you said you
12 were on year one (1) of a seven (7) year project. When
13 will the work start on the main dam?

14 MR. DAVE BOWEN: You'll have to be more
15 specific. There's a number of cofferdams and main
16 dams. If you're -- I'm not sure if you're asking about
17 one of the main dam structures or the cofferdams.

18 MR. BOB PETERS: I was thinking of what
19 would become, I guess, the permanent dam used by the
20 Keevask project.

21 MR. DAVE BOWEN: I believe that we'll
22 start our initial work on the main dam later this
23 summer. However, that work will occur between now and
24 -- and 2019. I could -- depending on what structure it
25 is, I could -- I could look into that and -- and

1163

1 provide a better answer, if you like.

2

3 (BRIEF PAUSE)

4

5 MR. BOB PETERS: Would you know by
6 sittin there -- when sittin there, Mr. Bowen, when
7 the -- when the spillwav itself will be complete?

8 MR. DAVE BOWEN: Our -- our plan for
9 our control schedule, which is used to formulate our
10 control budget, is to complete the spillwav and provide
11 access to the south side -- south side of the river in
12 late 2017.

13

14 (BRIEF PAUSE)

15

16 MR. BOB PETERS: While the cofferdam
17 work is being done, is there any more -- I think the
18 words of your president were 'geotechnical work' still
19 being done on the -- the main dam, and where the
20 powerhouse will be situated to make sure that the
21 foundation is -- is solid?

22 MR. DAVE BOWEN: I'm -- I'm not sure of
23 the context you're referring to, the geotechnical work?
24 We -- we -- for the -- there's numerous dams and dikes
25 for the Keevask project that will get constructed over

1164

1 a five (5) year period. As we do that work and -- and
2 start revealing the actual geotechnical -- technical
3 conditions, there is -- there will be geotechnical work
4 that'll happen on a daily basis. So I'm just -- I'm
5 trying to understand where you're -- what your question
6 is.

7 MR. BOB PETERS: When -- well, let me -
8 - let me start at it from this perspective. I know we
9 saw a schedule, the number of the contracts, but in the
10 -- in the vernacular, is this considered a -- a design
11 build project?

12 MR. DAVE BOWEN: Loosely speaking, yes.

13 MR. BOB PETERS: And I think in your
14 opening evidence through your counsel, you were telling
15 the panel that there still are design changes that are
16 being implemented?

17 MR. DAVE BOWEN: I -- I don't recall
18 noting design changes being implemented. I -- I do
19 recall mentioning that our engineering -- we're doing
20 our -- what we call our detailed engineering. So what
21 that means is that there's a -- a 3D model that's being
22 created that has -- if you -- if you compare it to this
23 building, if -- if you like, a -- a 3D model of the
24 building would be created. All the design for the
25 columns, the floors, the slabs as to how much rebar,

1165

1 what conduit was going in those slabs, et cetera. That
2 detailed work is happening.

3 Once -- once that model is -- is signed
4 off and complete, then two (2) dimensional drawing are
5 created.

6 So there'd be a two (2) dimensional
7 drawing which would show this column beside me, here.
8 It would show the reinforcement in that column, et
9 cetera. So that's the -- that's a type of engineering
10 work that's happening. It's the detailed -- it's a --
11 what we call the detail design.

12 MR. BOB PETERS: On page 73 of the
13 Board counsel Volume II book of documents, which is PUB
14 Exhibit 20, there's a chart at the top of the page, Mr.
15 Bowen. And we've talked about some of these numbers,
16 but you mentioned that Manitoba Hydro is still within
17 the contingency that it had built in for this project,
18 correct?

19 MR. DAVE BOWEN: Yes.

20 MR. BOB PETERS: And that contingency -
21 - if we look at CEF11-2 line, the contingency was 573
22 million, and that was simply the contingency fee.
23 There was no management reserve at that time.

24 Have I got that right?

25 MR. DAVE BOWEN: That's my

1166

1 understanding, subject to check.

2 MR. BOB PETERS: And then in CEF12,
3 when it went up over a billion dollars to 1.05 in
4 CEF12, the contingency and management reserves was a
5 combination of both the contingency and the management
6 reserve, so we can -- we can do the math.

7 And it looks like about \$475 million of
8 that is because of a management bon -- reserve?

9 MR. DAVE BOWEN: Assuming the
10 contingency didn't change, yes.

11

12 (BRIEF PAUSE)

13

14 MR. BOB PETERS: In CEF14, the number
15 dropped down to \$685 million, correct?

16 MR. DAVE BOWEN: Yes.

17 MR. BOB PETERS: Does that mean that
18 the difference between the CEF13 and CEF14 numbers for
19 this was spent?

20 MR. DAVE BOWEN: Sorry, I -- I didn't
21 understand the question.

22 MR. BOB PETERS: All right. Was the
23 contingency reserve, or the management reserve, reduced
24 in CEF14?

25 MR. DAVE BOWEN: Yes, it was. That was

1167

1 explained at the NFAT, what those reductions were.

2 MR. BOB PETERS: And it was because of
3 the confidence level that the Corporation had in its --
4 in its contracts?

5

6 (BRIEF PAUSE)

7

8 MR. DAVE BOWEN: In -- in part. As --
9 as the project has moved along, we started the Keevask
10 infrastructure work back in 2012. So we -- we had a
11 number of contracts and works that had been behind us,
12 if you like, so the risk profile had changed and -- and
13 there was a reduction in the contingency. There also
14 was a reduction in -- in both the labour management
15 reserve and the escalation management reserves.

16 MR. BOB PETERS: Can you tell the
17 Board, of that \$685 million, how much of that is
18 contingency reserve and how much is now management
19 reserve?

20 MR. DAVE BOWEN: It's -- yes, it's --
21 it's the same number as the NFAT. I'm going by memory
22 right now, but right now there's -- there was \$307
23 million of contingency. There was about \$304 million
24 for the labour management reserve. And I believe, \$88
25 million for the escalation management reserve.

1168

1 I -- I haven't added that up, but I
2 believe that should equal six hundred and eighty-five
3 (685).

4 MR. BOB PETERS: Thank you for that,
5 sir. On page 73 we also see there's been a \$600
6 million increase in the generating station costs from
7 CEF13 to '14 that we've previously mentioned.

8 Do you see that at the top line?

9 MR. DAVE BOWEN: Yes.

10 MR. BOB PETERS: Are you able to tell
11 the Board how much of that was as a result of the
12 general service contract -- civil contract that was
13 awarded as well as how much would have been the
14 negotiated service contract increases, as well as how
15 much was unforeseen?

16

17 (BRIEF PAUSE)

18

19 MR. DAVE BOWEN: Our -- our project
20 estimate increased from \$276 million during the NFAT.
21 Again, the -- the reasons for those changes were the
22 general civil contract as we talked about on page 56 of
23 the -- of the evidence, which included the performance
24 bonus. It included the post-adverse effects, signed
25 agreement, increase for site staffing due to the

1169

1 partial augmentation through an external consultant,
2 and decreases in the contingency based on an updated
3 risk model.

4 So in terms of -- of values, the -- I
5 don't -- I don't have a summary right in front of me as
6 to what those values are. I could tell you in terms of
7 the quantum, the -- the general civil contract was in
8 the \$200 million mark. The post-adverse effects was
9 about \$60 million, I believe. And -- and I believe the
10 site staffing for the partial augmentation was in the
11 \$60 million quantum as well.

12

13 (BRIEF PAUSE)

14

15 MR. BOB PETERS: All right. Thank you.

16

17 (BRIEF PAUSE)

18

19 MR. BOB PETERS: I want to turn to a
20 different topic. And I'm not trying to haunt the Board
21 with the Pointe du Bois project, but on page 91 there's
22 an article from a website called hydroworld.com.

23 Is that a website anyone on the panel is
24 familiar with?

25

1170

1 (BRIEF PAUSE)

2

3 MR. NICK READ: I'm aware of it.

4 MR. BOB PETERS: Okav. Thank you. I -
5 - we also see on page 84 of the Board counsel book of
6 documents, Volume II, an amount under the sustaining
7 capital of \$182 million for Pointe du Bois, correct?

8

9 (BRIEF PAUSE)

10

11 MR. BOB PETERS: Mr. Read, maybe we're
12 -- we're looking to you for an answer on that, if you
13 know.

14

15 (BRIEF PAUSE)

16

17 MR. NICK READ: Yes.

18 MR. BOB PETERS: And so the -- I want
19 to see if we can link those two (2). Is the \$182.9
20 million sustaining capital expenditures on Pointe du
21 Bois for this turbine and generator upgrade that's
22 going out to proposal?

23

24 (BRIEF PAUSE)

25

1171

1 MR. NICK READ: I think that would be
2 true.

3 MR. BOB PETERS: Thank you.

4

5 (BRIEF PAUSE)

6

7 MR. BOB PETERS: If we turn to page 108
8 of Board counsel's book of documents, we have a table
9 that is described as the forced outage percentage, and
10 it's done by I suspect fiscal years of the Corporation
11 from 2010 to 2014. Is that correct, Mr. Read?

