



“When You Talk - We Listen!”



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
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Pages 1421 to 1688

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1 --- Upon commencing at 9:04 a.m.

2

3 THE CHAIRPERSON: Good morning. I
4 believe that we're in a position to start today's
5 proceedings. So good morning, everyone. I hope
6 everybody had a good weekend. Without further ado, Mr.
7 Gange, please.

8

9 MANITOBA HYDRO PANEL 3 - PLANNING AND OPERATIONS

10 RESUMED:

11 DARREN RAINKIE, Previously Sworn

12 SANDY BAUERLEIN, Previously Sworn

13 DAVID CORMIE, Previously Sworn

14 TERRY MILES, Previously Sworn

15 ROB ELDER, Previously Sworn

16 DAVE BOWEN, Previously Sworn

17 MICHEL MORIN, Previously Sworn

18 DAVID SWATEK, Previously Sworn

19 NICK READ, Previously Sworn

20

21 CROSS-EXAMINATION BY MR. WILLIAM GANGE:

22 MR. WILLIAM GANGE: Thank you, sir.

23 Good morning, panel. I'd like to start with M. Morin.

24 Sir, you mentioned that -- for Manitoba Hydro the

25 impact of the natural life cycle of its assets is only

1 now starting to affect the assets.

2 Is that correct?

3 MR. MICHEL MORIN: That -- that's
4 correct.

5 MR. WILLIAM GANGE: And -- and you
6 mentioned that this is similar for many of the North
7 American utilities, that because of the -- the relative
8 age of this -- the commencement of the electrification
9 of North America, many of the North American utilities
10 are facing the same problem.

11 MR. MICHEL MORIN: That's correct.

12 MR. WILLIAM GANGE: And you -- you
13 contrasted that with respect to the European
14 jurisdictions, where you -- you mentioned that, for
15 many of them, they've been through this cycle at least
16 once, and some of them twice.

17 MR. MICHEL MORIN: Yes, that's correct.

18 MR. WILLIAM GANGE: And, sir, as far as
19 I know, this is the first time that Manitoba Hydro has
20 put together a panel that -- that focusses, as your
21 testimony has, on the -- the life cycle of -- of its
22 assets.

23 Am I correct in that?

24 MR. MICHEL MORIN: I think so, yeah, I
25 think.

1 MR. WILLIAM GANGE: And can you advise
2 me, sir, what was the thought process of Manitoba Hvdro
3 in approaching this GRA, and why you would have a panel
4 such as yours?

5 MR. MICHEL MORIN: I would think that
6 we -- last time we put in some asset information. It
7 wasn't? Last GRA, we -- we provided some information
8 on the aging of our assets and have been continually
9 communicating to stakeholders to try to understand
10 what's happening with our assets and understanding what
11 the resulting if we don't start to increase.

12 And we've been providing more and more
13 information on that. And I think this was an
14 opportunity to provide more information on -- on the
15 aging of a structure and the impacts of aging of a
16 structure to the stakeholders here.

17 MR. WILLIAM GANGE: And in terms of the
18 --

19 MR. DARREN RAINKIE: Mr. Gange -- Mr.
20 Gange, sorry. Good morning --

21 MR. WILLIAM GANGE: Sorry, Mr. Rainkie.

22 MR. DARREN RAINKIE: -- or good
23 morning. Good morning, Mr. Gange, Chairman, morben --
24 members of the Board. Maybe I can get in on that
25 question, too, because I have overall responsibility

1 for oversight of the rate applications.

2 Indeed, this is the first time we've had
3 such a panel, and we did bolster the information on
4 capital expenditures significantly in our filing this
5 time. And obviously the reason that we did that is
6 that we clarified through our filing that it's the
7 investment requirements of the next decade that are
8 producing the requirements for the rate increases that
9 we're requesting.

10 We wanted to be quite clear it isn't
11 accounting changes and depreciation and that sort of
12 stuff that's driving the need for rate increases, but
13 that it's the capital expenditures that we need to --
14 to undertake in order to maintain safe and reliable
15 service and meet the growth requirements of Manitoba.

16 So it would logically follow that if
17 that is the requirement for the rate -- rate increases,
18 that we would be very clear about that in the filing.

19 MR. WILLIAM GANGE: Thank you, sir.

20 Mr. Morin, would the jurisdictions that
21 are most similar to Manitoba in terms of, well, the --
22 the development of -- of the area and the development
23 of the electric grid -- grid, and also the weather
24 conditions, would those be Saskatchewan, North Dakota,
25 and Minnesota?

1 Is -- is that -- is that a fair
2 generalization on my part?

3

4 (BRIEF PAUSE)

5

6 MR. MICHEL MORIN: You know what, it
7 would be a generalization. I wouldn't have the actual
8 concrete information to -- to say that for certain, but
9 that -- that could be a generalization.

10 MR. WILLIAM GANGE: Certainly from a
11 geographic perspective, those three (3) jurisdictions
12 would be the most similar to Manitoba?

13 MR. MICHEL MORIN: Correct, and
14 northern Ontario. A lot of the northern Ontario stuff
15 would be similar to some of the northern parts we have
16 in Manitoba as well.

17 MR. WILLIAM GANGE: So I'm not asking
18 about how you like to spend your free time, Mr. Morin,
19 but -- but do you -- do you have discussions with your
20 counterparts in those jurisdictions with respect to
21 maintenance and -- and the deterioration of your asset
22 base?

23 MR. MICHEL MORIN: Yes, in -- in
24 several formats. There's some conference we meet in as
25 utilities on asset management conferences, and as well

1 as just even recently, you know, SaskPower came in to
2 work with us and view some of our programs to see some
3 of the things that Manitoba Hydro was -- was doing, and
4 vice versa. The utility sector's quite open for
5 sharing information on their programs and stuff. So we
6 -- we recently met with SaskPower and -- and vice
7 versa, providing some of our program documentation for
8 them to review.

9 MR. WILLIAM GANGE: Sure. This
10 wouldn't be something that you would be holding close
11 to your vest, I take it?

12 MR. MICHEL MORIN: Actually, most
13 utilities, you know, are -- are quite open to sharing
14 information on their asset management practices, yeah.

15 MR. WILLIAM GANGE: And from your
16 experience, Mr. Morin, would you say that -- that the
17 issue of the deterioration of assets is a problem that
18 is shared by the -- most of the jurisdictions that you
19 meet with?

20 MR. MICHEL MORIN: That -- that's
21 correct. It -- it's a -- it's a very common theme
22 you're seeing across the utilities.

23 MR. WILLIAM GANGE: And -- and from
24 those discussions, is it your perspective that a number
25 of the jurisdictions, and especially the ones close to

1 Manitoba, are also experiencing this -- this situation
2 of asset life coming to an -- an end for -- for many of
3 the original assets of the -- of -- of the system?

4 MR. MICHEL MORIN: That -- that would
5 be correct in a general sense, yeah, depending on the
6 asset and what they might have replaced previously from
7 first install, yes.

8 MR. WILLIAM GANGE: You mentioned that
9 -- in your direct testimony that -- that, from your
10 experience and from the information that you've
11 gathered, your view is that Manitoba Hydro has done a -
12 - a very good job at lengthening the life of assets.

13 Is that correct? Did I get that right,
14 sir?

15 MR. MICHEL MORIN: Yeah, that's
16 correct. Like, if we use -- there again going back to
17 poles as an example, we -- we implemented an integrated
18 pole maintenance program back in the '80s where not
19 many utilities were doing that, and it was an
20 investment we thought quite important. And we're
21 seeing more and more utilities mirror some of the
22 things we're doing today in their practices now as
23 they've seeing their poles and asset classes aging.

24 And part of that allowed us to
25 understand our assets with a -- a better granularity,

1 and then push back some of the replacements where,
2 prior to that, decisions, you know, several decades ago
3 were more difficult to kind of understand the true
4 risk, where these programs that we've installed or
5 implemented years ago have allowed Manitoba Hydro to
6 look at their asset base, extend it, and still maintain
7 a level of res -- reliability, so I would say, yes.

8 MR. WILLIAM GANGE: Do you have
9 information, sir, from, in particular, Saskatchewan,
10 North Dakota, Minnesota, about the relative percentage
11 of their budget that is being spent on this type of
12 capital maintenance?

13 MR. MICHEL MORIN: No, I don't have
14 that with me, no.

15 MR. WILLIAM GANGE: But -- but do -- do
16 you have that available in -- in your department?

17 MR. MICHEL MORIN: I wouldn't say we
18 have their -- the utilities across North America's
19 budget in our department, no, we do not.

20 MR. WILLIAM GANGE: No. And I wasn't
21 asking for all of them.

22 MR. MICHEL MORIN: Yeah.

23 MR. WILLIAM GANGE: I'm just asking for
24 -- for, in particular, the three (3) that I mentioned.

25 MR. MICHEL MORIN: No.

1 MR. WILLIAM GANGE: No way? Okay.

2

3 (BRIEF PAUSE)

4

5 MR. WILLIAM GANGE: You did provide
6 some information about Hydro One, I believe, in terms
7 of -- of the amounts that they are spending?

8 MR. MICHEL MORIN: Yeah, what we had as
9 just a high level view, as I had mentioned before, was
10 more -- Ms. Kapitany had asked a question about our
11 assets. And there was a document that we just looked
12 at their total asset base versus what we had, and it
13 was a -- yeah, it was -- it was another utility's
14 volume of spend versus the assets they -- they have.

15 MR. WILLIAM GANGE: Would that be the
16 only one that you have? Does that -- is the only
17 comparison that you can provide to the Board?

18 MR. MICHEL MORIN: We -- we haven't
19 really compared to other utilities in that manner.
20 We've been basically focussed on our assets and
21 maintaining our assets longer. And -- and most of our
22 assets have lasted longer -- or certain assets have
23 lasted considerably longer than other areas, so we've
24 just been focussed on managing the risk of our assets,
25 extending the life of our assets, and trying to manage

1 those programs.

2 MR. WILLIAM GANGE: Mr. Morin, Mr.
3 Williams has a -- an Exhibit number 16 and in it he
4 attached the distribution asset condition report.

5 Do you recall that, sir?

6 MR. MICHEL MORIN: Yes.

7 MR. WILLIAM GANGE: And on page 24 of
8 that report the number that is shown as the funding gap
9 is \$1.15 billion. Could you just explain that to me a
10 little bit? Because I'm not sure -- well, it may have
11 been that I wasn't listening appropriately. But the
12 \$1.15 billion, in -- in terms of that, sir, you've also
13 indicated that -- that if it was distributed over
14 twenty (20) years you'd need \$57.5 million per year in
15 -- in maintenance costs.

16 Is that correct, sir?

17 MR. MICHEL MORIN: If -- I guess the --
18 this would be in correlation with -- yes, the answer I
19 guess. The -- the funding gap here and it ties to
20 those soccer field charts where --

21 MR. WILLIAM GANGE: Yes.

22 MR. MICHEL MORIN: -- this would be the
23 example. We changed in those soccer fields that
24 current status and we said, What would be projected
25 twenty (20) years out is we'd sort of have the same

1 funding to be able to replace a certain amount of
2 assets year after year in a fairly consistent basis on
3 our current funding levels. The funding gap is the
4 difference between what would be required to kind of
5 maintain that soccer field from going quite a bit into
6 the red and very poor.

7 So that was saving using your existing
8 spend now what additional money would have to be
9 injected on top of that to -- in order to manage that
10 deterioration. And -- and in 2012, we had a prediction
11 of \$1.15 billion. And that was -- that was strictly on
12 the eight (8) assets that were outside of the station
13 fence. That was a -- an exercise done on stuff that
14 leaves the substation like poles and cables and street
15 lights and those -- those assets. That did not -- did
16 not include sub -- subtransmission -- or substations.

17 MR. WILLIAM GANGE: But as I read the
18 individual sections the -- the individual appendices
19 that were dealing with each of the headings: cables,
20 manholes, poles. It seemed to me that -- that you were
21 suggesting in -- or -- or the -- the authors of the
22 report were suggesting that -- that you were extending
23 the lifespan in -- on many assets well past its due
24 date.

25 Is -- was that a fair takeaway from --

1 from my read of it?

2 MR. MICHEL MORIN: Yeah, like, I think
3 that that theme has come up quite often about age.

4 Like, we -- we've managed our assets --

5 MR. WILLIAM GANGE: I'll hold that.

6 Thank you.

7 (BRIEF PAUSE)

8

9 THE CHAIRPERSON: After consulting with
10 Mr. Hombach, I -- I really believe we should just
11 proceed and...

12

13 CONTINUED BY MR. WILLIAM GANGE:

14 MR. WILLIAM GANGE: Thank you. I think
15 that what we were talking about, Mr. Morin, was the
16 question of the -- the appendices and the life
17 expectancy as related to the funding gap.

18 MR. MICHEL MORIN: I was going to, like
19 I said, bring up an example of -- like with underground
20 cables, we have 6,000 kilometres of underground cable.
21 And -- and they've served us well. Like, you know, I
22 mean, we've had minimal failures in the last few
23 decades. They're just starting to -- to cause trouble.
24 And so we didn't replace cables. So, you know, the
25 cables were in the system and performing well. And now

1 they're starting to show signs of degradation.

2 And that's where we have a considerable
3 amount over that thirty (30) year period now that are
4 between that thirty (30) and sixty (60) year. And so
5 the funding we had prior with cables that were in good
6 shape not causing any outages, we didn't spend. We
7 focussed on different aspects of our assets that were
8 requiring more attention.

9 So now that the cables are starting to
10 come into the queue, part of that investment was saving
11 we have to ramp up. And -- and then that -- at the
12 high level of why those charts were saving our cable
13 turnover is three hundred (300) years, because we
14 didn't change over cable. We installed it. It's the
15 first install. It's served us well. It's just starting
16 to degrade now. How do want to manage that replacement
17 going forward? And -- and it just identifies that
18 there's an injection of -- of new investment it
19 required to change that turnover rate. Because it's --
20 it's not sustainable at that level.

21 MS. SANDY BAUERLEIN: I just wanted to
22 add to that, if -- if I may, that that since this
23 report was written, Manitoba Hydro has added an
24 additional \$3 billion worth of investment in our
25 sustaining capital from CEF12, which is at the time

1 this report was drafted to CEF14, which is in front of
2 the Board right now, over the twenty (20) year period,
3 that \$3 billion.

4 MR. WILLIAM GANGE: Thank you, Mr.
5 Morin. I believe that those are the questions that I
6 have on -- on your material.

7 Mr. Cormie, if we could look at Board
8 counsel Volume I, page 127.

9

10 (BRIEF PAUSE)

11

12 MR. WILLIAM GANGE: So this was the
13 chart that Manitoba Hvdro prepared with respect to the
14 effect of DSM upon retained earnings.

15 You recall that, Mr. Cormie?

16 MR. DAVID CORMIE: Yes.

17 MR. WILLIAM GANGE: And when Mr. Peters
18 was questioning the panel on this, you testified at
19 page 1,038 of the transcript, you said:

20 "There's a strong incentive there for
21 us to charge customers separately for
22 their energy as opposed to a bundled-
23 in rate so that they don't get this
24 result."

25 I didn't understand that answer, not

1 that I understand a whole lot that you talk about, Mr.
2 Cormie, but -- but in particular this answer. I didn't
3 understand what -- what you were referring to for the
4 separate charge for energy as opposed to the bundled-in
5 rate.

6 MR. DAVID CORMIE: I'm sorry to --
7 sorry to hear, Mr. Gange, that what I -- what I
8 testified to is not understandable.

9 MR. WILLIAM GANGE: It's probably
10 entirely comprehensible by the majority of the people
11 here. It's my own failure, sir, so that -- that's not
12 a criticism of you.

13 MR. DAVID CORMIE: When -- in -- in a
14 bundled rate Manitoba Hydro is including several
15 charges. And -- and for the residential customer we
16 include the -- the cost of the energy, the -- the cost
17 of providing the capacity that's associated with the
18 energy. We provide for transmission and distribution
19 costs. All the customer service is there.

20 And -- and so the -- you know, that's a
21 -- that's a bundled rate. The best contrast I can make
22 is when you look at the large industrial rate where the
23 customer is in effect contracting for capacity and
24 energy. He pays his demand charge separately from his
25 energy charge. And then there's -- there's also some

1 customer services charges in there. But it's
2 essentially an -- you know, a more unbundled --
3 unbundled rate.

4 But when a customer chooses to invest in
5 a demand-side management option like insulation, he'll
6 reduce his energy charge, and -- and his energy -- his
7 bill will go down based on the -- upon the amount of
8 energy he -- he stops buying at the -- at the runoff
9 rate. And that runoff rate may include -- may be --
10 may be the bundled rate, or it may be the marginal
11 value of the rate, depending on where he is on that --
12 on that demand.

13 But that's not necessarily the -- the
14 cost of the energy. If it -- if it's -- if they -- if
15 the energy is costing Manitoba Hydro three (3) cents to
16 produce, but he's saving seven (7) cents on his bill,
17 that's not -- he's not really get the price signal --
18 the right price signal for the energy he's...

19

20 (AUDIO PROBLEM)

21

22 MR. WILLIAM GANGE: ...as we see it is
23 this, or the assumption that we see it as this, is that
24 in the past Manitoba Hydro has intro -- introduced DSM
25 programs that have resulted in significant savings.

1 And in -- in one (1) of the pieces of information that
2 was provided it's a pretty significant number that the
3 DSM programs have saved Manitoba taxpayers and -- by
4 freeing up energy so that over a period of time, that
5 DSM savings becomes locked in.

6 And -- and I understand your point. You
7 can't predict it in the future as locked in, but
8 looking backwards you can say that you have
9 significantly more dependable power that you are able
10 to export to other jurisdictions because of DSM
11 savings.

12 That's the assumption that -- that we
13 want to make. So that if -- if one were to take the
14 current DSM savings and flip it around, and I
15 understand your caveat, but I still would like to know
16 what this graph would look like if those savings became
17 available for dependable energy?

18 MR. DAVID CORMIE: Well, it's Mr.
19 Rainkie's exhibit, so if he wants to -- wants to answer
20 the question, I'm happy to let him answer it.

21 MR. DARREN RAINKIE: Mr. Gange, why
22 don't we take that away and I'll consult with Ms.
23 Carriere and Mr. Cormie, and we'll -- what you're
24 asking for, I think based on the past discussion is a
25 hypothetical calculation --

1 MR. WILLIAM GANGE: It is a
2 hypothetical calculation, you're -- you're right, sir.
3 I -- I acknowledge that.

4 MR. DARREN RAINKIE: Okay. We'll --
5 we'll take that away, and -- and come back and let you
6 know if we believe that that is something we provide to
7 the Board in terms of realistic information or not, but
8 can I undertake to take that away, and think about
9 that?

10 MR. WILLIAM GANGE: Absolutely. That
11 would be perfect. Thank you. So if -- if the reporter
12 was able to make a note of that undertaking -- got it?
13 Great. Thank you.

14

15 --- UNDERTAKING NO. 28: Manitoba Hydro to provide
16 what the graph would look
17 like if those savings
18 became available for
19 dependable energy

20

21 CONTINUED BY MR. WILLIAM GANGE:

22 MR. WILLIAM GANGE: I have absolutely
23 no idea. Okay. Thank you.

24 Mr. Miles, this may be for you, this
25 area. At the NFAT hearing, Mr. Dunsky testified with

1 is -- is economic or achievable, if you will, at the
2 customer end in implementing various technologies.

3 From the other side, from the resource
4 planning side when we're looking at the broader
5 perspective and sort of the larger-scale implementation
6 of technologies, we in essence work together on -- on
7 those sides.

8 Now, we have an annual process, and on
9 an ongoing basis review options that are -- that are
10 out there, various solar, wind, and whatever else comes
11 across.

12 We have been watching as things like the
13 -- the value of solar has come down, or the cost of the
14 solar technologies have come down, the cost of wind
15 technologies has -- has been variable.

16 What we need to look at and consider is
17 the application in Manitoba in our climate and how that
18 fits into the Manitoba climate, into the Manitoba load,
19 into the customer requirements that are there, and how
20 -- and how to potentially implement those types of
21 technologies in the province.

22 So I'd suggest that, on an ongoing
23 basis, we review both of those sides, large-scale
24 costs, you know, the smaller-scale costs, the public
25 interest, the ability to implement it, things like

1 system changes such as what Mr. Morin would -- would
2 sav in terms of the distribution end of things.

3 How can we implement those types of
4 things. If you have a lot of implementation on the
5 distribution side, how does that affect his work in the
6 maintenance and -- and upgrade of systems that -- that
7 they're doing?

8 So we have various avenues, if you will,
9 in Manitoba Hydro that look at those together. So as -
10 - as we have been watching the grid parity aspect, as
11 much as many others have, and -- and we haven't done a
12 specific -- I don't believe a specific calculation to
13 sav exactly when do we really think it's there.

14 I think in the NFAT -- I believe in the
15 NFAT process, someone was indicating in the middle of
16 the -- you know, mid-'20s time frame, we may start to
17 see that happening. Then the question is: Once that
18 starts to happen, what might be the interest and uptake
19 associated with that?

20 So once you start something, how long
21 might it take for people, the customers, our end to be
22 able to respond to that and move forward with that?

23 So as we go forward and we're looking at
24 things like maintaining our system and -- and that and
25 we're planning the bigger side of things, I think we're

1 going to weigh those options. I think we'll weigh them
2 more closely as we go forward.

3 So in the -- in the short answer, we
4 have ongoing processes on both sides, our resource
5 planning process, our maintenance and development
6 process. And those in essence are integrated together.

7 MR. WILLIAM GANGE: I take it, sir,
8 though, that there's not a -- a separate department
9 that's dedicated to the analysis of the effect of
10 technology upon the Manitoba electrical system.

11

12 (BRIEF PAUSE)

13

14 MR. TERRY MILES: That analysis would
15 happen on an ongoing basis as we assess the impacts of
16 those. Through the NFAT, I think what was presented
17 was the effect of wind in the system and how our system
18 might evolve from that.

19 Moving forward, as we look at when we
20 might consider some of these other technologies as
21 being viable, implementable, cost-effective, if you
22 will, to implement, we'll do those analysis and studies
23 to look specifically at that. To say how it might
24 affect it today, we're starting -- I think we're
25 starting to get on that curve where -- where we start

1 to more seriously think about how we move forward on
2 that.

3 So in -- in my division, Resource
4 Planning Department, those technologies would be
5 considered and it would be decided as to when it's --
6 it's prudent, if you will, to move forward. We're
7 watching other jurisdictions that are doing that.
8 There's other entities around the world that are
9 implementing these types of things. And we'll learn
10 from those and figure out when the timing is right to
11 do that specifically in Manitoba.

12 I say it's getting closer probably to
13 the time frame where we now start to put those types of
14 plans or technologies into -- into, I don't know,
15 build-out options, whatever you might want to call
16 them, on -- on both sides of it, on the customer side
17 and -- and the larger-scale side. We probably started
18 to enter into that aspect, but...

19 Is there one (1) specific department
20 that does that? No, because there's a number of
21 departments that have to be considered in that overall
22 process, from the generation side, the transmission
23 side, the distribution side, and then even from some of
24 the marketing aspects, from our Power Smart side, I'd
25 suggest, as well.

1 MR. WILLIAM GANGE: Do you see, sir,
2 from that answer that at some point there's going to be
3 -- there's -- there will have to be somebody with
4 Manitoba Hydro that is coordinating those efforts from
5 the various departments?

6

7 (BRIEF PAUSE)

8

9 MR. TERRY MILES: Potentially. But
10 it's probably more along the lines of -- of the various
11 groups understanding the different aspects of work that
12 is going on across those groups. And we work together.
13 The resource planning group in my department works with
14 the transmission planning folks. Mr. Swatek that we
15 seen in the back room there, we have ongoing
16 discussions with him on how to work with those types of
17 things.

18 We work with -- you'll -- you'll hear
19 from Lois Morrison, from the Power Smart. We work with
20 Lois's group and her staff on that. We work with the
21 load forecast groups looking forward, so we do
22 coordinate those activities. Do we have one (1)
23 specific entity? It's more like a group of entities
24 that work together and talk about those.

25 MR. WILLIAM GANGE: There is discussion

1 that's commencing with respect to the potential for
2 people to leave the electrical grid or to set up
3 microgrids.

4 You're aware of that, sir? It's in the
5 early stages. I recognize that.

6 MR. TERRY MILES: I'm aware of that
7 concept. I can't say that I'm an expert at all in that
8 aspect of it.

9 MR. WILLIAM GANGE: Is that -- is that
10 an issue that -- that has been studied yet by Manitoba
11 Hvdro, the effect of microgrids upon the svstem?

12 MR. TERRY MILES: I can't say that I'm
13 specifically aware that it's been studied for the
14 Manitoba Hvdro svstem, although I'll take that under --
15 I can always go back and check and see, but I don't
16 believe that's specifically been done for the Manitoba
17 Hvdro svstem.

18 I will say that we have definitely
19 looked at where that's been done in other areas and
20 where people in my general group that look at those
21 types of things across North America.

22

23

(BRIEF PAUSE)

24

25 MR. WILLIAM GANGE: Mr. Miles, can --

1 can you foresee whether there would be a different
2 approach that Manitoba Hvdro would take with respect to
3 transmission if in fact this microgrid concept
4 continues to grow and develop? Would there be a
5 difference in -- in the transmission process for
6 Manitoba Hvdro?

7 MR. TERRY MILES: I can't speak
8 specifically for how transmission might manage
9 something like that. I think the discussions around
10 that at Manitoba Hvdro would be joint discussions
11 across -- from a -- from a planning -- from a resource
12 planning perspective to the transmission perspective to
13 the distribution perspective as to how that might work.

14 Whether or not a process might be
15 different I -- we might have to engage in different
16 discussions than we've had in the past potentially.
17 But I can't speak specifically for transmission as to
18 whether or not they would approach things differently.

19 MR. WILLIAM GANGE: Can you answer
20 this? And -- and you may not be able to. And -- and
21 that's just in terms of areas of expertise. But right
22 now we have the -- the northern communities that are on
23 diesel generation.

24 Do you know if Manitoba Hvdro has
25 started to consider the concept of a microgrid for

1 those northern communities in order to lessen the
2 dependence upon the dies -- diesel generation?

3 MR. TERRY MILES: I'm aware that there
4 are a number of options being considered for dealing
5 with power supply, et cetera, for the -- the diesel
6 communities. And I don't believe a decision has been
7 made on that. And whether or not the mic -- microgrid
8 aspect is -- is one (1) of the specific solutions or
9 outcomes I -- I don't believe that it is one (1) of the
10 options that's in there currently. However, that's
11 potentially something that comes out of a longer term
12 process with that.

13 MR. WILLIAM GANGE: Okay. Thank you.

14 MR. TERRY MILES: But I know that
15 there's a - there are aspects of trying to reduce the
16 use of diesel in those communities.

17 MR. WILLIAM GANGE: I -- I'm just going
18 to ask you, Dr. Swatek, if -- whether you have anything
19 to add to that given that that's more your area of
20 expertise.

21 DR. DAVID SWATEK: I will ask you
22 first. Now, microgrid, it's one (1) of those hot new
23 buzz words. So could you define what you mean by
24 'microgrid'?

25 MR. WILLIAM GANGE: What I'm referring

1 to, sir, is the ability of a -- a small community or --
2 or area to generate sufficient electricity to serve its
3 own purposes. So that for instance the -- the diesel
4 communities would not -- with respect to a microgrid
5 would be -- would -- the -- would generate enough
6 electricity that they wouldn't require outside
7 assistance. That's what I'm referring to.

8 DR. DAVID SWATEK: Yeah. Well, there
9 are -- there -- there are examples now out there.
10 Industrial users like Tolko who have their own
11 generation. They -- they can supply -- they can supply
12 part of their own -- their own needs. They rely on the
13 grid for the others. There are est -- establishments
14 in Winnipeg using solar panels to supply part of their
15 energy needs during the day and re -- relying on Hydro
16 at -- at night. There are examples of how this
17 technology is evolving in the province. Now, with
18 respect to remote diesel communities right now the
19 diesel generator supplying that remote community would
20 be considered their microgrid.

21 MR. WILLIAM GANGE: Got you. Thank
22 you. Mr. Miles, you indicated that your department is
23 developing a consultation plan with respect to the
24 integrated resource planning in -- in your direct
25 testimony.

1 Is that correct, sir?

2 MR. TERRY MILES: We're putting
3 together an engagement plan, yes, with stakeholders.

4 MR. WILLIAM GANGE: And -- and I'm not
5 asking for anything that's confidential or that's not
6 ready to be made public, but with respect to the
7 consultation process, I'd like to go into it a little
8 bit more detail so that the Board can understand what
9 your department is planning on doing.

10 As I understand it, and -- and I hope
11 that I'm not treading on information that shouldn't be,
12 but I understand that you're thinking that there would
13 be three (3) main groups involved in that consultation.

14 Can you -- can you comment on that?

15 MR. TERRY MILES: Yes, I can comment on
16 that. We're looking at three (3) main groups. We've
17 defined -- at least currently defined three (3) main
18 groups as the being the general public, which is
19 essentially residents and businesses in the Province of
20 Manitoba across all -- across the province in -- in
21 general.

22 Another group that we're referring to as
23 interested organizations. We're currently considering
24 that group to be those Intervenorers that participated at
25 the NFAT, and those groups have parti -- participated

1 in some of the -- the pre-NFAT consultations at the
2 NFAT.

3 Now, that -- that mix of groups can --
4 can be expanded as such, and -- and other interested
5 groups would be able to provide submissions to Manitoba
6 Hvdro through -- through their web form, or some other
7 form on that -- on that aspect.

8 The third group are Aboriginal peoples,
9 and that represents the -- the First Nations, as well
10 as organizations that represent First Nations and Met -
11 - and the Metis in the province of Manitoba. So those
12 are the -- the three (3) general -- general groups.

13 The general public, our current plans
14 are to engage with the general public through surveys.
15 I mentioned one (1) survey that's been administered by
16 -- by Ipsos, as well as through a web-based
17 communication. So general information can be provided
18 to Manitoba Hvdro across a web base.

19 The interested organizations, we are
20 planning some initial face-to-face meetings with --
21 with the organizations, recognizing that they -- they
22 tend to be a little more informed, and will provide
23 some dialogue that's there. We haven't -- again, it's
24 initial -- initial engagement. What happens after
25 that, we'll see where the scope goes from there.

1 From the Aboriginal peoples, we intend
2 to invite the Aboriginal peoples to engage with
3 Manitoba Hydro, and we will again see where the uptake
4 is for that, and see where -- where that goes. But
5 those, then, would be face-to-face meetings with the --
6 with the Aboriginal communities and organizations.

7 MR. WILLIAM GANGE: And when you said,
8 sir, just now that -- with respect to the interested
9 groups, you'll have the initial meetings and then
10 you'll see where that goes, are you expecting that one
11 (1) of the things that you'll be seeking from the
12 interested groups is their ideas as to how the
13 consultation process would work?

14 MR. TERRY MILES: That -- that would be
15 one (1) of the aspects that are there. I think their
16 perspectives, and values, and interests in -- in the
17 development, or in the electricity in Manitoba, how
18 it's approached, definitely those -- those aspects.

19 MR. WILLIAM GANGE: Is it your
20 intention, sir, to have as wide a range of input as --
21 as you can possibly get?

22 MR. TERRY MILES: Right -- right now,
23 we're initiating the process. How wide or broad that
24 process goes, we have to think about timelines that
25 we're working with, and be able to have something that

1 we can actually engage in, we can have some feedback
2 in. We can have some milestone points along the way,
3 and that will define how broad of a -- of input we're
4 able to -- to receive.

5 Or maybe more specifically, we'll get
6 input. It's a matter of what we do with that input at
7 various points in the future.

8 MR. WILLIAM GANGE: With respect to the
9 survey that's being prepared by Ipsos, is it your
10 intention to share that survey with the interested
11 parties to get input from them as to what questions
12 should be asked by Ipsos?

13 MR. TERRY MILES: Yes, I believe so.

14 MR. WILLIAM GANGE: And in formulating
15 this consultative process, sir, has Manitoba Hydro
16 looked at the process that the British Columbia
17 utilities undertook with respect to doing a similar
18 type of thing?

19 MR. TERRY MILES: Yeah. In -- in
20 leading up to this, we looked at a number of processes
21 throughout the industry. There's obviously never --
22 numerous integrative resource plans. We talked about
23 numerous ones in the NFAT. There's many entities doing
24 these types of things.

25 We looked at the electricity industry

1 across -- I'd say across North America, we were
2 somewhat selective, but within Canada and the US. And
3 I think what -- what we found with -- with those
4 entities was that there wasn't necessarily a lot of
5 common threads around the content that the various
6 engagements had. Everyone has their own purpose for --
7 for engaging.

8 BC Hydro has a pretty -- pretty broad
9 perspective. Some are a little narrow. Some are more
10 focussed. Some are driven by different factors as
11 well. What we did find was that when all of these
12 processes started is that they, in essence, initiated a
13 program and then allowed that program or that
14 engagement to evolve as the interests, the values,
15 perspectives, ability to manage the processes, what
16 those processes were leading to, as well.

17 So that's the approach we're taking. So
18 we're initiating this initial engagement process and --
19 and we'll -- we'll build on it from there. And what
20 others have done, you know, many have been doing this
21 for a while. They have established processes, budgets.
22 We have a certain number of resources now to do that.
23 We have to build the program. We have to be able to
24 staff it. We have to be able to manage it. And we
25 will see where -- where that goes.