12 MR. NICK READ: You know, I can't
13 remember at this point whether it's fiscal or calendar.

14 MR. BOB PETERS: That's fine. If
15 anything turns on it, you'll have to let us know that.
16 But let's just have a look at it. When the Board
17 reviews this, what it's telling the Board is that in
18 2010 Jenpeg was out of service for 38.6 percent of the
19 time.

20 Is that correct?

21 MR. NICK READ: Yes.

22 MR. BOB PETERS: And then they can
23 follow in 2011 and Jenpeg was out of service for 35
24 percent of the time. In '12, it was twenty-nine point
25 three (29.3), '13 forty-two point nine (42.9), and then

1172

1 -- if I can find it -- in '14 it's 45.5 percent of the
2 time?

3 MR. NICK READ: Yes.

4 MR. BOB PETERS: That means the entire
5 generating station was -- was out?

6 MR. NICK READ: The numbers are showing
7 a percentage out, not 100 percent out.

8 MR. BOB PETERS: So -- so it's not --

9 MR. NICK READ: Oh, yes. So, I mean,
10 there's six (6) units in that station.

11 MR. BOB PETERS: Okay, now you've
12 confused me further. But the -- how should the Board
13 understand that chart? And I'm just dealing with
14 Jenpea --

15 MR. NICK READ: Okay. So, you know,
16 maybe I'll just tell a story to help you understand the
17 chart. Jenpea are those horizontal submarines that I
18 referred to previously. They're Russian-made turbine
19 generators. And a few years back, and I'd have to
20 check to see if it was 2010 but, you know, from these
21 numbers it must have been, one (1) of our people came
22 back from a conference and found out that the sister
23 units in Serbia and Romania had -- were suffering from
24 cracking of the shafts.

25 And we jumped in and looked at our

1173

1 machines, and this was -- the cracking happened in an
2 area that was hidden. You had to take some equipment
3 out and -- and look at a seal -- big seal area. And we
4 found the cracking, too, so we had to shut down all the
5 machines at that site because of the fear that there
6 would be a catastrophic accident.

7 And over the next couple years we had to
8 machine out these cracks, build a new seal -- put in a
9 new seal design, and -- and so you had all these
10 machines coming down out of service for this type of
11 repair. And in addition to that, we had a fire on one
12 of our units there, unit 1, a couple years back.

13 So for the last couple years we've had
14 two (2) units out of service most -- most of the time.
15 We're getting around that problem. We should have that
16 station repaired soon and -- and back -- back up into
17 full service.

18 MR. BOB PETERS: For this particular
19 generating station, are they all complete now?

20 MR. NICK READ: There's still two (2)
21 units out right now. Unit 1 and unit 4 are currently
22 out. One of the problems is the station is so far away
23 from anywhere for -- with accommodations that it's hard
24 for us to get enough staff in to work on two (2) -- two
25 (2) units at the same time. It's one of these remote

1174

1 site issues.

2

3 (BRIEF PAUSE)

4

5 MR. BOB PETERS: Mr. Read, thank you.

6 When we look at page 109 of the book of documents, and
7 we'll stick with Jenpeg, would the Board be correct
8 when it reviews the -- the Jenpeg overhaul program in
9 the middle of the page as an indication that there were
10 supposed to be \$23 million spent in 2015, but because
11 it has brackets around it, it's been deferred?

12 I'm sorry, I'm in the wrong line. Go
13 out to 2018, and I see that Jenpeg overhaul was slated
14 for \$18 million in 2018, but it now appears that that's
15 being deferred.

16 Is that correct?

17 MR. NICK READ: I'll -- I'll speak to
18 that. We have deferred that based on -- when we
19 originally put that in we weren't sure about the
20 condition of those machines because of the cracking.
21 And we knew our -- the people in Serbia and Romania,
22 they take those machines apart every five (5) years.
23 And we've run our machines since the '70s with just
24 light inspection.

25 So we had -- we had planned for

1175

1 overhauls in 2018, but based on what we've seen in
2 Serbia and based on what we've seen on these machines
3 that we've taken apart, we're confident we can push the
4 overhauls back, so.

5 MR. BOB PETERS: So if we go to page
6 110, just still sticking with the Jenpeg overhaul
7 program, we see that you've pushed back -- 'you' being
8 Manitoba Hydro, has pushed back the -- the rebuild
9 project on Jenpeg, which is not highlighted but it's in
10 the middle of the page about five (5) lines from the
11 bottom. You've pushed it back to 2026?

12 Would that be correct, sir?

13 MR. NICK READ: Sadly, I think
14 'rebuild' is what we called the full powerhouse
15 replacement, right? So the full powerhouse replacement
16 has been --

17 MR. BOB PETERS: I -- I'm sorry, sir,
18 I'm -- I'm on Jenpeg still.

19 MR. NICK READ: Oh, you're on Jenpeg.

20 MR. BOB PETERS: Yes.

21 MR. NICK READ: Okay. So I'm sorry,
22 whereabouts are you?

23 MR. BOB PETERS: I didn't -- I didn't
24 highlight it, and I apologize, but it's about five (5)
25 lines from the bottom --

1176

1 MR. NICK READ: Okav.

2 MR. BOB PETERS: -- and I'm going out
3 to year 2026, and I'm seeing that the new plan is to
4 move the -- the Jenpeg overhaul program out to 2026.

5 MR. NICK READ: That's correct.

6 MR. BOB PETERS: So we can go back to
7 page 108, and we can see that by relative example,
8 those at the top of the list are the -- the ones that
9 are out of service the longest, or the most, during
10 that year?

11 MR. NICK READ: That's correct.

12 MR. BOB PETERS: And then if we follow
13 through...

14

15 (BRIEF PAUSE)

16

17 MR. BOB PETERS: And maybe we should
18 take your Pointe du Bois program and look at the next
19 page on page 109.

20 The Pointe du Bois, is it the
21 rehabilitation program is what I should be looking at,
22 which is one (1) of the highlighted items, that's been
23 deferred?

24

25 (BRIEF PAUSE)

1177

1 MR. NICK READ: I'm not sure what
2 you're looking for when you say. Is that what I should
3 be looking at.

4 MR. BOB PETERS: Okay. I'm sorry. On
5 your screen in front of you there's a -- a number of
6 highlighted items. One (1) of them is called Pointe du
7 Bois generating station rehabilitation.

8 MR. NICK READ: Yes.

9 MR. BOB PETERS: And in 2013 there was
10 going to be \$16 million of sustaining capital spent on
11 it, but it's now been postponed out to 2016?

12 MR. NICK READ: Yes.

13 MR. BOB PETERS: And we can look at
14 Great Falls as well. Great Falls was out of service
15 for various points of time in the -- in the outage
16 schedule.

17 And that's another one that's been
18 deferred for a couple of years?

19 MR. NICK READ: Yes.

20 MR. BOB PETERS: Can you provide the
21 Board and -- and quantify the aggregate megawatt months
22 that the generating stations are -- are out of service
23 for Jempea, Pointe du Bois, Slave Falls, and Great
24 Falls?

25 MR. NICK READ: As an undertaking?

1178

1 MR. BOB PETERS: Yes, sir.

2 MR. NICK READ: Could you repeat that?

3 I'm sure we can.

4 MR. BOB PETERS: It's to quantify in
5 aggregate the megawatt months that the generating
6 stations at Jenpeg, Pointe du Bois, Slave Falls, and
7 Great Falls have been out of service. And we'll --
8 we'll look to page 108 of Board counsel's book of
9 documents and take you back from 2010 through to 2014.

10 MR. NICK READ: Okay. Yes, we can do
11 that.

12 MR. BOB PETERS: Thank you, sir.

13

14 --- UNDERTAKING NO. 19: Manitoba Hydro to quantify
15 in aggregate the megawatt
16 months that the generating
17 stations at Jenpeg, Pointe
18 du Bois, Slave Falls, and
19 Great Falls have been out
20 of service from 2010 to
21 2014

22

23 CONTINUED BY MR. BOB PETERS:

24 MR. BOB PETERS: When we look on page
25 108 as we're seeing, and these outages of the

1179

1 generating stations, and then we look to see what's
2 happened for the work in-service completion dates, we
3 see a number of them are postponed a number of years
4 out into the future, Mr. Read.

5 Is that what -- is that correct?

6 MR. NICK READ: Yes.

7 MR. BOB PETERS: Does that suggest that
8 the Corporation is going to continue to run them as --
9 with the same outage rates as seen on page 108?

10 MR. NICK READ: Certainly that's not
11 the plan at any of the deferrals. You know, there's a
12 story that goes along with these units. Pointe, for
13 example, right up until recently we were going to
14 replace the whole generating station and all the units
15 for 2016. And when the price tag got too high, the
16 whole plan was re-looked at.

17 The current plan is to -- is to replace,
18 I think, five (5) units with new units. And if that
19 works out well, to replace another three (3) and then
20 shut down all the unit -- the older units that have,
21 you know, really terrible reliability. And -- and then
22 we'd have a -- you know, an old concrete powerhouse
23 with new units and higher reliability between now and
24 2015.