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(BRIEF PAUSE)

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MR. WILLIAM GANGE: Mr. Miles, with respect to DSM, you mentioned earlier that in your integrated resource planning process that the DSM information is an important part of that process.

That would be a fair statement, wouldn't it?

MR. TERRY MILES: That's a fair statement, yes.

MR. WILLIAM GANGE: And at the NFAT, the DSM levels were much higher than the current plan.

You'd agree with that?

MR. TERRY MILES: There were a range of DSM levels than -- than what's currently in. So since the NFAT process -- like, I don't want to speak specifically for our Power Smart fol -- program -- folks, so if I --

MR. WILLIAM GANGE: Yeah, we'll deal with them --

MR. TERRY MILES: -- it's taking this out of context, but I would suggest is that after the NFAT, we looked at basically, the program or levels that were there. And those were based on, then, their current understanding that -- that we have. I'd

1 suggest we'll -- I'd suggest we're in a process of
2 really trying to refine maybe what the -- I don't want
3 to say the best level, but the most economic level of
4 DSM that we have.

5 I mean, this chart that's sitting in
6 front of me, when we talk about the different levels of
7 DSM -- I think there's another chart here that -- that
8 add -- adds the costs and that -- the program's a
9 little differently. So as we go forward, we're --
10 we're going to want to look more specifically at those
11 programs and what is the right level of DSM, what is
12 the appropriate level from an economics perspective,
13 from a -- a -- and there might be other policy driving
14 things.

15 Right now, obviously, there's
16 discussions going on with DSM. And I can't speak
17 specifically to those, but I'd suggest that there might
18 be changes in the future, there might not be. How we
19 factor DSM into, you mentioned integrated resource
20 planning will be a function of how it's treated in
21 Manitoba Hydro and -- and whether or not -- and -- and
22 what the flexibility is, if you will, around our DSM
23 levels.

24 MR. WILLIAM GANGE: You may recall that
25 during the NFAT, Mr. Dunsky and Mr. Chernick both

1 testified about the advantages of having DSM targets
2 that are fixed and are set -- and as -- as a certain
3 percentage, and then demanding that the Utility meet
4 those targets.

5 Mr. Kuczek stated in his earlier
6 testimony in this hearing that Manitoba Hydro prefers a
7 bottom-up approach rather than a top-down imposition of
8 levels.

9 With that background, I'd like to know
10 from your perspective, with respect to the integrated
11 resource planning, whether it's easier for you, as --
12 as the head of the integrated resource plan process, to
13 have a mandatory target set, or whether Mr. Kuczek's
14 approach of the bottom-up approach is easier for you to
15 deal with?

16

17 (BRIEF PAUSE)

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19 MR. TERRY MILES: Easy. I -- I suppose
20 if you're directed to do something and it was --

21 MR. WILLIAM GANGE: I -- I --

22 MR. TERRY MILES: -- specific, it would
23 be -- it -- it makes it easier. You don't have to make
24 decisions around it. Whether or not that's the most
25 effective thing to do or the best way in getting the

1 most value for that resource relative to other
2 resources, then that -- that becomes the question, I
3 think, Mr. Gange.

4 MR. WILLIAM GANGE: Easy was a -- was
5 an improper description. I -- I should have used the
6 word 'effective' in your process?

7 MR. TERRY MILES: If -- if the process
8 is to look at a broad range of options and evaluate
9 them on a level playing field that's there, then a
10 target may not be the thing that does that. You want
11 to look at the options independently of something like
12 a -- a target.

13 So from the perspective of looking at
14 resource options, if you will, on that level playing
15 field, that would take that out of the picture,
16 potentially.

17 MR. WILLIAM GANGE: Okay, thank you.

18

19 (BRIEF PAUSE)

20

21 MR. WILLIAM GANGE: Mr. Cormie, I just
22 have a couple of questions with respect to firming
23 capacity. One (1) of the aspects of the export
24 contracts that you've recently entered into is that
25 there's a storage component to store power for the

1 Minnesota wind farms.

2 Is that correct?

3 MR. DAVID CORMIE: Yes.

4 MR. WILLIAM GANGE: And that feature
5 would be an important part of the sale from the third-
6 party's perspective.

7 Is that correct, sir?

8 MR. DAVID CORMIE: Yes, that's
9 something that was very attractive to our customers.

10 MR. WILLIAM GANGE: It allows them to
11 have more confidence in the viability of their wind
12 farms?

13 MR. DAVID CORMIE: It makes their
14 investment in wind farms more attractive financially.

15 MR. WILLIAM GANGE: And -- and the
16 reason for that is because it -- it deals with the --
17 the potential unreliability of the wind farm model.

18 Is that correct, sir?

19 MR. DAVID CORMIE: Well, as we
20 discussed the other day, Mr. Gange, Manitoba Hydro is -
21 - is sharing some of the value that the utility has
22 created for Manitoba Hydro by allowing an new
23 interconnection to be built.

24 And so the money that we send to the
25 customer on an annual basis helps offset the costs of

1 their wind farm investment, so the wind farm investment
2 becomes more economical.

3 MR. WILLIAM GANGE: Thank you. I just
4 have a couple more questions. I'm -- I'm a little bit
5 over my -- my limit here, sir, so. You mentioned that
6 -- that during high water levels, there's spilling on
7 the system. We all know that. Does that occur for the
8 entire system?

9 In other words, if -- if you're spilling
10 at the first of the dams, do -- does that have a domino
11 effect all the way down?

12 MR. DAVID CORMIE: Not necessarily, but
13 -- because the dams don't necessarily all have the same
14 flow capacity at the powerhouse, and -- and some dams
15 will spill before others will spill. But when we're --
16 when we're long energy, that we have more production
17 available than we have market, the market being demand
18 for electricity in Manitoba, and the market in the
19 United States generally, which is limited by our
20 transmission capacity, we have to spill so much energy.

21 It doesn't really matter where that --
22 at which generating station it is managed. Our -- our
23 practice is to generally concentrate it on the lower --
24 at the lower Nelson generating stations. It's just a
25 much more convenient and easy place to -- to manage

1 that resource.

2 But it -- you could spill the surplus
3 generation at any of the hydro stations, just it --
4 it's really an arbitrary thing. But for operational
5 simplicity, it's generally spilled on the Lower Nelson.

6 MR. WILLIAM GANGE: So -- so help me
7 understand that. Is -- is -- does that mean that
8 sometimes water is spilled because you simply don't
9 have the -- the market for the electricity?

10 MR. DAVID CORMIE: Yes. Let's say that
11 we had generating poten -- or capability of 120,000
12 megawatt hours a day, but there's only a hundred
13 thousand megawatt hours of demand in a day. So there's
14 20,000 megawatt hours of energy capability --
15 capability that -- that we can't -- can't generate. So
16 20,000 megawatt hours of water will go through the
17 spillway.

18 MR. WILLIAM GANGE: Okay. Thank you.
19 And, sir, the -- the Manitoba -- or the -- the dams
20 through the Lake Winnipeg system also provide that same
21 backup in terms of reliability for the Manitoba wind
22 farms, correct, sir?

23 MR. DAVID CORMIE: Yes, to the extent
24 that we can maximize the value of the wind generation
25 in Manitoba we already -- we provide that service to

1 the wind farms. Because we want to maximize the value
2 of our own wind energy purchases.

3 MR. WILLIAM GANGE: So in years where
4 there's not high water or excessive water the -- the
5 use of the -- the wind farms can be tied in to -- to
6 back up the -- the wa -- the hydroelectric system?

7 Or pardon me, the -- the -- you -- you
8 can store more energy in the lake?

9 MR. DAVID CORMIE: Yes, in a year when
10 there's -- when spillage is really not an issue we
11 optimize the overall production of the hydro system
12 around the production of -- of the expected production
13 from the wind farms. So reservoir storages are man --
14 managed around the expected wind farm production. So
15 we're providing -- we're trying to maximize the value
16 of that production.

17 MR. WILLIAM GANGE: And, sir, from --
18 from your experience and I -- I hope that -- that I'm
19 asking the right guy. I suspect I am. But the -- the
20 wind farm energy year to year is relatively stable.

21 Is that correct, sir? It's -- it's
22 variable within the year, but year over year it's
23 relatively stable?

24 MR. DAVID CORMIE: It's more stable
25 than the -- the -- than the hydro supply. The hydro

1 supply is, you know, plus or minus 50 percent. Wind is
2 probably plus or minus 15 percent so there is
3 variability. There is high wind years and low wind
4 years and just like there's high water years and low
5 water years. And the range around the average is -- is
6 smaller for wind than it is for -- for hydro.

7

8

(BRIEF PAUSE)

9

10 MR. WILLIAM GANGE: Going back through
11 and this is -- this is my last question. Going back to
12 the -- the answer that you gave about transmission
13 constraints with respect to -- to the spilling of
14 water.

15 Once the new intertie and once the new
16 Bipole is introduced will that same problem still
17 exist? Or will that -- will those two (2) issues solve
18 that problem?

19 MR. DAVID CORMIE: The -- the new
20 intertie will help us sell more energy in high water
21 years. We have more outlet capacity. So that's one
22 (1) of the areas where value is created. DSM programs
23 are better. We -- we're able to generate more of the
24 electricity that comes in a high water year. We have
25 more firm dependable import capability. But you're

1 right, we are able to generate more hydro in high water
2 years because we have more interconnected capability.

3 MR. WILLIAM GANGE: Thank you.
4 Appreciate the -- the panel. Thank you, Mr. Chair,
5 that's -- those are my questions.

6 THE CHAIRPERSON: Thank you. We have a
7 bit of time before -- before we take our normal coffee
8 break. So I have some questions if you don't mind, Mr.
9 Hachault, to ask this panel. I want to take advantage
10 of the fact that this panel will be here just for the
11 rest of the day. So I want to have some questions I
12 want to ask. Specifically probably answers that need
13 to be addressed -- questions that need to be addressed by
14 Dr. Swatek.

15 I guess the first question I have is --
16 and -- and it -- it relates to something I asked
17 earlier. You know, the Bipole III converters have a
18 rating of 2,300 megawatts. And one (1) presenter has
19 indicated that you could reduce the rating to a
20 thousand megawatts for the Bipole III and still have
21 enough capacity.

22 Could you address that, please?

23 DR. DAVID SWATEK: I -- if you reduced
24 the rating to 1,000 megawatts, now -- now, subject to
25 check, I believe that we -- we would not be able to

1 meet our NERC reliability criteria with that reduced
2 rating, given the additional generation. But I can
3 look into that for you, but, yes, that's my
4 understanding.

5 THE CHAIRPERSON: That would be useful
6 if you could do that. And I guess the other question
7 that I'd like to ask is whether or not those Bipole III
8 converters could be connected to the existing Bipole I
9 and II without having to build Bipole III?

10 DR. DAVID SWATEK: That -- that would
11 be the same answer, that we would not be able to meet
12 reliability criteria. But again, the -- this gets into
13 a highly technical area, and I will save subject to
14 check, yes.

15 THE CHAIRPERSON: And Bipole I and II
16 have a capacity of 3,800 megawatts, and they're only
17 used apparently at a capacity of 2,000 megawatts
18 leaving lots of unused capacity for Keewask.

19 Could you address that as well, please?

20 DR. DAVID SWATEK: Sorry, could you
21 repeat that -- that question?

22 THE CHAIRPERSON: This is contained in
23 a presentation that we'll be hearing tomorrow, but the
24 statement is that:

25 "Bipole I and II have 3,800 megawatts

1 of capacity that are -- and are only
2 currently being used at 2,000
3 megawatts, leaving lots of unused
4 capacity for Keevask's 695
5 megawatts."

6 DR. DAVID SWATEK: I'm not aware that
7 they are currently only being used at 2,000 megawatts.

8 THE CHAIRPERSON: It would be useful if
9 you could address that as well --

10 DR. DAVID SWATEK: Sure, okay.

11 THE CHAIRPERSON: Okay. And then
12 finally there's another statement made to the effect
13 that -- that Manitoba Hydro should have prepared a
14 probabilistic adequacy study in respect of Bipole III,
15 because this is something that Manitoba Hydro and its
16 consulting arm recommended in the Newfoundland --
17 Newfoundland process that was going on with respect to
18 Muskrat Falls.

19 So could you indicate whether or not
20 Manitoba Hydro did perform a probabilistic adequacy
21 study to determine the reliability of the -- the
22 system?

23 DR. DAVID SWATEK: Yes. Those studies
24 were -- those studies were carried out. Yeah.

25 THE CHAIRPERSON: And -- and those

1 studies confirmed that the Bipole III was required for
2 reliability purposes?

3 DR. DAVID SWATEK: Bipole III is --
4 yes, those studies did confirm that Bipole III is
5 required to achieve the industry standard loss of load
6 expectation of zero point one (0.1) per year, yeah.

7

8 (BRIEF PAUSE)

9

10 DR. HUGH GRANT: Can I just ask -- Mr.
11 Cormie, I wanted to follow up on Mr. Gange's question.
12 Would I understand it correctly, if -- if you're in a
13 higher water year where you're spilling some water
14 because of a capacity constraint, and I'm thinking of
15 the capacity constraint is specifically in the
16 transmission line, are you effectively spilling wind,
17 as well?

18 Because you're -- you're committed to
19 purchasing it, I understand, and then if you're already
20 at a -- sort of a maximum that you can't get any
21 surplus to the States.

22 MR. DAVID CORMIE: We're -- we're -- we
23 have surplus energy. The question is what generating
24 station or supply is -- is supplying that surplus
25 energy. You could -- and -- and every resource is at

1 the margin. You know, you could say if -- if Pine
2 Falls generating station were to stop generating
3 because of an outage, would the amount of spill go down
4 and you'd say, Yes.

5 So Pine Falls is at the margin. Well,
6 if the wind farms weren't generating would they be at
7 the margin, well, they would. So, you know, you -- the
8 question is: What resource is at the margin? And to
9 are -- are -- to -- to just assume that wind is at the
10 margin I think would -- would unfairly value that
11 resource.

12 Every generating station in the system
13 expect for the -- the coal and the gas stations, you
14 know, they have essentially a zero marginal cost. And
15 the question is who -- who's going to -- who are you
16 going to back down.

17 Contractually we could back down the
18 wind -- we could back down the wind stations and we
19 could turn them off, but we'd still have to pay them.
20 It gets very complicated contractually to -- to go and
21 say well what their production would have been. So we
22 -- we essentially concentrate the spill energy at the
23 most convenient from an operational perspective
24 location.

25 But as I said, every generating station,

1 like Pine Falls, a certain portion its output is
2 dependable and a certain portion is surplus. Kelsev's
3 the same. Nelson River generating station is still the
4 same. Even the new Wuskwatim has a certain dependable.
5 They all have surplus. Whose surplus is being spilled
6 at that -- at that time.

7 Yeah, so you could -- you could say,
8 Yeah, the -- the wind is being spilled, oh, but you can
9 also say a hydro station is being spilled. It -- it
10 becomes academic, I think.

11 DR. HUGH GRANT: And just -- I'm not
12 sure if it's possible for you to answer this, but often
13 you're spilling water because the -- the constraint may
14 be in the generating capacity.

15 How -- relative importance, how often is
16 the constraint in the transmission line the important
17 one?

18 MR. DAVID CORMIE: Are -- are you
19 referring to the internal Manitoba Hydro transmission
20 system or the export transmission system?

21 DR. HUGH GRANT: I'm thinking of
22 export.

23 MR. DAVID CORMIE: The export. Well,
24 it -- it happens in high water years, in -- especially
25 in the -- in the high water years that we've been

1 experiencing over the last six (6) -- since 2009 we've
2 spilled out of -- we've spilled out of storage every
3 year. And it -- in those kind of high water years in
4 the springtime when the Manitoba load is low, there's
5 not yet an air conditioning load, people are just --
6 and the -- and the days are very long, so there's not a
7 lot of lighting load, so we have a lot of surplus
8 generating capacity and that tends to overwhelm the
9 export line at night.

10 And -- and we'll load the line up to
11 full capacity at night and we'll still have generators
12 that we could -- we -- we could be running if
13 Manitobans wanted more power. We -- we would just
14 increase the -- reduce the spillage and increase the
15 production, still maintaining full export -- maximum
16 exports.

17 So it's -- it's a spr -- it's generally
18 a spring and fall light load period issue. And we're
19 more likely to have high water in the spring than we
20 are in the fall.

21 DR. HUGH GRANT: Thank you.

22 THE CHAIRPERSON: Dr. Swatek, please.

23 DR. DAVID SWATEK: Yes, Mr. Chairman, I
24 was thinking about your question in the context of what
25 I had seen submitted from the Bipole III Coalition.

1 And I think I understand what that question was.

2 The -- the Bipole I and II transmission
3 lines, the -- the actual conductors themselves, are
4 designed to carry the -- are designed to carry the full
5 load of both the Bipole I and Bipole II converters if
6 one (1) of those two (2) transmission lines were to be
7 out of -- of service. So the Bipole I con --
8 converter, that's an 1,800 megawatt converter and the
9 Bipole II converter, that's a 2,000 megawatt con --
10 converter.

11 And under normal operation, one (1) --
12 one (1) transmission line would be carrying 2,000
13 megawatts and the other would be carrying 1,800. But
14 there is the extra design capacity in those lines such
15 that if one (1) of them were to go -- go down, we could
16 transfer the full power of the two (2) converters onto
17 one (1) -- one (1) line.

18 So that's -- that's a -- that's a
19 reliability cons -- consideration that we currently
20 have.

21 THE CHAIRPERSON: Thank you for that.
22 I think it's probably the right time to take a break.
23 So why don't we take a ten (10) minute break and Me.
24 Hacaault will commence his questioning.

25

1 --- Upon recessing at 10:19 a.m.

2 --- Upon resuming at 10:35 a.m.

3

4 THE CHAIRPERSON: I believe that we're
5 ready to resume today's proceedings. Mr. Czarnecki,
6 please.

7 MR. BRENT CZARNECKI: Thank you, Mr.
8 Chairman. We do have some undertakings to file. And
9 they've been distributed, so I'll just jump right into
10 them. The first one is Manitoba Hydro Undertaking
11 number 10. And this undertake -- undertaking related
12 to the -- for Hydro to provide a proportion of its
13 Aboriginal staff that have declared Metis. And I would
14 propose that be Manitoba Hydro Exhibit number 40.

15

16 --- EXHIBIT NO. MH-40: Response to Undertaking 10

17

18 MR. BRENT CZARNECKI: And -- and I note
19 the date of these undertakings are May 29th because
20 they were prepared to be filed later on Friday
21 afternoon. But due to the early adjournment, they're
22 being filed today, so we didn't go and reproduce them.

23

24 The next one was Manitoba Hydro
25 Undertaking number 19, and it's from transcript page
1,178. And this was the quantification of the

1 aggregate megawatt months for Jenpeg, Pointe du Boise,
2 Slave Falls, and Great Falls, that they've been out of
3 the service from 2010 to 2014. It's a two (2) page
4 document. And I believe that's now Manitoba Hvdro
5 Exhibit number 41.

6

7 --- EXHIBIT NO. MH-41: Response to Undertaking 19

8

9 MR. BRENT CZARNECKI: The next is Hvdro
10 Undertaking number 8. And that was provided at
11 transcript page 619. And these are relating to the
12 financial runs of what quantum of relief would be
13 required with respect to government fees to reduce
14 proposed and indicative rates, increases to 3 percent
15 from the 3.95 percent, and there's seven pages. And
16 that would be Manitoba Hvdro Exhibit number 42.

17

18 --- EXHIBIT NO. MH-42: Response to Undertaking 8

19

20 MR. BRENT CZARNECKI: The next is Hvdro
21 Undertaking number 9 which was found at transcript page
22 622. And similarly, this is a preparation of financial
23 runs showing the reduction in water rentals and capital
24 taxes required to reduce rate increases from 8 percent
25 down to 4 percent and from 6 percent down to 4 percent.

1 And that would be Manitoba Hvdro Exhibit number 43, and
2 there's thirteen (13) pages to that exhibit.

3

4 ---- EXHIBIT NO. MH-43: Response to Undertaking 9

5

6 MR. BRENT CZARNECKI: The next is
7 Manitoba Hvdro Undertaking number 20. And this is for
8 Hvdro to provide a chart similar to slide 42 of Exhibit
9 Manitoba Hvdro 36 with the power train assets for the
10 Nelson River plants in Grand Rapids, giving the age of
11 each asset, type, and the anticipated retirement.

12 And that would be Manitoba Hvdro Exhibit
13 number 44, and it's a two (2) page document.

14

15 --- EXHIBIT NO. MH-44: Response to Undertaking 20

16

17 MR. BRENT CZARNECKI: And the last
18 exhibit for now will be Exhibit number 45. And it was
19 at transcript page 358 and its -- was Manitoba Hvdro
20 Undertaking number 4, for Hvdro -- Mr. Thomson to
21 request Ministerial approval to file a letter to the
22 Public Utilities Board regarding the NFAT report
23 recommendations. And it is a five (5) page document.
24 And I can confirm that the excerpt that Mr. Hacault had
25 provided to Mr. Thomson was in fact accurately read to

1 Mr. Thomson.

2

3 --- EXHIBIT NO. MH-45: Response to Undertaking 4

4

5 MR. BRENT CZARNECKI: Those conclude
6 the undertakings. And -- and, Mr. Chair, I do have one
7 (1) other procedural issue at this time. I -- I note
8 with -- with your questions of Dr. Swatek before the
9 break that there's great interest of this Board in the
10 Bipole III and some of the technical details
11 surrounding that, that are surrounding and originating
12 from a presentation that will be made tomorrow
13 afternoon.

14 And -- and I was discussing over the
15 break with Mr. Rainkie that perhaps, and this would be
16 a little bit unusual in terms of process, but if
17 Manitoba Hydro had the opportunity to first hear the
18 presentation -- we've received the written
19 presentation. And then bring back Dr. Swatek and
20 whoever else for Manitoba Hydro may be able to shed
21 more light in response to the -- the presentation so
22 that it benefits the Board and you could ask those
23 questions at that time.

24 And I'm thinking it could even be a very
25 short presentation so that you do have Hydro's formal

1 replv response and the ability to ask them questions.
2 Because we do note that this is -- you're taking great
3 interest in this area. So we -- I could discuss it
4 further with PUB counsel and My Friends, but that's an
5 option going forward.

6 THE CHAIRPERSON: I think that makes
7 good sense. I -- I would appreciate that information.
8 And a -- a more formal response I think would be very
9 useful to us.

10 MR. BRENT CZARNECKI: We'll look into
11 that further then, sir.

12

13 (BRIEF PAUSE)

14

15 THE CHAIRPERSON: Thank you, Mr.
16 Czarnecki. I pass the microphone over to Mr. Hacault.

17

18 CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

19 MR. ANTOINE HACAULT: Thank you. Good
20 morning, all. To the Hydro panel if my questions
21 aren't clear -- you're pretty good, but I'd remind you
22 just ask me to clarify my question. I, as other
23 counsel, don't have the in-depth knowledge of everybody
24 on your panel so I appreciate your assistance in that
25 regard. Again, as Mr. Peters says, I don't think I'm

1 getting into any kind of confidential information, but
2 if at any point in time you feel that that's happening
3 let me know and we'll try and deal with that.

4 This morning getting into the questions
5 of your panel which is a planning and operations panel
6 I just want to set a backdrop with a couple of
7 questions of the big picture going into one (1) of the
8 subjects that I'll be dealing with which is pacing and
9 prioritiz -- prioritization. And probably this will be a
10 mixture of people up front, but probably mostly Mr.
11 Rainkie.

12 Do you agree that with respect to the
13 two (2) test years we've got generally favourable water
14 conditions being expected?

15 MR. DARREN RAINKIE: Yes, I think Mr.
16 Cormie went through that in his presentation.

17 MR. ANTOINE HACAULT: And also do you
18 agree that generally speaking we have got favourable
19 interest rates, at least for the two (2) test years?

20 MR. DARREN RAINKIE: Yes, when you look
21 at that in isolation. Yes.

22 MR. ANTOINE HACAULT: And with respect
23 to the Canadian dollar is -- my summarizing the
24 evidence is that the decrease in the value of the
25 Canadian dollar is pretty much neutral to the

1 Corporation?

2 We don't have to be worried too much
3 about that?

4 MR. DARREN RAINKIE: Yes, as it affects
5 our net income, Mr. Hacault.

6 MR. ANTOINE HACAULT: Okay. The next
7 one I'm not too sure whether I was going to put in
8 neutral or unfavourable. It was the -- what I had put
9 in my notes as kind of a stagnate export market, given
10 the impending decision by the EPA.

11 For the two (2) test years, does that
12 have any particular impact on us?

13 MR. DARREN RAINKIE: Well, if we go
14 back to the scenario, I think, that we provided in PUB-
15 10(b), if I'm -- First Round Information Request 10(b),
16 Mr. Hacault. I think what we were trying to
17 demonstrate there is that the effects of lower interest
18 rates and export revenues would somewhat mitigate one
19 another. Come out in the wash, if you'd like.

20 MR. ANTOINE HACAULT: Thank you for
21 that. So it's not something we really have to be
22 concerned with for these two (2) test years.

23 Is that fair?

24 MR. DARREN RAINKIE: Well, it -- given
25 that at least the '15/'16 test year is on a forecast

1 basis, we all -- always have to be concerned about
2 water flows which can change quickly, and other
3 factors, sir. So I -- I'm not sure I can go 100
4 percent there with you. We're always concerned about
5 and then always monitoring those factors.

6 MR. ANTOINE HACAULT: Fair enough. And
7 the old answer about what's going to happen as a
8 consequence of the EPA decision is something we'll have
9 a better idea of in a couple years, as I understood the
10 evidence, correct?

11 MR. DAVID CORMIE: Yes, Mr. Hacault,
12 that's probably a long range issue, not -- not
13 something that we're really concerned about in the next
14 two (2) years.

15 MR. ANTOINE HACAULT: And another thing
16 that we've -- don't have to deal with, at least for the
17 two (2) test years, is I'll call the uncertainty about
18 DSM, and who's going to handle that portfolio, correct?

19 MR. DARREN RAINKIE: Yeah. If I think
20 back to the evidence of Mr. Thomson and what would have
21 to be formally in place to divest Manitoba Hydro of
22 DSM, I -- I think that's a fair -- in terms of
23 legislation, et cetera, if I remember day one (1)
24 correctly, Mr. Hacault. It's already day six (6). It
25 seems like a long time ago.

1 But -- and such that those expenditures
2 would be in -- for '15/'16 are Manitoba Hvdro's
3 expenditures on DSM -- in our plan on DSM.

4 MR. ANTOINE HACAULT: Thank vou. Now,
5 Diana, if you could bring IFF14 on the screen, Roman
6 numbers two (2) little 'I's and three (3) little 'I's?
7 I'm continuing again with respect to the general
8 backdrop of where we're at for these two (2) test
9 years.

10 Specifically looking at the third bullet
11 down, so the executive summary indicates that we've
12 suspended Conawapa, which was a \$10.1 billion, correct?

13 MR. DARREN RAINKIE: IFF14 assumes the
14 suspension of Conawapa.

15 MR. ANTOINE HACAULT: And there are
16 newly identified capital costs for sustaining capital
17 in this integrated financial forecast for 2019 in the
18 amount of \$1.9 billion, correct?

19 MR. DARREN RAINKIE: Sorr, sir, did
20 you -- before the 1.9 billion, what was your reference?

21 MR. ANTOINE HACAULT: I had said an
22 increase in sustaining capital in the IFF.

23 MR. DARREN RAINKIE: Over the twenty
24 (20) year forecast period, sir, ves.

25 MR. ANTOINE HACAULT: Yes. And we've

1 talked a little bit about Bipole III and Keevask, and I
2 may have some additional questions with respect to
3 that. Now, if we go to the -- page IV, Roman numeral
4 IV...

5

6

(BRIEF PAUSE)

7

8

MR. ANTOINE HACAULT: We see that there
9 are a number of consecutive -- three point nine-five
10 (3.95) increases assumed until 2031, correct?

11

MR. DARREN RAINKIE: That's correct.

12

MR. ANTOINE HACAULT: And then the
13 Corporation hopes to back off a bit on rates and
14 believes at this time it only needs 2 percent rate
15 increases for 2020 -- or '32, 2033, and 2034, correct?

16

MR. DARREN RAINKIE: Well, 'believes'
17 might be a bit strong, sir, given that's seventeen (17)
18 or eighteen (18) years out. I mean, that's -- this is
19 an assumption in a -- in a financial forecast eighteen
20 (18) years from now. I mean, certainly when I look at
21 this schedule what I'm the most worried about is what's
22 coming up in the next, you know, three (3) to ten (10)
23 years.

24

And that is much more certain than what
25 will happen in the back end of the forecast.

1 MR. ANTOINE HACAULT: Understood. And
2 thank you for that clarification. The one (1) thing
3 this IFF does though, it brings us to the 75:25 target
4 by 2034, correct?

5 MR. DARREN RAINKIE: Yes, assuming all
6 of the 3.95 percent increases. If we don't get those
7 increases the picture -- the line is not an upward
8 sloping one, it's a downward sloping one, as I had in
9 my presentation on the first day.

10 So what we have to keep in mind when
11 we're going through the IFF always is it includes all
12 the rate increases in it. If we don't obtain those
13 then we should not be making any assumptions about
14 recovery of the -- the debt to equity ratio.

15 MR. ANTOINE HACAULT: Understood.
16 That's the revenue side and we've been chatting quite a
17 bit in this hearing about whether or not the
18 Corporation has any discretion and will make any chan -
19 - changes on the expense side, correct?

20 MR. DARREN RAINKIE: Sorry, sir, can
21 you repeat that question?

22 MR. ANTOINE HACAULT: You've indicated
23 that you need three point nine-five (3.95) increases,
24 as shown here, to arrive at these results, agreed?

25 MR. DARREN RAINKIE: Exactly, yes.

1 MR. ANTOINE HACAULT: And I've
2 indicated that deals only with the revenue side,
3 correct?

4 MR. DARREN RAINKIE: It does, but to
5 the extent that we have Keevask and Conawapa forecasted
6 over \$10 billion, unless somehow those projects are
7 stopped, those are fairly certain in terms of their --
8 their cost patterns. So it's not quite as iffv as one
9 might -- might think it is.

10 And I think the testimony of this panel,
11 talking about the need for sustaining capital
12 expenditures, is I wouldn't expect that what we have
13 forecast in -- I -- in CEF14 will be reduced.

14 MR. ANTOINE HACAULT: I -- I think I
15 heard what I would I call -- and it's not derogatory at
16 all, I was going to say a brain fart, because you said
17 something like, We're -- we've got Keevask and Conawapa
18 online. And --

19 MR. DARREN RAINKIE: Sorry, sir, I
20 meant -- I meant Keevask and Bipole III.

21 MR. ANTOINE HACAULT: Sorry. My
22 attempt at levity are not very good. So thank you for
23 that. Now...

24

25

(BRIEF PAUSE)

1 MR. ANTOINE HACAULT: Why didn't the
2 Corporation show for 2032, 2033, and 2034 3.95 percent
3 increases instead of the 2 percent increases?

4 MR. DARREN RAINKIE: Well, because
5 towards the back end of the forecast, once again,
6 seventeen (17) years from now, or eighteen (18) years
7 depending on your math, we see forecast -- reasonable
8 results, a fairly large net income, so we felt at that
9 point, at least for a forecasting perspective, we could
10 reduce the rate increases.

11 I don't think there's anything more
12 devious than that, Mr. Hacault.

13 MR. ANTOINE HACAULT: Well, you would
14 have reached your 75:25 quicker than the twenty (20)
15 year time period if you had kept the 3.95 percent rate
16 increases throughout, including the last three (3)
17 years.

18 Isn't that correct?

19 MR. DARREN RAINKIE: Yes, that's
20 correct. And in reality, we might want to do that when
21 we get fifteen (15) years out from now. I -- I'm not
22 sure what to say. I'm -- I'm more concerned about the
23 next number of years, as I said, for the reasons that I
24 just stated.

25 It's tough forecasting twenty (20) years

1 with a high degree of certainty, so the longer you get
2 out in the forecast, the more direction a forecast
3 becomes as -- as opposed to being more certain, I
4 think. That's not -- not saying anything bad about our
5 forecasting. That's just the reality of the world and
6 the complex business that we -- we operate under.

7 MR. ANTOINE HACAULT: Now, Ms.
8 Bauerlein, were you involved in the NFAT calculations
9 at all and the different runs that were put in there?

10 MS. SANDY BAUERLEIN: No. That would
11 be Ms. Carriere on the finance panel.

12 MR. ANTOINE HACAULT: Thank you. Now,
13 then it'll probably be Mr. Rainkie who would be able to
14 deal with some of these questions. In our book of
15 documents at page 12 -- ten (10) two (2) -- yes, our
16 new book of documents, I had collaterally referred to
17 this in my general questions of Mr. Thomson and Mr.
18 Rainkie.

19 This particular graph showed equal
20 annual increases for each of the twenty (20) years,
21 correct?

22 MR. DARREN RAINKIE: Yes, this was, I
23 think, our original presentation at the start of the
24 finance panel on the NFAT -- during the NFAT
25 proceeding. I think, then, once we moved to DSM Level

1 2 forecast, that these were all changed. Ultimately,
2 this was what we started with.

3 MR. ANTOINE HACAULT: And if we go to
4 page 17, which is the graph that -- or the details that
5 correspond with this, for, in particular, the Keevask
6 with Level 2 DSM, we see that the model that was shown.
7 And I agree that there were different -- many models
8 run by the Corporation.

9 At least for this model, it showed after
10 2015, equal annual increases of 3.74 percent to arrive
11 at the 75:25 figure at the end of twenty (20) years,
12 correct?

13 MR. DARREN RAINKIE: Yes, it did. That
14 was the mechanical calculation that's produced here. I
15 -- I would note, if you look at the third line from the
16 botto -- bottom, being the debt ratio calculation under
17 the scenario, by about 2021 and 2022 -- sorry, 2022, we
18 get down -- we get up to 92 percent debt or 8 percent
19 equity, so. And we see the string of losses on the net
20 income line after 2016 to 2023.

21 So this was a mechanical calculation to
22 solve for the 3.74 percent by taking the starting point
23 and the ending point. But the reason we provided the
24 other rate-setting methodologies at the NFAT proceeding
25 is that when we looked at this after we included Level

1 2 DSM, this didn't seem like a realistic scenario to
2 us.

3 In fact, we said many times on the
4 transcript that we would be seeking the 3.95 percent
5 rate increases on the transcript of NFAT. And we can
6 find those references if the Board so desires. But I
7 think we indicated when we presented this material that
8 this was designed to project rate increases over fifty
9 (50) years. It wasn't designed to project rate
10 increases in the -- you know, in the -- in the next
11 GRA. I think we were quite clear about that.

12 MR. ANTOINE HACAULT: But nonetheless,
13 it was a model that was shown. And what the effect of
14 a -- a moderate relaxing over twenty (20) year time
15 period instead of seeking equal annual increases of
16 3.95, the Corporation could achieve the same objective
17 at the end of the twenty (20) years by reducing that
18 increase to three point seven-four (3.74), correct?

19 MR. DARREN RAINKIE: That was the
20 calculation. The objective here was to do that to aid
21 in the calc -- calculation of two hundred and sixteen
22 (216) different financial runs.

23 MR. ANTOINE HACAULT: And --

24 MR. DARREN RAINKIE: But our objective
25 in terms of rate setting in terms of rate applications

1 to the Public Utilities Board is to maintain our
2 financial strength that -- so that we can maintain rate
3 stability for customers. So the objective that we're
4 here today is to actually set rates, not to project
5 them fifty (50) years into the future, but to inform
6 the Board about rate increases in the next year or two
7 (2).

8 And so when you look at this, you're --
9 you're seeing something that we clearly wouldn't ask
10 for in the real world. But then again, the objective
11 of this was to -- there's a second page of this that
12 projects rate increases out to 2061. So in pre --
13 presenting this material, I think I want to make it
14 clear to the Board this wasn't a projection of what our
15 rate application was going to be.

16 There were several different
17 methodologies presented to inform the Board about
18 different possibilities, the differentials, if you
19 like, between the various development plans that were
20 under discussion at the NFAT. So when you look at
21 something, you have to understand the purpose of it
22 first before making conclusions about the specific
23 details. That's my -- that's the point I'm trying to
24 make, Mr. Hacault.

25 MR. ANTOINE HACAULT: Thank you very

1 much for making that point. The debt ratio that's
2 shown on the bottom of this Level 2 -- and this is what
3 the Corporation is trying to achieve. The debt ratio
4 hovers at some points in time at -- I'm looking at the
5 bottom line, third up. And we see for 2015, if my
6 eyesight serves me well, eighty-three (83). And then
7 eighty-five (85), eighty-seven (87), eighty-eight (88).
8 And then it hovers around the nineties.

9 For the current rate -- rate
10 application, you're actually projecting that you're
11 going to go down to point eight-six (.86) in 2022,
12 correct, which is not that different than what this
13 modelling is showing?

14 MR. DARREN RAINKIE: No, sir, I'm not
15 sure I'm on the same page as you. Our low point in
16 IFF14 is either 10 or 11 percent equity, which would
17 mean 89 -- 89 percent debt ratio. So this is a -- a
18 deterioration in 2022 or 2023 of three (3) points above
19 what we think the minimum acceptable point is. So that
20 -- that's the point I'm trying to make to the Board is
21 I would not recommend an IFF to our board that had this
22 type of deterioration. I'm worried about the current
23 forecast we have, let alone accepting further
24 deterioration.

25

1 (BRIEF PAUSE)

2

3 MR. ANTOINE HACAULT: Did the
4 Corporation run a model on how it could pace and
5 prioritize projects based on a 2.95 percent increase?

6 MR. DARREN RAINKIE: Sorry, sir. Where
7 does the two point nine (2.9) come from?

8 MR. ANTOINE HACAULT: I'm -- I'm just
9 asking, did the Corporation run a model as to how it
10 could pace and prioritize capital projects based on a
11 2.95 percent increase?

12 MR. DARREN RAINKIE: Sir, in Appendix
13 3.5, we ran a 2.95 percent scenario, as I recall. But
14 once again, the financial projections were lower than
15 what we're comfortable with. So we -- we ran
16 everything from zero percent rate increase to 5.5 to 6
17 percent increase trying to show the Board a range of --
18 of potential outcomes. But as -- as we've said several
19 times in the filing, our view is 3.95 percent gradual
20 rate increases over the next number of years is, in our
21 judgment, the -- the best balancing between the need
22 for investment and sensitivity to customer rate
23 increases.

24 So we -- we always run numerous
25 scenarios when we're preparing an IFF, but the 3.95 has

1 become a minimum. It -- it is not a number that gets
2 us to 25 percent at 2034. It -- it just so happens to
3 do that when we reduce the rate increases to 2 percent
4 at the very tail end of the forecast. But the three-
5 nine-five (3.95) is what is protecting the dip in the
6 middle of our forecast.

7 And I'm not sure if -- if that somehow
8 got mixed up at the NFAT, but I -- I want to make sure
9 that the Board understood our position on that is that
10 we ran numerous scenarios, but that's where we think
11 the tipping point is.

12 MR. ANTOINE HACAULT: Perhaps I didn't
13 make my question clear enough. I asked specifically if
14 you ran a scenario of two point nine-five (2.95) but
15 base and prioritized (sic) capital expenditures
16 differently?

17 And let me just give a little bit of
18 background before you -- you answer again. I just want
19 to make sure you understand the question. I don't mind
20 you answering, I just want to make sure you understand
21 the question.

22 We've seen a significant increase, in
23 our client's respectful view, in -- and change in the
24 pace and prioritization of capital spending by this
25 Corporation from CEF12 to CEF14. And my question to

1 you is to try and understand whether the Corporation
2 has taken a serious look at pacing and prioritization
3 on the expense side, and how and what it could achieve
4 with a 2.95 percent increase, or any other increase
5 less than three point nine five (3.95) for that matter.

6 MR. DARREN RAINKIE: Mr. Hacault, I
7 think the -- this panel in the last week has
8 demonstrated that the pacing that we have in the CEF
9 and the IFF is the appropriate one. If we let this
10 wave get ahead of us, it's -- it's going to result in
11 higher rate increases in the future and lower
12 reliability.

13 So we spend a lot of time carefully
14 thinking about the level of capital expenditures that
15 we put into CEF14. But it's not just a matter of doing
16 a financial run. It's a matter of, as we said, trying
17 to keep up with the degradation of our assets so that
18 we don't get behind the curve. So that is what we've -
19 - we've looked at in order to provide our
20 recommendation to the Board on the necessary rate
21 increases.

22 MR. ANTOINE HACAULT: So do I
23 understand, sir, that -- or can I summarize your answer
24 as follows: No, Mr. Hacault, we did not do those runs
25 and this is why we didn't do those runs, but am I clear

1 in understanding the Corporation at no time did a run,
2 for example, at 3.5 percent, 3.75 percent, or any other
3 amount but changing the pacing and prioritization of
4 capital spending?

5 I just want to -- did it do those runs,
6 or not? I understand why now you didn't do them, but
7 did it do them or not?

8 MR. DARREN RAINKIE: Well, Mr. Hacault,
9 I think I have an undertaking with Mr. Williams that's
10 pretty much the same -- you know, maybe not word for
11 word but it's down the same line. And as I said, we
12 run numerous scenarios in the completion of a CEF and
13 an IFF, and -- and I -- I will bring that back with an
14 explanation of what we looked at and -- and why we came
15 to the conclusion that we did.

16 MR. ANTOINE HACAULT: So you are unable
17 to recollect today, sir, whether or not you actually
18 ran a three point five (3.5) or a 3 percent scenario,
19 but reducing the capital spending and pacing and
20 prioritization differently? You're unable to recollect
21 that specific answer today?

22 MR. DARREN RAINKIE: Sir, we might do
23 hundreds of runs in the preparation of an IFF. But
24 what you see in the IFF is a linear increase in capital
25 expenditures, so I think we have looked seriously at

1 the -- at the pacing of the capital expenditures.
2 That's necessary to carry out our mandate in a
3 responsible fashion. And that's what we concentrated
4 on in the -- in the preparation of the IFF and CEF.

5 There may be another scenario or two (2)
6 that we could do, and we certainly could do other
7 scenarios if -- if we want to, but I think when you
8 look at the asset condition report, you look at the
9 material that the people that take care of the assets
10 in our Corporation are telling us -- I mean, it had a
11 profound effect on -- on our board and our audit
12 committee and our executive committee.

13 And we believe this is the appropriate
14 pacing because if we get behind the eight (8) ball on
15 this, it's not going to be pretty. So I guess you'll
16 have to forgive us if we didn't do a number of runs on
17 something that we think wasn't reasonable, and wasn't
18 what was necessary to carry out our mandate.

19 I'll go back, if there are some other
20 runs that -- because I tend to see the runs towards the
21 completion, and what's going to our audit committee and
22 our board. If there are other runs, I'll -- I'll
23 ruminate on that and I'll provide that information to
24 the Board.

25 THE CHAIRPERSON: Could you frame that

1 as an undertaking, please?

2 MR. DARREN RAINKIE: Sure, Mr. Chair.
3 I -- I think it's, subject to check, pretty much the
4 same undertaking that I gave Mr. Williams, is have we
5 considered -- has Manitoba Hydro considered other
6 facing of sustaining capital expenditure in terms of
7 its IFF14 and CEF14. And I suppose ultimately it's a
8 rate proposal to the -- to the Public Utilities Board.
9

10 --- UNDERTAKING NO. 29: Manitoba Hydro to determine
11 whether or not it has
12 considered other facing of
13 sustaining capital
14 expenditure in terms of its
15 IFF14 and CEF14
16

17 CONTINUED BY MR. ANTOINE HACAULT:

18 MR. ANTOINE HACAULT: Thank you, sir.
19 In dealing with the whole challenge that the
20 Corporation has and its evidence that other utilities
21 are having in capital projects, at page 16 of your
22 rebuttal you give examples of BC, Saskatchewan, and
23 other provinces that seem to be having the same
24 challenge.

25 So, members of the panel, I'm just going

1 to ask a couple questions as to whether or not anybody
2 on this panel is aware of what's happening in some of
3 those provinces. They may or may not have information.
4 And one (1) of the documents that was referenced in the
5 rebuttal was the BC Hydro Service Plan. And that's at
6 -- parts of that have been reproduced at page 49 of our
7 book of documents, at 10-2.

8 And if we look at the second paragraph
9 on the left, which starts as follows, and I'm quoting:

10 "This effort builds on the 2011
11 government reviews that identified
12 over \$391 million in savings. New
13 measures in the ten (10) year plan
14 will reduce the amount of money that
15 the province receives from BC Hydro
16 and free up additional cash to
17 support investments, and
18 infrastructure, and limiting
19 operating costs."

20 And then before I ask the question as to
21 whether you're aware or not -- Diana, at the bottom
22 right-hand corner there's some footnotes. You might
23 have to bring that up where it says, "Note," the very
24 bottom right-hand corner. And I'm quoting again:

25 "The province, as part of the ten

1 (10) year plan, will restrict the
2 amount of dividends received from BC
3 Hvdro starting in financial 2018
4 until such a time as the debt-equity
5 ratio reaches 60:40. BC Hvdro does
6 not anticipate reaching the debt-
7 equity ration of 60:40 during the ten
8 (10) year time period."

9 Is anybody on this panel aware that the
10 province in British Columbia backed off on its
11 dividends, I guess the equivalent would be water
12 rentals and capital tax, to deal with the pressures of
13 the capital expenditures that were mentioned in your
14 rebuttal?

15 MR. DARREN RAINKIE: Yes, Mr. Hacault,
16 I'm -- I'm aware of that through reading their annual
17 reports here and there. And certainly KPMG has
18 reviewed this as part of their engagement. You tied it
19 to water rentals and I'm not -- I -- sorry, I'm not
20 agreeing to that part of your question.

21 You've asked me if I understand that the
22 BC government is backing off on its -- on its
23 dividends. And it is, because in both the case of BC
24 Hvdro and Hvdro-Ouebec, the governments have taken huge
25 dividends from these utilities. And in the case, I

1 think, of BC Hvdro, hundreds of millions of dollars a
2 vear. And in the case of Hvdro-Ouebec, billions of
3 dollars a vear.

4 And, of course, that was included in the
5 -- in their respective revenue requirements up until
6 now, so. They are backing off -- or that's their plan.
7 I -- I guess we'll see how successful they are in terms
8 of reducing their dividends to -- to try to achieve the
9 capital structure.

10 I do note though that the rate
11 increases, if you pan up on this page, they're still
12 ten (10), nine (9), eight (8), 3 1/2 percent, so the
13 difficulty, I suppose, in comparing in other
14 jurisdictions is that all things are not created equal.
15 So even with those measures I think their rate
16 increases are -- have -- have been and are very
17 substantial in BC in this particular instance.

18 MR. ANTOINE HACAULT: But would you
19 agree, sir -- I don't have the exact sources in front
20 of me, but it seems to me from prior read applications
21 that the government revenues received from Manitoba
22 Hvdro are in the range of 15 to 18 percent?

23 MR. DARREN RAINKIE: Yeah, I think
24 they're pretty consistently at 14 to 15 percent, Mr.
25 Hacault, of total revenue.

1 MR. ANTOINE HACAULT: So in one (1)
2 province we might call it a dividend, as we do in
3 British Columbia and here. We don't have that same
4 concept, as you said.

5 Provinces aren't created equal?

6 MR. DARREN RAINKIE: Well, no, other
7 than, I think, a one (1) time special dividend a number
8 of years ago, the Province of Manitoba does not take a
9 dividend from Manitoba Hydro, so that dividend has
10 never been included in our revenue requirement. So
11 it's pretty hard to take away something that wasn't
12 there in the first place.

13 The other thing is, is that, you know,
14 when you compare the percentage of -- there -- there
15 are different fee structures in the different
16 jurisdictions, so it's just not a matter of dividends
17 versus water rentals and capital tax in our
18 circumstance.

19 The other jurisdictions do pay fees, as
20 well.

21 MR. ANTOINE HACAULT: Yeah. And we can
22 get into that maybe in finance. I don't intend to get
23 into details. But other provinces, as we raised
24 before, will only charge .5 of a percent debt guarantee
25 fee. Here we have 1 percent, correct?

1 That's one (1) difference?

2 MR. DARREN RAINKIE: Oh, yeah. Then
3 they'll take, you know, \$500 million dividends, sir,
4 which far surpasses the differential in the .5 percent.
5 So you -- you have to look at it in total. You can't
6 pull one (1) piece of data out to understand the
7 equation.

8 MR. ANTOINE HACAULT: Okay, thank you.
9 Now, the next document and the rebuttal that had been
10 referenced was the SaskPower report. It was March of
11 2015. We have copies of that report here, but I don't
12 think we need to go to it.

13 Preceding that report there was a
14 decision by the -- the rate review panel in
15 Saskatchewan which provided a report to the minister,
16 and it starts at page 52 of our book of documents, iust
17 for the title page, and then we'll move on, iust to
18 show the date. Just scroll down.

19 So this report was submitted in April of
20 2014 prior to the completion of the report which you
21 reference in the rebuttal. And if I could direct your
22 attention to page 54 of our book of documents. There's
23 the heading in that public document to dividends.

24 And in the first paragraph under that
25 heading there's an explanation of a reduced return on

1 equity being sought by the Government of Saskatchewan.

2 Were you aware of that, sir?

3 MR. DARREN RAINKIE: No, sir. The
4 report that we referenced in rebuttal was the annual
5 report, not this report. But I am aware that, like
6 most of the other jurisdictions other than Manitoba,
7 the Saskatchewan government has took a fairly hefty
8 dividend from SaskPower and has -- you know, they had
9 the -- previously have had the rates to support that
10 because a rate of return has been built into their rate
11 structure.

12 So we don't have that return in Manitoba
13 Hydro. We have a very small contribution to reserves
14 each year, so I -- I would just note that. But I
15 haven't read this or digested this report, sir. It's
16 not the one we referred to in rebuttal.

17 MR. ANTOINE HACAULT: Yeah, thank you.
18 Then I'll just quote the first two (2) sentences from
19 the next paragraph and again ask you whether you were
20 aware.

21 "This panel commends the Government
22 of Saskatchewan for refraining from
23 taking a dividend from the
24 Corporation in all years except one
25 (1) since the 2008 period. No

1 dividend payments are anticipated
2 during the 2014/'16 time period
3 covered by this application."

4 Were you aware of that, sir?

5 MR. DARREN RAINKIE: Once again, sir, I
6 haven't laid eyes on this report before today.

7 MR. ANTOINE HACAULT: Okay, thank you.
8 So with respect to two (2) of the provinces having
9 challenges in the capital investment area I've taken
10 you through some of the information related to that.
11 Another province which you've referenced was Ontario,
12 and Mr. Bowman in his evidence quotes an Ontario Energy
13 Board -- I'll call it a report, but it's chapter 5.

14 And this is not necessarily directed to
15 Mr. Rainkie. The first quote in his response is
16 reproduced at page 58 of our book of documents. It's
17 taken from that particular page. And it starts -- to
18 put it into context he quotes the footnote number 1,
19 but the footnote number 1 is the first paragraph in
20 that introduction. And I'm quoting:

21 "These filing requirements set out
22 the information required by the Board
23 under the renewed regulatory
24 framework for electricity to assess
25 distributor applications involving

1 planned expenditures on distribution
2 and other infrastructure."

3 There's a footnote number 1 which has
4 been quoted by Mr. Bowman in his evidence if you can
5 move that please, Diana. It's at the bottom of the
6 page. Again, I'm reading footnote number 1 now:

7 "The renewed regulatory framework for
8 electricity is a comprehensive
9 [comma], performance [dash] based
10 approach to a regulation that is
11 based on the achievement of outcomes
12 that ensure the electricity system
13 provides value for customers."

14 First, to use a Williams question, have
15 I correctly read into the record those extracts?

16 MR. DARREN RAINKIE: Yes, sir.

17 MR. ANTOINE HACAULT: Sir, and this can
18 be anyone on the panel, was anyone on the panel aware
19 that this filing requirement was created by Ontario
20 Energy Board to deal with filing requirements related
21 to planned expenditures on distribution system and
22 other infrastructure?

23 MR. DARREN RAINKIE: I certainly
24 haven't seen this particular report before. I assume
25 that the -- the filing requirements are in accordance

1 with the jurisdiction of the OEB where I assume that
2 they will have approval of all of the capital
3 expenditures of the company particularly if this is a -
4 - a distribution company. I'm not quite sure what this
5 document is.

6 In our rebuttal evidence we referred to
7 a Toronto Hydro capital investment. We didn't refer to
8 a minimum filing requirement document. But -- but
9 obviously in Ontario the OEB would -- would regulate
10 and approve all of the capital expenditures of the
11 distributors and there are many of them. So in fact I
12 think they have over seventy (70) distributors.

13 So it would be quite -- quite normal for
14 a regulatory panel to have a minimum -- constant
15 minimum filing requirements when it's dealing with that
16 many individual entities. Of course, there's different
17 ownership frame -- frameworks and they're dealing with
18 a different jurisdiction. As we know, in this
19 jurisdiction the Manitoba Public Utilities Board
20 doesn't have jurisdiction over approving Manitoba
21 Hydro's capital program. So once again before you look
22 at a document for -- from another jurisdiction I think
23 you have to understand its purpose and then -- and then
24 go from there.

25 MR. ANTOINE HACAULT: My question was

1 to the panel generally and I don't need an answer from
2 everyone I guess if maybe kind of the reverse is -- was
3 anybody aware that this document existed and ever had a
4 chance to look at it?

5 MR. MICHEL MORIN: Well, we were made
6 aware of this document, because it's not that old, from
7 our consultant Kinectrics which does -- works with many
8 utilities across Canada that Ontario was transitioning
9 to this framework because of what Mr. Rainkie
10 mentioned, the seventy-two (72) different utilities, or
11 over seventy (70) utilities with some municipal, some
12 Crown, some public, different frameworks of ownership
13 that they moved towards this plan. And -- and so the -
14 - the consultant was well aware of it and -- and let us
15 know that that was transitioning in the Ontario side.

16 MR. ANTOINE HACAULT: When you
17 indicated 'we' can you put some names to that with
18 respect to the panel members? Or is it just yourself,
19 Mr. Morin?

20 MR. MICHEL MORIN: Yeah, I can't recall
21 who might have been there at the time, but it was when
22 they were working with our transmission group and we
23 had talked about distribution. That -- you know,
24 engaging them on the distribution side and just what's
25 happening across Canada.

1 So I don't know exactly who might have
2 been there, but I remember the discussion happened.
3 That they brought up that the Ontario -- because of the
4 challenges they're having with so many different
5 utilities, that they had brought up this -- this
6 framework to try to manage it.

7 MR. ANTOINE HACAULT: Okay. Thank you.
8 There's another quote at page 59 of our book of
9 documents which is at page 2 of this document.
10 Immediately above the heading '5.0.1' Mr. Bowman quoted
11 and made comments with respect to the paragraph which
12 I'll quote:

13 "DS plan filings must enable the
14 Board to assess whether and how a
15 distributor has planned to deliver
16 value to customers. One of the
17 primary goals of DS..."

18 For the court reporter that's capital
19 'D' and capital 'S':

20 "...plans and by extension hallmarks
21 of good planning..."

22 And I'm putting some emphasis on this:

23 "...is pacing and prioritizing
24 capital investments in a manner that
25 considers rate impacts. To

1 facilitate the achievement of this
2 goal, these filing requirements focus
3 on the qualitative and quantitative
4 information distributors can use to
5 support their investment proposals
6 that best enable the Board to assess
7 how a distributor has sought to
8 control the costs, and related
9 impacts of proposed investments."

10 First, did I read that into the record
11 correctly?

12 MR. DARREN RAINKIE: I believe so, Mr.
13 Hacaault.

14 MR. ANTOINE HACAULT: And as you
15 pointed out, this Board does not approve capital
16 expenditures unless it's given specific authority as it
17 did for the NFAT, which was only a recommendation.

18 But did Kinectrics explain how Manitoba
19 Hydro could use these guidelines in the filings to help
20 it assist in control costs and the related impacts of
21 proposed investments?

22 MR. MICHEL MORIN: I -- I think because
23 it was new to the Ontario utility groupings there was
24 still some time for utilities to get their -- their
25 plans in place, and -- and document their processes.

1 Part of the concepts of the plan is -- is that pace and
2 prioritization of capital investments and -- and we
3 viewed -- we were actually doing what we needed to do
4 here at Manitoba Hvdro, as well as there's always
5 continued improvement.

6 But the core principles of that pace and
7 prioritization, I believe we've demonstrated how -- how
8 we've been trying to maintain those assets and -- and
9 still manage the system at that time.

10 MR. ANTOINE HACAULT: But you'll agree
11 that Manitoba Hvdro in its filings did not format its
12 filings as required by this filing requirement, for
13 example? And there was no reason for it to do so. It
14 had no requirement to do so, correct?

15 MR. DARREN RAINKIE: That's correct,
16 Mr. Hacault. I mean, we've communicated what we
17 believed was good information to the PUB during this
18 last proceeding. As I -- as I said earlier, if you
19 look at past filings there was very little either than
20 the CEF in terms of the capital expenditures.

21 We recognize that we were asking rate
22 increases that are being driven by capital
23 expenditures, so we bolstered our Tab 4 significantly.
24 We filed the -- the asset condition report. So I think
25 we've -- we've tried recognizing the Board's

1 jurisdiction to have a more robust filing with respect
2 to capital.

3 And, you know, we don't -- there's
4 minimum filing requirements in every jurisdiction. So,
5 of course, just as other companies don't follow what
6 our minimum filing requirements are, we don't -- we're
7 not bound by theirs. But you also have to recognize
8 Manitoba Hydro is a vertically integrated utility. It
9 has generation, transmission, distribution, a very
10 complex export -- export activities, as Mr. Cormie
11 talks about.

12 So each filing has to balance all of
13 those different activities. We're -- we're not just a
14 small distributor in Ontario. So we can't give, you
15 know, every piece of information. If we did that with
16 every sector of our filing, our filings to the PUB
17 would be even more massive than they are, and I'm not
18 sure they would help the Board, just maybe confuse the
19 matter more with much more technical details.

20 So just like anything, there's a
21 balancing act here.

22 MR. ANTOINE HACAULT: But you -- in
23 that response, sir, you're not suggesting that this PUB
24 should ignore what's happened in Ontario for filing
25 requirements?

1 MR. BRENT CZARNECKI: Mr. Chairman,
2 I'll just jump in at this point. No, that's not what
3 we're suggesting. And my understanding is this Board
4 will be looking to all parties to make submissions on
5 what may or may not be minimum filing requirements in
6 the future.

7 So we're certainly open to participate
8 in that proceeding and hear others' comments and make
9 our own submissions, so. I've been patient letting
10 this go. These are documents that are not Hydro
11 documents. We're trying our best to answer them and I
12 think we're getting close to the end of the road, from
13 my perspective, on these documents, which, by the way,
14 were provided at Friday at 6:00 p.m., so they've had
15 very little time to review them in any great length at
16 this time.

17 THE CHAIRPERSON: Thank you, Mr.
18 Czarnecki. I would agree with his point to the effect
19 that to be fair to Manitoba Hydro, they've had not had
20 the opportunity to review these documents. And -- and
21 frankly, I'm not sure how pertinent they are, because
22 they're dealing with the requirements in other
23 jurisdictions, so.

24

25 CONTINUED BY MR. ANTOINE HACAULT:

1 MR. ANTOINE HACAULT: I didn't have any
2 other questions in that area, so thank you for
3 anticipating that. A very short question with req --
4 or a couple short questions with respect to -- and this
5 would be Mr. Bowen. I don't think you need to move up
6 front for this.

7 It's just I was reviewing the transcript
8 and I'm not so sure I understood your answer when Mr.
9 Peters was asking questions about the cofferdam. It's
10 at page 1,160 that I looked at.

11 And you're explaining that the value of
12 the cofferdam cost for ice was in around the \$50
13 million mark. That's at line 18.

14 Do you see that?

15 MR. DAVE BOWEN: Yes, I do, and I can
16 clarify that. I believe I -- I said fifteen (15). It
17 wasn't fifty (50), it was one (1), five (5), fifteen
18 (15).

19 MR. ANTOINE HACAULT: Yeah, thank you.
20 The second part that I'd like to clarify is was there a
21 contingency amount with respect to the cofferdam
22 construction itself as opposed to the contingency in
23 the col -- control budget overall?

24 MR. DAVE BOWEN: Yes, there are --
25 there -- there are contingency dollars specific to

1 cofferdams. Was this event -- I think I noted that
2 this event was known. We didn't expect to have to top
3 off our cofferdam, so we did not carry this much money
4 in our contingency for this event.

5 MR. ANTOINE HACAULT: Okay. So -- yes,
6 that helps me understand, because I wasn't too sure the
7 way this had -- response had come out, because at line
8 14 you said you had:

9 "High watermark cost us more money
10 than we had in our contingency."

11 If you had continued the sentence it
12 would have been that you had planned in your
13 contingency for the cofferdam.

14 Is -- is that correct?

15 MR. DAVE BOWEN: Sorry, can -- can you
16 say that again?

17 MR. ANTOINE HACAULT: I'm looking at
18 line 14. Do you have that on the screen?

19 MR. DAVE BOWEN: Yes.

20 MR. ANTOINE HACAULT: You had
21 testified, and I'm quoting:

22 "We had the higher -- higher
23 watermark that cost more money than
24 we had planned in our contingency."

25 To finish that sentence it would have

1 been something like, Our contingency with respect to
2 the cofferdam? You're still within the general control
3 budget, but you exceeded the contingency you had for
4 the cofferdam, correct?

5 MR. DAVE BOWEN: That's right.

6 MR. ANTOINE HACAULT: Are you able to
7 put on the record what the contingency was for the
8 cofferdam?

9 MR. DAVE BOWEN: I -- I don't have the
10 exact number in front of me.

11 MR. ANTOINE HACAULT: If you can put
12 the number with respect to this kind of an event, kind
13 of a general unforeseen contingency, I'd appreciate
14 that. Would you be able to undertake to do that, sir?

15 If -- if it's commercially sensitive
16 information it can be filed in confidence with the
17 Board.

18 MR. DAVE BOWEN: We -- we can undertake
19 to do that. And I'll take it under advisement as to
20 whether or not it's confidential. We need to just
21 review the numbers.

22

23 --- UNDERTAKING NO. 30: Manitoba Hydro to provide
24 what the contingency was
25 for the cofferdam

1 MR. ANTOINE HACAULT: The next subject
2 that I'm going to get into is synchronous condensers
3 and the rating for Bipole III. And, Diana, if you
4 could bring PUB book of documents 20-2 up on the
5 screen? And I think you've already set aside CEF14.

6

7 (BRIEF PAUSE)

8

9 MR. ANTOINE HACAULT: Page 21, please.

10

11 (BRIEF PAUSE)

12

13 MR. ANTOINE HACAULT: So Mr. Peters
14 went through this document fairly -- in a fairly
15 detailed way. And if we scr -- scroll down a bit lower
16 we see that Mr. Elder was part of the 2011 revision to
17 this contract. Is that correct, Mr. Elder?

18 MR. ROB ELDER: That's correct.

19 MR. ANTOINE HACAULT: And in the 2011
20 addendum and all the ones preceding it, the design and
21 construction was for 2,000 megawatts, correct?

22

23 (BRIEF PAUSE)

24

25 MR. ROB ELDER: That's correct.

1 MR. ANTOINE HACAULT: And if we go --
2 this was prepared, the date on the screen shows,
3 September 24 of 2014, correct?

4 MR. ROB ELDER: Yes.

5 MR. ANTOINE HACAULT: Okay. By that
6 time, we had the decision by the NFAT panel and the
7 request by the government to suspend all expenditures
8 on Bipole III, correct?

9 MR. ROB ELDER: I'm sorry, I think you
10 meant to say Conawapa.

11 MR. ANTOINE HACAULT: Conawapa. Yeah,
12 there I go.

13 MR. ROB ELDER: There's your brain
14 fart.

15 MR. ANTOINE HACAULT: I got the brain
16 fart. Correct --

17 MR. ROB ELDER: I --

18 MR. ANTOINE HACAULT: -- with respect
19 to Conawapa?

20 MR. ROB ELDER: Yes.

21 MR. ANTOINE HACAULT: Thank you. If we
22 go to page 23 of the book of documents, so it's the --
23 the second page here, there's a highlighted area. And
24 the second sentence of that highlighted area says:

25 "The increased rating ensures future

1 generation associated with Keevask

2

3 see this and to Conawapa can be
4 transmitted via Bipole I, Bipole II,
5 and Bipole III in the event of a
6 single valve group outage."

7

And I'm continuing in the quote.

8

"The increased rating limits the
9 amount of future upgrades and
10 equipment replacement needed on the
11 Bipole HVDC system to accommodate,
12 again, future Conawapa generation."

9

10

11

12

13

So my question to you, Mr. Elder, is:

14

Was it the view of the Corporation that, given that

15

this was a Bipole III upgrade, it didn't matter whether

16

it was with respect to Conawapa whose expenses were

17

supposed to be suspended?

18

MR. ROB ELDER: Sorry, could you ask

19

that question again?

20

MR. ANTOINE HACAULT: Given that this

21

is a capital justification for Bipole III, was it the

22

view of the Corporation that it could spend more money

23

on Bipole III to accommodate the future of Conawapa

24

generation, that that part was not put on hold?

25

MR. ROB ELDER: No.

1 (BRIEF PAUSE)

2

3 MR. ANTOINE HACAULT: You are the one
4 who drafted these words, and I'm quoting, "To
5 accommodate future Conawapa generation"? Is that
6 correct?

7 Or is it somebody else who drafted that?

8 MR. ROB ELDER: No, that was me. And
9 maybe I can expand on that a little bit. And as I
10 tried to explain the other day, the -- the increase
11 from -- from a reliability perspective allows for
12 future generation, but it also provides additional
13 capacity. And back to that analogy where you've got
14 three (3) highways, if you lose a bridge on one (1) of
15 those highways, that additional capacity gets you --
16 gives you one (1) valve group spare. So when we got to
17 -- to rebuild Bipole II, we have to take less outages,
18 because we've got that additional capacity there.

19 Then, should we lose Bipole I or II,
20 that gives us additional capacity there that we can
21 transfer over there. And the third piece is if
22 Conawapa or any other future generation comes in the
23 north, that capacity is already there at -- at an
24 incremental cost. And it -- it's -- avoids the
25 requirement to build another transmission line down

1 from the north or spend significant dollars on Bipole
2 I, II, or III to increase that capacity. So while the
3 words say 'Conawapa' it's not intended for Conawapa.