25 So we have a solution. It's scheduled.

1180

1 Any deferrals were so that we could move towards this
2 new plan. So that would take care of Pointe. When --
3 when you come to Jenpea, there was a fault there that
4 we found. We got it in time to save those machines.
5 In Serbia, one (1) of these machines literally cracked
6 right in half and dropped its propeller right into the
7 water. We were able to prevent that from happening.

8 So now we're down to Great Falls and
9 Slave Falls.

10 MR. BOB PETERS: Well, if I could just
11 stop you there at Jenpeg, the overhaul for Jenpeg has
12 been pushed off from 2022 to 2028, as I think you and I
13 had talked about earlier, correct?

14 MR. NICK READ: And that's prudent.

15 MR. BOB PETERS: Okav. And let's
16 explain to the Board whv that's prudent when the
17 outages are shown, as they are here in front of them on

18 page 109 -- MR. NICK READ: All these --

19 MR. BOB PETERS: And what --
20 MR. NICK READ: -- outages were due to
21 that design defect that we were able to capture --
22 capture in time and correct, and the overall taking the
23 whole machine out of the water and taking it apart is
24 unnecessary and would just be an -- an unneeded
25 expense

1181

1 MR. BOB PETERS: And so by the repair
2 work done to date then, no more sustaining capital will
3 be needed to the levels that are shown until those
4 rebuild years are -- are shown in the -- into the
5 future?

6 MR. NICK READ: For those machines,
7 yes.

8 MR. BOB PETERS: From -- just while
9 we're on Jenpeg, what levels of outages are you
10 expecting in 2015 to 2017 for that particular
11 generating station?

12 MR. NICK READ: I wouldn't say the
13 problem has gone away. Those cracks keep coming back a
14 little bit, and so we keep having to shut down the
15 machines to look for them. We have to determine
16 whether or not we have corrected the problem, or
17 whether we're going to have to put new shafts in at
18 some point. So I'm not saying they're going to be the
19 best of our fleet, but we have it under control for
20 now. And doing the -- doing the whole major overhaul
21 wouldn't help at this particular problem.

22 MR. BOB PETERS: Can you indicate then,
23 for Slave Falls, I think you were going to -- it
24 appears that the sustaining capital for that project
25 was pushed off from 2013 to 2016.

1182

1 But what's your understanding of the --
2 the reasons that that can happen?

3 MR. NICK READ: Okay. So there we have
4 -- oh, geez -- four (4), six (6), six (6) units? I
5 think it's six (6) units. Units 1 and 2 are the oldest
6 units there, and they're really quite a basket case.
7 We're sort of almost running them to failure right now.
8 And our resource planning group is doing a study to
9 determine, if they fail, whether we even want to
10 replace them or not, given the poor economics of
11 putting in small units.

12 The units 2 to 6 are really in much
13 better shape and are being -- are being taken care of.
14 So some of the -- some of the forced outage numbers
15 here, I believe, will -- are related to units 1 and 2.

16 I just want to check one (1) set of
17 numbers, here, and I'll get right back to you.

18 MR. BOB PETERS: All right. Thank you.
19 Mr. Chairman, this might be an opportune time for an
20 afternoon recess?

21 THE CHAIRPERSON: I think that's a good
22 idea. Thank you very much. We'll take ten (10)
23 minutes.

24

25 --- Upon recessing at 2:51 p.m.

1183

1 --- Upon resuming at 3:05 p.m.

2

3 THE CHAIRPERSON: I believe that we're
4 ready to resume the proceedings. Mr. Peters, I'll turn
5 the microphone over back to you.

6

7 (BRIEF PAUSE)

8

9 CONTINUED BY MR. BOB PETERS:

10 MR. BOB PETERS: Mr. Read, I'm not sure
11 if I cut you off before the recess. I didn't intend
12 to, but were you -- were you looking at...

13 MR. NICK READ: I was looking up some
14 information, which I now have.

15 MR. BOB PETERS: Did you want to
16 provide it to the panel?

17 MR. NICK READ: Yes -- yes. One (1) of
18 my staff reminded me that I lost two (2) units at Slave
19 Falls. There's eight (8) units there. And I was
20 talking about the reasons for the Slave Falls failures.
21 One (1) of the things both -- all the Pointe units,
22 Slave Falls units, some of the smallest units we have
23 in the system. They're also some of the oldest. I
24 mean, Pointe units are back in 1910 and 1920 when they
25 were built, and Slave Falls was -- units were in 1920s.

1 Even when we have them in reasonably good shape,
2 they're still going to fail more frequently than the
3 big units in the north. And -- and even if we do full
4 overhauls on them, they won't catch some of these
5 things. Like, for example, in 2011, which will be part
6 of these numbers we're looking at, they had a failure
7 due to a deluge -- a deluge fire system going off on
8 top of one (1) of the transformers. It knocked out two
9 (2) transformers for three (3) months. So that's why
10 those unit -- that's why the forced outage rate was so
11 poor for Slave Falls that year.

12 And then in 2013, unit 6 was knocked out
13 for six (6) -- eight (8) months because of a shaft seal
14 failure that revealed a guide bearing and thrust
15 bearing issue, and misalignment. And it took eight (8)
16 months to correct that problem, so.

17 MR. BOB PETERS: Mr. Read, would you --

18 MR. NICK READ: All I can say is there
19 will always be some units in the top of our forced
20 outage list. What we try to do through risk management
21 is making sure that they're the smallest units.

22 MR. BOB PETERS: Just taking that
23 transformer that starts on fire at -- I think you said
24 Slave Falls?

25 MR. NICK READ: It didn't go on fire.

1185

1 That's the unfortunate thing. The water system went
2 off even though there was no fire.

3 MR. BOB PETERS: That was something
4 that was unforeseen, and unplanned?

5 MR. NICK READ: Correct.

6 MR. BOB PETERS: And even through
7 additional maintenance, that's something that wouldn't
8 have been -- wouldn't have been caught in the normal
9 course, would it?

10 MR. NICK READ: That's correct. That's
11 sort of a freakish thing that you'd never look for.

12 MR. BOB PETERS: And on the screen in
13 front of the Board on page 108 are the non-weighted
14 instances of the outages, correct?

15 MR. NICK READ: That's correct.

16 MR. BOB PETERS: And then in the
17 presentation that was made by Mr. Rainkie, marked as
18 Manitoba Hydro Exhibit 31, on slide 42 if we have that
19 at hand, he brought up the SAIDI and SAIFI, and then
20 showed another chart -- another graph showing the
21 generation operation hydraulic weighted forced outage
22 rates.

23 Can you explain to the Board how one
24 gets from the non-weighted to the weighted
25 calculations?

1186

1 MR. NICK READ: You take the unit, and
2 you multiply by the size of the unit when you're adding
3 these up, and then you divide the whole thing by the
4 total number of units and you get a weighted average
5 rather than a -- rather than having the small units
6 influence the number too great.

7 So if you did this for Gen South where
8 all the small units are, the average forced outage rate
9 for Gen South comes up to 14 percent rather than the --
10 than -- what is that -- sorry, I guess that's about 3
11 1/2 percent there.

12 MR. BOB PETERS: So it's weighted based
13 on the number of total units, or is it based on the
14 total megawatts that those units generate?

15 MR. NICK READ: It's -- it's weighted
16 based on the size of the units that are part of the --
17 of the population.

18 MR. BOB PETERS: So it's based on the
19 megawatt ratings.

20 MR. NICK READ: Yes.

21 MR. BOB PETERS: Okay. And -- and you
22 have the undertaking from us, so I think that'll
23 address one of the areas of concern that we have.

24 THE CHAIRPERSON: It sounds like -- it
25 sounds like Jenpeg is the one influencing that -- that

1187

1 table on the -- on the right based on what you just
2 said regarding the weighted --

3 MR. NICK READ: Yes, Jenpeg and Pointe
4 both would be influencing that. Jenpeg would have a
5 bigger influence in a way because the units are bigger.

6 THE CHAIRPERSON: I guess the follow-up
7 question to that would be, The Jenpeg issue is a
8 separate issue than the general condition of the
9 assets. I mean, it sounds like it's a unique problem
10 with Jenpeg, not -- not a reflection of the condition
11 of the assets globally --

12 MR. NICK READ: Right.

13 THE CHAIRPERSON: -- for Manitoba
14 Hydro.

15 MR. NICK READ: Yes, that's true. But
16 we can see from the condition of our assets that
17 something is going to happen unless we start replacing
18 some of the older assets. We do all the condition
19 assessments we want, but at some point in time these
20 assets -- some of these assets need to be changed, so.

21 But I -- I agree with you. There's --
22 Pointe is in there because it's just a very old station
23 and old assets. Jenpeg is in that -- on that graph
24 because of the -- of this design defect.

25

1 CONTINUED BY MR. BOB PETERS:

2 MR. BOB PETERS: A couple more quick
3 questions. I want to turn to -- it's Manitoba Hydro
4 Exhibit 36, which was the presentation that this panel
5 made I believe yesterday morning. And on page 42 we
6 see the asset replacement dealing with generation.

7 You spoke to this yesterday, did you --

8 MR. NICK READ: I did.

9 MR. BOB PETERS: And, Mr. Read, are you
10 able to provide a similar tabulation for each of the
11 Nelson River plants, and Grand Rapids showing the age
12 of each asset type and the anticipated replacement age?