4 MR. ANTOINE HACAULT: Thank you for
5 that clarification, sir. It helps me understand that
6 document better. We just have to strike out when you
7 wrote, "Conawapa."

8 We take those words out and it reflects
9 better your meaning?

10 MR. ROB ELDER: It -- it should have
11 said, Any -- any future generation. Sure.

12 MR. ANTOINE HACAULT: Now, remind us
13 again what the cost of this upgrade was?

14 MR. ROB ELDER: Are -- are you talking
15 the 2,000 to 2,300 megawatts?

16 MR. ANTOINE HACAULT: Correct.

17 MR. ROB ELDER: About \$50 million, or 1
18 percent of the capital project.

19 MR. ANTOINE HACAULT: Okay.

20 MR. ROB ELDER: And -- and I might add
21 that that is just for the uprate -- upsizing of the
22 converter equipment alone. All the lines, collector
23 lines, all the other infrastructure, there -- there's
24 no dollars for that as -- as that -- all that other
25 infrastructure is already capable of that.

1 MR. ANTOINE HACAULT: Okav. So the
2 only incremental cost was about \$50 million?

3 MR. ROB ELDER: I wouldn't say 'only'.
4 But, yes, 50 million.

5 MR. ANTOINE HACAULT: Well, he said 1
6 percent. Sorry. Before this \$50 million investment
7 was decided, Mr. Read, were you asked whether you had
8 \$50 million of capital projects for your generating
9 stations?

10 What you might want to do with that \$50
11 million?

12 MR. NICK READ: No, I was not.

13 MR. ANTOINE HACAULT: Okav. Mr. Morin,
14 were you asked, before that \$50 million upgrade was
15 approved, what you could do and what you wanted to do
16 with that \$50 million that was now available?

17 MR. MICHEL MORIN: I was not.

18 MR. ANTOINE HACAULT: And Mr. Swatek,
19 were you asked, prior to this \$50 million increase
20 being approved, whether you could use that money and
21 what you would do with it, sir?

22 DR. DAVID SWATEK: At -- at that time,
23 I was the manager of the Insulation Engineering and
24 Testing Department, so I was not on -- I was -- I was
25 not on the scene, no.

1 MR. ANTOINE HACAULT: Okav. To your
2 knowledqe, was the division manager of transmission
3 asked, prior to this \$50 million upgrade being
4 approved, whether and what he might do with the \$50
5 million?

6 DR. DAVID SWATEK: I would have had no
7 way of knowing that.

8 MR. ANTOINE HACAULT: Thank you.

9 MR. NICK READ: Could I add to my
10 answer, please?

11 MR. ANTOINE HACAULT: Sure --

12 MR. NICK READ: I iust feel like I'm
13 following you down a rabbit hole, and I'd like to sav
14 had I been asked, I would sav we didn't have it
15 available. And -- and the reason for that is we have
16 done modelling on how much money we need. And right
17 now we are deat -- dealing with -- dealing with
18 generation risks.

19 Where we spend a dollar we get about
20 seven (7) or eight dollars (\$8) back on risk reduction.
21 That's iust how many aging assets we have out there.
22 So it's really, for me, not a matter of pacing. We are
23 pacing. And -- and I iust wanted to make that point.

24 MR. ANTOINE HACAULT: Thank you very
25 much for that. And I guess I don't need to explain,

1 but -- but I'm exploring, for members of the panel, the
2 process that we have in this Corporation, and whether
3 they even ask people with respect to amounts which, I
4 don't know how Mr. Elder has now qualified it, whether
5 it's insignificant or significant, but \$50 million.

6 So I'll move on with my question --

7 MR. ROB ELDER: So -- so maybe I could
8 just add to that? When we're looking at the final
9 rating of the system, that's not a decision that I make
10 myself. That's made in collaboration with our HVDC
11 operating folks, our system planning folks, at our
12 executive.

13

14 (BRIEF PAUSE)

15

16 MR. ANTOINE HACAULT: Now, the -- the
17 next thing I'd like to get some clarification on is the
18 synchronous condensers. The approved Bipole III
19 capital justification sheets talk about this technology
20 and the alternatives going back to 2011, correct?

21 MR. ROB ELDER: Are -- you're referring
22 to the voltage source technology?

23 MR. ANTOINE HACAULT: Yes.

24 MR. ROB ELDER: Yes.

25 MR. ANTOINE HACAULT: And the -- sorry,

1 Diana, I -- I should have warned you ahead, but PUB/MH-
2 I-20(e). I don't think it's in Mr. Peters's book of
3 documents. It's Addendum 6(b), as in 'Bob'.

4

5

(BRIEF PAUSE)

6

7

MR. ANTOINE HACAULT: The matter I
8 want to bring to your attention, Mr. Elder, is that --
9 the last paragraph of that document, while we wait it
10 goes on the screen, indicates:

11

"The assumed use of new technology in
12 the form of voltage source
13 converters, both at the Keewatinoow
14 and Riel Converter Stations,
15 represents an additional risk factor.
16 Confirmation or otherwise of the
17 feasibility of this technology is
18 expected by late 2011."

19

And this is on page 3 of 4 of that
20 document. Can you help us understand why the
21 Corporation could not determine whether that technology
22 was feasible by late 2011, as indicated in this
23 document?

24

MR. ROB ELDER: Sure, I'll try. As I -
25 - as I explained on Friday, in -- at that point, we did

1 still feel that it was a -- a valid technology. All
2 three (3) of them -- the major vendors in the world
3 were telling us that. Our independent experts were
4 telling us that. There were some systems being built
5 with a similar configuration at the time, so --

6 MR. ANTOINE HACAULT: Just to clarify,
7 could you put a date on that? I just want the record
8 to be clear. I've been talking 2011, so are you still
9 taking 2011, sir? I just -- I don't want to interrupt
10 you but I just --

11 MR. ROB ELDER: Yeah, well --

12 MR. ANTOINE HACAULT: -- want the
13 record --

14 MR. ROB ELDER: -- sure. Yeah.

15 MR. ANTOINE HACAULT: -- to be clear.

16 MR. ROB ELDER: When we went to bid in
17 September 2013, it was still our understanding that
18 this was a viable technology. But really -- so the way
19 we've set up these bids is as a performance bid, where
20 the vendors would have to propose the technology, and
21 then they would have to guarantee not only the
22 technology, but the execution and the delivery of the
23 system.

24 What we got back from the vendors once
25 they had to -- had to, you know, in essence, sign on

1 the dotted line, was that they -- given -- given the
2 project parameters, the schedule, the budget, and --
3 and the potential penalties in the contracts, they
4 weren't willing to propose that -- that technology.

5 MR. ANTOINE HACAULT: Okay, thank you.
6 I -- I just want to understand the last sentence, so:

7 "The confirmation or otherwise of the
8 feasibility of this technology is
9 expected by late 2011."

10 From whom were you expecting that
11 confirmation, sir?

12 MR. ROB ELDER: We were still working
13 with the external experts and the vendors. And -- and
14 as I said, when we went to bed -- when we went to -- to
15 bid in -- in September of '13, we were -- we were fully
16 expecting bids on this technology or the more classic
17 technology, so.

18 MR. ANTOINE HACAULT: And when you
19 submitted the -- or asked for the bids, was it in the
20 form of a tender with a whole bunch of specs, or a
21 request for proposals?

22 MR. ROB ELDER: They were requests for
23 proposals --

24 MR. ANTOINE HACAULT: Okay.

25 MR. ROB ELDER: -- with -- with some

1 fairly tight req -- what our requirements were from a
2 performance perspective.

3 MR. ANTOINE HACAULT: Okay. And when
4 did the document ask that you receive responses from
5 your three (3) suppliers, or potential suppliers?

6 MR. ROB ELDER: I -- subject to
7 confirmation, I think it was about April of '14.

8 MR. ANTOINE HACAULT: The -- could you
9 confirm that that is the date, and -- and what date in
10 April of 2014 you received the --

11 MR. ROB ELDER: I certainly can, yeah.

12 MR. ANTOINE HACAULT: -- the responses?

13 MR. ROB ELDER: And -- and as I -- as I
14 tried to explain on Friday, once those bids were
15 closed, they were well over five thousand (5,000) pages
16 a piece of technical information. So the next step was
17 then to have our technical team spend two (2) to three
18 (3) months going through those, understanding not only
19 the technical aspects of the proposal.

20 I -- in most of the cases, we have two
21 (2) to three hundred (300) technical clarifications.
22 Once we went through that process and had a good
23 understanding of -- of what the technical requirements
24 were and what was being proposed financially, we put a
25 recommendation together for a preferred proponent.

1 And then, at that point, we sat down
2 with that preferred proponent and started to work
3 through the final pricing of the contract. So as I
4 said on Friday, it was about June of '14 we had a sense
5 of what the pricing was. And it took us til October of
6 '14 to sign the contract.

7 MR. ANTOINE HACAULT: Are you
8 suggesting, sir, that with the technical expertise and
9 other of Manitoba Hydro, that within a day or two (2),
10 your team could not have a general understanding of
11 what was being proposed as far as technology and at
12 least a general view of what the cost of that
13 technology would be?

14 I can understand there's a lot of
15 detail, but it seems to surprise me that you wouldn't
16 be able to have a general idea of where these guys are
17 going and what the cost is going to be when you get to
18 the -- the paper in April?

19 MR. ROB ELDER: Yes, we -- we had a
20 general idea of -- well, we certainly knew the
21 technology, day 1. We had a general idea of costs
22 through the bid process. Just to give you a bit of a
23 sense, there were items that swung \$50 million through
24 -- through that whole process. So what the final costs
25 were? No, we didn't. We had a -- a general sense of

1 it, but there was a lot of variability in -- where we
2 started.

3 The other pieces that we really, as I
4 tried to explain on Friday, needed to have a full
5 understanding of were they proposing realistic
6 schedules, did they -- especially in the north, where
7 you've got a camp and you've got a limited number of
8 beds. If you get a vendor that says, We can build this
9 for you, and then you get into their -- their execution
10 plan, and they need twice as many beds and you don't
11 have that, then you're looking at a two (2) year delay
12 in your project, so you need to work through all of
13 that, and that does take a lot of time.

14 MR. ANTOINE HACAULT: I understand
15 that. But the one (1) thing, if I've understood you
16 correctly, is that as soon as you received in April,
17 whatever that date was, the three (3) proposals in
18 response to your request, you knew that the technology
19 was going to be synchronous condensers, correct?

20 MR. ROB ELDER: We knew that the
21 technology was going to be voltage source converter --
22 I'm sorry, that it was going to be LCC technology, and
23 that we would need synchronous condensers, yes, that's
24 correct.

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(BRIEF PAUSE)

MR. ANTOINE HACAULT: Sorry, I'm just trying to think what I can do here for the next five (5) or ten (10) minutes for the break. I'll pick some -- some very small items. At Tab 4 of Manitoba Hydro's main filing at page 16, there's an explanation of what affects reliability at lines 18 to 21. God, you're fast, Diana.

So I understood this explanation in the context of these graphs on reliability. Does Manitoba Hydro have, for distribution, what adverse weather causes as far as a percentage of reliability impacts over the last, say, three (3) to five (5) years?

MR. MICHEL MORIN: I believe there's -- through our Canadian reporting, there's a definition of how to include or exclude adverse weather in your reporting, and I -- and I believe we have that separated in our reports, if required.

MR. ANTOINE HACAULT: Do you have any sense of what percentage that might be? It -- it would change over the years, I would guess, correct, Mr. Morin?

MR. MICHEL MORIN: That's correct. I -

1 - I wouldn't have a percentage readily available right
2 now, sorry.

3 MR. ANTOINE HACAULT: Okay. The next
4 item is tree contact. Again, that would be another
5 item in the reliability report, which would be
6 attributed a percentage which would change over years,
7 correct?

8 MR. MICHEL MORIN: Yes. I think we
9 discussed that earlier. It was -- the tree contacts
10 are some -- somewhat fluctuated, but are within the
11 reasonable range consistency over the last ten (10)
12 years, yes.

13 MR. ANTOINE HACAULT: Okay. And what
14 about adverse weather? Has that significantly changed
15 with, say, our colder weather last year?

16 MR. MICHEL MORIN: You know what, I'd
17 have to get the stats on the adverse weather before I
18 could comment.

19 MR. ANTOINE HACAULT: The third item
20 that's identified is:

21 "Lengthening of restoration time due
22 to changes in work procedures to
23 conform to safety, legal, and
24 environmental requirements."

25 This seems to reference something that's

1 new, something that has changed. When did this start
2 to impact reliability?

3 MR. MICHEL MORIN: I think in general,
4 when you look at work practices, you know, work places
5 have instituted many new safety requirements, you know,
6 which have benefited safety performances across
7 utilities across Canada.

8 And some of those are certain
9 preparations you do before you -- you do the work,
10 sometimes calling in a second person before doing
11 certain work so you're not working, you know, alone in
12 certain aspects. Like recently, like, traffic control
13 changes on different speeds of highway. You need
14 different types of traffic control to be able to be on
15 that side -- side of the road.

16 Various things. How you deal with
17 asbestos, PCBs, you know. I mean, those things
18 continue to be further improved on -- on some of the
19 regulated requirements, or just overall requirements,
20 but they do take time. And -- and when you look at
21 where it was before to -- you know, to now, it
22 continues to take a little bit more time to do some of
23 the work.

24 So that does impact your restoration
25 time to put these measures in place for employee,

1 public, or environmental reasons.

2 MR. ANTOINE HACAULT: My question to
3 you was: Do you have any sense as to when this started
4 to be a greater factor, significant enough that you've
5 reported it here?

6 MR. MICHEL MORIN: I -- I think it was
7 just in general. Like that -- you know, when we look
8 at the cost of -- and time to do certain things, we're
9 realizing it just takes longer to do certain aspects
10 than it did previously. So when we put estimates on --
11 on certain times of work, it -- it's starting to factor
12 in that it does add time and there's a cost to it from
13 where we were several decades ago.

14 So I just -- I just wanted to take note
15 that quite a few things have changed, you know, and --
16 and -- for the better, but it does impact your cost and
17 time.

18 MR. ANTOINE HACAULT: Yeah, and your
19 point here is that this is also a -- a factor that
20 affects reliability.

21 You didn't have to deal with this type
22 of thing before, correct?

23 MR. MICHEL MORIN: No, I would say it's
24 been a progression of -- of just continual improvements
25 in -- in sort of work methods and -- and environmental

1 protection measures.

2 MR. ANTOINE HACAULT: Okay. And I'll
3 ask --

4 MR. NICK READ: And can I add to that
5 please?

6 MR. ANTOINE HACAULT: I was just about
7 to ask you and -- and Mr. Swatek whether or not that's
8 affected the restoration times and the reliability
9 numbers that you have in your particular sectors.

10 MR. NICK READ: I would say it has.
11 And -- and in -- if you're asking for dates I'd say
12 it's been a gradual process over the last ten (10)
13 years. I think if you look you'll see Manitoba Hydro's
14 safety record has improved and the efforts in those
15 areas are worth doing. But we do things like job plans
16 and people stop before a job and they evaluate the
17 hazards. And it's right that they do so, but it's an
18 additional step they didn't do before.

19 One (1) thing that's happened recently
20 is arc flash. And it -- for our staff they're not
21 allowed to work on any hot systems over 50 volts now
22 unless there's been a -- an analysis done of the input
23 energy and just how big the -- if there was an
24 inadvertent short how -- how much energy would be
25 released.

1 And unless the panel's labelled then we
2 actually have to do -- stop right there and do an
3 analysis on that panel. And so that has caused
4 extension of outages. As we do more of it and we label
5 more panels that problem will go away and it's once
6 again the right thing to do, but it does extend
7 outages. Until we've gone through all our panels and
8 done this work.

9 MR. ANTOINE HACAULT: Thank you very
10 much for that explanation.

11 MR. NICK READ: But if anyone -- I'll
12 just add to that if anyone ever wants to look at arc
13 flash and see what happened to a poor individual in
14 Brazil that was literally engulfed by the flame you
15 just have to go into YouTube and do 'arc flash Brazil'.
16 So we're doing the right thing. It's just -- takes
17 time.

18 MR. ANTOINE HACAULT: And your point is
19 doing the right thing sometimes will impact reliability
20 when you start looking at stats as to how much longer
21 it takes you to do a particular job that has created a
22 -- an outage.

23 Is that fair?

24 MR. NICK READ: That's fair.

25 MR. ANTOINE HACAULT: And, Mr. Swatek,

1 do you have any comments on whether in your area of
2 transmission whether there's lengthening restoration
3 time due to changes in work procedures to conform to
4 safety, legal, and environmental requirements?

5 DR. DAVID SWATEK: Well, now is the
6 question specifically due to changes in requirements?

7 MR. ANTOINE HACAULT: I'm just trying
8 to understand the evidence. Because the sentence
9 references at line 18, and I'll quote it again:

10 "Why our reliability is impacted by
11 fact -- factors such as adverse
12 weather, tree contacts, and the
13 lengthening of restoration time due
14 to changes in work procedures to
15 conform to safety, legal, and
16 environmental requirements."

17 And the sentence continues:

18 "The condition of Manitoba Hydro's
19 assets is contributing more and more
20 to the decline in reliability."

21 I wanted to understand to what extent
22 all of these new safety, legal, and environmental
23 requirements that are said to be changing is having an
24 impact on the reliability.

25

1 (BRIEF PAUSE)

2

3 DR. DAVID SWATEK: The changing legal
4 requirements around safety. When -- when was it that
5 safe work procedures became provincial law? That was
6 very recently. But that would -- that -- from -- from
7 transmissions per -- per respective regulatory changes
8 on -- for safe work procedures would not have a
9 significant impact on reliability. Questions of safety
10 and encountering new hazards certainly do have an
11 impact on -- on re -- reliability.

12 And in 1996, when both the Bipole I and
13 II lines were blown down, during the process of
14 restoring those -- those lines, one (1) -- we -- you
15 know, we -- these lines are critical. There's such a
16 huge percentage of our power. Seventy (70) percent of
17 our total generation is on those -- those lines, and 80
18 percent of that is the power that's up north.

19 So it's very critical to restore these
20 lines as soon as possible. So one (1) of the -- the
21 Bipole lines was restored on a temporary wood pole
22 structure. And then this goes back to Mr. Chairman's
23 question before the -- the break. We were able to
24 parallel the -- the two (2) poles, Bipole I and II,
25 onto that single temporary wood pole line that -- that

1 was rest -- restored. And that allowed us to go and --
2 and replace the fallen steel towers.

3 While the work crews were replacing
4 those fallen steel towers, there was a -- a momentary
5 hiccup in the power flow on the adjacent line that was
6 carrying the full 3,600 megawatts. And as a result of
7 that hiccup on the restored line, a hazardous amount --
8 amount of energy was reduced -- sorry, a hazardous
9 amount of energy was induced onto the work zone -- onto
10 the adjacent work zone where the crews were restoring
11 the steel towers.

12 And as a result of this electromagnetic
13 induction, part of their line-stringing equipment was -
14 - their -- their line-stringing equipment was
15 vaporized. Molten metal fell to the ground and ign --
16 ignited a small --

17 MR. ANTOINE HACAULT: Brush fire.

18 DR. DAVID SWATEK: -- brush fire. So
19 work -- work was shut down until we could do a -- an
20 engineering ana -- analysis to determine why a
21 momentary hiccup in power flow on one (1) line caused
22 vaporization of the line-stringing equipment on the
23 adjacent work zone.

24 We did the electromagnetic analysis, and
25 we developed safe work procedures to -- to allow that

1 work to continue. So that's an example of where
2 considerable time and effort would go into developing
3 safe work procedures. And -- and that delayed the
4 restoration of the steel towers.

5 MR. ANTOINE HACAULT: Thank you. That
6 was a -- a great illustration of a -- an unplanned
7 weather event and how safety issues also contributed to
8 the length of time that you had to repair this
9 unplanned event. I think it's an appropriate time, if
10 it's the Board's wish, to take a break.

11 THE CHAIRPERSON: I think we do. And a
12 quick calculation, I would think we'd start at ten (10)
13 to -- ten (10) to 1:00. Thank you.

14

15 --- Upon recessing at 12:07 p.m.

16 --- Upon resuming at 12:52 p.m.

17

18 THE CHAIRPERSON: Good afternoon. I
19 believe we are ready to resume the proceedings. So
20 with the understanding of Me. Hacault, we will ask Mr.
21 Orle to begin his questions.

22 MR. BYRON WILLIAMS: And, Mr. Chair, if
23 I -- I might. It's Mr. Williams here waving at you.
24 Just with the consent of other counsel, we just had --
25 there was a exhibit flowing from our discussion of

1 Friday at transcript pages 1,328 to 1,330 relating to
2 PowerStream, and we are -- we'll be filing -- the Board
3 secretary has it -- Section 5.33 of PowerStream.

4 I don't anticipate any discussion but
5 the -- the agreement in terms of entering in Manitoba
6 Hydro's material was that we would put in the chapter
7 upon which it was based. And so that -- that is now
8 before you. And Ms. Menzies is here, thank goodness,
9 so I'm going to -- with -- excuse myself from the
10 proceedings for today.

11 THE CHAIRPERSON: Welcome back.

12 MS. MEGHAN MENZIES: Thank you.

13

14 CROSS-EXAMINATION BY MR. GEORGE ORLE:

15 MR. GEORGE ORLE: Thank you, Mr. Chair.
16 Mr. Rainkie, I think I'll be directing most of my
17 questions to you. And first of all just to -- to
18 confirm, the -- the recommendations that were made by
19 the -- by the Public Utilities Board in the NFAT
20 proceedings regarding DSM and redirection of water
21 rental and capital tax has not been addressed in the
22 last year at all since these recommendations were made?

23 MR. DARREN RAINKIE: Sir, those were
24 recommendations to the Government of Manitoba. I think
25 Mr. Thomson went through those with Mr. Peters on -- on

1 the first day of the hearing giving a status update to
2 the extent that we know where those are at.

3 MR. GEORGE ORLE: But Hvdro itself has
4 not addressed any of those recommendations in preparing
5 its projections or in dealing with the projections for
6 this -- for this particular budget and rate increase?

7 MR. DARREN RAINKIE: Well, no, sir. I
8 -- I think as Mr. Thomson indicated, there would be a
9 change -- have to be a change in legislation to divest
10 Manitoba Hvdro of the DSM activities. As well, the
11 government would have to change its budget or other
12 measures in order to change payments to the government,
13 so we have to base these hearings on known legislation.
14 We can't forecast things that aren't even through a
15 first reading vet.

16 MR. GEORGE ORLE: Okay. You're aware,
17 sir, and agree that the -- the Minister, after the
18 recommendations were released, indicated that the
19 government accepted them and would be adopting them?

20 MR. DARREN RAINKIE: Yes, I am.

21 MR. GEORGE ORLE: Would it not have
22 been prudent on the part of Hvdro to, at least prior to
23 this hearing since a year has past, to try to see
24 whether or not there was anything happening with
25 regards to either a reduction in capital tax or the

1 water rental rates?

2 MR. DARREN RAINKIE: Well, Mr. Orle,
3 Mr. Thomson will have regular meetings with our
4 minister so if there were any of those discussions they
5 would happen in that form, sir. It -- it's not like we
6 don't communicate between each other.

7 MR. GEORGE ORLE: But you're coming
8 here before the panel that has made these
9 recommendations, and you have nothing to tell them
10 either in the way of information or in the manner in
11 which you might incorporate these into your projections
12 for the next twenty (20) years that would be any -- any
13 assistance to them?

14 MR. DARREN RAINKIE: Well, as I said
15 previously I don't think we can assume changes in
16 legislation. Manitoba Hydro, like every other
17 corporation, has to follow the legislation and -- and
18 taxation parameters of the provincial government. So I
19 think it would be irresponsible for us to assume
20 something that wasn't there.

21 MR. GEORGE ORLE: If I might refer you,
22 sir, to Exhibit -- Hydro Exhibit number 31, slide 41.

23 And I believe that both Mr. Thomson and
24 yourself used this slide in respect to the question of
25 what you -- what you refer to as 'rate shock'?

1 MR. DARREN RAINKIE: Yes, sir. It's
2 right on the slide.

3 MR. GEORGE ORLE: Yeah, and the -- the
4 purpose of this slide was the -- the basis for Hvdro's
5 concern that without having these rates harmonized or
6 made equal over the course of the next twenty (20)
7 years that there would be a scenario where there would
8 be a -- a very large increase required in a very short
9 period of time?

10 MR. DARREN RAINKIE: Yes, sir. Much
11 larger than we have experienced in this jurisdiction as
12 long as I can recall.

13 MR. GEORGE ORLE: Okay. And the -- the
14 only recourse that Hvdro appears to have looked at is
15 to what extent can we use rates as a manner in which to
16 mitigate these increases?

17 MR. DARREN RAINKIE: No, sir. We've
18 discussed the constraintment of our operating costs and
19 limiting that to 1 percent inflationary increases over
20 the next number of years.

21 MR. GEORGE ORLE: Okay. I'd like to
22 refer you to Manitoba Hvdro Exhibit number 43. It was
23 undertaken given -- undertaking given to MKO as part of
24 the examination of -- of Mr. Thomson.

25 And the undertaking had been to provide

1 MKO with information as to what amount of either water
2 rentals or reduction in capital tax would be required
3 to bring the rate increase down to either 2 percent or
4 down to 2.9 percent over the course of the projected
5 time period?

6 MR. DARREN RAINKIE: Sorry, sir, can we
7 just -- I think there was two (2) undertakings.

8 Can we just make sure that we're all on
9 the same page?

10 MR. GEORGE ORLE: Okay. I'm talking
11 about Undertaking number 9 which is the first page of
12 your Exhibit number 43.

13 MR. DARREN RAINKIE: Okay. I have it
14 now, sir.

15 MR. GEORGE ORLE: Okay. And you'll see
16 that the undertaking was:

17 "Manitoba Hydro to prepare the
18 financial runs showing the reduction
19 water rentals on capital taxes
20 required to reduce rate increases
21 from 8 percent."

22 Which is the highest part of your rate
23 shock down to 4 percent. And from 6 percent down to 4
24 percent which is the second highest one (1). And I --

25 MR. DARREN RAINKIE: Yes, sir.

1 MR. GEORGE ORLE: -- and I'd just like
2 to -- to read-in the response, sir, for the benefit of
3 the record. And that is:

4 "The reduction of proposed and
5 indicative annual rates from 7.94
6 percent
7 the 8 percent was rounded up from
8 that amount to 4 percent from
9 2019/'20 to 2023/'24 requires an
10 equivalent reduction in payments to
11 the province of approximately 220
12 million per year for five (5) years
13 which represents approximately 50
14 percent of total payments projected
15 in Manitoba Hydro-14. And please
16 note in this scenario Manitoba Hydro
17 only achieves an equity ratio of 15
18 percent by 2034."

19 Had you seen that before it was tabled
20 today, Mr. Rainkie?

21 MR. DARREN RAINKIE: Yes, I reviewed it
22 this morning.

23 MR. GEORGE ORLE: And was any thought
24 given in the preparation of the -- the rate increase
25 application to working out any series of numbers that

1 would come to this same conclusion in being able to
2 present before the Board what sorts of options there
3 were to just straight rate increases?

4 MR. DARREN RAINKIE: Well, sir, this --
5 this is -- this is a regulatory proceeding. And if I'm
6 not mistaken, the rules of practice and procedure
7 require the applicant to indicate what type of a rate
8 increase it's looking for and why. Certainly the
9 twenty-five (25) years that I've been involved in these
10 proceedings that's the case.

11 We -- we don't come with ranges, we're
12 looking for this number to this number. Certainly in
13 the material, Tab 3.5 of the material -- appendix 3.5
14 of the material and throughout the Information Requests
15 I think we've pro -- provided a plethora of different
16 rate alternatives, and I think we've answered every one
17 that we've been asked.

18 So I -- I'm not sure I -- you had the
19 same kind of line of questioning with Mr. Thomson. I'm
20 not sure what your expectation of Manitoba Hydro is.
21 We've -- we've shown the impacts of rate increases from
22 zero to 6 percent.

23 If we were simply looking at this from a
24 financial perspective, to try to minimize our losses,
25 we would be asking for five and a half (5 1/2) to six

1 (6). We have maintained a 3.95 percent, as I
2 indicated, we would try to NFAT when I was testifving.
3 So we believe we have mitigated the impacts on
4 customers. Other parties might not agree with that,
5 sir, but that doesn't change the fact that that's our
6 position.

7 MR. GEORGE ORLE: Well, you've seen
8 from some of the information provided by Mr. Hacault
9 that in other jurisdictions, the Board has been
10 presented with certain steps taken by government in
11 order to minimize the needs of hvdro when they've come
12 -- or their power utility when they've come to ask for
13 rate increases?

14 MR. DARREN RAINKIE: Yes, sir, I -- I
15 assume, because I'm not familiar with everything that
16 goes on in other jurisdictions, obviously, that -- that
17 before those would be built into actual rate
18 proceedings, there would either be a formal plan
19 released by the respective government or some
20 legislation introduced. I don't think that we would go
21 through a -- an actual rate hearing on a presumption
22 scenario, you know, something of that -- that ilk.

23 MR. GEORGE ORLE: In dealing with its
24 responsibility, do you not think that the Public
25 Utilities Board would want to take a look at what some

1 of the other options are available to Hvdro in terms of
2 financing from outside of the actual ratepavers?

3 MR. DARREN RAINKIE: Sure. And along
4 the way, we've answered two thousand (2,000)
5 Information Requests. And a lot of those Information
6 Requests have been looking at options. But I -- I
7 suppose an application at the front requires the -- the
8 applicant to indicate what it wants and why, not, you
9 know, We want to -- here's a range of possible options.
10 I've never been part of a rate application that has
11 that type of a, you know, a construct to it.

12 Certainly during the information
13 exchange period, we run numerous scenarios that provide
14 the boards with options, perspectives, all of the
15 above.

16 MR. GEORGE ORLE: The second paragraph
17 of the undertaking deals with the reduction at the --
18 the other rate. I -- I'd like to read it in, also.

19 "Reduction of proposed and indicative
20 annual rates from 6 percent to 4
21 percent from 2019/'20 to twe -- twe -
22 - 2023/'24 requires an equivalent
23 reduction in payments to the province
24 of approximately 115 million per year
25 for five (5) years, which represents

1 approximately 25 percent of total
2 payments projected in Manitoba Hvdro
3 14.

4 Please note, in this scenario,
5 Manitoba Hvdro only achieves an
6 equity ratio of 20 percent by 2034."

7 And you've seen that before today's
8 hearing?

9 MR. DARREN RAINKIE: Yes, I have, sir.

10 MR. GEORGE ORLE: And under these two
11 (2) scenarios, if there was an equivalent reduction of
12 the -- of the amount of the -- either the capital tax
13 or the -- the water rentals, then you could maintain
14 the -- the 2 percent increase for the years up until
15 the big jumps, the two twenty (220). And at that
16 point, there would only be a necessity to raise them to
17 4 percent under these two (2) scenarios?

18

19 (BRIEF PAUSE)

20

21 MR. DARREN RAINKIE: Sir, that's what
22 these scenarios were designed to calculate. They were
23 designed to calculate an equivalency --

24 MR. GEORGE ORLE: All right.

25 MR. DARREN RAINKIE: -- on that

1 presumption. You know, you also -- the reason I'm
2 hesitating is you also have to look at what happens
3 along the way, what that does to your -- when you're
4 simply just goal seeking for a scenario, you have to be
5 careful that there isn't other unintended consequences,
6 other metrics that fall by the wayside, sir, so.

7 MR. GEORGE ORLE: Okay. But under
8 these two (2) scenarios, you could still do all of the
9 capital spending and all the capital maintenance that
10 you've put into your budget without having those
11 affected, but you would have an effect upon the rates
12 that would have to be charged?

13 MR. DARREN RAINKIE: Well, even in this
14 circumstance, we still have significant losses
15 starting in 2018/'19, sir, so, you know, I -- I'm not
16 sure I can go fully with you on that proposition.

17 These are simply scenarios -- the -- the
18 way this started originally is we said, If there were 2
19 percent rate increases for the first four (4) years,
20 what would be the equivalent required rate increases
21 for the next five (5) years to get us back to a minimum
22 equity ratio of 10 percent?

23 And I -- I think there's still some
24 discussion whether that minimum equity ratio of 10
25 percent is really desirable in the end when we get to

1 it, so.

2 MR. GEORGE ORLE: But the losses you're
3 talking about are already losses that you've accepted
4 as part of this rate application.

5 These proposals don't change anything in
6 terms of the amount of losses that you have?

7 MR. DARREN RAINKIE: Well, the word
8 'accepted', I think, is a strong one, sir. You know, I
9 think that that's what's in our forecast now, and we're
10 trying to maintain the rate increases to 3.95 percent.
11 What may happen in the next three (3) or five (5)
12 years, I don't know.

13 Every time we seem to do a new forecast,
14 there -- there are different factors that seem to be
15 derogating the forecast. And that's why I proceed with
16 some caution, you know, in terms of simply relying on
17 the forecast going out twenty (20) years.

18 We think, certainly at Manitoba Hydro,
19 that it's better to have gradual rate increases of 3.95
20 percent so that we don't build up rate pressures and
21 require rate shock depending on the circumstance, which
22 could be a severe drought in the middle of this.