13 MR. NICK READ: You mean, the same
14 layout of --

15 MR. BOB PETERS: Yes.

16 MR. NICK READ: You mean the turnover?

17 MR. BOB PETERS: Yes, I'd like the same
18 -- the same way you've set it out, but just focus on
19 the Nelson River plants and -- and Grand Rapids.

20 MR. NICK READ: We can. It's going to
21 give you some very long numbers, because, you know,
22 during the first forty (40) years of life you hardly
23 replace anything.

24 MR. BOB PETERS: Understood.

25 MR. NICK READ: And so if we do that, I

1189

1 mean, we're going to get some very big numbers.

2

3 (BRIEF PAUSE)

4

5 MR. NICK READ: I mean, it won't be
6 meaningful, but if that's what you want we'll do it.

7 MR. BOB PETERS: Oh, I don't -- if it's
8 not meaningful I don't want it. Instead of turnover
9 years, which you say will be a big number, can you
10 include it -- can you insert in there instead of
11 turnover years the expected retirement year of -- of
12 those assets?

13 MR. NICK READ: For Grand -- did you
14 say Grand Rapids and --

15 MR. BOB PETERS: And the Nelson River
16 plants.

17 MR. NICK READ: Yes, we -- we could do
18 that.

19 MR. BOB PETERS: All right. Would that
20 also then break out the power houses and the spillway
21 and the main dam structures?

22 MR. NICK READ: Those aren't -- those
23 aren't -- aren't assets -- part of -- they aren't part
24 of our drive train assets that we model, so.

25 MR. BOB PETERS: You wouldn't have that

1190

1 then?

2 MR. NICK READ: No.

3 MR. BOB PETERS: All right.

4 MR. NICK READ: I mean, it's not like -
5 - it's certainly something our Company is interested
6 in, but it's not something my department models on a
7 day to day basis. But I could certainly give you the
8 drive train components for Grand Rapids and -- and the
9 northern -- Nelson River stations.

10 MR. BOB PETERS: Thank you, sir. I
11 appreciate that.

12

13 (BRIEF PAUSE)

14

15 MR. NICK READ: I think they're after
16 the -- so you want the replacements going out how many
17 years?

18 MR. BOB PETERS: You'll tell us that in
19 your -- in the --

20 MR. NICK READ: Well, I can go out one
21 hundred (100) years, but I'm not sure that'll do anyone
22 any good.

23 MR. BOB PETERS: I wasn't looking for
24 the turnover years, I was looking for when you say that
25 the -- the number of years of expected life left in the

1191

1 assets.

2 MR. NICK READ: Oh, expected life left,
3 I'm sorry. Okay.

4 MR. BOB PETERS: The undertaking is
5 that Mr. Read is going to provide a chart similar to one
6 page 42 of Exhibit MH-36, however, he's going to
7 provide the power train, I think he called it, and --

8 MR. NICK READ: Yeah, power train
9 assets.

10 MR. BOB PETERS: The power train assets
11 for the Nelson River plants and Grand Rapids, giving
12 the age of each asset, type, and the anticipated
13 retirement.

14

15 --- UNDERTAKING NO. 20: Manitoba Hydro to provide a
16 chart similar to page 42 of
17 Exhibit MH-36 with the
18 power train assets for the
19 Nelson River plants and
20 Grand Rapids, giving the
21 age of each asset, type,
22 and the anticipated
23 retirement

24

25 CONTINUED BY MR. BOB PETERS:

1192

1 MR. BOB PETERS: Now, in your absence
2 yesterday, Mr. Read, I talked with Ms. Bauerlein about
3 how much money is allocated to you and it was on page
4 96 of Board counsel's Volume II book of documents.

5

6 (BRIEF PAUSE)

7

8 MR. BOB PETERS: When we look at the
9 generation operation line we see what has been
10 allocated to the generation operations. And if I had
11 understood your evidence yesterday to -- to mean that
12 you weren't getting any new money until ten (10) years
13 out, that's not what this shows, is it?

14 This shows that you're getting from --
15 from '13 to '14 you received an -- an additional
16 allocation, at least notionally?

17 MR. NICK READ: When -- when I spoke I
18 was referring to the condition graphs that we had shown
19 you, which were for CEF13. And then somebody asked
20 what would the effect be of giving us CEF14 funding.

21 CEF14 funding over CEF13 is largely
22 about the same for the first ten (10) years for us and
23 then we seek additional funding after that.

24 MR. BOB PETERS: All right. I have
25 your point and thank you for clarifying it. The other

1193

1 point that we could talk about with page 96 before the
2 panel is that we've -- we've looked at how some of the
3 sustaining capital that had been targeted for some of
4 the generating stations has been deferred.

5 Do you recall that discussion before the
6 recess this afternoon?

7 MR. NICK READ: Yes.

8 MR. BOB PETERS: And so what's taken
9 the place of -- of that -- those monies that have been
10 deferred? Is there any specific programs yet
11 determined, or will that be part of the planning
12 process going forward?

13 MR. NICK READ: Any deferrals we did
14 was on the basis of moving projects around to manage
15 risk. So if we moved anything back, it was because
16 there was something with a higher risk that we had to
17 deal with. And generally, we didn't move anything back
18 that had an unacceptable risk, or we would have gone to
19 our management and -- and tried to get more.

20 MR. BOB PETERS: All right, thank you
21 for that. I'd like to turn to Mr. Rainkie and page 113
22 of Volume II of PUB Exhibit 20.

23 Mr. Rainkie, we've had some preliminary
24 discussions about this, but this was one (1) of the
25 minimum filing requirements that the Corporation

1194

1 provided in terms of the revenue requirements related
2 to specific major capital projects?

3 MR. DARREN RAINKIE: Yes, that's my
4 understanding, Mr. Peters.

5 MR. BOB PETERS: And what you're
6 showing the Board -- and we're looking at -- if we can
7 see the top quadrant. We might have to reduce the size
8 of this a little bit to strain our eyes. At the very
9 top, if we can even scroll up, please, Diana, we see
10 that for Keevask in 2022 there's going to be \$528
11 million needed to pay for the finance expense, the
12 OM&A, the depreciation, and the capital tax, correct?

13 MR. DARREN RAINKIE: Yes, that was the
14 calculation of the revenue requirement of the plant.

15 MR. BOB PETERS: And I won't go through
16 each of them. But I know this information was provided
17 in addition for Keevask. If we want to look to
18 Wuskwatim for the same year, we can flip to the next
19 page, 114.

20 And we see that the cost of Wuskwatim
21 for 2022, which I didn't highlight, is \$144 million for
22 the same components?

23 MR. DARREN RAINKIE: That's correct,
24 Mr. Peters.

25 MR. BOB PETERS: And then we can cover

1195

1 on that Bipole III, which is just underneath that. And
2 it comes in service -- I have 2019 in my mind, Mr.
3 Rainkie. And we can see from the numbers that it's
4 fully in service in 2020.

5 Would that be your understanding?

6 MR. DARREN RAINKIE: Yes, that's my
7 understanding of this.

8 MR. BOB PETERS: There would be \$330
9 million of a revenue requirement related to that asset?

10 MR. DARREN RAINKIE: Yeah, that's what
11 this calculation is, Mr. --

12 MR. BOB PETERS: There's no choice for
13 you to defer those expenditures once they hit the
14 operating statement, is there, Mr. Rainkie?

15 MR. DARREN RAINKIE: Once the project
16 is in service, they come into our operating statement.

17

18 (BRIEF PAUSE)

19

20 MR. BOB PETERS: Perhaps to -- to just
21 bring it to the Board's attention, Mr. Rainkie, if we
22 go down to page 115 and we look at the -- the chart,
23 the total incremental revenue requirement without any
24 allocations of net extraprovincial revenue is \$1.668
25 billion for the '22/'23 year?

1196

1 MR. DARREN RAINKIE: Yes, sir.

2 MR. BOB PETERS: And then once Keevask
3 is in service, that's up to \$1.765 billion?

4 MR. DARREN RAINKIE: I'm in need of
5 some new glasses, but I think that's the right number,
6 Mr. Peters.

7 MR. BOB PETERS: If you agree with me,
8 then we'll both be wrong, so.

9

10 (BRIEF PAUSE)

11

12 MR. DARREN RAINKIE: Mr. Peters, this
13 chart was showing is what I was trying to demonstrate
14 to the Board on day 1 in my presentation, that the
15 revenue requirements over the next ten (10) years are
16 doubling, are going up a hundred percent or more,
17 versus the 42 percent rate increases. So this
18 hopefully brings -- the -- this would be some of the
19 detailed calculations that would get us to that -- to
20 that conclusion.

21 I -- I would also add the discussion
22 between Mr. Orle and Mr. Thomson a couple days ago
23 about the -- thrust being, well, Manitoba Hydro hasn't,
24 you know, honoured the NFAT direction in terms of, What
25 could we do to mitigate rate increases for customers?

1197

1 And I was thinking about that a bit in the last couple
2 days, Mr. Peters, and I think -- I -- I think the
3 answer is -- is not nothing, I think, as Mr. Orle was -
4 - was trying to indicate, but it's Manitoba Hydro has
5 tried to maintain the 3.95 percent rate increases based
6 on the new forecast that we have in IFF14. So I think
7 that these are some of the calculations that
8 demonstrate trying our best to maintain those rate
9 increases for customers, given the large balancing act
10 that we -- that we have.

11 MR. BOB PETERS: Mr. Rainkie, I'm not
12 sure if here or the finance panel is the place to talk
13 about page 133 of Board counsel's book of documents,
14 but the WPLP statements...

15 MR. DARREN RAINKIE: Mr. Peters, it --
16 it probably would be best -- I can probably go with you
17 a certain way. It probably would be best if Ms.
18 Carriere was here with me on the panel. But, you know,
19 if it's critical to your line of cross right now, we
20 could start off that path, but I'm not sure if it's a
21 subcomponent or -- of a larger -- of a larger scheme,
22 or a --

23 MR. BOB PETERS: Well, we'll move it --

24 MR. DARREN RAINKIE: -- or a --

25 MR. BOB PETERS: -- we'll move it over.

1198

1 MR. DARREN RAINKIE: -- a one-off.

2 MR. BOB PETERS: We'll move it over,

3 Mr. Rainkie. You're not going away.

4 MR. DARREN RAINKIE: No, and I'm not --

5 I'm not trying to interrupt your flow, Mr. Peters. If

6 you want to ask a question, I'll answer as best I can,

7 always.

8 MR. BOB PETERS: Just seeing if I've...

9

10 (BRIEF PAUSE)

11

12 MR. BOB PETERS: I had some more Bipole
13 questions that I think, Mr. Elder, you should be able
14 to assist with. Page 157 of the book of documents.

15

16 (BRIEF PAUSE)

17

18 MR. BOB PETERS: Can you indicate, sir,
19 without Kee -- without Conawapa, what is the intended
20 typical average year operation of, let's say, Bipoles -
21 - individually, Bipoles I, and II, and III, in terms of
22 megawatts and/or gigawatt hours per year?

23

24 (BRIEF PAUSE)

25

1199

1 MR. BOB PETERS: Dr. Swatek, if you can
2 assist me?

3 DR. DAVID SWATEK: Yes. Sure. Mr.
4 Peters, this would be a question that the -- that the
5 system planning department would address. However, I
6 have not come prepared to speak to it at -- at this
7 point. I would have to consult with my staff, and we
8 could have an answer.

9 MR. BOB PETERS: I -- I think, if you
10 would, sir, that would be helpful. Maybe take an
11 undertaking. What I was wanting -- just -- if I could
12 just have a second?

13

14 (BRIEF PAUSE)

15

16 MR. BOB PETERS: Just so that the
17 context of my question, Dr. Swatek, can be shown and
18 you're seeing page 157 on the screen in front of you.

19 DR. DAVID SWATEK: Okav.

20 MR. BOB PETERS: What -- what you've
21 shown I believe are equal losses in this -- in this
22 answer to this Information Request, that is equal
23 losses on -- on each of the three (3) lines. And so I
24 would ask that without Conawapa being included, what's
25 the intended typical average year operation for the

1200

1 respective Bipoles that achieve that equal losses that
2 you've shown?

3 DR. DAVID SWATEK: Okav.

4 MR. BOB PETERS: Could you take that
5 away as an undertaking and provide the answer in
6 writing through your counsel?

7 DR. DAVID SWATEK: I can, yes.

8 MR. BOB PETERS: Yeah, that would be
9 helpful, sir, and thank you for that.

10

11 --- UNDERTAKING NO. 21: Manitoba Hydro to provide
12 the intended typical
13 average year operation for
14 the Bipoles which achieve
15 equal losses

16

17 THE CHAIRPERSON: One (1) of the
18 questions I have resulting from this table is, you
19 know, the excess line capacity that's available as a
20 result of Bipole.

21 And I guess the question that comes to
22 my mind is: Are we building a Cadillac when we don't
23 need that amount of capacity?

24 DR. DAVID SWATEK: Hardly, no. there -
25 - there will always be ex -- well, the reason for the

1201

1 excess line capacity is if one (1) converter goes --
2 goes -- if one (1) converter goes down, we can parallel
3 -- ex -- oh, excuse me, Mr. Chairman.

4 If one (1) transmission line were to go
5 down we can parallel the power of the converter onto an
6 adjacent line. So the actual transmission lines
7 themselves have the capacity to carry the power from
8 two (2) converters. That's part of the re --
9 reliability inherent in an HVDC scheme. Yeah.

10

11 (BRIEF PAUSE)

12

13 CONTINUED BY MR. BOB PETERS:

14 MR. BOB PETERS: Dr. Swatek, there's
15 been a presentation brief submitted to the Board by the
16 Bipole III coalition.

17 Has Manitoba Hydro had an opportunity to
18 look at that?

19 DR. DAVID SWATEK: For -- for this GRA?
20 I haven't seen it myself, no.

21 MR. BOB PETERS: All right. And can
22 you indicate whether or not -- have you had any
23 dealings with the Bipole III coalition in your capacity
24 with the Corporation?

25 DR. DAVID SWATEK: Directly, no. I

1202

1 have assisted our executive in responding to some
2 inquiries.

3 MR. BOB PETERS: There was -- and I
4 appreciate you're at a disadvantage and I -- I
5 understand that Manitoba Hydro made a presentation to a
6 delegation from Alberta dealing with residential rates
7 versus the levelized cost of energy generated from
8 solar panels.

9 DR. DAVID SWATEK: I'm --

10 MR. BOB PETERS: Nothing like that --

11 DR. DAVID SWATEK: -- not aware of
12 that, no.

13 MR. BOB PETERS: All right.

14 MR. KURT SIMONSEN: Mr. Peters, it's
15 Board secretary. Just so you're aware I have advised
16 Manitoba Hydro counsel of the Bipole III coalition
17 presentation. It's now on our website. All are
18 welcome to have a look at it. So parties are aware the
19 Bipole III Coalition will be here on June the 2nd.

20 MR. BOB PETERS: Thank you, Mr.
21 Simonsen.

22

23 CONTINUED BY MR. BOB PETERS:

24 MR. BOB PETERS: Are you aware, Dr.
25 Swatek, as to whether Manitoba Hydro has a -- a feed-in

1203

1 tariff program offered to residential and general
2 service customers?

3 DR. DAVID SWATEK: A feed-in tariff
4 program? I'm not aware. I'm not a tariff expert.

5 MR. BOB PETERS: Perhaps in your
6 discussions with the Chairman just a few minutes ago,
7 has Manitoba Hydro conducted a probabilistic adequacy
8 study on the transmission system without Bipole III and
9 with Bipole III?

10 DR. DAVID SWATEK: We have done -- we
11 have carried out loss-of-load ex -- loss-of-load
12 expectation studies internally. I don't believe
13 they've been issued, though.

14 MR. BOB PETERS: Is that different from
15 a probabilistic adequacy study?

16 DR. DAVID SWATEK: It's the same thing.
17 The -- the loss-of-load expectation is what MISO uses
18 to determine the probabilistic adequacy, yes.

19 MR. BOB PETERS: Are you able to
20 explain on the public record what the Corporation's
21 findings were in the loss-of-load expectation study?

22 DR. DAVID SWATEK: There -- I can say
23 that the industry standard for loss-of-load expectation
24 is, I believe, zero point one (0.1) days per year.
25 Without Bipole III, we are not able to meet that

1204

1 industry standard. With Bipole III, we can meet that
2 standard, yes.

3 MR. BOB PETERS: A question that came
4 out of my reading of this -- this presentation that
5 will be delivered next week that's on the Board's
6 website now is:

7 Did Manitoba Hydro revisit the need for
8 a Bipole III in light of the expanded import
9 capabilities from 700 megawatts to -- I think it was
10 thirteen ninety-eight (1,398) Mr. Cormie told us this
11 morning?

12 DR. DAVID SWATEK: We had looked at
13 that, and indeed that was one (1) of the questions
14 raised by -- by I'm assuming a member of the Coalition.
15 And increasing the import capability with the new 500
16 kV tie line, we can in -- increase the firm import
17 capability from 700 megawatts to 1400 megawatts. But
18 that still does not provide for -- for a firm supply
19 for Manitoba.

20 There is still quite a deficit there.
21 No, without -- without Bipole III, even with the
22 additional tie line, we do not have firm supply to meet
23 winter peak.

24 MR. BOB PETERS: Your answer, Dr.
25 Swatek, suggests that it's the winter peak that's the

1205

1 problem in terms of meeting the Manitoba load?

2 DR. DAVID SWATEK: Keeping the lights
3 on during the winter, yes.

4 MR. BOB PETERS: And so in that
5 assumption, you've assumed Bipoles I and II go down and
6 you have only a 1400-megawatt interconnection into the
7 States, into MISO?

8 DR. DAVID SWATEK: That's the inter --
9 well, 1400 megawatts would be the -- the -- would be
10 the firm import cap -- the firm import capability. We
11 -- we would also have the supply from the Winnipeg
12 River and the thermal plants, as well as Wuskwatim.