23 We think that's a better proposition for
24 customers, even though there's some more pain at the
25 front end in terms of higher rates. And I -- the

1 purpose of this hearing -- or for the purpose of this
2 hearing, all parties don't have to agree, but certainly
3 that's mai -- is Manitoba Hvdro's position, regardless
4 which scenarios we can concoct about relief that hasn't
5 even been provided vet.

6 MR. GEORGE ORLE: Well, I expect, Mr.
7 Rainkie, that we're all working from the same song
8 sheet, and that you've -- you've filed your -- your
9 projections, you've filed your request, and that as we
10 bring in some assumptions that may change those, that
11 do you really want to start bringing in additional
12 assumptions of your own?

13 If we're starting from a base proposal,
14 should we not stick with that and put our assumptions
15 towards that projected budget?

16 MR. DARREN RAINKIE: Well -- well, we
17 should, but we need to also understand the risks, the
18 many risks that this Corporation faces. And -- and the
19 fact, as we were talking about earlier, that we've had
20 ten (10) years of good water flows. If that turns
21 around significantly, then this financial forecast
22 turns around very quickly, very significantly. And our
23 financial forecast is very sensitive to rate increases
24 at the front. So if we kick these rate increases to
25 the back, it builds up the pressures very quickly.

1 That's what that chart that you had on before was
2 designed to show, that if we do this an even measured
3 way, we're going to reduce our risk.

4 If we say, Well, let's see what happens
5 in the next five (5) or ten (10) years, we're
6 increasing the risk. I -- I can't, in good conscience,
7 leave that discussion in any other way.

8 MR. GEORGE ORLE: All right. I'm
9 fairly new to this process, but I've been told, and
10 it's not used in a pejorative sense, that in rate
11 increases, what we Intervenors do is -- is called
12 'diving for dollars'.

13 Have -- have you heard that expression
14 before, Mr. Rainkie?

15 MR. DARREN RAINKIE: No, sir.

16 MR. GEORGE ORLE: It may -- it may be
17 one that's only used on our side, but the purpose of it
18 is that by going in, we try to find dollar amounts
19 either on the revenue side, or dollar amounts on the
20 expense side that might have an affect on our ability
21 to be able to have the rates either lowered or
22 mitigated in some way. And -- and that's in the way
23 that I use the term.

24 One (1) of the things that I've found
25 interesting about this -- this undertaking, the answer

1 to it is that it appears to me that what we have is a -
2 - is a target, that if we use the first scenario of a 2
3 percent increase until 2023, and then 4 per -- I'm
4 sorry, 4 percent from 2019/'20, that we know that we
5 have to find \$220 million to be able to do that. And
6 that could come either from increase in revenue, or a
7 decrease in expenses, or some combination of both.

8 Would that be correct, at least in terms
9 of the principle?

10 MR. DARREN RAINKIE: Yes, it's math --
11 this is mathematics, sir --

12 MR. GEORGE ORLE: Okay.

13 MR. DARREN RAINKIE: -- and principle,
14 yes.

15 MR. GEORGE ORLE: All right. So also
16 if we have a -- a target number, then we can also take
17 a look at things such as projections for when certain
18 expenses might come into play, or whether they could be
19 deferred, or whether or not there is something that
20 could make up either the \$220 million on some increase
21 in revenue or looking at some of the expenses that you
22 have, whether they can be deferred past the point where
23 you require the -- the 8 percent or the 6 percent
24 increase?

25 MR. DARREN RAINKIE: Well, certainly

1 I'm not going to tell the Intervenors what their job is
2 to do. What I can say to the Board is that \$220
3 million, that would be half of our operating costs, so
4 I would -- it would seem to be unrealistic to just chop
5 our operating costs in half.

6 And I'm not sure what you believe the
7 source of \$200 million of extra revenue is, but -- so I
8 -- I -- you know, I'll leave it -- I'll leave your
9 argument to your argument, sir, but Manitoba Hydro
10 believes that we have looked at our operating costs
11 through -- with a fine tooth comb, and we're limiting
12 the increases to 1 percent, much low -- lower than the
13 rate of inflation, and much lower than the rate of
14 increase due to contract wage settlements, and
15 progression, and merit.

16 We've also looked at our capital
17 program, and come to the conclusion that if we don't
18 invest at a reasonable rate soon that that's going to
19 result in poor reli -- reliability for our customers.
20 And as I said to the Chair last week, if you don't have
21 safe and reliable electrical svcs -- service, there's
22 not much use debating the cost.

23 MR. GEORGE ORLE: No, and I don't
24 disagree with you there, Mr. Rainkie, and I -- I was
25 very impressed with the fact that safety and operations

1 is one of the main considerations.

2 And -- and I haven't delved into doing
3 that in any way other than the fact that it appears to
4 me that on your undertaking, an infusion from -- from
5 the government or from some -- some other source in
6 terms of reduction of water rentals or the capital tax,
7 could accomplish everything that you want to accomplish
8 with a corresponding reduction in the rates to the --
9 the ratepayers.

10 MR. DARREN RAINKIE: I can provide a
11 thousand different scenarios, sir. I -- I guess the --
12 the question becomes: How realistic are they? You
13 know, I -- I can't speak for the government but we've
14 all seen on the -- on the public record their ability
15 to balance their budget by 2018/'19.

16 So I'm not sure as I sit here how we
17 could make a determination on expecting \$220 million of
18 reduction and transfer payments to the government, or
19 increases in revenue or reductions in operating costs.

20 MR. GEORGE ORLE: Okay.

21 MR. DARREN RAINKIE: That -- I guess
22 that's my point. And my other point is, is that this
23 is a scenario, one of hundreds, that we put together
24 during these proceedings, and I still look at the
25 brackets around those numbers after 2018/'19 in the

1 quantum of those losses, sir, and -- and, you know, it
2 keeps me awake at night.

3 MR. GEORGE ORLE: Okay. Mr. Rainkie,
4 do you know when water rentals first came into the --
5 the system?

6 MR. DARREN RAINKIE: That's past my
7 memory bank, Mr. Orle. I'm not sure if there's anybody
8 else on the -- on the panel that can answer that
9 specifically.

10 MR. GEORGE ORLE: All right. Are you
11 aware when the capital tax came into effect on Hydro?

12 MR. DARREN RAINKIE: I probably saw
13 that date somewhere in my ten (10), fifteen (15) years,
14 sir, but not -- not precisely. I mean, we've been
15 paying both for a long time.

16 MR. GEORGE ORLE: I wonder, sir, and
17 this is -- this is just from the point of view of -- of
18 whatever recommendations we may make to the Public
19 Utilities Board as to what they may wish to recommend,
20 but it would be fair to say, and you can check on this
21 if you like afterwards, that both the water rentals and
22 the capital tax came into effect at a time when
23 Manitoba Hydro was showing significant profits, and not
24 much of a liability in terms of future losses?

25

1

(BRIEF PAUSE)

2

3

4

5

MR. DARREN RAINKIE: I can investigate that, sir.

6

7

8

MR. GEORGE ORLE: All right. Thank you very much. Mr. Chairman, those are all my questions. Thank you.

9

10

(BRIEF PAUSE)

11

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THE CHAIRPERSON: I -- was that an undertaking? We probably should express it as an undertaking then.

15

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--- UNDERTAKING NO. 31: Manitoba Hvdro to review the timing of the introduction of capital taxes and water rentals as

1 well as the financial
2 circumstances of Manitoba
3 Hvdro at a particular point
4 in time

5

6 THE CHAIRPERSON: Thank you for that.
7 I'd now call on Mr. Masi please to begin your
8 questions. Mr. Masi.

9 MR. TOMAS MASI: Thank you, Mr. Chair.

10

11 CROSS-EXAMINATION BY MR. TOMAS MASI:

12 MR. TOMAS MASI: In light of my
13 client's scope that's been provided by the Board my
14 cross-examination will not be very extensive and will -
15 - most of the questions will be related to -- or
16 directed towards Mr. Rainkie and relate to water --
17 water rentals and assessments. If I could direct your
18 attention to Hvdro's response to PUB IR Round 2,
19 Question 89, which I believe Diana will be able to
20 queue up right away. Thank you.

21 I just want you to confirm that Hvdro's
22 response here, it's question -- Round 2 Question 89 by
23 the PUB, provides an updated version of appendix 11.19
24 of Hvdro's application at the request of the Board.

25 Is that correct?

1 MR. DARREN RAINKIE: I'll take that
2 subject to check. I think that's the case, sir.

3 MR. TOMAS MASI: Okay. And you might
4 have to take this subject to check as well, but I put
5 it to you that the updated version provided of Appendix
6 11.19 here reflects more current interest rate -- rate
7 forecasts for both long and short-term interest rates
8 as well as a more current projection relating to
9 Manitoba Hydro's expectations regarding export revenue
10 projections.

11 Is that correct?

12 MR. DARREN RAINKIE: Yes, we've updated
13 this for those parameters.

14 MR. TOMAS MASI: Thank you. And I
15 believe we're on page 2 here in front of you. I note
16 that Hydro expects to incur expenses related to water
17 rentals and assessments -- which you can see there the
18 line item labelled "Water rentals and assessments" --
19 for the 2014/2015 fiscal year in the amount of a
20 hundred and twenty-four million, four hundred and
21 sixty-nine thousand dollars (\$124,469,000).

22 Is that correct?

23 MR. DARREN RAINKIE: Sir -- sir, if
24 you're just looking at the assessments -- sorry, the
25 water rentals themselves it would be the \$117 million

1 figure.

2 MR. TOMAS MASI: That's correct. I --
3 I was looking at both water rentals and assessments
4 together.

5 MR. DARREN RAINKIE: Yeah, the -- the
6 total of -- of both of those is 124 million or so.

7 MR. TOMAS MASI: Thank you. And
8 Hydro's expectation in terms of expenses associated
9 with water rentals and assessments for the next
10 nineteen (19) or so years are set out in this document
11 next to the line item titled "Water Rentals and
12 Assessments."

13 Is that correct?

14 MR. DARREN RAINKIE: Yes, they are,
15 sir. But just going back to your previous question
16 just so we're on the same page. The water rental line
17 is what Manitoba Hydro would -- would pay to the
18 provincial government. The assessment line is made up
19 of a number of other subscriptions and such that we
20 have, like to the NE -- NEB, I think and to MISO. So
21 that's not a -- an issue of a provincial payment just
22 to -- just to be clear. I'm sure Mr. Cormie could give
23 you the rundown of what all fits into that line item,
24 but it's not the same thing as the first line of water
25 rentals.

1 MR. TOMAS MASI: Thank you, Mr.
2 Rainkie. That was actually my next question. So I
3 thank you for that point of clarification. So the
4 water rentals and assess -- sorry. The water rental
5 expenses incurred by Manitoba Hydro that's paid
6 directly to the Province of Manitoba are the numbers
7 that you see next to "MH water rentals."

8 Is that correct?

9 MR. DARREN RAINKIE: That's correct.

10 MR. TOMAS MASI: And so accordingly
11 Manitoba Hydro anticipates currently that it'll make
12 the payments listed next to "MH water rentals" to the
13 province for the next twenty (20) or so years?

14 MR. DARREN RAINKIE: Yes, based on the
15 projected water flows in the forecast.

16 MR. TOMAS MASI: Thank you. And you
17 would agree that the Province of Manitoba will be
18 receiving sub -- substantial incremental revenues
19 through water rental payments from Hydro as a result of
20 the Keevask project.

21 Is that correct?

22 MR. DARREN RAINKIE: Yeah, the
23 assumption I -- that Keevask comes in, in around --
24 starting in '19 -- 2019/'20 and 2021/'21. You can see
25 the increase from around 105 million to 117 million. I

1 would assume most of that is related to Keevask.

2 Someone else on the panel wants to correct me.

3 MR. TOMAS MASI: Thank you, Mr.

4 Rainkie. And -- and we'll actually turn to a document

5 that will more clearly show that, but thank you for

6 your comment there. So if we could turn right now to

7 page 113 of Volume II of the Board's book of documents

8 that I believe Diana has there. Thank you.

9 So if I could direct your attention, Mr.

10 Rainkie, to the line item titled, "Water rentals." As

11 I understand this document, Hvdro currently estimates -

12 - estimates that the water rentals for the Keevask

13 project to be paid to the province in fis -- fiscal

14 2019/'20 will be \$2 million.

15 Is that correct?

16 MR. DARREN RAINKIE: That's correct.

17 MR. TOMAS MASI: And then in 20 -- in

18 fiscal 20 -- fiscal 2020/'21 the water rental payments

19 will be 13 million. Is that correct?

20 MR. DARREN RAINKIE: That's correct.

21 MR. TOMAS MASI: And thereafter,

22 annually from 20 -- fiscal '21/'22 through to '32 -- or

23 '33/'34, I believe, the water rentals are expected to

24 be 15 million per year.

25 Is that correct?

1 MR. DARREN RAINKIE: That's correct.

2 Based on once again, average water flow assumptions in
3 the financial forecast?

4 MR. TOMAS MASI: Yeah, these are just
5 the current projected amounts that Hydro expects to pay
6 the province assuming average water?

7 MR. DARREN RAINKIE: Yes.

8 MR. TOMAS MASI: Thank you. Those are
9 my questions, Mr. Chair.

10 THE CHAIRPERSON: Thank you. Me.

11 Hacaault, do you have any more questions for the -- for
12 this panel?

13

14 RE-CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

15 MR. ANTOINE HACAULT: Yes. Yes, I do.

16 Just to give the Board and the members of the panel
17 some indication of the subject matters that I'll be
18 dealing with firstly, there's a line of questioning
19 with respect to curtailable rates, which is kind of a
20 unique subject related to MIPUG which I'll be asking of
21 Mr. Cormie as it relates to planning and operations.

22 I still have some miscellaneous areas to
23 cover. And I'll also be dealing with, on a brief
24 basis, negative salvage value related to the Pointe du
25 Bois spillway and the conditions of assets and the

1 information related.

2 So, unfortunately, it's fairly tedious
3 and dry material, but if we can kind of slug our way
4 through it this afternoon, that would be great.

5 Firstly, perhaps, yeah, some questions addressed to Mr.
6 Cormie with respect to the curtailable rate program.
7 It's -- we've reproduced at page 37, I think, in our
8 book of documents. It's Appendix 611 of the rate
9 application. There's a report to this Board with
10 respect to the curtailable rates program.

11 And in that report at page 2 of 10 --
12 I'll give you the document book number.

13

14 (BRIEF PAUSE)

15

16 MR. ANTOINE HACAULT: There's various
17 statements that are made which I'd like to ask Mr.
18 Cormie to comment on. The first is in the middle of
19 that page. It's a paragraph that talks about hv -- how
20 Manitoba Hydro uses curtailable load. And given we've
21 had a lot of talk in this hearing so far about
22 reliability, part of that discussion is going to be
23 related to that, I understand.

24 So can you give us an example, Mr.
25 Cormie, of how Manitoba Hydro can use the curtailable

1 load to maintain operating and contingency reserves as
2 a mean of dis -- minimizing disruption to firm
3 customers in the event of loss of generation or
4 transmission. And you may have to break that down for
5 panel members.

6 First, what's the difference between
7 firm customers and other types of customers?

8 MR. DAVID CORMIE: In -- in Manitoba
9 there's not a lot of difference between firm customers
10 and other customers. Essentially, the only non-firm
11 customers that we have are those who participate under
12 our surplus energy program. But our notice of
13 requirement to interrupt them is so long that
14 interrupting surplus energy customers, it wouldn't be
15 effective in managing contingencies.

16 And I think our -- our surplus energy
17 load is around 7 megawatts. So out of, you know, four
18 (4) -- five (5) -- 3 to 4,000 megawatts of load,
19 surplus energy customers are not that significant. So
20 the vast majority of our -- our load in Manitoba are
21 firm cust -- customers.

22 And as Dr. Swatek indicated, we're
23 required to provide a reliable supply of power, which
24 involves maintaining reserves when it comes to
25 generation or HVDC contingencies, or in the case of a

1 transmission outage, an alternate path.

2 So if a transmission line goes down the
3 power can immediately flow on an alternate path. And -
4 - and that's how the reliability is maintained. So
5 those are the customers we would call firm customers.

6 MR. ANTOINE HACAULT: And in answering
7 my questions, you're welcome to look directly at the
8 panel. You don't need to convince me of any of this.
9 With respect to the next paragraph, there's an
10 explanation:

11 "Curtailable load provides value to
12 Manitoba Hydro all year round, as
13 curtailments for system emergencies
14 can occur at any time of the year."

15 Can you indicate in the last five (5) or
16 six (6) years whether you've had any such emergencies
17 which have required some of the industrial customers to
18 curtail their load?

19

20 (BRIEF PAUSE)

21

22 MR. DAVID CORMIE: You know, Mr.
23 Hacaault, I was reading the transcripts from the
24 previous rate hearing two (2) years ago and there were
25 listed several examples. And I -- I thought that they

1 were -- they were good. I'm just trying to see if I
2 can find them.

3 But generally, they deal with forest
4 fires, interruptions to the -- where we have -- have to
5 reduce the loading on the HVDC system, pole outages on
6 the HVDC system, 1,000 megawatt loss of -- of HVDC
7 capability. Those are the types of emergencies that we
8 would use.

9 Unfortunately, I've been in hearings for
10 so many months of this year, I'm not keeping on top of
11 the actual most recent contingencies.

12 MR. ANTOINE HACAULT: Thank you.

13 MS. MARILYN KAPITANY: Just before you
14 leave the subject, Mr. Hacault, so were you saying then
15 that customers using the Curtailable Rate Program are
16 what you would consider customers receiving firm power?

17 MR. DAVID CORMIE: Yes, those -- those
18 -- the curtailable load customers are -- are receiving
19 firm power, but we're allowed to interrupt them for --
20 for short terms to help deal with system emergencies.

21 MS. MARILYN KAPITANY: And on --

22 MR. DAVID CORMIE: And -- and they get
23 a discount for that --- for that purpose, yeah.

24 MS. MARILYN KAPITANY: And on the
25 Surplus Energy Program, the same thing, they're

1 considered firm power customers, but you said the
2 notice periods are so long?

3 MR. DAVID CORMIE: No, that's not
4 correct.

5 MS. MARILYN KAPITANY: Okay.

6 MR. DAVID CORMIE: Surplus energy
7 programs are -- are customers who have alternatives.
8 So if you were heating your school with propane, for
9 example, you have an alternative, but that may be more
10 expensive than buying electricity from Manitoba Hydro
11 that's -- that's surplus. And so those customers can
12 elect to buy the Surplus Energy Program, energy on a
13 week-to-week basis at the market price.

14 Surplus Energy Program customers then
15 benefit by paying less to heat the school. But if --
16 if we weren't in a surplus energy position, then we
17 would -- we would curtail that offering, and they would
18 have to then revert back to their alternate fuel
19 supply, in the -- in the case of Wuskwatim.

20 MS. MARILYN KAPITANY: So they're non-
21 firm customers, but you said they have a very long
22 notice period?

23 MR. DAVID CORMIE: That's right. We
24 have to give them -- like, emergencies happen in five
25 (5) minutes, ten (10) minutes or, you know, within a

1 half an hour. There's not enough notice to -- notice
2 time available under the Surplus Energy Program for
3 them to convert. So when -- when they're on the
4 system, essentially they're firm, but they're subject
5 to interruption.

6 MS. MARILYN KAPITANY: Okay.

7 MR. DAVID CORMIE: And -- but the
8 interruption time is not -- the notice time isn't long
9 enough to deal with system emergencies. It's -- it's
10 more about -- it's -- it's an energy -- it's an energy
11 program, not a -- not a capacity program.

12 MS. MARILYN KAPITANY: Thank you.

13 MR. ANTOINE HACAULT: And perhaps just
14 following up on some of those questions, Mr. Cormie, if
15 -- Diana, if you could turn to page 34 of our book of
16 documents, there's -- taken from Manitoba Hydro's
17 filing, a -- a table which I understand sets out in a
18 very summary way how the programs work, as far as
19 minimum notice.

20 Could you just go through Option A,
21 which is one (1) of the options that will be kept, to
22 explain how that would work if Manitoba Hydro came to
23 the conclusion it had an emergency, and wanted to use
24 this particular option?

25 MR. DAVID CORMIE: Yes. Option A load

1 is -- can be curtailed on five (5) minutes notice. So
2 an emergency happens in the Manitoba Hydro system.
3 Manitoba Hydro deploys its contingent -- its
4 contingency reserves to deal with emergency to keep the
5 lights on, but it contacts the curtailable load
6 customer and -- and uses the curtailment to help
7 reestablish its ability to meet the next contingency.

8 And -- and we have to do that within a
9 few minutes, so there's enough time to identify there's
10 an emergency, then it takes -- the -- the customer has
11 to reduce its load within five (5) minutes. And -- and
12 that -- that Option A is -- is there to respond to the
13 reestablishment of reserves. It's not there to meet
14 the emergency. It's there to reestablish the -- the
15 reserves.

16 MR. ANTOINE HACAULT: And what Manitoba
17 Hydro is proposing to do is to eliminate the Option C,
18 which is -- has a little star beside it, and also the
19 Option C and 'E', which is lower at the table, also has
20 a star on it. That's what Manitoba Hydro is proposing?

21 MR. DAVID CORMIE: Yes, because they're
22 -- these options really provide little value to
23 Manitoba Hydro, and there's not a lot of customer
24 interest. Removing those options is our objective.

25 MR. ANTOINE HACAULT: And when these

1 program 'C' and a combination of 'C' and 'E' were
2 designed, for what kind of reliability issues were
3 those programs designed?
4

5 (BRIEF PAUSE)

6
7 MR. ANTOINE HACAULT: They must have
8 had a purpose at one point in time to deal with
9 reliability. What types of things were they intended
10 to help Manitoba Hydro deal with?

11 MR. DAVID CORMIE: Right. The Option A
12 and Option C were designed as pure capacity sup --
13 supplies. Option E was then to build in some energy
14 behind that. And so you'll notice for the Option E
15 curtailments that the length of the annual amount of
16 curtailments goes up into the seven (7) to eight
17 hundred (800) hour range. So we can curtail -- we can
18 curtail the -- the load for a significant period of
19 time.

20 And we designed those to deal with the
21 two (2) week cold snap in the winter. So you're in the
22 middle of January. You're running short of energy.
23 You need to curtail the industrial demand to help get
24 through that, so you can -- you can reduce the demand
25 of power on the system as opposed to responding to

1 emergencies where you just need the capacity for a few
2 minutes to get through the emergency and -- and there's
3 very little energy behind it.

4 So when you match the capacity with the
5 energy, it's -- it's the most similar to looking like
6 what a combustion turbine would do. A combustion
7 turbine, you can turn it on, leave it on for a two (2)
8 -- two (2) week cold snap. It'll give you energy and
9 capacity.

10 And -- and so the -- the program was
11 designed to -- if a customer was willing to take a two
12 (2) week outage, then he would get a hundred percent of
13 the value of the curtailable load. If he was just
14 wanting to take the occasional interruption for
15 capacity reasons, then he would -- he would only get
16 partial value for the -- for the option. And the --
17 and the last column describes the percentages which
18 reflect the value to Manitoba Hydro of having something
19 that looks almost like a combustion turbine.

20 But a combustion turbine is dispatchable
21 year round. You can turn it on and essentially you can
22 leave it on for -- for most of the year, if you wanted
23 to. Because there are -- are limits to the number of
24 hours here, that's how we got down so that it's -- even
25 -- even in the best case, curtailable load Option A and

1 'E' is only equivalent to 42 percent of having a
2 combustion turbine.

3 So that's -- the -- the discount is
4 based on the -- the combustion turbine there, but given
5 the limits, we reduced it down to 42 percent if you're
6 offering us 'A' and 'E'. And then to the extent that
7 there are additional constraints going to Option C and
8 Option E, you'll see the discount even goes down from
9 70 percent down to 35 percent.

10 MR. ANTOINE HACAULT: Now, am I right
11 in understanding this table if I go along the line of
12 the 'C' with the star that the customer who needed a
13 minimum one (1) hour notice to curtail his load got
14 paid less than the one who's willing to submit his load
15 to a five (5) minute curtailment?

16 MR. DAVID CORMIE: That -- that's
17 right. There's -- the customer who is going to respond
18 to emergencies gets a premium -- an extra 30 percent of
19 the -- of the referenced discount.

20 MR. ANTOINE HACAULT: And we see that
21 in the extreme right-hand side of the table by
22 comparing the 70 percent as a percentage of the
23 referenced discount going down to 40 percent as a
24 referenced discount.

25 Is that correct?

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

2 MR. ANTOINE HACAULT: Now, Manitoba
3 Hvdro's point is that there hasn't been a customer
4 using an Option C for some time?

5

6 (BRIEF PAUSE)

7

8 MR. ANTOINE HACAULT: Sorry, I maybe
9 incorrectly worded that. Manitoba Hvdro has not chosen
10 to exercise an option C. Rather, they've chosen to
11 exercise Option A, even though the client wasn't in an
12 Option C program?

13 MR. DAVID CORMIE: Yes, Option C does
14 not bring a lot of value to the Utility, because we
15 have other options that are available on a more timely
16 basis than Option C. Like, if -- if you have to give
17 an -- somebody an hour of an emergency, by that time,
18 the emergency's over. We've already dealt with it.
19 And -- and so we -- we just don't see the -- lot of
20 value in that -- in that program.

21 MR. ANTOINE HACAULT: Yeah. I'm not so
22 sure I correctly understood your letter -- your
23 explanation as to why, at one point in time, Manitoba
24 Hvdro thought Option C was useful. Because if we go to
25 page 43, you see that of the three (3) customers that

1 are reported on in this particular report, there's one
2 (1) customer that has an Option C on the right-hand
3 side of the table.

4 Do you see that, firstly?

5 MR. DAVID CORMIE: Yes, and in -- in
6 that case, that customer's load is rarely above the
7 protected load that that customer has. And so he's not
8 really offering us anything of -- that's really of much
9 use to us. In addition, when we designed Option C that
10 was back in the days when we had to demonstrate to the
11 MAPP, the Midwest -- Mid-continent Area Power Pool, on
12 an after-the-fact basis, that we had enough reserves in
13 the system.

14 And so as we were approaching the peak
15 load of the day, we can anticipate based on our load
16 forecast whether we were going to be short or -- short
17 the capacity reserves. And we could -- we could give
18 an -- an hour's notice of that event, because you can
19 see the loads building. Our load forecast is saying,
20 You're going to be short in an hour from now. You
21 could curtail that.

22 We no -- now no longer have that -- we -
23 - we're not -- we're not penalized on an after-the-fact
24 basis. And so the -- there's now no longer any value
25 to us for that. And -- and as I indicated, in this

1 particular customer's case, they're not offering us a -
2 - a lot of load there anyway, so it's -- it's just not
3 something that the customer's willing to offer to us,
4 and that we have any value for.

5 MR. ANTOINE HACAULT: And that's in
6 contrast to the customer on the left-hand side, which,
7 at some point in time, is varying from 175.5 megawatts
8 up to 209.3 megawatts, I see.

9 Is that correct?

10 MR. DAVID CORMIE: Yes, that -- that
11 customer, through the combination of options that it's
12 elected, is providing a significant and meaningful
13 amount of -- of capacity that can be curtailed.

14 MR. ANTOINE HACAULT: And just to give
15 us an idea of the size of that available reserve to
16 Manitoba Hydro, what's Wuskwatim rated at?

17 MR. DAVID CORMIE: It's slightly more
18 than 200 megawatts, Mr. Hacaault.

19 MR. ANTOINE HACAULT: So is it fair to
20 say, and -- and I -- it's a very generalized way, that
21 you nearly have a Wuskwatim on reserve with that
22 customer for emergency services?

23 MR. DAVID CORMIE: No.

24 MR. ANTOINE HACAULT: Okay.

25 MR. DAVID CORMIE: Wuskwatim provides

1 dependable energy year-round. It's completely
2 dispatchable. This is, essentially, a capacity project
3 -- product. And if we -- and over the -- over the
4 years that we've had this program, we've gone through a
5 lot of revisions to the program so that the customers -
6 - provides this value, but we're not interrupting him
7 very frequently.

8 And I remember many years ago, we had
9 the right to curtail forty (40) for economic reasons,
10 and we were -- we were curtailing forty (40) times, and
11 -- and the customer complained. They said, We -- that
12 -- that's very disruptive to our operation. We don't
13 mind being disrupted a few times a year.

14 And so we redesigned the limits on the
15 program so that it only -- Option A was only curtailed
16 during emergencies. And now Option R, they're
17 participating in that, and -- and they're -- they're
18 taking a few more curtailments on that. But really,
19 it's a very limited use resource that -- that we're
20 acquire -- we're acquiring here.

21 MR. ANTOINE HACAULT: And by
22 referencing curtailment for economic reasons, that's
23 one (1) of the pitches the industrials have been making
24 for some time. While we'd like to set up some kind of
25 a program where it can be a win/win situation, you guys

1 call us up, and if we decide to curtail and we say, Oh,
2 you guys can make profits and we can make a bit of
3 profits, we'd like to start talking about those things?

4 MR. DAVID CORMIE: Yes, Mr. Hacaault,
5 we're -- we're most willing to meet and discuss with
6 any customer. When we do have the customers who want
7 to -- and we've had these discussions in the past.
8 They're fine as long as it's win/win. But when you are
9 starting to enter into economic transactions they're
10 not always win/win. So if they're participating, they
11 have to be in win or lose. And Manitoba Hydro can't
12 always take the losses. We -- if they're
13 participating, they need to share in the upside as well
14 as the downside.

15 And when we -- when we started having
16 those discussions with large customers, they weren't
17 willing to participate if they had any downside risk,
18 it always to be upside. And so, generally, those kind
19 of programs, when there's risk involved, customers are
20 very hesitant to participate.

21 So those kind of economic rates don't --
22 has -- haven't worked to date, but that doesn't mean
23 that we might not be able to find someone who would be
24 willing to -- to do that.

25 MR. ANTOINE HACAULT: Can we move to

1 page 39 of the book? And I've got a couple questions
2 with respect to how these programs work and different
3 levels of water supply, and then move on to a different
4 subject. Quite frankly, the first time I looked at
5 this, I was kind of surprised that some of these
6 curtailable options would have any use in high water
7 supply, yet the report indicates that.

8 Could you explain why that might be so?

9 MR. DAVID CORMIE: Yes, Option R is --
10 its use is to help Manitoba Hydro meet its reserve --
11 ready reserve obligation. We have generators that we -
12 - that are online that are spinning. And then there
13 are generators that -- that we can bring the load up
14 and -- and provide supplemental reserves. Option R
15 provides that equivalent capability.

16 So if we have an obligation to have 150
17 megawatts of generators available that can be brought
18 on -- can be brought up to full load within a matter of
19 a few -- a few minutes.

20 To the extent that we're not running
21 those hydro units and we're in high water, water is
22 being spilled over the spillway. And so to the extent
23 that we can reduce the -- or increase the loading on
24 the hydro units and -- and generate electricity for
25 commercial use and sell it in the export market, it

1 generates revenue.

2 So to the extent that we have Option R
3 load available, that means the hydro units can be used
4 more efficiently and they can -- can generate. And so
5 there's high -- there -- there's -- spillage is avoided
6 with Option R load under high water conditions.

7 MR. ANTOINE HACAULT: Okay.

8 MR. DAVID CORMIE: Adversity under low
9 water conditions, we have units that are -- are shut
10 down and are -- and are available at -- already. We
11 don't need -- we don't need additional load to do that.
12 Excuse me. Sorry about that. So the -- the value of
13 the Option R load depends on -- on whether we're in a
14 low water or -- or high water condition.

15 And high water Option R load has a
16 higher value than, under average, of low water.

17 MR. ANTOINE HACAULT: And under low
18 water supply might there be instances where there would
19 be an emergency and you -- you might still have to call
20 on a Option A?

21

22 (BRIEF PAUSE)

23

24 MR. DAVID CORMIE: An HVDC contingency
25 where the generators that aren't open -- operating in

1 the north, if -- if the contingencies is on the DC
2 system then having a generator available in the north
3 doesn't really help you. So there -- there would be
4 circumstances where under low water that generators in
5 the south may be -- be better used in that
6 circumstance.

7 But it -- but generally, in low water, I
8 don't -- I don't think it -- it matters.

9 MR. ANTOINE HACAULT: So as a general
10 rule, no, but if you were in a low water condition and
11 you were -- you had to either decide to do your coal
12 fire plants or your turbines and you really didn't have
13 the water to generate, and you hit an emergency, you
14 know, your system is kind of maxed out the way you can
15 run it in -- in that low water system, you might have
16 to, I would suggest, and Option A in an emergency if
17 you had some line go down or something where you had to
18 -- to deal with that emergency?

19 MR. DAVID CORMIE: Well, Mr. Hacault, I
20 think -- I think under low water we have plenty of
21 hydro units that are -- that -- that are available that
22 can be used to serve emergency. I can't imagine that
23 if we had shutdown hydro units or hydro units that are
24 -- that are partially loaded, that there wouldn't be
25 adequate reserves already that makes the use of Option

1 A much more valuable.

2 MR. ANTOINE HACAULT: I think you and I
3 are talking at cross sections here. I'm not talking so
4 much reserve. You might be short energy for a
5 particular time period, because a line goes down and
6 you're to import from the States, because you're --
7 you're maxed out at your Brandon and your turbines and
8 you can't put more water through up north, because you
9 don't have it.

10 So what do you do when you have an
11 emergency? Where did you get the extra power? I guess
12 you can go to the export market or you can go and ask
13 the guy to curtail, couldn't you?