13 We -- we would have whatever generation
14 is not currently on the HVDC system, but there is still
15 quite an adequacy shortfall, yes.

16 MR. BOB PETERS: You -- did you
17 quantify the shortfall and can indicate it on the
18 record, or --

19 DR. DAVID SWATEK: I can, if -- here,
20 I'll -- if I could reach back to...

21

22 (BRIEF PAUSE)

23

24 MR. BRENT CZARNECKI: Mr. Chairman, Mr.
25 Peters, I -- while Mr. -- or Dr. Swatek, pardon me, is

1206

1 finding this, I -- I just want to be a little careful
2 and I'm not sure how much further Mr. Peters is going,
3 but Bipole III is an approved project; that it's moving
4 forward and -- and there's some questions from a
5 presentation that we would like to review, as well.
6 And I'm -- I've been patient, but this amount of
7 detail, and again I'm struggling to see the relevance,
8 or the significance of this line of question -- or
9 particular line of question.

10 If it's in response to a presentation
11 that's not sworn evidence, I'm having a difficulty with
12 it. And again, I'm struggling for the relevance and
13 the significance to the one (1) year GRA application
14 that's before you right now. So this may be very
15 interesting to know, but I -- I'm walking a fine line
16 in terms of where -- where it's going here, and I -- I
17 want to just alert you to my sensitivity around this
18 particular topic at this time.

19 DR. DAVID SWATEK: Okay. With -- okay.
20 What I have here is without Bipole III we will have
21 about a -- let's see, this is -- here -- actually, if -
22 - if you can give me a moment to digest this, that --
23 that would -- would help.

24 MR. BRENT CZARNECKI: Perhaps, Dr.
25 Swatek, you can do that, and we can look at this and

1207

1 maybe move on, Mr. Peters, if I could suggest, and if -
2 - after digesting this with the presentation we could
3 speak to it tomorrow morning, if necessary?

4 MR. BOB PETERS: That's fine by me then
5 if it's fine by Dr. Swatek.

6 THE CHAIRPERSON: To be fair -- to be
7 fair, Dr. Swatek, why don't we -- why don't you -- you
8 look at the numbers tonight, and come back tomorrow
9 morning. And I -- you know, probably look at the
10 presentation that had been submitted by the Bipole
11 Coalition just to be fair so you kind of know where
12 we're going.

13 And to the point that Mr. Czarnecki was
14 making, I think it strikes at the very root of the
15 confidence that they have in Manitoba Hydro, and the
16 Public Utilities Board. There's a very public debate
17 going on about the merits of Bipole III, and I think it
18 behoves us, as a panel, to consider the merits.

19 And I think we -- we both the -- both
20 this PUB and Manitoba Hydro needs to respond publicly
21 to the concerns that have been expressed by Bipole III.

22 DR. DAVID SWATEK: Okay. I think I can
23 give a quick response though -- though now. We were
24 dealing with a member of the Coalition on this, who had
25 -- who was mistaken in his belief that we -- that we

1208

1 somehow had twenty-five (25) -- that we -- yeah, that
2 we somehow -- somehow had 2,500 megawatts of firm
3 import capability from MISO. In -- in reality with the
4 MMTP, the Manitoba-Minnesota 500 kV line improvement,
5 we would only have fourteen hundred (1400).

6 So with that 1,400 megawatt import
7 capability, we would still be at least -- at least 700
8 megawatts short without Bipole III. And that -- yes,
9 that's -- that's what my number is.

10

11 CONTINUED BY MR. BOB PETERS:

12 MR. BOB PETERS: Okay. Thank you, sir.
13 Moving, perhaps, back to Mr. Elder. Now that you're
14 put in the back row, I've found another question or two
15 (2) for you, sir, so I apologize.

16 In terms of the components of the Bipole
17 project, can you indicate, are the transmission towers
18 going to be sourced in Manitoba, or do they come from
19 outside of Manitoba?

20 MR. ROB ELDER: The tower steel itself
21 will be sourced out of -- outside of Manitoba. The
22 labour will be procured within the province. So the
23 tower -- tower and conductors and that have -- have all
24 been purchased already, as I mentioned yesterday. Most
25 of the labour, assuming there's available labour, will

1209

1 come from within the province.

2 MR. BOB PETERS: All right. And I -- I
3 -- just help me on this. The steel is coming from out
4 of province for the towers, as I understood your
5 answer?

6 MR. ROB ELDER: Correct.

7 MR. BOB PETERS: Does the steel come
8 prefabricated into a tower, or is the steel brought to
9 Manitoba and Manitoba labour makes the steel into a
10 tower?

11 MR. ROB ELDER: Yeah, so -- so on the -
12 - on the 500 line, what we've done is we've procured
13 the material, the steel for the towers, the conductor,
14 the -- the fibreoptic that will run on it. Most of
15 those -- or all of those manufacturers are primarily
16 outside of Manitoba. In a lot of cases, outside of
17 Canada.

18 And then we're procuring separate
19 contracts for the -- the building of the towers, the
20 erection of the towers on the foundations, and the
21 string and the cable. In those contracts, there's --
22 there's clauses that -- hiring preferences, that we
23 have to start with Manitobans.

24 MR. BOB PETERS: That is in the three
25 (3) contracts for the building of the towers, for the -

1210

1 - putting the towers on a foundation, and for stringing
2 the wire, there's a Manitoba preference in respect of
3 those items?

4 MR. ROB ELDER: There's a Manitoba
5 preference in all of our contracts, regardless of
6 whether it's that contract or not for any -- for any
7 labour-type contracts.

8 MR. BOB PETERS: All right. But the
9 transmission towers, the steel is coming from out of
10 province, the conductors are coming from out of
11 province, the converters are coming from out of
12 province.

13 And I suppose the synchronous
14 condensers, likewise, are coming from out of the
15 province?

16 MR. ROB ELDER: That's correct. And so
17 just to give you a bit of context on the HVDC
18 equipment, there's three (3) manufacturers in the world
19 that make that equipment, never mind Canadian
20 companies. Now they're all multinationals. The same
21 with the synchronous condensers. Most of this
22 equipment is very specialized and, therefore, no local
23 manufacturers.

24 MR. BOB PETERS: Do I take from your
25 previous answer to me that the fabrication of the tower

1211

1 is in Manitoba?

2 MR. ROB ELDER: The assembly of the
3 tower, so the pieces. So you asked: Would the towers
4 be sent to Manitoba assembled? No, that's not
5 practical. So the components, the bolts and
6 everything, will be shipped to Manitoba. And in
7 Manitoba, they'll be -- they'll be erected as -- like a
8 -- like a Lego set and put up.

9 MR. BOB PETERS: All right. That helps
10 me better understand it. And...

11

12 (BRIEF PAUSE)

13

14 MR. BOB PETERS: And again, Dr. Swatek,
15 and I -- subject to Mr. Czarnecki's concerns from
16 before, you've explained to the Board that you've done
17 lots of studies in respect of the Bipole III.

18 Should the Board understand that
19 Manitoba Hydro also examined an alternative to Bipole
20 III that involved the strengthening or the hardening of
21 the existing Bipole I and II system with respect to
22 tower design and converters?

23 DR. DAVID SWATEK: It -- there was a --
24 as part of the Dorsev converter station reliability
25 project, there was a strengthening of the 230 kV relay

1212

1 building, which was considered a -- a highly vulnerable
2 point at the converter station. That work is complete.
3 As far as strengthening of the towers, I'm not aware of
4 anything like that.

5

6 (BRIEF PAUSE)

7

8 MR. BOB PETERS: I -- I wasn't meaning
9 that the -- the towers would be physically strengthened
10 or hardened. I was meaning that the existing Bipole I
11 and II system could be strengthened or beefed up so
12 that it could carry additional capacity to what it's
13 already shown as -- as -- on the screen as being able
14 to carry.

15

16 (BRIEF PAUSE)

17

18 DR. DAVID SWATEK: Now, increasing the
19 capacity of the existing Bipoles I and II does not give
20 us the reliability that we need. We're -- with the
21 Bipole III concept, we're going for the -- the physical
22 -- the physical separation or the geographical
23 separation of the transmission line, such that a storm
24 event that could take -- take -- that could take down
25 the lines wouldn't take down everything.

1213

1 We had -- we -- we have lost those two
2 (2) HVDC lines simultaneously during a previous storm
3 event, I think, in -- in September of 19 -- September
4 of 1996. So, no, we -- we are not looking at
5 increasing the capability of the existing Bipoles I and
6 II, but rather, having a reliability scheme where the
7 additional capacity is on a geographically separate
8 line.

9 MR. ROB ELDER: May -- maybe if I could
10 just add to that? Right -- right now, both -- both
11 Bipole I and II terminate at the same location. If --
12 if, for some reason -- so which is it -- the -- the
13 Dorsev converter station. If we were to lose the
14 Dorsev converter station, we could be up to four (4)
15 years without the Bipo -- with -- without Bipole I and
16 II. So you can do what you want to strengthen up the
17 lines, but unless you've got a second terminus in the
18 south that -- with some distance between them, you --
19 you run that risk of losing that facility.

20 MR. BOB PETERS: And with the building
21 of Riel, you now have that?

22 MR. ROB ELDER: Once Bipole III is
23 built, we'll have that, yes.

24 MR. BOB PETERS: And, Dr. Swatek, when
25 I -- when I talked about the strengthening of the --

1214

1 the system, I -- I did want to take that the next step.
2 And I think your answer was in terms of physically
3 upgrading and strengthening the steel structures and
4 towers and foundations, you're not aware as to whether
5 Manitoba Hydro looked at that?

6 DR. DAVID SWATEK: I am not aware that
7 they looked at increasing the strength of the towers
8 for Bipoles I and II. I don't think that's a -- a
9 realistic thing.

10 MR. BOB PETERS: Well, and I appreciate
11 that's your best understanding is -- would you be
12 prepared to accept an undertaking to make inquiries
13 back at the office, if it was to find out if anybody
14 has done those studies? Or would you know if they were
15 done?

16 DR. DAVID SWATEK: We could do that.
17 We'll -- we'll take an undertaking to see if that had
18 been -- been looked at.

19 MR. BOB PETERS: All right. Thank you
20 for that, sir.

21 MR. BRENT CZARNECKI: Mr. Peters, just
22 so I'm clear. Does 'strengthen the towers' meaning
23 that the -- somehow they would be reinforced with extra
24 girding, or steel, or -- I -- I just want to make sure
25 I'm not going for a complete wild goose chase back to

1215

1 the engineers on this. I'm -- I'm not exactly sure
2 what, further, you could share with me to make the
3 undertaking a little more obtainable.

4 MR. BOB PETERS: You're on the right
5 track, Mr. Czarnecki, in terms of -- of making the
6 steel reinforced, maybe reinforcing the foundation.
7 You talked it -- the -- the guy wires or whatever
8 that's called. I think your vernacular is quite a bit
9 ahead of mine, but that's what I was intending.

10 MR. BRENT CZARNECKI: We'll -- we'll do
11 our best on that one.

12 MR. ROB ELDER: Mr. Peters, maybe if I
13 could just add? If -- if you're talking about
14 strengthening towers and foundations and that, in
15 essence, you're -- you're -- not only are you building
16 a new line now, you're taking down another line to
17 start. So from a practicality perspective, it -- it's
18 -- it just doesn't seem to make sense to me.

19 MR. BOB PETERS: I -- I hear your
20 answer and I heard Dr. -- I heard Dr. Swatek's answer,
21 but I just want to make sure that if -- if that was
22 something that was looked at you can just come back and
23 clarify that on the record?

24 THE REPORTER: Mr. Peters, can you
25 clarify the undertaking, please?

1216

1 MR. BOB PETERS: Yes, the undertaking
2 is Dr. Swatek, perhaps with Mr. Elder, we'll make
3 inquiries as to whether or not Manitoba Hydro examined
4 an alternative to Bipole III that involved the
5 physically strengthening -- or hardening of the Bipole
6 I and II system with respect to the tower design, spare
7 converters, foundations, and other infrastructure.

8

9 --- UNDERTAKING NO. 22: Manitoba Hydro to make
10 inquiries as to whether or
11 not Manitoba Hydro examined
12 an alternative to Bipole
13 III that involved the
14 hardening of the Bipole I
15 and II system with respect
16 to the tower design, spare
17 converters, foundations,
18 and other infrastructure

19

20 CONTINUED BY MR. BOB PETERS:

21 MR. BOB PETERS: When the Board looks
22 at page 157 on the screen, in terms of the -- the
23 Bipole system, would it be correct, Dr. Swatek, for the
24 Board to understand that the maximum HVDC limit on the
25 Bipole III is 13,520 gigawatt hours?

1217

1 (BRIEF PAUSE)

2

3 DR. DAVID SWATEK: The capacity of the
4 Bipole III -- of -- of Bipole III is 2,000 megawatts.
5 Gigawatt hours are megawatts multiplied by time. So
6 this particular table would refer to megawatt -- it
7 would refer to megawatts over a -- over a fixed length
8 of time and I'm not sure what -- what the -- the basis
9 was there.

10 MR. BOB PETERS: It's not annual
11 calculation? It doesn't look right to be an annual
12 calculation?

13 DR. DAVID SWATEK: I don't have a
14 calculator on me here.

15 MR. BOB PETERS: All right.

16

17 (BRIEF PAUSE)

18

19 MR. BOB PETERS: Dr. Swatek, on page
20 160 of the materials there's an answer to an
21 undertaking. And -- and looking at the last paragraph,
22 would the Board be correct in understanding that in
23 terms of the 2005/'06 HVDC losses of 2,215 megawatt
24 hours, that's 8 percent of the 27,323 total output from
25 the lower Nelson hydraulic generation?

1218

1 DR. DAVID SWATEK: I'll trust your math
2 there.

3 MR. BOB PETERS: Well, you haven't
4 known me that long, so that'll change, but you can --
5 you can take that subject to check. And I -- but I do
6 think -- I -- I appreciate that and it was -- but the -
7 - saving an 8 percent transmission loss doesn't sound
8 out of the ordinary to -- to yourself?

9 DR. DAVID SWATEK: The transmission
10 loss, I -- something like 8 percent would not be -- be
11 out of the ordinary. No, that would be in the -- the
12 range, yes.

13

14 (BRIEF PAUSE)

15

16 DR. DAVID SWATEK: But I do want to
17 say, I wasn't involved in preparing these IRSs. So
18 perhaps this question belongs to someone else.

19 MR. BOB PETERS: All right. If -- if
20 someone else takes issue with that. We'll take it
21 subject to check, but I -- I just wanted to see if that
22 was in the ballpark, sir.

23

24 (BRIEF PAUSE)

25

1219

1 MR. BOB PETERS: If I turn a bit
2 further through to Tab 17 -- and I just -- there's just
3 some extracts from the Kinetrics materials that I
4 think will be looked at in -- in greater detail with
5 others.

6 But is it correct that in neither CEF13
7 or CEF14, there were no costs included for the
8 improvement to foundations of Bipole I and II?

9 DR. DAVID SWATEK: I don't believe that
10 is correct. In fact, there is a fairly significant
11 program going on currently to -- to re -- to re --
12 rebuild Bipole I and II footings to -- to be -- to --
13 excuse me -- to rebuild the Bipole I and II footing
14 structures in the north where they were damaged due to
15 recent ice flows.

16 Now, is that in -- if that's in CEF14?

17

18 (BRIEF PAUSE)

19

20 DR. DAVID SWATEK: Yeah. Sorry. We
21 would ha -- this would be -- this would be subject to
22 check, but there has been sig -- significant work very
23 recently to -- to re -- well, to repair damage caused
24 by ice in northern Manitoba.

25 MR. BOB PETERS: I was looking on pages

1220

1 78, 80 on the CEF that I had, and I -- I certainly
2 didn't see that line item broken out.

3 DR. DAVID SWATEK: That would be a core
4 capital item and would not show up as a -- a line item.

5 MR. BOB PETERS: Do you know the
6 approximate cost of that core item?

7 DR. DAVID SWATEK: No, I do not.

8 MR. BOB PETERS: All right. And do you
9 know how many towers were being rehabilitated?

10 DR. DAVID SWATEK: I don't have that
11 number, no.

12 MS. SANDY BAUERLEIN: Would it be a
13 project within the transmission allocation? It's not
14 highlighted specifically as it is less than \$50
15 million.

16 MR. BOB PETERS: In -- is that in
17 CEF14, Ms. Bauerlein?

18 MS. SANDY BAUERLEIN: I believe it is.
19 subject to check.

20

21 (BRIEF PAUSE)

22

23 MR. BOB PETERS: Dr. Swatek, can you
24 just confirm the ages of Bipoles I and II,
25 respectively?

1221

1 (BRIEF PAUSE)

2

3 DR. DAVID SWATEK: I don't have an -- I
4 don't have a pres -- I don't have the exact age, but
5 Bipole I went in in the 19 -- went in in the 1970s, and
6 Bipole II in the early '80s.

7 MR. BOB PETERS: All right. That's
8 close enough. I had them at forty-five (45) and
9 thirty-five (35) years old, respectively, but I wasn't
10 sure if that was accurate from the materials. And it's
11 about the time lines that you're looking at as well.

12 When you indicated that there was
13 upgrades on some of the -- the footings, and I believe
14 the project's now been quantified as one of those
15 that's less than \$50 million, it's -- was it just for
16 the northern towers, or was there -- was it coming
17 further south?

18 DR. DAVID SWATEK: That was work done
19 in the north.

20 MR. BOB PETERS: Would you, if you're
21 amenable to taking another undertaking from me, to
22 provide the project description and the budget amount
23 that's included in CEF14 specifically?

24 DR. DAVID SWATEK: We can -- we can
25 obtain a project description, yes.

1222

1 MR. BOB PETERS: All right. Thank you
2 very much, sir.

3

4 --- UNDERTAKING NO. 23: Manitoba Hydro to provide
5 the project description and
6 the budget amount that's
7 included in CEF14
8 specifically

9

10 CONTINUED BY MR. BOB PETERS:

11 MR. BOB PETERS: When I'm looking at
12 page 177 of the book of documents and the asset
13 groupings that were considered by Kinectrics, were you
14 part of that work involving Kinectrics?