14 MR. DAVID CORMIE: Well, now we're
15 confusing energy and capacity. Now, we're short of
16 energy. This program is not an energy program. This
17 is just short-term capacity reasons. But in -- in the
18 case of a system emergency, all load is curtailable
19 ultimately. We would curtail this load first --

20 MR. ANTOINE HACAULT: Okay.

21 MR. DAVID CORMIE: -- as opposed to
22 curtaining someone else. We wouldn't curtail someone
23 else if we had the right under this program to curtail.

24 MR. ANTOINE HACAULT: And --

25 MR. DAVID CORMIE: And in those cases

1 we wouldn't be bound by the hourly limits that are laid
2 out in this program. We would be curtailing them
3 first. If the outage went on longer than what was
4 allowed and the choice was to curtail someone else, we
5 would probably continue to curtail -- the curtailable
6 else.

7 MR. ANTOINE HACAULT: And the last
8 subject before we move on is the average water supply.
9 How can Manitoba Hydro capture the benefits of price
10 differential between on-peak and off-peak using these
11 options?

12 MR. DAVID CORMIE: Well, similar to the
13 high -- to the high water supply, the -- if the
14 generator unit is being held in reserve in the on-peak,
15 the water that it would otherwise generate would get
16 generated in the off-peak. And so the -- the Option R
17 load allows us to capture the on-peak/off-peak
18 differential.

19 And that's -- that's a portion of the
20 full value of -- of the option under high water.

21 So if the -- if -- if you can't generate
22 in the on peak at say thirty dollars (\$30), and you --
23 and as a result you're -- you're generating in the off
24 peak at ten dollars (\$10), you're getting twenty
25 dollars (\$20) a megawatt hour for that freed up

1 capacity that the Option R gives you.

2 Under the high water, you would get the
3 full thirty dollars (\$30) because that water is being -
4 - was being -- is being billed in the on peak, and so
5 you get 50 percent more value in the -- in the on peak
6 under high water conditions.

7 MR. ANTOINE HACAULT: Sorry, there was
8 just one acronym in there that I didn't understand. It
9 was a CRSG event.

10 What -- what does that mean?

11 MR. DAVID CORMIE: CRSG is the MISO
12 Contingency Reserve Sharing Agreement that we have with
13 MISO. MISO maintains 2,000 megawatts of -- of reserves
14 from -- and Manitoba Hydro can -- is obligated to
15 provide a hundred and fifty (150) of that, and MISO
16 will provide us the other eighteen hundred and fifty
17 (1,850). And -- and that's an arrangement we have with
18 MISO to deal with contingencies.

19 MR. ANTOINE HACAULT: And -- and does
20 curtailable rates, or options, assist Manitoba Hydro in
21 meeting those obligations?

22 MR. DAVID CORMIE: Yes. So in -- in --
23 the question is, How do we fulfill the 150 megawatts?
24 If we have Option R load, we -- we can use that up to
25 the maximum to the extent that we have -- we have to

1 fulfill the additional amount. We have to provide it
2 with generators.

3 MR. ANTOINE HACAULT: And lastly with
4 the reduced amounts, you're setting caps. Is that a
5 total cap for all companies? You're going down to --
6 to different caps under the proposal?

7 Or is that better asked of somebody
8 else, Mr. Cormie?

9 MR. DAVID CORMIE: Well, we'd like to
10 reduce Option R to 50 megawatts from the hundred that's
11 there now. And Option A reduce it from two hundred and
12 thirty (230) down to 180 megawatts. And we think that
13 in a time of saving money, reducing these caps is -- is
14 prudent. We don't see the value in -- in offering
15 additional curtailable load when -- when we can't -- we
16 can't see a return for that value.

17 MR. ANTOINE HACAULT: Okay. So when we
18 had looked at those examples for that customer 1,
19 which was over a hundred and eighty (180), the combined
20 amount for that person would be the fifty (50) for the
21 'R' plus the hundred and eighty (180)? Is that how --

22 MR. DAVID CORMIE: Yeah, we're not
23 proposing to change for the existing customers. This
24 is leaving it open for additional customers to come
25 along and -- and purchase. So if a new customer came

1 along and said, We want -- we want to participate, that
2 cap would -- would restrict that amount.

3 MR. ANTOINE HACAULT: So the previous
4 customers are grandfathered at their existing levels?
5 I -- I just want to get confirmation of what the
6 Corporation's view is on that.

7 MR. DAVID CORMIE: Yeah, Mr. Hacault,
8 I'm -- I'm correct on that. We don't want new
9 additional customers. Customers that we have under the
10 existing program limits we're fine with. We know it
11 takes a lot of effort and education to bring these
12 customers on board. We think in the long run that's --
13 that's good for both them and for us.

14 But -- but to increase the number of
15 customer megawatts that we have under the program is
16 something that we're trying to avoid now, especially
17 for -- for Option A. It -- it doesn't -- we don't
18 believe it's value -- it has value to us right now,
19 having additional Option A load.

20 MR. ANTOINE HACAULT: Okay. So the
21 customers see if that customer -- or that was having --
22 that had the Option C wanted to move to 'A' he could do
23 it, but he'd be capped at a hundred and eighty (180).

24 Is that it?

25 MR. DAVID CORMIE: Well, we're hoping

1 that Option C customer converts to the Option A. If he
2 does, if he makes that choice, but we would reduce it
3 to 150 megawatts if it converts to firm.

4 MR. ANTOINE HACAULT: Okay. So that
5 new customer --

6 MR. DAVID CORMIE: No. If Customer C
7 wants to continue to participate in the program, we'll
8 accommodate him but he has to be accommodated under
9 option -- under Option A. Because there -- at least
10 there is some value there.

11 MR. ANTOINE HACAULT: With a cap of a
12 hundred and fifty (150). He wouldn't be able to go
13 higher than that?

14 MR. DAVID CORMIE: Yeah. The -- the
15 assumption of taking it from two thirty (230) to one
16 eighty (180) is assuming that the Option C customer
17 that we have converts to Option A. Otherwise the
18 hundred and eighty (180) would go to a hundred and
19 fifty (150), and that customer would no longer be on
20 the program.

21 MR. ANTOINE HACAULT: Sorry, it
22 confused me. I'll take it one (1) little bite at a
23 time. So the one (1) -- customer number 1 that we
24 looked on the chart that person is not affected by the
25 new caps.

1 Is that correct?

2 MR. DAVID CORMIE: Yes. Just moment
3 please.

4 MR. ANTOINE HACAULT: Okay.

5

6 (BRIEF PAUSE)

7

8 MR. DAVID CORMIE: Yeah, I think I -- I
9 spoke to that correctly. We have an Option C customer.
10 And we're willing to continue to --

11 MR. ANTOINE HACAULT: Page 43.

12 MR. DAVID CORMIE: -- continue to have
13 an Option C customer -- have -- have that as a
14 customer. And we would put him in Option A. At least
15 we would get some value for that. But if the customer
16 is not willing to in -- have his load interrupted on
17 such short notice then that customer will have to leave
18 the program.

19 In that case then our -- our limit would
20 -- for Option A would go down to 150 megawatts rather
21 than being at a hundred and eighty (180). If he stayed
22 -- if Option C customer converted then we would -- we
23 would then limit to 180 megawatts. Right now Option A
24 is at 230 megawatts.

25 MR. ANTOINE HACAULT: So we don't have

1 to add the total? Just like we don't add one-seventy-
2 five (175) on this table, plus twenty-four (24), plus
3 something to -- to come up to a total?

4

5 Each customer has got its own max?

6 MR. DAVID CORMIE: Yeah, the -- the
7 table is -- is confusing because customer 1 has three
8 (3) options. He's -- he's participating in three (3)
9 different options: AE, 'R', and 'A'. And so -- but ult
10 -- what we're trying to do is -- is accommodate Option
11 C customer and we're prepared to accommodate him under
12 Option A if he wish -- if he is willing to live with
13 those terms and conditions. And in that case we would
14 have an higher Option A cap of 180 megawatts. If the
15 customer chooses to leave the Curtailable Rate Program
16 then that would be capped at a 150 megawatts.

17 MR. ANTOINE HACAULT: And that is a
18 total of customer 1, and 2, and 3 is -- is a hundred
19 and eighty (180) and the hundred and fifty (150)?

20 MR. DAVID CORMIE: Yeah.

21 MR. ANTOINE HACAULT: Caps?

22 MR. DAVID CORMIE: It would be one (1),
23 two (2), and three (3) at a hundred and eighty (180).
24 If -- if customer 3 leaves then it would be one-fifty
25 (150) for customer 1 and 2.

1 MR. ANTOINE HACAULT: Okay. That's
2 what I wanted to clarify. Thank you. Sorry if I
3 didn't understand exactly how your caps would work. I
4 didn't know if it was customer specific or if it was as
5 a customer group that they had to live within that --

6 MR. DAVID CORMIE: No, and -- and again
7 as -- we've -- we've had this program for several
8 decades now and we're trying to -- we appreciate these
9 customers. They've gone to a lot of effort to
10 cooperate with us in developing the program. And --
11 and we don't want to move the terms and conditions
12 around in the program and squeeze them out of the
13 program because in the long run we think that there's -
14 - there's value.

15 And so we're trying to accommodate those
16 customers. What we're trying to avoid is bringing new
17 customers to the table, especially for Option A load.
18 And --and Option A load has much fewer -- much lower
19 value to Manitoba Hydro now because we can't sell that
20 capacity in the short-term capacity market. There's --
21 the market is so surplus with -- with capacity in the -
22 - in -- in the short-term that it has no value.

23 And so we would be paying this customer
24 to give us a product that we would only capture about 5
25 percent of its value in the export market. And -- and

1 that -- that doesn't make sense to us given where we
2 are today with regard to our -- our financial position.

3 MR. ANTOINE HACAULT: Thank you. Those
4 are all the questions I had of Mr. Cormie, members of
5 the panel. So unless the panel has any questions Mr.
6 Cormie, subject to what his counsel wants to do, is
7 welcome to do other things this afternoon.

8 MR. BRENT CZARNECKI: Thank you. And
9 Mr. Cormie alerted me to the fact that he would like to
10 revisit an answer that he had from this morning to the
11 panel. And I think he has a Information Request queued
12 up so that it'll hopefully be very clear to everyone.
13 So, Mr. Cormie.

14 MR. DAVID CORMIE: Yes, Mr. Chairman.
15 We had this discussion this morning over whether we had
16 spare DC capacity. The question is whether there's a
17 thousand megawatts of unused HVDC capacity. And I
18 wanted to go back to an exhibit that we provided to the
19 PUB in the 2012/'13 hearing. And I think, Diana, if
20 you can bring up that Manitoba Hydro Exhibit number 41.

21 And -- and what this -- what this
22 exhibit does it shows for a particular day, December
23 11, 2012, how our generation was stacked and how -- how
24 much of that generation was using the DC. Diana, could
25 you scroll to the bottom chart first? And -- and what

1 this chart shows is for December the 11th on an hourly
2 basis what the Manitoba load profile looks like. And
3 that's the red line. And you can see it's averaging
4 between 3,500 megawatts and around 4,400 megawatts.
5 And there's a little red dot there indicating the daily
6 peak. I think that average hourly number was around
7 4,300 megawatts, but on an instantaneous basis, it was
8 up at 4,400 -- over 4,400 megawatts.

9 And then you'll -- and -- and then the -
10 - the grey area is -- is the portion of Manitoba load
11 that was served at night with imports. And the -- and
12 the blue area is the extra generation that we had on
13 the system that we were selling in the export market.

14 And so that's the -- the important part
15 here is -- is the Manitoba load profile. You can see
16 it's -- it's relatively constant, and it's relatively
17 high under this -- in this period.

18 So the question is: How do you -- where
19 are you getting the electricity to serve this load?
20 And that's when we scroll up to the top chart. Diana,
21 if you could go to that? And we'll say here's --
22 here's how Manitoba Hydro dispatched its generation on
23 this particular day. And these colours represent the
24 various generating stations on the system. The -- the
25 dark blue is the output from Limestone. The lighter

1 blue is the Long Spruce, and even lighter blue is -- is
2 the Kettle Generating Station.

3 And -- and you can see from this chart
4 how, when Dr. Swatek says between 70 and 80 percent of
5 our load is being served by the lower Nelson River, how
6 this chart makes that quite evident. The vast majority
7 of the demand for electricity is being served from the
8 -- from the -- from -- from the lower Nelson, and that
9 energy is flowing south on the HVDC system.

10 The rest of the system -- you can see in
11 purple there we've got -- it looks like Wuskwatim is on
12 there, and the grey is the Kelsey and Jenpeg
13 generation. And the -- and the very dark blue we have
14 Grand Rapids, but generally that -- the -- the other
15 generation besides the lower Nelson amounts to
16 something less than 20 percent of -- of the power
17 supply.

18 So you have these -- this 3,600
19 megawatts of Nelson River generation that's being
20 delivered to southern Manitoba over the DC system. And
21 if -- if the DC system is interrupted, all -- all that
22 supply that's shown here in blue will disappear. It
23 can't come to southern Manitoba.

24 And Mr. Swatek talk -- talked about this
25 the other day. He said, for the transmission system,

1 generally we have an 'N' minus one (1). You know, if
2 something happens, we have spare transmission. That's
3 true on the AC network, but on the DC network, it --
4 that's not true. There is no alternative to the DC.

5 So if the DC system goes down, the
6 generators that are relying on that have to shut down,
7 and so those generators are no longer allowed to -- to
8 serve -- to serve load. They -- they're not capable.
9 They're -- they're sitting up north, capable of
10 producing power, but there's no transmission line. And
11 that's -- the transmission lines that it's -- they're
12 using is Bipole I and Bipole II.

13 So if you were to lose the DC system, we
14 would lose 3,800 megawatts of transmission capacity.
15 And that 3,800 megawatts is being used to deliver the
16 3,600 megawatts of lower Nelson River generation. And
17 that's the -- that's the generation that's shown in
18 blue here.

19 So if you lose 3,800 megawatts of
20 generation, and you've got 4,700 megawatts of load,
21 that means that you're -- all you have left, then, if
22 you lose the DC is 1,500 megawatts of generation in
23 southern Manitoba, at Wuskwatim, Laurie River, the
24 other generating stations.

25 But you can see from our -- our load

1 chart that we have load that's up to 4,400 megawatts.
2 Where is that extra power going to come from to serve
3 the load? Well, we could import 700 megawatts. So
4 that -- you can add that 700 megawatts to the 1,500
5 megawatts. That gets you back to 2,200. But you know
6 from the chart above we've got 4,400 megawatts of load,
7 so we would be short. We would have to curtail 2,200
8 megawatts of -- of load.

9 And -- and based on that load chart, if
10 we -- Diana, if you go back down to the bottom, if all
11 you've got is 2,200 megawatts, you can see that in
12 every hour, Mani -- there -- there is insufficient
13 generation to serve Manitoba load. Even when the load
14 is at -- at -- is -- is the lowest at -- in -- at two
15 o'clock in the morning, you've got 3,300 megawatts of
16 load, you only have 2,200 megawatts of generation.
17 We're short twelve 12 or 1,300 megawatts. The lights
18 will go out for 1,300 megawatts of customers. And at
19 the peak, there would be about 2,700 megawatts of load
20 that will be -- or 2,200 megawatts of load that won't
21 be served.

22 So that's how critical the DC system is.
23 The DC system is needed to get the -- the 3,800
24 megawatts of generation that we have in the north.
25 There is no alternative path. And that's why,

1 essentially, we're -- we're building Bipole III because
2 we need that alternate path, so if the DC goes down we
3 can continue to meet the load with the remaining
4 generation on the system, and with our import
5 capability.

6 So I -- I -- you -- you know, we've been
7 talking about this in terms of numbers. I thought
8 showing you that graph and -- and how -- how important
9 that transmission system is in -- in serving our load,
10 and how for -- for -- on that particular day, every
11 hour we would have to curtail. Not just the peak hour,
12 but every hour.

13 And that was in 2012, and by the time
14 Bipole III comes into service, we'll be in 2018. There
15 will be load growth. So our -- our exposure to the --
16 to the loss of the DC just gets bigger and bigger as
17 the -- as the load grows.

18 So that -- that was a -- a chart that we
19 -- that we put on the record in -- in 2012, and I don't
20 remember going over it. I thought we just -- we
21 probably submitted it, but I don't think I had the
22 opportunity to explain it.

23 THE CHAIRPERSON: Now, the addition of
24 the Great Northern Transmission Line to what you just
25 described means what? I mean you -- you described a --

1 a shortfall that would occur if, you know, we were to
2 lose the service of Bipole I and -- and II, and now the
3 -- the point -- one (1) of the points that's being made
4 is that, you know, the addition of the Great Northern
5 Transmission Line would give us enough power without
6 having to go to Bipole III.

7 Could you address that, please?

8 MR. DAVID CORMIE: Yes. We will get a
9 -- we will -- we will have another 700 megawatts of
10 import capability with the Great Northern Line. So
11 instead of being twenty-two (22) -- and let's just --
12 let's assume, first of all, that Keevask isn't built
13 yet. So instead of being 2,200 megawatts short on this
14 day, we would be 700 megawatts better off. We -- we
15 would have to cut the load -- we would have to curtail
16 1,500 megawatts.

17 So it helps reduce the amount of -- of
18 Manitoba load that would be unserved, but it doesn't --
19 doesn't solve the problem. Putting -- putting Keevask
20 on the 700 megawatts of generation, Keevask will now be
21 added to the 3,800 megawatts -- or 3,600 megawatts, and
22 so we'll have 4,300 megawatts, but it'll be shared on -
23 - on the three (3) Bipoles.

24 So it will redistribute the -- the load
25 such that if we were to lose Bipole I or -- or Bipole

1 II, that we have the alternative path. And between
2 having Bipole III, if you lost Bipole I and II, with
3 the import capability, I understand that we should be
4 able to continue to meet our -- meet our load
5 obligations.

6

7

(BRIEF PAUSE)

8

9 MR. ANTOINE HACAULT: Diana, could you
10 just bring the -- the graph down a -- no, the other
11 way, sorry, or up.

12 Mr. Cormie, could you just explain with
13 respect to the gas turbines, and the -- the coal? Were
14 they producing at capacity down south here in this
15 particular day?

16 MR. DAVID CORMIE: Selkirk was online
17 for proficiency training on that particular day, and so
18 I think you'll see the -- the -- a bit of Selkirk at
19 the very top. And on that particular day, one (1)
20 combustion turbine at Brandon was running. The other
21 one was not running. It -- it would reduce the problem
22 by another a hundred and -- 130 odd megawatts, if that
23 would -- but really, nothing we can do if we -- if we
24 were to bring those units online, would avoid the --
25 the widespread load curtailments.

1 And for them to be effective in order to
2 avoid a blackout, they actually have to be running
3 before the emergency, because it takes time for those
4 units to be started, and -- and up and running. And so
5 DC contingencies can be -- can occur any time of the
6 year, not just at the time of peak.

7 And so you -- you would have to -- in --
8 in effect, if you were going to use natural gas
9 turbines to provide the same reliability as Bipole III,
10 they would have to be on all the time, so that when the
11 emergency happened, a few milliseconds later, the
12 imports would change direct -- the exports would change
13 direction to import. The -- the combustion turbines
14 would be already online, and we would just reduce
15 exports and turn those into imports, and that's how the
16 -- the emergency would be handled.

17 But having combustion units on the
18 system that aren't actually up and running prior to the
19 emergency doesn't help you during the emergency. They
20 help you recover from the emergency. You know, you can
21 probably bring the -- bring the power system back
22 together much quicker if you have combustion turbines.
23 But for reliability purposes they have to actually to
24 be on before the emergency occurs.

25 And so that's one (1) of the problems

1 with a -- a natural gas solution to that reliability.
2 They -- they become so expensive to have them on all
3 the time in anticipation of the emergency, that the
4 economics of a natural gas solution are -- are not very
5 attractive.

6

7

(BRIEF PAUSE)

8

9 MR. DAVID CORMIE: Okay. Thank you,
10 Mr. Chairman.

11 THE CHAIRPERSON: I believe that's all
12 the questions we have for -- for this panel. Mr.
13 Czarnecki...?

14 MR. BRENT CZARNECKI: I would just --
15 for completeness of the record, Mr. Chairman, I would
16 recommend that we mark this particular Information
17 Request that Mr. Cormie spoke of as the next Manitoba
18 Hydro exhibit, which would be number 46, I believe.

19

20 --- EXHIBIT NO. MH-46: The Information Request
21 spoken of by Mr. Cormie

22

23 THE CHAIRPERSON: Thank you for that.
24 I believe that that's all the business we have for
25 today. So I want to thank the members of this panel

1 who are not going to be here for the next many days of
2 hearings. Thank you very much for your contribution to
3 the deliberations of this -- of this panel and thank
4 you for the work you've done in the background.

5 Your contribution has been appreciated.
6 Thank you very much.

7 MR. SVEN HOMBACH: Mr. Chairman, I
8 think Mr. Hacaault wanted to raise another point.

9 MR. ANTOINE HACAULT: Yeah, when I said
10 that was all for Mr. Cormie, I was very specific to Mr.
11 Cormie.

12 THE CHAIRPERSON: Oh.

13 MR. ANTOINE HACAULT: I wasn't -- I had
14 some questions with respect to the balance of the panel
15 and that's why I was looking to Mr. Czarnecki as to
16 whether or not --

17 THE CHAIRPERSON: Oh, I'm sorry. I
18 misunderstood you. I apologize for that. Please
19 proceed.

20 MR. ANTOINE HACAULT: Sorry. I'm
21 really going to be in the bad books now. So it's --
22 it's up to Mr. Cormie as -- he's welcome to leave now
23 if he wants.

24

25 (WITNESS STANDS DOWN)

1 CONTINUED BY MR. ANTOINE HACAULT:

2 MR. ANTOINE HACAULT: I think this next
3 question is addressed to Mr. Read. It relates to the
4 Pointe du Bois spillway and the reconstruction of that
5 spillway. Now, with respect to that spillway site,
6 could you help us understand whether the old spillway
7 site, or just the general site all together was useful,
8 or whether the old spillway site area was rendered
9 totally useless as a result of the reconstruction and
10 we just have a negative liability sitting there that
11 needs to be dealt with?

12 MR. NICK READ: I'd like to say first
13 of all that my experience is mainly with the old
14 spillway. A project team was put together to build a
15 new one. But, yes, I'd say the old spillway, which was
16 ninety (90) something gates, what's left of it is --
17 it's going to -- it -- it's going to be put in a
18 condition where it's as safe as we can make it, but any
19 of the structures that are left are of no value to us
20 and somewhat of a liability.

21 MR. ANTOINE HACAULT: And how have you
22 integrated the new spillway into the old spillway site,
23 or am I misunderstanding how that project occurred?
24 How do you protect and redo a spillway in the context
25 of having an old one?

1 How do you replace and put a new one in?

2 MR. NICK READ: The new spillway has
3 been built in a way that the -- most -- most of the new
4 structures are behind the old structure and -- and by
5 the time the new spillway has been completed, the old
6 spillway is just not needed anymore. And all the new
7 structures stand on their own. And it's a very nice
8 spillway.

9 MR. ANTOINE HACAULT: So that -- might
10 I suggest to you that having Pointe du Bois as a
11 generating station, and the site approvals generally
12 haven't been given to that station, represented an
13 advantage to Manitoba Hydro when compared to having to
14 set up a totally new site at a totally new location?

15 MR. NICK READ: I'm sorry. I'm not
16 sure I understood the question.

17 MR. ANTOINE HACAULT: Okay. I'm trying
18 to get some sense as to whether or not being able to
19 build this new spillway at an existing location was in
20 any way easier than just starting from a greenfield
21 where you had to get all your environmental approvals,
22 go through all the licensing, the negotiations with
23 First Nations, et cetera, as compared to what you had
24 to go through to do this new one.

25 MR. NICK READ: The existing spillway

1 was at -- at the end of its life, and a number of the
2 structures were unsafe. And we really didn't have much
3 time to get a new spillway in there before the old
4 spillway would decide on its own that it was at the end
5 of its life.

6 MR. ANTOINE HACAULT: I'm really not
7 making my question clear. I'm trying to get a
8 comparison from your perspective if you had to start
9 doing a new spillway in a new area without having an
10 existing site and an existing generation, whether there
11 would be further complications that are solved by
12 having the existing site.

13 MR. NICK READ: I'm not sure I can
14 answer that hypothetical question in that we needed a
15 spillway right where that one -- or next to where that
16 one was. We couldn't really operate the site without
17 a spillway there, and the one that was there was
18 rapidly falling apart.

19 MR. ANTOINE HACAULT: The -- the reason
20 I'm asking the question, and it's just to get a factual
21 basis. It -- it's a question that forms a basis or the
22 facts form the basis for some depreciation issues and
23 other issues on what they call 'negative salvage
24 value'. And I was trying to get some explanation or a
25 sense from you, sir, as to whether or not having an

1 existing site made it easier to create that new
2 spillway on the existing site as opposed to starting
3 new elsewhere and have to demolish everything at Grande
4 Pointe and start somewhere else new totally without
5 having that site.

6 MR. NICK READ: It really isn't part of
7 my expertise, the questions you're asking, so I'm going
8 to have to drop out of that.

9 MR. ANTOINE HACAULT: Okay. Thank you.
10 I thought you might have some information, but if you
11 don't, that's okay. The next -- I'd like to get into
12 the condition of assets discussion. And...

13

14 (BRIEF PAUSE)

15

16 THE CHAIRPERSON: Me. Hacault, we've
17 been going for about an hour and a half now. So I'm
18 wondering, do you -- do you plan on being --

19 MR. ANTOINE HACAULT: It's a good time
20 to break if you want to break.

21 THE CHAIRPERSON: Okay. Let's break,
22 then. Let's break for ten (10) minutes.

23

24 --- Upon recessing at 2:20 p.m.

25 --- Upon resuming at 2:34 p.m.

1 THE CHAIRPERSON: I believe that we can
2 resume the proceedings. Me. Hacaault, s'il vous plait.

3 MR. ANTOINE HACAULT: Thank you.
4 Diana, could you please bring page 8 of our document
5 book 1 up, please? Thank you. Some of you may not
6 have seen this, but it was -- it's a response of MIPUG
7 to PUB Interrogatory 13, and it compares levels of PP&E
8 investment in some runs that were based on CEF12. It
9 was the first two (2) lines compared to IFF14-1.

10 And what I intend to do is to have a
11 discussion with respect to the condition of assets as
12 of CEF12 because there were some answers on the record
13 that decisions were being made based on the condition
14 of the assets as of when that capital expenditure
15 forecast was being made.

16 So I'll start with Mr. Read. As of when
17 the capital expenditure forecast for 2012 was made, or
18 prepared, did you have a good sense of what the
19 condition of the assets in your portfolio was?

20 MR. NICK READ: Yes.

21 MR. ANTOINE HACAULT: Okay. And could
22 you -- are you part of the reporting that gets done to
23 do the CEFs in the Manitoba Hydro organization as it
24 relates to generation?

25 MR. NICK READ: I couldn't hear the

1 words. Am I part of...?

2 MR. ANTOINE HACAULT: The process that

3 --

4 MR. NICK READ: Oh.

5 MR. ANTOINE HACAULT: -- leads to

6 CEF12.

7 MR. NICK READ: Yes.

8 MR. ANTOINE HACAULT: And when would
9 you give information to the group that creates the
10 CEF12? Would it be in the fall of 2011? I'm just
11 trying to get a sense of when the information is dated.

12 MR. NICK READ: It's during the winter
13 and into the spring. CEF12?

14 MR. ANTOINE HACAULT: Yes.

15 MR. NICK READ: So it'd be during the
16 winter and spring of -- of 2012.

17 MR. ANTOINE HACAULT: Now, what type of
18 information do you gather from all the group of people
19 that are under you with respect to the condition of
20 your assets as of the winter of 2012 which gets put
21 into CEF -- or sorry, the winter of 2011 to '12 which
22 gets put into CEF12?

23 MR. NICK READ: Perhaps I can give you
24 a more helpful answer if I explain that we started
25 building our condition assessment data around 2008.

1 But because of the thousands of assets, it took a numb
2 -- a number of years, maybe three (3) years, to get the
3 full first time data set.

4 In 2011, we purchased the Copperleaf
5 software for asset investment planning. And it wasn't
6 until December 2011 that we actually went live with the
7 system. And that's where we actually take all the
8 condition assessments and -- and we're able to model
9 the condition of those assets looking forward based on
10 asset investment levels.

11 And so we were just starting to do
12 better modelling of the data in 2011. And that's when
13 we went live. So we actually starting getting better
14 at it, I would say, in 2012 and 2013.

15 MR. ANTOINE HACAULT: So I don't know
16 if this is a fair summary. You knew the condition of
17 the assets, but you went one (1) step further with this
18 software and tried to -- tried to project going forward
19 at what was going to happen

20 Is -- is that what the software helps
21 you to do?

22 MR. NICK READ: It helps us do that.
23 It also helps us -- there's thousands of assets there,
24 and we've got projects for a couple hundred of them.
25 It helps us estimate what the capital requirements are.

1 If it sees an asset that doesn't have a project against
2 it, it'll actually, based on the data that we've put
3 in, give us an estimated level of the investment that's
4 required sometime in the future to deal with that.

5 So it helps us do the gap analysis
6 between where we are today, where we need to be. It
7 also helps us calculate the loss generation risk if we
8 don't spend that level of money. So -- so that's what
9 it does.

10 MR. ANTOINE HACAULT: Okay. But the
11 one (1) thing the software does not do, it didn't
12 change your level of knowledge with respect to the
13 condition of the assets themselves as of the winter of
14 2012/2000 -- or 2011/2011, correct?

15 MR. NICK READ: We knew the condition
16 of the assets at that time. And that's based on the
17 work we did, not the software. In fact, all the data
18 inputs into the software is based on work that my staff
19 did. We fit in as many high-priority projects as we
20 could under the targets that we were given at that
21 time.

22 MR. ANTOINE HACAULT: Okay. I'd like
23 to understand the last part of your statement a bit
24 more. I think you said something like, Under the
25 targets we were given at that time. So that would have

1 been around CEF12.

2 Is that correct?

3 MR. NICK READ: That's correct.

4 MR. ANTOINE HACAULT: Okav.

5

6 (BRIEF PAUSE)

7

8 MR. ANTOINE HACAULT: Now, if we look
9 at the book of documents, which reproduces some runs on
10 capital -- or property and plant investments, am I
11 understanding correctly -- I'll have to give some
12 context to this.

13 At that time Conawapa was still in the
14 plans, correct?

15 MR. NICK READ: 2012?

16 MR. ANTOINE HACAULT: Yes.

17 MR. NICK READ: Yes.

18 MR. ANTOINE HACAULT: And Keevask was
19 still in the plans, correct?

20 MR. NICK READ: Correct.

21 MR. ANTOINE HACAULT: And Bipole III
22 was still in the plans, correct?

23 MR. NICK READ: Correct.

24 MR. ANTOINE HACAULT: And in the
25 context of that entire Preferred Development Plan, as I

1 understand it, you were asked to work within certain
2 targets.

3 Is that correct?

4 MR. NICK READ: That's correct.

5 MR. ANTOINE HACAULT: And are you
6 telling this panel then as of CEF2012, that it was your
7 belief as a division manager for generation, that you
8 could operate within the budget parameter runs that
9 were done in IFF12?

10 MR. NICK READ: No, I didn't have that
11 belief. And that is why I promoted the -- the building
12 of the new processes and the purchase of the Copperleaf
13 system, so that we could actually do organized long-
14 term asset investment planning and that we could
15 somehow determine what the gap was between what we were
16 doing and what we had to do in the long-term.

17 And in 2012 I knew the condition of our
18 assets, but we still had to determine what that -- what
19 we needed for the long term. And part of that was the
20 presentation of that corporate report on asset
21 condition you've seen this year, but it's something
22 that can't be done overnight.

23 We have more or less identified now what
24 we need. And I -- I can't criticize my management for
25 not giving me the money that we didn't give them the

1 reports for that really identified just how much it was
2 we needed. We've done so now. And it's a -- it's a
3 process that's taken years to do.

4 MR. ANTOINE HACAULT: So I understand
5 you've given a very difficult answer right now. You've
6 given, at least my clients, insight for the first time
7 of the challenges inside the Corporation, at least from
8 a generation perspective in getting the things done
9 that you thought needed to be done based on your
10 knowledge of the condition of assets in 2012.

11 Is that correct?

12 MR. NICK READ: That's correct. But
13 it's a problem that we hadn't seen before. This aging
14 asset problem is a -- is a problem that has a lot to do
15 with the timing of when we bought the assets years ago
16 and them all seeming to come together to an end-of-life
17 at roughly the same time.

18 And so the problem I'm seeing and the
19 problem distribution and transmission have seen is
20 roughly the same thing. And in 2010, I don't think any
21 of our three (3) areas were in a position to say, This
22 is how much we need -- need. We were all in a position
23 to say, We don't have enough. We weren't in a position
24 to say how much we needed.

25 MR. ANTOINE HACAULT: Okay. So as I

1 understand your explanation the condition wasn't a
2 surprise.

3 And what you thought you needed
4 internally was to have additional, let's say proof or
5 reports to convince your superiors to give you what you
6 thought you needed, correct?

7 MR. NICK READ: Yes, even to convince
8 ourselves what we needed. Somebody had to figure it
9 out. So, yes, we needed a report of some sort
10 identifying what the long-term requirement was -- was
11 to deal with this aging asset problem.

12 MR. ANTOINE HACAULT: Now, the report
13 that I've seen gives us a comparison between day one
14 (1) and year twenty (20). There hasn't been anything
15 filed that gives us a detailed requirement and an
16 analysis and prioritization (sic), say that gives us a
17 snapshot of what's required in years five (5) to ten
18 (10), then years ten (10) to fifteen (15), then years
19 fifteen (15) to twenty (20).

20 Is that report being worked on, sir?

21 MR. NICK READ: I think we're working
22 on the individual elements of it. I'm not aware of a
23 corporate report on that at this point.

24 MR. ANTOINE HACAULT: Okay. Now, thank
25 you very much, Mr. Read for those answers. I'm going

1 to pursue the same type of questioning. Sorry, there
2 needs to be some repetition with Mr. Swatek and Mr.
3 Morin, although probably I'll get much the same
4 answers.

5 What about you, Mr. Swatek? As of
6 CEF12, as a division manager -- well, you weren't
7 division manager then. But to your knowledge did the
8 division manager have a good handle on the condition of
9 the transmission assets?

10 DR. DAVID SWATEK: I would say the
11 division manager -- now, my position right -- right now
12 I'm the manager of the System Planning Department. So
13 I'm not a division manager currently.

14 MR. ANTOINE HACAULT: Okay.

15 DR. DAVID SWATEK: Yes. So the
16 question is...

17 MR. ANTOINE HACAULT: With respect to
18 transmission I'm trying to get a sense as to whether or
19 not to your knowledge whoever was in charge as of 2012
20 -- for the CF 2012, knew the condition of the assets in
21 the transmission portfolio.

22 DR. DAVID SWATEK: In 2012, that's when
23 the work was really being developed to really
24 understand or to quantify and compare the condition.
25 That -- that was the year that we had engaged

1 Kinectrics to work with the transmission business unit
2 to take a look at all of the asset condition data that
3 we -- that we have been -- that we have been gathering
4 through our maintenance programs for decades and work
5 with our subject matter experts to -- to turn that into
6 -- to an asset condition report.

7 MR. ANTOINE HACAULT: But I would
8 suggest to you, sir, that the people in charge of
9 transmission would not have been surprised by the
10 report that was given.

11 DR. DAVID SWATEK: I'm not sure how
12 surprised they were. You may recall from the earlier
13 days of testimony that with a -- with a couple of
14 exceptions the transmission assets were shown to have
15 been well -- well main -- maintained with recommended
16 transmission -- or, sorry, recommended transformer
17 sustainment programs kicking in ten (10) years down the
18 road.

19 Our HVDC Bipole II valve groups were
20 certainly highlighted as -- as an asset to be targeted
21 as soon as possible. I -- so perhaps -- yeah, so I
22 would agree with you that I don't think anyone was
23 terribly -- terribly surprised, although I wasn't there
24 myself, so that's speculative.

25 MR. ANTOINE HACAULT: Did the people in

1 the transmission department have the same challenges as
2 Mr. Read in generation, that they were requesting more
3 but -- I'm not too sure how to put it, but maybe
4 thought that they need to have better reports to be
5 able to convince the executive and the decision makers
6 to give them more?

7 DR. DAVID SWATEK: I'm -- I'm not sure
8 if I could speak to 2012 there.

9 MR. ANTOINE HACAULT: Okay, thank you.
10 I can appreciate that --

11 DR. DAVID SWATEK: Yeah.

12 MR. ANTOINE HACAULT: -- because you
13 weren't there, so.

14 MS. SANDY BAUERLEIN: I did just want
15 to highlight for the record that, although between
16 CEF12 and CEF14 in the first ten (10) years of the
17 forecast we have added just a little over a billion
18 dollars, it -- necessarily, there was a redistribution
19 of those funds between each of the asset categories
20 again based on the knowledge and prioritization of the
21 conditions of the assets, which most of that
22 information has, you know, been completely understood
23 by, you know, all levels of management in the
24 Corporation really over the last couple of years.

25 DR. DAVID SWATEK: Yeah.

1 MR. ANTOINE HACAULT: Thank you for
2 that additionally ex -- explanation --

3 DR. DAVID SWATEK: Yeah.

4 MR. ANTOINE HACAULT: -- Ms. Baurlein.

5 DR. DAVID SWATEK: And perhaps to make
6 some -- something clear, the -- the sustaining capital
7 budgets that we are looking at from CEF12, 13, and --
8 and 14, this includes the budget -- the budgets for
9 asset sustainment as well as the major and base capital
10 budgets for capacity enhancement projects.

11 And the transmission business unit we
12 always -- with load growth, we have a lot of capacity
13 enhancement.

14 MR. ANTOINE HACAULT: To your
15 knowledge, was the transmission department also asked
16 to live within budget constraints, as Mr. Read was,
17 back in 2012?

18 DR. DAVID SWATEK: We are always given
19 targets. And we -- we respect the financial strength
20 of the Corporation, so we prioritize our projects to
21 fit within -- within these targets. And we present
22 that portfolio to -- to our executive. The -- the
23 projects that will fit, as well as the projects that
24 will not fit, and a discussion of the risk associated
25 with those that do not fit.

1 MR. ANTOINE HACAULT: So I'll go back
2 to Mr. Read. With respect to the targets, is it your
3 recollection, sir, that you were asked to meet the
4 targets that were set out in CEF 2012? Was that the
5 kind of budgetary constraint you were given at that
6 time?

7 MR. NICK READ: Yes, but sort of the
8 same budgetary constraint that I've seen for twenty
9 (20) years, so it didn't come as a surprise to me.

10 MR. ANTOINE HACAULT: And, Mr. Swatek,
11 are you able to help us all given that you're new, but
12 do you have any knowledge as to whether transmission
13 was also expected as of CEF12 to live within those
14 budgetary constraints?

15 DR. DAVID SWATEK: Transmission would
16 be expected to -- to live within their constraints,
17 yes.

18 MR. ANTOINE HACAULT: As set out in
19 CEF12 as of that particular time?

20 DR. DAVID SWATEK: Yes.

21 MR. ANTOINE HACAULT: Okay. I'll move
22 now to Mr. Morin with respect to distribution. You
23 have been patiently waiting. So I'll take you back to
24 2012 again with respect to the condition of the assets
25 that you're responsible for and -- and your division's

1 knowledae of the condition of those assets as it
2 existed in 2012. Do you feel that your department had
3 a pretty good sense of the condition of its assets as
4 of 2012?

5 MR. MICHEL MORIN: I believe our report
6 came out in 2012, so CEF12 was already finished by that
7 time. We had an understanding of the overall condition
8 of our assets, but invested significantly in trying to
9 gather more data, more information on the context of
10 how many assets and what type, and -- and those kind of
11 things, to -- to be able to put -- put forward sort of
12 a long-term projection of where distribution assets
13 were going.

14 We -- we came off some fairly busy --
15 like the Manitoba economy growth, like we're the --
16 we're the ones that hook the customers up as well, so
17 we were firing on all cylinders to try to meet the
18 current load demand, and -- and I think that trickled
19 in also with where capacity is, and -- and some of the
20 transmission issues is the economy dictated where --
21 where a lot of the work was going to be done, depending
22 on the part of the province that was experiencing that
23 growth.

24 So at the same time, we were trying to
25 meet those challenges and -- and work out our long-term

1 sort of aging infrastructure plans, but it wasn't until
2 later -- after 2012 that we were able to present sort
3 of the findings of these assets, and -- and where they
4 were in relation to what would be required for funding.

5 MR. ANTOINE HACAULT: You see, sir,
6 when I asked the question whether your department had
7 knowledge of the condition, in my mind I separate that
8 from being able to produce a report for your
9 superiors on -- on the condition of the assets.

10 And if I ask you to address your mind as
11 to whether your department or division knew the
12 conditions of the assets, I would suggest to you, you
13 didn't need a report to tell yourselves what the
14 condition was. If you were looking for a report, it
15 was to tell your superiors and try to convince them of
16 the status of your portfolio.

17 MR. MICHEL MORIN: No, I wouldn't say
18 that. I -- I would think for ourselves as asset
19 managers that report played a big role in our
20 understanding of assets so we had an understanding of
21 the overall kind of condition.

22 But, you know, like we've kind of
23 demonstrated, we've -- we -- we don't spend money until
24 we understand what's going on. And -- and we learnt a
25 lot from that 2012 report as asset managers because we

1 started to -- like I said, we're -- it's like a million
2 Bic lighters out there and trying to get your head
3 around how many, where they are, what type of
4 condition.

5 So to -- to me, that report was very
6 important to have the justification to move forward
7 with some of the requests going forward, and adjust
8 some of our existing practices accordingly.

9 MR. WILLIAM GANGE: Okay.

10 DR. DAVID SWATEK: I would just concur
11 with Mr. Morin. It was the same experience for
12 transmission. Yes, we had been gathering asset
13 condition data for decades through our maintenance
14 program, but the 2012 report was a high watermark for
15 bringing everything together to get that overall per --
16 perspective, yes.

17 MR. ANTOINE HACAULT: Okay. Now, the
18 asset condition report that I've seen with respect to
19 transmission and -- and distribution sets out a picture
20 at base year, and then twenty (20) years down the road.

21 In your respective areas, being
22 transmission and distribution, is there a detailed
23 report in Manitoba Hydro that sets out, for example,
24 years five (5) to ten (10), then years ten (10) to
25 fifteen (15), then years fifteen (15) to twenty (20),

1 what the specific condition is going to be in those
2 time frames?

3 MR. MICHEL MORIN: I -- I believe
4 Darren can maybe speak to CEF14, as far as their long-
5 term plan as far as -- are you looking for the --

6 MR. ANTOINE HACAULT: No, I'm looking
7 for a report in the same way -- you've given us a
8 summary report --

9 MR. MICHEL MORIN: Yeah.

10 MR. ANTOINE HACAULT: -- that gives us
11 graphs --

12 MR. MICHEL MORIN: Yeah.

13 MR. ANTOINE HACAULT: -- at both ends.

14 MR. MICHEL MORIN: Yeah.

15 MR. ANTOINE HACAULT: Is there a report
16 that gives us graphs at year five (5), at year ten
17 (10), fifteen (15)? They may not be those particular
18 years, but is there an internal report we haven't seen?

19 DR. DAVID SWATEK: Yeah. Well, no, you
20 have seen it as part of the Round 2 response -- well,
21 the responses to the Round 2 IRs. For transmission, we
22 submitted the report supplied by Kinectrics which does
23 look at assets flagged for replacement, and they show
24 in which years how many transformers would be flagged.
25 And that was the basis of the capital -- of -- of the

1 asset sustainment capital programs that were put
2 together for transformers and -- transformers, circuit
3 -- circuit breakers, and wood poles. So that -- that's
4 on the record.

5 MR. ANTOINE HACAULT: So it's the
6 Kinectrics report. If we have something we have to
7 look at that. There's nothing else in Manitoba Hvdro
8 that deals with those issues for transmission and
9 distribution? Perhaps Mr. Morin can also confirm that.

10 MR. MICHEL MORIN: Not in the same
11 context of that soccer field, but our asset management,
12 like our capacity, we have a plan on that twenty (20)
13 and twenty (20) to reduce the capacity issues with
14 urban substations. So it's a detailed plan of what
15 will be accomplished, by year going forward, to meet
16 those objectives.

17 So it's based -- imbedded in various
18 types of reports. Our -- our Underground Cable
19 Replacement Injection Program is buried in a report
20 saying this is our next three (3) years, this is what
21 we intend to accomplish on those asset classes.

22 So it -- it wasn't -- we didn't recreate
23 that same report on a periodic basis. We -- we work
24 within these other more -- asset class reports to -- to
25 see where we're going to be in, you know, certain years

1 of the -- of the capital plan.

2 MR. ANTOINE HACAULT: Now, were you --
3 and -- yeah, okay, I'll leave -- sorry.

4 MR. NICK READ: Can I add to that?

5 MR. ANTOINE HACAULT: Yeah, absolutely.

6 MR. NICK READ: One (1) of the reasons
7 generation was used in the IRs to do the asset
8 condition forecasting every five (5) years out to
9 twenty (20) years was the fact we have a model, a
10 computerized model with many data sources. But in the
11 end, it has degradation curves for each asset type and
12 we can forecast asset condition into the future.

13 Of course, it has to be confirmed before
14 you replace an asset, but at least it's a forecast.
15 When these guys do it it's hard number crunching by
16 staff. So we -- they've done it, but when you come
17 back and say, Well, this is nice, can you do it every
18 five (5) years, or every year, there's a collective
19 groan because it's all hard number crunching.

20 They're both looking at possibly moving
21 toward cap relief. And if they do, they'll be able to
22 do those long-term condition assessment forecasts more
23 or less at the push of a button once all the data is in
24 -- input. So I'm not sure if that's what you're
25 looking for.

1 MR. ANTOINE HACAULT: Well, that's --
2 that's useful, thank you.

3 DR. DAVID SWATEK: If you want more
4 with -- with that too, now up until very recently, as
5 Mr. Read said, it had been hard manual number crunching
6 for transmission to crank these things out, but just --
7 just very recently, I believe last month, we com --
8 completed our implementation of the Meridium software,
9 which -- which will take the asset condition data from
10 our -- our maintenance databases and actually do the
11 calculations to build the asset health indices.

12 So this -- so this process is being --
13 being automated and we are currently working on ways to
14 quantify risk, probabilistic risk, quantifications
15 using expected unserved energy, the number of homes in
16 the -- the dark. So this output from the -- the asset
17 health indices that'll be calculated from Meridium and
18 the risk that we are -- that we are deve -- developing
19 new tools to calculate ourselves, we're currently
20 working to incorporate those into the Copperleaf tool.

21 So that would be a -- a great help and
22 we would be able to -- to produce some very nice charts
23 showing how much risk for how many years if we move --
24 move things around.

25 MR. NICK READ: Could I just add to

1 that as well. You know, you've heard about all these
2 computer systems and I expect it might be a bit
3 confusing. You know, we have our computerized
4 maintenance management system that the plant staff use,
5 and, you know, you literally have thousands of plant
6 staff working on these assets and -- and entering the
7 results into this computerized maintenance management
8 system.

9 We have lab results coming in from oil
10 analysis and whatnot, so. Just like Dave said, that
11 they're going to use this Meridium. This Meridium sits
12 on top of the computerized maintenance management
13 system and takes data from it and then calculates more
14 or less automatically the condition assessments for
15 some assets. And we're going to use it as well because
16 it'll save on -- on staff time and more efficiency.

17 Then that data will then go into
18 Copperleaf and Copperleaf would still be used for
19 forecasting the change in condition with time. And --
20 and so there is uniformity as -- as to what we're doing
21 here. We're -- we're all looking at the same systems.

22 MR. ANTOINE HACAULT: And -- and that's
23 helpful. And it's nice to see that Manitoba Hydro is
24 moving in that direction. And I see a lot of nodding
25 in the back row, so you're getting a lot of agreement

1 via your supporting staff.

2 Now, I hadn't asked Mr. Morin with
3 respect to CEF2012, did your division have the same
4 challenges as Mr. Read's division? In other words you
5 were asked to work within budgetary constraints imposed
6 by CEF2012?

7 MR. MICHEL MORIN: I would say my level
8 I would say you -- you had to respect those numbers.
9 Yes.

10 MS. SANDY BAUERLEIN: I just wanted to
11 be clear that while each area is assigned a target as
12 we talked about before we prioritize projects. And I
13 believe Mr. Rainkie had indicated that if there ever --
14 you know, an issue was being raised where we needed to
15 re-address a priority, an urgent priority, then funding
16 would be -- would be moved around. The investment
17 dollars would be reallocated. So, you know, just like
18 on -- on your personal situation we all have to respect
19 a budget. We also have to recognize that we have to
20 deal with -- with, you know, unexpected challenges.

21 MR. ANTOINE HACAULT: Now, I'm testing
22 my memory a little bit because as you say there's
23 thousands of pages here. But for some reason I believe
24 it was in one (1) of the recent financial years and
25 we'd be able to see it maybe in an IFF or the

1 financials. There was a budget allocated of -- of
2 about some 572 million, but some amount I thought
3 significantly less actually spent.

4 Am I correct in recalling that? Sorry,
5 I don't have...

6 MS. SANDY BAUERLEIN: I would probably
7 need a reference, Mr. Hacaault.

8

9 (BRIEF PAUSE)

10

11 MR. ANTOINE HACAULT: I'll maybe come
12 back to that when I do have the reference. Maybe
13 Melissa Davies who is assisting me can kind of dig it -
14 - dig that out.

15

16 (BRIEF PAUSE)

17

18 MR. ANTOINE HACAULT: I had in my notes
19 here page 913 of the transcript where you had been
20 talking. And my recollection on the numbers wasn't
21 correct. Apparently it was reported that for 2013/'14,
22 the forecast was for 526 million, whereas the actual
23 spent was four-seventy (470).

24

25 (BRIEF PAUSE)

1 MR. ANTOINE HACAULT: And Diana has
2 brought that up. It's at lines 17 to -- to 20.

3 MS. SANDY BAUERLEIN: Those figures are
4 correct for 2013/'14.

5 MR. ANTOINE HACAULT: Yeah. So I was
6 trying to reconcile that with the statements that were
7 made that people had to live within budgetary
8 constraints which suggested that everybody would spend
9 the entire budget and reallocate if necessary.

10 In that particular year, although there
11 was a forecast of 526 million there was only four
12 hundred and seventy (470) that was spent, correct?

13 MS. SANDY BAUERLEIN: That is correct.
14 So there were some initial drivers for that under
15 expenditure. Primarily, there was two (2) projects,
16 Lake Winnipeg east system improvements. As a result
17 of, there was licensing delays and delays in property
18 acquisition. And as well in generation in the Pine
19 Falls major overhaul for units 1 to 4. We had an under
20 expenditure as a result of a decision to cancel work on
21 two (2) of our turbine runners. It was deemed it
22 wasn't economically feasible to continue to proceed
23 with that work.

24 Those decisions were made. And again,
25 given the time frames, we manage, again, the -- the

1 portfolio projects over the term, and where we can, we
2 adjust within the year. But in that year, for those
3 two (2) projects, there are under expenditures. We
4 couldn't simply -- and I'll let my colleagues talk
5 about how it was not possible just to simply ramp up
6 another project at that point in time.

7 So as a result of that, we were
8 underspent primarily as a result of those two (2) main
9 projects.

10 MR. ANTOINE HACAULT: Thank you for
11 that clarification. And Mr. Read wants to provide
12 further explanation here.

13 MR. NICK READ: Yes, I'll tell the
14 story.

15 MR. ANTOINE HACAULT: Not too long
16 because I've got a time limit --

17 MR. NICK READ: I know.

18 MR. ANTOINE HACAULT: -- but go ahead.

19 MR. NICK READ: Well, it's your fault
20 for asking.

21 MR. ANTOINE HACAULT: I asked Sandy.

22 MR. NICK READ: No, I -- and I'll --
23 and I'll try to be -- I will try to be brief. It's a
24 real irritation to us on the project portfolio planning
25 side when we ask for money, and then we leave money on

1 the table because we know people are going to say:
2 Look, you asked for this money and you didn't spend it.
3 Maybe you don't need so much.

4 The problem is, if you've got fifty (50)
5 projects, there's nothing that can happen to them to
6 make them go any faster. The only thing that can
7 happen is things that slow them down, you know, a
8 licence isn't granted, you know, we make a -- we review
9 -- the economics is changing with exports. We review
10 those -- the runners. And suddenly we decide it's not
11 economic to replace those two (2) runners, so we pull
12 it out. But once again, we're leaving money behind.

13 And then when we try to transfer the
14 funds to somebody else we're halfway through the year
15 and it's too late. We just can't pull these projects
16 out of -- out of... So I know Hydro-Quebec, when they
17 do this portfolio planning they have the same problem.
18 They have what they call slippage.

19 So they'll put slippage against each
20 portfolio, and then over-plan portfolios, so with the
21 slippage they end up where they want to be, and that's
22 what we're trying to do, and we have to get better at
23 it.

24 MR. ANTOINE HACAULT: That wasn't a
25 very long answer, and it was very useful. Thank you,

1 sir. I'm going to slip into something a little bit
2 more detailed.

3 THE CHAIRPERSON: Before you go there I
4 just want to confirm something. That my recollection,
5 as well, from Ms. Bauerlein, is that the most recent
6 budget allocation was underspent by 10 million. Did I
7 hear -- did I remember correctly you telling me that?

8 MS. SANDY BAUERLEIN: Yes, that was for
9 the 2014/'15 fiscal year, is 10 million. The reference
10 that Mr. Hacaault was referencing before, seventy (70)
11 to five twenty-six (526), was for the 2013/'14 fiscal
12 year.

13

14 CONTINUED BY MR. ANTOINE HACAULT:

15 MR. ANTOINE HACAULT: Okay, thank you.
16 The next thing I want to get a better idea on is the
17 type of data that you've been talking about, the detail
18 of the data that you've been able to get to at this
19 point in time, in 2013 to '14. I'll deal again by each
20 area, and I suspect for generation it'd be pretty
21 short.

22 For all the individual components or --
23 that are tracked in the depreciation study and in your
24 asset condition study do you have the date of
25 installation?

1 MR. NICK READ: Are you asking if we
2 have the date that our asset types or what I'm calling
3 our drive train components were installed?

4 MR. ANTOINE HACAULT: Correct.

5 MR. NICK READ: For the ma -- for the
6 vast majority of them, yes.

7 MR. ANTOINE HACAULT: When you say,
8 "vast majority," what would you be missing? Would it
9 be some older stuff that you took over from Winnipeg
10 Electric or, I don't know, there's been transformations
11 in the Company?

12 MR. NICK READ: Yeah, some of those
13 assets go right back to 1910 and some may have been
14 replaced, breakers, you know -- I'm -- I was thinking,
15 when I say, "vast majority," we could probably get
16 almost all of them, but there might be the odd breaker
17 that we're not sure when an -- a replacement breaker
18 went in.

19 MR. ANTOINE HACAULT: Okay. But my
20 question was -- I'll -- I'll deal with specific things.
21 Firstly was the date of installation on any components
22 that are tracked in -- in depreciation.

23 Does your department -- could I ask you
24 for a report as to when all the pieces were installed?

25 MR. NICK READ: Yes.

1 MR. ANTOINE HACAULT: And you'd be able
2 to -- does your software allow you -- you to give me
3 that information fairly easily?

4 MR. NICK READ: Yes.

5 MR. ANTOINE HACAULT: Okay. Now, the
6 next question, again, with respect to your area, Mr.
7 Read. I'm not going to repeat the entire preamble, but
8 for each individual asset, are you able to produce a
9 report that gives me the capital cost as of the date of
10 installation?

11 MR. NICK READ: No, only estimates,
12 probably.

13 MR. ANTOINE HACAULT: Okay. So what's
14 the -- where -- at what point in time do you start to
15 have enough detail to give me actual costs instead of
16 estimates with respect to your area?

17

18 (BRIEF PAUSE)

19

20 MR. NICK READ: No. You know, we have
21 the recent costs of assets that we've purchased, but
22 going back trying to determine what a governor, you
23 know, that was a hundred years old at Pointe was
24 originally purchased for, we don't -- we don't have
25 that data.

1 MR. ANTOINE HACAULT: Okay. And my
2 subset of that question was, When do you start getting
3 that data? Is it just, like, five (5) years, ten (10)
4 years out?

5 Can you give me a sense of when you stop
6 relying on estimates and actually have hard data on the
7 capital costs as of the date of installation?

8 MR. NICK READ: Probably the last ten
9 (10) years, where we can still pull out the records of
10 the -- the purchasing records for it. I mean, we -- we
11 don't file the data that way, so we actually have to
12 dig up purchasing records and try to -- you know, we
13 generally replace these assets as part of a large
14 project. As I was saying, like, for Great Falls unit
15 4, you know, you'd be doing the head cover, the
16 turbine, the generator, the transformer, the exciter.
17 I mean, it's all in one (1) big project.

18 And then you have to dig into, and try
19 and find out, what did you pay for that transformer?
20 And it's just not the way we store the data in the
21 maintenance engineering side.

22 MS. SANDY BAUERLEIN: I did --

23 MR. NICK READ: It doesn't mean we
24 can't find some of that data.

25 MS. SANDY BAUERLEIN: I did want to

1 clarify that Mr. Read would be looking at it from the
2 asset perspective from a maintenance versus from the
3 accounting perspective. We look at it in a much higher
4 level for a depreciable component. And in that, we
5 have plant ledgers dating back many, many years. But
6 again, it wouldn't be at the same level of detail that
7 Mr. Read would be requiring to maintain and replace
8 individual assets.

9 THE CHAIRPERSON: Since we're on the
10 topic, why don't we try to do some intersection of
11 data, here? So the later -- we'll have a later debate
12 around ASL versus ELG, so you have data from the
13 maintenance people, and you have -- you know, relate to
14 me how that intersects.

15 I mean, how -- what's -- you know, for
16 example, one (1) governor, the population of governors
17 is what you would be concerned about, or it would be
18 individual governors that would enter into your
19 database? In a -- in a debate around ASL versus ELG.

20

21 (BRIEF PAUSE)

22

23 MS. SANDY BAUERLEIN: So we have
24 mentioned we do group depreciation, so most of our
25 records are at the group component level. They're not

1 by the individual specific site location. That would
2 be unit depreciation. So most of our records are at
3 the -- the higher level, at the component level.

4 Again, in some cases, we do know -- at a
5 generating station, we may know the site simply because
6 we only have fifteen (15) generating stations. But
7 when you look at the volume of distribution and -- and
8 transmission assets, again, with the concept of group
9 depreciation, we're depreciating poles, not that
10 specific pole along that highway at, you know, this
11 point.

12 So I'm not sure if I'm really answ --

13 THE CHAIRPERSON: Well, I'm -- I'm --
14 what I'm trying to get at is trying to understand one
15 (1) of the central points that's being made by Manitoba
16 Hydro that moving to another -- staying with ASL under
17 an IFRS scenario would require you to go through a lot
18 more data than would otherwise be the case, and I'm
19 trying to understand why that is.

20 MS. SANDY BAUERLEIN: So this is -- I -
21 - I guess the topic will come up in the depreciation,
22 but really, what it has to do with is the level of
23 componentization that's required under IFRS. So both
24 methods, both ASL depreciation and ELG are acceptable
25 methods of depreciation under IFRS.

1 However, IFRS requires that -- that
2 greater level of componentization. So when you use an
3 ASL approach, you're using the average service life of
4 the assets. So you'll have some assets that may have a
5 range of twenty (20) years within a grouping for
6 depreciation, and others that may be fifty (50) years.

7 You would have to, for depreciation
8 purposes, be able to identify within that one (1)
9 category. For example, we group right now turbines and
10 generators for depreciation purposes. Both have very
11 different service lives. We would now have to break
12 out turbines separate from generators in order to be
13 able to depreciate them separately, because their
14 service lives are very different.

15 You can do it under average service
16 life. It doesn't matter that it's twenty (20) versus
17 fifty (50), but because IFRS requires that greater
18 level of componentization, that precision, it says, No,
19 you have to -- if you're going to do average service
20 life, you have to average it for assets within more of
21 the, you know, twenty (20) to thirty (30) range, and
22 then keep the assets that are fifty (50) to sixty (60)
23 in a different component grouping.

24 THE CHAIRPERSON: Okay. Let's -- let's
25 use a population that's larger than just turbines.

1 Let's talk about Mr. Monin's poles. Is that -- it that
2 -- that -- are you suggesting that you'd have to break
3 that population down to discrete groupings and -- and
4 account for those in separate groupings?

5 MS. SANDY BAUERLEIN: If we felt those
6 poles had very different service lives, yes.

7 THE CHAIRPERSON: But having grouped
8 those -- those poles into discrete groups, you wouldn't
9 have to do individual accounting on a microsegment of
10 that group, would you? I mean, you'd need to say, Oh
11 the poles are built by this company, or -- or they have
12 a service life of thirty (30) years, therefore --
13 enlighten me about that?

14 MS. SANDY BAUERLEIN: Yes, so your
15 answer is no, we wouldn't have to, again, do unit, but
16 again, our level of componentization right now for
17 poles under -- because we currently use the ASL method,
18 we would have poles of different vintages. Therefore,
19 we would have to identify which vintages and break out
20 our asset records to be able to have a -- an opening
21 net book value of the different vintages of poles
22 within -- so right now we have poles. Now you're going
23 to break it out by individual vintage, so to speak,
24 because each one might have a different service life
25 estimate.

1 And I don't know if poles is the best
2 example, but we have many assets -- I didn't bring my
3 notes with me -- where we would actually have to go in
4 to our grouping, our depreciation grouping, and say,
5 No, we need to break these assets out separately from
6 these particular assets within that same component that
7 exists today.

8 THE CHAIRPERSON: Just -- just one (1)
9 other question, Mr. Hacaault, just to -- I hope you
10 don't mind. And we've been talking exclusively about
11 electricity, but do you gentlemen have responsibility
12 in the area of natural gas at all? And I'm thinking of
13 Mr. Morin. And -- you do?

14 So -- so the -- the comments you've been
15 making about the collection of data and so on, is it
16 equally applicable to natural gas distribution assets?

17 MR. MICHEL MORIN: You know -- you know
18 what? We have part of those line items on our budget,
19 but I would -- I'd be more comfortable with someone
20 else speaking to the data collection on those assets.
21 I -- I wouldn't be the one to ask on the amount of data
22 they collect. Sorry.

23 MR. ANTOINE HACAULT: I'll just take a
24 little sidebar at -- at my line of questioning as a
25 result of the questions of the -- the Chair.

1 You explained that in depreciation, as I
2 understood your evidence, that you group generators and
3 turbines together with one (1) life, correct, for
4 depreciation purposes?

5

6

(BRIEF PAUSE)

7

8 MS. SANDY BAUERLEIN: I do need to go
9 and check my notes. I know I was using that as an
10 example. I may be incorrect. I -- I don't actually
11 have my depreciation book here with my information as
12 to the service lives.

13 MR. ANTOINE HACAULT: I'll -- Diana, if
14 you'd bring up Appendix 5.6. It can be most pages in
15 there, but say page 8. But you were right, according
16 to what I see in the document, but we'll bring that up
17 for you so you can -- so we see for Slave Falls on that
18 particular page about midway through, there's governors
19 -- sorry, turbines and generators which -- with a sixty
20 (60) year life.

21 Do you see that? So you --

22 MS. SANDY BAUERLEIN: That's correct.

23 MR. ANTOINE HACAULT: -- you didn't
24 need to doubt yourself. Now, if we go -- and this is
25 why I was going into the detail that we have from an

1 operations side and a asset condition side. Diana, if
2 you could bring up Appendix 4.2?

3

4 (BRIEF PAUSE)

5

6 MR. ANTOINE HACAULT: Page 10. This is
7 the summary report on the asset condition, correct?

8 MS. SANDY BAUERLEIN: That is correct.

9 MR. ANTOINE HACAULT: And if we look on
10 this particular page, it's got the heading
11 "Generators," which we just looked at in the
12 depreciation table. And it has something that's
13 defined as an 'expected life' of sixty (60) years.

14 That matches the depreciation table that
15 we looked at, correct?

16 MS. SANDY BAUERLEIN: Yes. However, it
17 is my understanding, and these gentlemen can correct me
18 if I'm -- I'm wrong, that expected life may be
19 different than what we use for depreciation purposes,
20 as we look at additions and retirements. And I don't
21 believe that is factored into these figures.

22 MR. ANTOINE HACAULT: Okay. Well, if
23 we go to page 79, because it says, "As defined in
24 Appendix A," we have a definition of expected life
25 which I'll read into the record:

1 "Expected life equals the typical
2 lifespan of an asset, provided it is
3 not replaced sooner for other
4 reasons, such as government
5 regulations, economic justification,
6 system development, performance
7 safety issues, obsolescence/lack of
8 spare parts, and/or unusual condition
9 degradation. Under favourable
10 operating environments, the asset may
11 exceed its typical lifespan."

12 So we have a definition there, and I
13 guess the question you're raising is whether or not
14 that definition matches with what you're using in the
15 depreciation study.

16 Is that correct?

17 MS. SANDY BAUERLEIN: That is correct.

18 MR. ANTOINE HACAULT: Okay. Now --

19 MS. SANDY BAUERLEIN: I believe there's
20 -- they -- they are interpreted differently and used
21 differently as one's an accounting service life for
22 calculating depreciation, and this is for assessing
23 asset -- or used towards assessing asset condition.

24 MR. MICHEL MORIN: And we -- we would
25 have -- as just an example, like, our expected life on

1 a pole is seventy-five (75) years, but we have poles
2 burn, get hit by cars, capacity upgrades that take
3 poles out of service before that end-of-life. So that
4 would be factored in on more on the depreciation side.
5 But our goal is to, you know, to -- to try to get that
6 asset to that range. But there's some things that do
7 take the assets out early.

8 MR. ANTOINE HACAULT: Okay. And I'll
9 continue that on the depreciation panel. And -- and
10 I'll thank you for your thoughtful comments. I just
11 don't want to go too down in this depreciation. But
12 there is one (1) other point just while we had, had the
13 -- the table on generators and turbines both having a
14 sixty (60) year life.

15 If we turn to page 12 of this report,
16 and this was why I was going down to details, the
17 turbines have an expected life, not of sixty (60)
18 years, but of ninety (90) to a hundred years, according
19 to this report, correct?