15 DR. DAVID SWATEK: I was not in the --
16 the transmission -- I -- I was not in the transmission
17 business unit at that time, no. So, no, I was not part
18 of this -- this work.

19 MR. BOB PETERS: All right. If you
20 look at page 178 and we look at the as -- the
21 assessments that are performed by Kinectrics, it
22 appears that the work that they performed was related
23 to power transformer, circuit breakers, wood piles, and
24 wood spars.

25 Would I have that right?

1223

1 DR. DAVID SWATEK: Yes, that's correct.

2 MR. BOB PETERS: All right.

3

4 (BRIEF PAUSE)

5

6 MR. BOB PETERS: And conductors and
7 steel structures then were not items that were assessed
8 and addressed by Kinectrics?

9 DR. DAVID SWATEK: That's correct. We
10 were not able to supply them with our condition data in
11 time for that study.

12 MR. BOB PETERS: And that condition
13 data has since been pre -- been prepared?

14 DR. DAVID SWATEK: The condition data
15 had -- had -- existed at the time, but it was recorded
16 in our -- our -- it was recorded in our T-line
17 database, and was not -- it was -- the data was -- the
18 data was not -- was -- the data was not in a form that
19 could be readily output in -- in time for Kinectrics to
20 -- to use.

21 Now, sub -- now subsequently, we -- we
22 have extracted all of that data, and we have carried
23 out the asset health analysis.

24 MR. BOB PETERS: I'm not sure I
25 understand --

1224

1 DR. DAVID SWATEK: Yes.

2 MR. BOB PETERS: -- I'm sorry, I'm not
3 sure I understand what it means when data is not in a
4 form readily output.

5 DR. DAVID SWATEK: Our -- our
6 consultant, Kinetrics, wanted us to -- wanted us to be
7 able to dump the data to a -- to a spreadsheet, and
8 this old T-line database did not have that capability.
9 The data had to be manually extracted piece -- piece by
10 piece and tabulated. It was -- it was a very time-
11 consuming process that we carried out on our own
12 afterwards.

13 MR. BOB PETERS: If you could, please,
14 turn with me, Dr. Swatek, to page 190 of the book of
15 documents. Are you able to confirm, and this -- this
16 was a chart that was not prepared by Manitoba Hydro, I
17 should make sure you're aware of that at the outset if
18 you weren't --

19 DR. DAVID SWATEK: Sorry, do we have
20 the -- the correct chart? This is hydraulic
21 generation.

22 MR. BOB PETERS: Yes, that's the chart.
23 And I know that's going to scare you because it's
24 hydraulic generation, but I -- I have a transmission
25 question.

1225

1 DR. DAVID SWATEK: Okay.

2 MR. BOB PETERS: And that's -- can you
3 confirm to the Board that Manitoba Hydro's HVDC system
4 carries about 70 percent of the total hydraulic
5 generation in an average flow year?

6 DR. DAVID SWATEK: The numbers I've
7 always had were closer to eighty (80), but yeah.

8 MR. BOB PETERS: That's 80 percent on
9 the HVDC system?

10 DR. DAVID SWATEK: Yeah, that the --
11 the HVDC system would carry approximately 80 percent of
12 our hydraulic generation.

13 MR. BOB PETERS: Can you confirm that
14 most of the non-firm opportunity sales also used the
15 HVDC system?

16 DR. DAVID SWATEK: I'm not sure exactly
17 where those electrons would be coming from, but you
18 could portion it out.

19 MR. BOB PETERS: When you say, "portion
20 it out", I'm not following how you would do that
21 calculation.

22 DR. DAVID SWATEK: That's more of a
23 Dave Cormie thing.

24 MR. BOB PETERS: All right.

25 MR. BRENT CZARNECKI: Mr. Peters, I

1226

1 recognize your acknowledgement that this isn't a
2 Hydro's chart, but can you tell us where the source for
3 this chart is so we can find it ourselves and --

4 MR. BOB PETERS: I'll -- I'll --

5 MR. BRENT CZARNECKI: -- perhaps take a
6 look at the context of where it's coming from, just --
7 and for future questioning?

8 MR. BOB PETERS: Sure. Let me do that.

9 MR. BRENT CZARNECKI: We can do it
10 offline. That's fine.

11 MR. BOB PETERS: After we recess, sure.

12 Thank you.

13

14 CONTINUED BY MR. BOB PETERS:

15 MR. BOB PETERS: Dr. Swatek, are you
16 familiar with Manitoba Hydro's transmission tariff
17 charges?

18 DR. DAVID SWATEK: No.

19 MR. BOB PETERS: And I don't suspect
20 anybody on the panel is conversant with that.

21

22 (BRIEF PAUSE)

23

24 MR. BOB PETERS: Mr. Czarnecki, I'm --
25 I'm -- I just want to make sure that, before I pose

1227

1 some questions related to the curtailable rates program
2 cap reduction, that Mr. Rainkie or other witnesses
3 would be able to field some of those?

4 MR. BRENT CZARNECKI: Your time may be
5 better spent with Mr. Cormie, I'm advised.

6 MR. BOB PETERS: Shouldn't have given
7 him the afternoon off. Well, with -- with that good
8 news, Mr. Chairman, I...

9 THE CHAIRPERSON: Yeah. I think that
10 if that's the end of your questions --

11

12 CONTINUED BY MR. BOB PETERS:

13 MR. BOB PETERS: Well, I -- I did want
14 to see if Dr. Swatek could help me on page 209 while
15 he's here because...

16 DR. DAVID SWATEK: Two zero nine (209)?

17 MR. BOB PETERS: Yes, page 209.

18 Underneath the -- the graph, there's a statement that:

19 "Savings from curtailable rates
20 programming do not qualify for -- as
21 winter peak capacity or dependable
22 energy."

23 Are you able to explain why that's the
24 case for Manitoba Hydro?

25 DR. DAVID SWATEK: That's not within my

1228

1 area. Again, that would be a Dave Cormie question.

2 MR. BOB PETERS: When you're planning
3 your transmission for winter peak as you've talked
4 about already this afternoon, Dr. Swatek, do you
5 consider what means there are to reduce that winter
6 peak?

7 DR. DAVID SWATEK: We use the most --
8 we use the most current load -- load forecasts which
9 include the up-to-date demand-side management numbers.

10 MR. BOB PETERS: Is there a
11 transmission reason as to why curtailable rates
12 programming would not assist in the winter peak
13 transmission planning that you do?

14 DR. DAVID SWATEK: In Manitoba it's
15 cold and it's dark during the winter. Curtailable
16 rates are -- curtailable rates are only an advantage to
17 customers who feel they can turn off their power. In
18 Manitoba it's -- the winter peak is a
19 critical life and death thing.

20 MR. BOB PETERS: Under -- Manitoba
21 Hydro already has some customers enrolled in a
22 curtailable rates program. Are you aware of that?

23 DR. DAVID SWATEK: That -- that would
24 be on the commercial side and I would not be aware of
25 who or which ones.

1229

1 MR. BOB PETERS: Thank you for that.

2 And, Mr. Chairman, I would like to thank
3 the panel. Their -- their information and responses
4 has been appreciated. And I look forward to a few
5 undertakings that we have left, but those are my
6 questions of this panel.

7 THE CHAIRPERSON: Thank you, Mr.
8 Peters. I -- I do want to continue a bit of a debate
9 I've had with Mr. Czarnecki regarding Bipole III.

10 You know, I think our responsibility as
11 a panel as well is to address the prudence of
12 expenditures; and I think that is what we're doing.

13 We are wanting to -- to make sure that -
14 - that the expenditures that are being made by Manitoba
15 Hydro, including the expenditures for Bipole III are
16 prudent, because we are asking Manitobans to pay for
17 those expenditures. And I think it behoves us to
18 address them head on and I think that's what we're
19 doing now. Thank you.

20 So with that, we'll adjourn for the day.

21 And --

22 MR. BRENT CZARNECKI: Mr. Chairman, I -
23 - if I could just add, we -- we do fully appreciate and
24 respect your role in that regard. And -- and perhaps I
25 wasn't as articulate as I could have been in expressing

1230

1 more the concern of commenting on a presentation that
2 we had yet to seen directly, the witness in particular,
3 and -- and knowing the context behind what I thought
4 were Mr. Peters' questions were originating from.

5 So I -- I want to make that more
6 abundantly clear to you, sir.

7 THE CHAIRPERSON: Thank you.

8 MR. BRENT CZARNECKI: And sorry for the
9 confusion.

10 THE CHAIRPERSON: Thank you for that.
11 Okay. With that we'll adjourn for the day and we'll
12 see each other again, most of us, tomorrow morning at
13 nine o'clock. Thank you. Have a good evening
14 everyone.

15

16 (PANEL RETIRES)

17

18 --- Upon adjourning at 4:15 p.m.

19

20 Certified correct,

21

22

23

24 Chervl Lavigne, Ms.

25