20 MS. SANDY BAUERLEIN: That is correct.

21 MR. ANTOINE HACAULT: And I'll leave
22 the rest for depreciation discussion. But we see, at
23 least here, you have components for turbines and the
24 expected life, and components for the generators in a
25 general asset group which is more detailed than what

1 you've been doing, and you now have that as a result of
2 this asset condition report, correct?

3 MS. SANDY BAUERLEIN: I'm not quite
4 understanding the -- the statement. Could you
5 rephrase, perhaps?

6 MR. ANTOINE HACAULT: Thank you for
7 doing that. I'd -- I had said at the very outset, and
8 I don't think you were here, if you didn't understand
9 my question, yeah, just ask me to rephrase. In the
10 depreciation table, both the generators and the
11 turbines were classed together with an expected life of
12 sixty (60) years.

13 We saw that, correct?

14 MS. SANDY BAUERLEIN: Correct.

15 MR. ANTOINE HACAULT: And when we come
16 to asset condition, which Mr. Read has explained,
17 they've gone into further detail now in the
18 Corporation, and they understand, paraphrasing his
19 evidence, at least have a report now which gives us
20 more information on the expected life of generators and
21 more separate information on the life of turbines and
22 when those might have to be replaced, correct?

23 MS. SANDY BAUERLEIN: Correct.

24 MR. ANTOINE HACAULT: Okay. Now I'll
25 move back to the line of questioning that I was trying

1 to get a sense from each area as to the level of
2 information that they have gathered with respect to
3 their assets. So I had gone with Mr. Read on the date
4 of installation, the capital cost as of the date of
5 installation.

6 And the third item is whether for your
7 grouping of assets, sir, do you have information now as
8 to whether the expected life is different than what
9 would be termed as the normal life? I'm not too sure
10 if I'm using the right terminology. But you might have
11 a turbine that's expected to have a normal life of
12 sixty (60) years, but you maintain it, and you increase
13 the life to have now a life expectancy of ninety (90)
14 years.

15 Do you have better information on that
16 area?

17 MR. NICK READ: You know, we've sat
18 around for hours talking about, what do we mean by
19 'expected life'? So at least we have a definition of
20 what we mean by 'expected life'. I'm not sure what you
21 mean by 'normal life'.

22 MR. ANTOINE HACAULT: I saw some
23 nodding in the back. Maybe I could ask you for a
24 definition as to what we compare, because there's some
25 post -- for example, on a motor, you might have a --

1 MR. NICK READ: It --

2 MR. ANTOINE HACAULT: -- post --

3 MR. NICK READ: -- the expected life
4 and ask me if I think our assets are reaching their
5 expected life. I mean, that's --

6 MR. ANTOINE HACAULT: But --

7 MR. NICK READ: -- that's the only term
8 I'm familiar with, is 'expected life', or -- and then
9 we have assets failing all around the -- you know, some
10 we had a stator go to eighty-nine (89) years, and then
11 we've got some that are failing currently at Kettle at
12 forty-five (45) years.

13 So it's like anything else. It's --
14 you're going to have an expected life somewhere around
15 a -- a normal distribution. And then you're going to
16 have these things, the extremes failing. You know,
17 it's -- some are going to fail, like I said, forty-five
18 (45), and some are going to go to eighty-nine (89).
19 And -- and hopefully, the -- the numbers we use --
20 using as expected life are somewhere in the centre of
21 the normal dis -- normal distribution.

22 MR. ANTOINE HACAULT: Okay, so help me
23 understand when we've talked about Pointe du Bois, the
24 generating station part, and we've talked about a
25 hundred and fifty (150) years. How does that --

1 MR. NICK READ: Or what?

2 MR. ANTOINE HACAULT: From the date --

3 MR. NICK READ: Reference to a hundred
4 and fifty (150)?

5 MR. ANTOINE HACAULT: Yeah, we talked
6 about that number.

7 MR. NICK READ: Do you mean --

8 MR. ANTOINE HACAULT: What's that mean,
9 then?

10 MR. NICK READ: Oh, okay.

11 MR. ANTOINE HACAULT: Is that an
12 expected life, or is it something else?

13 MR. NICK READ: Saving that -- I -- I'm
14 just not sure which reference you're referring to on
15 the hundred and fifty (150) years. We have said that
16 our concrete on modern generating stations with modern
17 concrete in the last -- in excess of a hundred and
18 fifty (150) years. I've said that. I'm not sure about
19 the reference you're referring to. If you could pull
20 out the reference, I'd be glad to answer it.

21 MR. ANTOINE HACAULT: I'm not too sure
22 if I'm paraphrasing the evidence correctly. As I
23 understood the evidence, and I didn't make a particular
24 note in my examination details here, was that Pointe du
25 Bois was deferred on the replacement issue because

1 there was an assessment that it could go past a hundred
2 and twenty-five (125) year age into a hundred and fifty
3 (150) years.

4 That's what I think I had heard?

5 MR. NICK READ: Okay. Well, there has
6 been a decision to put new -- I think it's four (4) --
7 we're going to try four (4) new turbine generators with
8 new modern controls rather than the old controls out
9 there. The problem with Pointe is the concrete
10 structure is growing, and the -- and the units that are
11 in there, the way they -- the old units, every time we
12 rebuild them they go out of alignment, and it's just a
13 losing battle.

14 I'm told by our designers that these new
15 replacements will be capable of dealing with that
16 movement, and get rid of a lot of our O&M headaches.
17 And so that's the direction they're going in, and the
18 assumption by our civil engineers is the structure will
19 last that long.

20 MR. ANTOINE HACAULT: When you say,
21 "That long," a hundred and fifty (150) years, sir?

22 MR. NICK READ: It's roughly --
23 correct.

24 MR. ANTOINE HACAULT: And --

25 MR. NICK READ: I --

1 MR. ANTOINE HACAULT: -- does a hundred
2 (100) --

3 MR. NICK READ: -- I'm not sure if it
4 was --

5 MR. ANTOINE HACAULT: -- sorry.

6 MR. NICK READ: -- a hundred and fifty
7 (150). I believe the reference was 2050, but I could
8 be wrong.

9 MR. ANTOINE HACAULT: Oh, the year
10 itself --

11 MR. NICK READ: Yeah.

12 MR. ANTOINE HACAULT: -- but I'm
13 talking about the total age.

14 MR. NICK READ: Right. That would -- a
15 hundred and fifty (150) on 1910 would bring that to
16 2060, so I'm just not sure of that reference. I
17 believe I heard 2050.

18 MR. ANTOINE HACAULT: Okay. So it
19 would be a total of about a hundred and forty (140)
20 years for that structure as the expected life then.

21 MR. NICK READ: I'm not an expert in
22 that. I'm just repeating what I thought I heard, which
23 was 2050.

24 THE CHAIRPERSON: Yeah, but we're get -
25 - we're kind of speculating here. There's too many

1 ifs. Perhaps either we check, or we iust abandon that
2 --

3 MR. ANTOINE HACAULT: Yeah.

4 THE CHAIRPERSON: -- line of
5 questioning.

6 MR. ANTOINE HACAULT: Well, the 2050
7 date is in the materials. So -- but I -- what I was
8 trving to understand from this witness, he said we are
9 using one definition, expected life, and I was trving
10 to understand in the context of that statement and the
11 life being expect -- --

12 MR. NICK READ: I have set --

13 MR. ANTOINE HACAULT: -- extended to
14 2050, what that 2050 date meant. Was it an expected
15 life definition, or was it something else?

16 MR. NICK READ: That station has
17 anvthing but modern concrete where I'm saving a station
18 with modern concrete has a life of -- the concrete
19 structure has a life in excess of a hundred and fifty
20 (150) years. I wouldn't necessarily apply that to
21 Pointe, because Pointe has the old form of concrete
22 that has this growing problem.

23 MR. ANTOINE HACAULT: Okav. Thank you.
24 Now, with respect to the data in your area of
25 generation, do you have data that goes down to the

1 detail of the quality of the piece? For example, you
2 explained Jenpeq and the turbines, and mentioned that
3 there was a difference in quality of the turbines in
4 that generating station compared to other generating
5 stations.

6 Is that something that's true of your
7 assets in a general way, sir?

8 MR. NICK READ: You know, we have that
9 kind of data and we'd track that kind of data for
10 things like staters where we look at the different
11 insulation types because over time the manufactures
12 changed, and generally they all change together from
13 one insulation type to another. And then over time we
14 find one insulation type lasts longer or less long, and
15 so we track that.

16 When it comes to something like the
17 Jenpeq units with a shaft defect, well, all the turbine
18 manufacturers find a way of getting their own kind of
19 defect so, yeah, we track it but if you looked at my
20 asset data base you'd likely find insulation type, or -
21 - or that sort of thing for staters. And I think we do
22 it for transformers. And then after that it's just the
23 knowledge of my staff as to the type of the asset,
24 whether that asset has a -- a defect that makes it less
25 likely to reach its expected life or not.

1 MR. ANTOINE HACAULT: Thank you. Do
2 you have data on what kind of work has been done which
3 extends the expected life? Example, again, would be
4 the turbines. So if you've done work on the turbines,
5 do you have data that gives us detail on how you've
6 extended the life of a particular item?

7 MR. NICK READ: Well, it's a good
8 example for me, not -- depending on what you're trying
9 to move in which direction, it's not so good for you.
10 Because turbines we can keep going indefinitely unless
11 there's something really wrong with them.

12 I think in my presentation -- PowerPoint
13 presentation the other day, I was saying that it's
14 really generators that bring a unit down for a major
15 overhaul. We can keep the turbine going indefinitely.
16 And when the generator finally fails after sixty (60)
17 years, or seventy (70) years, or whatever, that's when
18 we pull the whole machine apart and give it a full
19 overhaul frequently, but it's not driven by the
20 turbine.

21 And it's a real exception that we have
22 to replace a turbine runner for any other reason than
23 we want to get more power out of the machine.
24 Occasionally we will rerun a machine to get better
25 efficiency or more capacity. The two (2) point units

1 are an example of that.

2 But other than that, our people can go
3 down during outages, do welding repairs, and pretty
4 well keep the turbine going indefinitely.

5 MR. ANTOINE HACAULT: Okay. And for
6 generators then, you'd have a pretty good idea if you
7 did some maintenance work in off-peak times when you
8 could put the generator down, what you've been able to
9 do with respect to extending that life of the
10 generator?

11 MR. NICK READ: The -- I think the most
12 effective thing we do to extend the life of generators
13 is keep them clean. If a generator gets too dirty or
14 dusty it'll overheat. And at a -- if it gets too dirty
15 it'll age about twice as fast as one (1) -- one (1) a
16 year of dirty aging is worth about two (2) years of
17 regular aging.

18 So our biggest effort there -- you
19 really can't take them apart and tune them up. The
20 only thing you can do is keep them clean. And we send
21 our friends from insulation testing in every time
22 there's a major overhaul and they do insulation testing
23 to look for defects. So that's the way we take care of
24 the staters.

25 MR. ANTOINE HACAULT: Now, are you able

1 to produce reports as to how much you've extended the
2 life on a particular maintenance effort?

3 MR. NICK READ: Well, not really. What
4 we -- what we try to achieve there is keep the staters
5 clean and test to make sure there's no defect, and then
6 shoot to get the expected life or better. So not
7 really. We do keep track of all those -- all the tests
8 we do and we keep track of all the cleaning we do.

9 MR. ANTOINE HACAULT: Okay. And
10 lastly, and then I'll move on to Mr. Swatek, for your
11 area of assets in generation, do you have the -- are
12 you able to produce a report with respect to when the
13 particular assets have been retired or changed -- reta
14 -- retired, so?

15 MR. NICK READ: We can get that
16 through...

17

18 (BRIEF PAUSE)

19

20 MR. NICK READ: Yeah, we can run
21 reports on retired assets.

22 MR. ANTOINE HACAULT: In your area?
23 Okay. Thank you. And when you say, "we," that would
24 be with the assistance of Ms. Bauerlein?

25 MR. NICK READ: Well, we're kind of

1 like a corporate organism, it's -- it's hard to tell
2 one (1) part from the other.

3 MR. ANTOINE HACAULT: And I just heard
4 her say there was a difference between the accounting
5 records and your records.

6 So I just wanted to clarify that. So --
7 and is that done in groupings then or is it done by
8 station?

9 MR. NICK READ: I'm sorry?

10 MR. ANTOINE HACAULT: Would that be
11 done by groupings then? Or is it done by station?

12 MR. NICK READ: I'm sorry --

13 MR. ANTOINE HACAULT: Would that be
14 done by groupings or by station? So in other words if
15 I asked, you know, did you retire a -- a stator or
16 whatever. I'm going way above my head here.

17 Would you be able to --

18 MR. NICK READ: Yes.

19 MR. ANTOINE HACAULT: -- provide me a
20 report on groupings or on stations?

21 MR. NICK READ: If you asked for
22 stators we'd be able to tell you about when we retired
23 our stators.

24 MR. ANTOINE HACAULT: Per station --
25 per generating unit?

1 MR. NICK READ: Yes.

2 MR. ANTOINE HACAULT: Okay. Now, Mr.

3 Swatek --

4 THE CHAIRPERSON: Before we go there,
5 Me. Hacaault, I'm just looking at the clock here. We
6 can't sit beyond 4:30 today.

7 MR. ANTOINE HACAULT: I understand.

8 THE CHAIRPERSON: So have you got
9 enough time to finish all your questions before 4:30?

10 MR. ANTOINE HACAULT: Yes.

11 THE CHAIRPERSON: Okay.

12 MR. ANTOINE HACAULT: I apologize for
13 the tedious nature of this, but it's information that's
14 critical to understanding. In -- in our respectful
15 view I think it'll kind of all fall in place with
16 respect to the basis for any depreciation study and --
17 and also understanding the details for asset condition,
18 just like the extent of information. The two (2)
19 models of depreciation require different levels of
20 detail and it's important for us to understand the
21 basis on which certain assertions are being made with
22 respect to depreciation matters.

23 And unfortunately it's a pretty tedious
24 way to try and get that information, but these people
25 have been very helpful in -- in helping us understand

1 that. So I apolog -- I -- I apologize again for the
2 tedious nature of this, but it's a factual basis on
3 which then we proceed for analysis.

4 THE CHAIRPERSON: I'm wondering if we
5 should take a stretch now, or do you want -- do you
6 think you have enough time to...

7 MR. ANTOINE HACAULT: Sure.

8 THE CHAIRPERSON: Okay. Let's -- let's
9 take five (5) minutes and then we'll -- we'll resume
10 after that.

11

12 --- Upon recessing at 3:47 p.m.

13 --- Upon resuming at 3:56 p.m.

14

15 THE CHAIRPERSON: If we could resume
16 the proceedings. People are in position.

17 MR. ANTOINE HACAULT: Mr. Swatek,
18 you're the next one (1) that gets this grueling line of
19 questionings.

20 DR. DAVID SWATEK: All right.

21 MR. ANTOINE HACAULT: I apologize. I
22 just have to go through it. So thank you for being
23 patient with me.

24 So with respect to the area that I
25 understand you're responsible for, being transmission,

1 do you know whether now that area has the date of
2 installation of all of the components that fall into
3 that group?

4 DR. DAVID SWATEK: The asset nameplate
5 data is recorded -- recorded in our computerized
6 maintenance management system. So ideally we would
7 have both the -- the date of man -- manufacture and the
8 date of installation. But at the very least the date
9 of installation, yes.

10 MR. ANTOINE HACAULT: And is that
11 grouped by plant or just by group by category?

12 DR. DAVID SWATEK: It's -- hold -- hold
13 on a second. That would be grouped by asset, yes.

14 MR. ANTOINE HACAULT: So asset
15 category?

16 DR. DAVID SWATEK: Well, each -- each
17 individual asset has this data logged against it and
18 you could query this maintenance management -- the
19 maintenance management system in various ways.

20 MR. ANTOINE HACAULT: Okay. And would
21 that maintenance management data system also be able to
22 tell us the capital cost as of the date of
23 installation?

24 DR. DAVID SWATEK: No, we do not store
25 the capital cost in the maintenance management -- in

1 the maintenance management system, no.

2 MR. ANTOINE HACAULT: And, Ms.
3 Bauerlein, is something that you'd be able to produce a
4 report on, the date -- the capital costs as of the date
5 of installation for the transmission assets?

6 MS. SANDY BAUERLEIN: Our accounting
7 records do not have -- the transmission for operation
8 and maintenance purposes have the record for every
9 individual asset. We would not have the capital cost
10 for each individual asset in the asset records
11 necessarily.

12 MR. ANTOINE HACAULT: So at what point
13 in time do you keep track, or are you able to produce
14 actual costs as opposed to estimates with respect to
15 transmission asset costs when they were installed?
16 Let's break it down into small pieces.

17 At one point in time when I was asking
18 the questions with respect to the generation assets I
19 think the answer was somewhere around ten (10) years we
20 started to get actual data on cost of installation
21 versus an estimate?

22 DR. DAVID SWATEK: When we started
23 producing capital project justifications, the CPJs,
24 there -- there would be an estimate for all of the
25 assets associated with a particular project. The

1 project might be a station upgrade, and all of the
2 assets associated with that upgrade. That's how I'm
3 aware of it. Now, exactly when that CPJ process
4 started I don't recall.

5 MR. NICK READ: Just to clarify on my
6 answer. When I said, "ten (10) years," it's only
7 because original capital cost of items are something we
8 don't track for maintenance purposes. And so I was
9 trying to be helpful as to how could I recreate this.
10 Well, I could go back and look at purchasing records.
11 Well, anything beyond ten (10) years I probably
12 wouldn't find.

13 So it's not a set number. And, in fact,
14 I'm not even sure I could find it at ten (10) years.
15 So I would think the answer would be similar for all
16 three parties in that we don't track the original
17 capital costs at the asset level. We've been
18 interested at that at times, but it's so difficult.
19 You build a station, you know, like Wuskwatim, and the
20 project people don't buy the individual assets, they
21 buy systems.

22 And then to try and find out what the
23 individual governor cost is very difficult. And so we
24 -- we know what governors cost because my guys buy
25 governor replacements. So we have the knowledge to the

1 degree we need it. But if you want to find out what
2 the Wuskwatim governor costs, it's a whole lot of
3 backwards looking at files and trying to figure it out.

4 DR. DAVID SWATEK: Thank you very much,
5 Mr. Read. That help -- that -- that helps my answer as
6 well, too.

7 MR. ANTOINE HACAULT: So with respect
8 to asset groups, we don't have data on actual costs
9 from a financial perspective, Ms. Bauerlein, as of the
10 date of installation continuing?

11 MS. SANDY BAUERLEIN: There is asset
12 records. Those records were manual ledger books
13 maintained until 1997, when we actually moved our asset
14 records to a computerized system, so there is
15 information. Sometimes it's very difficult when we go
16 back in those ledger books to actually understand the
17 handwriting of the individual, was this the right
18 location if we were trying to find -- so again, the
19 data exists.

20 Is it easy to get the data? No, simply
21 because in those -- in that time, it was manual systems
22 and manual tracking of the information.

23 MR. ANTOINE HACAULT: And, Mr. Swatek,
24 with respect to the assets under your responsibility,
25 being the transmission assets, are you able to provide

1 a report with respect to how the expected life is
2 either equal to, greater than, or less than the
3 nameplate life?

4 DR. DAVID SWATEK: The -- the
5 computerized maintenance management system keeps track
6 of every asset change out, so we would have that.

7 MR. ANTOINE HACAULT: And you'd be able
8 to produce a report as to whether the expected life is
9 longer than -- I'm going to let you explain the other
10 word.

11 DR. DAVID SWATEK: Whether the actual
12 life is less than or equal to or more than the expected
13 life. That would end up being a manual process
14 outputting data to spreadsheets, and then trying to
15 manipulate spreadsheets.

16 MR. ANTOINE HACAULT: And -- and in the
17 transmission area, do you keep track of the quality of
18 assets in a particular group? I saw on the asset
19 condition report that, depending on the type of --
20 there's some particular assets that you might think
21 have a greater life than others within a grouping.

22 DR. DAVID SWATEK: There's a
23 reliability-centred maintenance program that we have
24 where assets receive routine maintenance and testing,
25 and the results of these routine maintenance and tests

1 would be recorded. Not all in the same spot though.

2 It would depend on the group doing the testing.

3 So that -- that information is out
4 there, and much like -- much like how Ms. Bauerlein des
5 -- described, a lot of it is handwritten.

6 MR. ANTOINE HACAULT: So, for example,
7 would HVDC svstem transformers be something that you
8 would have different expected life, depending on the
9 qualifv of that and tpe of transformer?

10 DR. DAVID SWATEK: Different expected
11 life? The HVDC transformers we actually -- because of
12 their criticality to the svstem, we actually have on --
13 online monitoring that's continually looking at the
14 dissolved gas and oil, hvdrogen content in the oil, and
15 we are monitoring those.

16 We've had converter transformers with
17 manufacturer defects that have not lasted as -- as
18 long. We've had con -- converter transformers that
19 we've kept in -- in service through changing the
20 dialectic oil, the insulating oil, in the transformer.
21 The oil will continuously run -- run through a
22 processing svstem.

23 The HVDC convertor transformers are
24 particularly critical, and we pay very close attention.
25 And they -- they don't last -- they have a short life

1 because they -- they take a lot of -- a lot of abuse.
2 Being part of the HVDC system, rather than a nice
3 smooth sinusoidal 60 Hz wave form they get hit with
4 steps, and it's very hard on them. So they -- an HVDC
5 convertor transformer would not last as long as a power
6 transformer out on the AC system.

7 MR. ANTOINE HACAULT: So that's why in
8 the asset condition report there's a range of expected
9 lives for HVDC system transformers from forty (40)
10 years to seventy (70) years.

11 Is that correct?

12 DR. DAVID SWATEK: Can you -- just to
13 make sure I'm thinking of the same --

14 MR. ANTOINE HACAULT: Page 12.

15 DR. DAVID SWATEK: -- column that you are
16 there.

17 MR. ANTOINE HACAULT: Page 12 -- sorry,
18 it's Appendix 4.2, page 32.

19

20 (BRIEF PAUSE)

21

22 DR. DAVID SWATEK: There is quite a
23 range, and there's all -- and if you scroll -- scroll
24 down to the footnote, wherever -- there's a -- be --
25 beside that range there's a footnote 10 --

1 MR. ANTOINE HACAULT: Footnote is page
2 115.

3 DR. DAVID SWATEK: Okay. We can go to
4 page 115 and see exactly what the rationale was at that
5 time. I think -- I believe it was -- it was endnote
6 number 10.

7 MR. ANTOINE HACAULT: Correct.

8 DR. DAVID SWATEK: Yes. So just --
9 just like we had -- just like we had just talked about,
10 the expected life is dependent on the loading and --
11 and service type, whether it's part of a six (6) pulse
12 or a twelve (12) pulse group, how -- which means how
13 violent are these steps.

14 MR. ANTOINE HACAULT: And you have all
15 that data, sir?

16 DR. DAVID SWATEK: That data is
17 collected by the insulation engineering and testing
18 department and analysed by that group along with HVDC.

19 MR. ANTOINE HACAULT: Okay.

20 DR. DAVID SWATEK: There -- it would be
21 largely paper records, yes.

22 MR. ANTOINE HACAULT: Okay. But that's
23 what helped your department to come up --

24 DR. DAVID SWATEK: It did, yes.

25 MR. ANTOINE HACAULT: -- with the

1 expected life --

2 DR. DAVID SWATEK: Yeah.

3 MR. ANTOINE HACAULT: -- in this
4 particular report. We'll look at footnote 11 and then
5 we'll just flip back to page 34. Footnote 11 talks
6 about an expected life is dependent on device
7 technology and electrical -- electrical and --
8 mechanical devices have longer expected --

9 DR. DAVID SWATEK: Oh, excuse me, are -
10 - are you still talking about HVDC converter
11 transformers, because --

12 MR. ANTOINE HACAULT: No. No, this --

13 DR. DAVID SWATEK: -- this footnote is
14 not --

15 MR. ANTOINE HACAULT: -- this is a
16 protection relay footnote.

17 DR. DAVID SWATEK: It might be helpful
18 to explain where this one (1) --

19 MR. ANTOINE HACAULT: Yeah, so --

20 DR. DAVID SWATEK: -- comes from.

21 MR. ANTOINE HACAULT: So just looking
22 at the note, then we'll flip back to 34, which is the
23 protection relays, to which this note refers. So page
24 34, please. And you'll see the footnote. Again,
25 you've got a range of twenty (20) to fifty (50) years

1 with that footnote 11 explaining why there's such a
2 wide range?

3 DR. DAVID SWATEK: Yeah, these
4 electrical mechanical relays, they are exactly what
5 they sound like. They're mechanical devices. So it's
6 like a really good clock. And it might last a long
7 time, but the ones we have, have been -- they're -- the
8 electrical mechanical relays in service are obsolete
9 and we are managing them through spares. And
10 eventually we will not have spares.

11 MR. ANTOINE HACAULT: The -- with
12 respect to your area of responsibility, being
13 transmission, would you be able to provide the -- the
14 dates that any of these particular assets were retired?

15 DR. DAVID SWATEK: I'll just confirm.
16 Not with the electrical mechanical relays. Those we
17 don't have.

18 MR. ANTOINE HACAULT: Okay. And would
19 you be able to do it with respect to the transmission
20 system wood pole structures?

21 DR. DAVID SWATEK: Not wood poles, no.

22 MR. ANTOINE HACAULT: Okay. With
23 respect to the wood poles, do you have similar to what
24 I believe Mr. Morin ex -- explained, the date the poles
25 were installed, the type of wood, ex cetera?

1 DR. DAVID SWATEK: That -- yes, that --
2 that we do have, yeah.

3 MR. ANTOINE HACAULT: With respect to
4 that particular category, being the transmission wood
5 pole structures, do you -- how far back do you have
6 data with respect to length of poles, type of
7 protectant, cost of each pole, things like that?

8 DR. DAVID SWATEK: Approximately ten
9 (10) years.

10 MR. ANTOINE HACAULT: Okay. Thank you.
11 You're off the hook.

12 DR. DAVID SWATEK: Okay. I'll turn it
13 off.

14 MR. ANTOINE HACAULT: You get the last
15 stuff. Sorry, Mr. Morin. Thank you everybody for
16 bearing with me. With respect to distribution, are you
17 able, with respect to your area, Mr. Morin, give us the
18 date of installation of any particular types of assets
19 set out in the Asset Condition Report?

20 MR. MICHEL MORIN: We have pockets of
21 data on certain assets depending on the asset class.

22 MR. ANTOINE HACAULT: Okay. Which
23 asset class and distribution do you have data with
24 respect to the date of installation?

25 MR. MICHEL MORIN: Wood poles, we bark

1 order them, but another contractor that does integrated
2 pole maintenance is putting the age -- estimated age on
3 those poles. So we don't have a complete set -- yet,
4 but we've extrapolated percentages. And even then,
5 some of those old poles the tags aren't visible
6 anymore. They're -- they're quite old vintage. So
7 sometimes there's assumptions even at that age group.

8 But we don't have a complete set, but
9 we've got a significant amount that it's allowed us to
10 give us a -- a statistical sort of sampling of what our
11 demographics would look like.

12 MR. ANTOINE HACAULT: Okay. I think in
13 your direct evidence you had mentioned that there was a
14 six (6) year cycle to get all that data.

15 Where are you at in your six (6) year
16 cycle, sir?

17 MR. MICHEL MORIN: Actually that's two
18 (2) separate programs. So just to kind of back up for
19 clarification. We bar code the poles. That was a -- a
20 -- just a counting process that we -- we had talked
21 about earlier. We had thought we had seven hundred
22 thousand (700,000) poles for years, and by counting
23 them we had a million. So there's a significant kind
24 of understanding of the sheer volume of assets.

25 And then we have an integrated pole

1 maintenance and that's a pole specialist that we hire.
2 And -- and they -- they work for utilities across
3 Canada. They inspect the pole, they treat the pole,
4 they know wood species very well. And they give us
5 that type of pole and also year manufacturing the
6 treatments that pole has had. And that's a one (1) in
7 fifteen (15) year cycle. So there's still probably
8 another few years left before we get that data and we
9 marry that bar code to that inspection to get sort of
10 their record married to that bar coding exercise.

11 The six (6) year cycle that Mr. Hacault
12 mentioned was our detailed feeder patrols. That's
13 where we go to every pole and stop at every pole with
14 one (1) of our employees that's been trained to look at
15 the condition of that pole. And that -- that looks at
16 the overall top of the pole where the cross-arms,
17 insulators, you know, conductor, all of those things.
18 We evaluate that pole, where those inspectors we talked
19 about earlier they don't do that condition assessment
20 on top on some of the equipment. So the six (6) year
21 cycle, I think we're on the third full year of our
22 program on the six (6) year cycle. The second or third
23 year I'm -- I'm pretty sure.

24 MR. ANTOINE HACAULT: And where are you
25 at on the fifteen (15) year cycle with your independent

1 contractor? How many years?

2 MR. MICHEL MORIN: Well, like I
3 mentioned before they've been working us -- with us
4 since the '80s where technology wasn't there with bar
5 codes and all that. So we had started inspecting poles
6 quite -- quite a bit earlier than most utilities. In
7 '03 the bar codes is where we could kind of start to
8 marry those records. We're probably about three (3)
9 years away before getting that more complete set of --
10 of pole records.

11 MR. ANTOINE HACAULT: And do you have
12 data with respect to each asset group set out in the
13 asset condition report as to the capital cost as of the
14 date of the installation with respect to those assets?

15 MR. MICHEL MORIN: Well, my dad told me
16 he was paid fifty dollars (\$50) a hole to dig a hole
17 back in the day to install some of those poles. But
18 back -- going back into the '50s, '60s, or the cost of
19 manholes. I -- I -- we don't have any of those
20 records. We wouldn't have any of those records of
21 those original install costs.

22 MR. ANTOINE HACAULT: Do you agree with
23 that, Ms. Bauerlein?

24 MS. SANDY BAUERLEIN: In the
25 operational systems they do not, but there are records,

1 not again at the detailed asset level. But there are
2 records from an accounting perspective.

3 MR. ANTOINE HACAULT: Okay. And at
4 what point in time do you start to have data with
5 respect to the capital cost of -- as of the date of
6 installation?

7 MR. MICHEL MORIN: I guess that's a --
8 a difficult question because each asset is considerably
9 different than another, where it is geographically.
10 Like, some poles we use a helicopter to set in remote
11 areas, areas that is downtown urban or a rural pole.
12 So the cost per pole is -- can vary considerably on the
13 installation and which pole is coming out of service.
14 So I don't know how -- when you look at the actual --
15 each asset, we wouldn't track that by each individual
16 install. No, we wouldn't.

17 MR. ANTOINE HACAULT: When would you be
18 able to give us an idea, sorry, with respect to, like,
19 poles as an example as to the cost -- average cost of
20 installation?

21 MS. SANDY BAUERLEIN: The current
22 average cost of installation?

23 MR. ANTOINE HACAULT: Or when can we
24 start to get some data with respect to the average cost
25 of installation, for example of poles?

1 Is that ten (10) years back? Five (5)
2 years back?

3 MS. SANDY BAUERLEIN: It would probably
4 be as Mr. Read indicated. Since we now have a
5 computerized system we have the capital project
6 justification process. So as we create a project.
7 Again, it's not at the individual asset level, but we
8 would have a project to replace so many poles. And so
9 that cost of that work would then be captured and
10 recorded. And so exact date, I -- I'm not sure exactly
11 when that sort of all happened.

12 MR. ANTOINE HACAULT: And is the answer
13 any different for other categories in the report? For
14 example, there's breakers, stations transformers,
15 underground cable, manholes.

16 When would you be able to give us the
17 cost of installation of any of those particular
18 grouping of assets?

19 MS. SANDY BAUERLEIN: It would be the
20 same for all assets. I don't see it as any different.

21

22 (BRIEF PAUSE)

23

24 MR. ANTOINE HACAULT: With respect to
25 your area of control, which is distribution, Mr. Morin,

1 are you able to give us expected lives for different
2 areas? And I'll choose one (1) example, just to
3 illustrate. It's page 54 of this report, Diana.
4 There's underground cables, and it shows an expected
5 life of thirty (30) to seventy (70) years.

6 Could you remind us again why there's
7 such a variation? Does it depend on cable type? And
8 if we go to footnote 22, does that help us?

9 MR. MICHEL MORIN: If you go to
10 footnote 22? The -- the range -- the -- the -- excuse
11 me. The range there is because of different types of
12 cable. We got an example of some of the downtown
13 cables. We put in lead cables in the downtown core
14 area. That stuff was put in quite a few years ago, and
15 is still in service.

16 That one (1) cable type we were talking
17 about before that's very prone to failures, it was put
18 in in the late '70s, early -- early '80s. And we've
19 quit -- well, I don't think anyone -- quit using it
20 after the mid-'80s, because they realized it was not
21 the right cable to maybe move forward. A different
22 technology came out.

23 So we have a block of that cable that's
24 now in that thirty (30) year range, where -- thirty
25 (30) to forty (40) is problematic. And then some of

1 the new cables we're putting in, we're expecting that
2 fifty (50) to sixty (60) year life range. So between
3 the downtown big lead copper cables that are still in
4 service sixty (60) years out to some of that '70s and
5 '80s cable, that expected life is between the thirty
6 (30) and forty (40) years, that's the range of why that
7 was given there, because it multi -- like, very
8 different manufacture makeup of the asset in that
9 class.

10 MR. ANTOINE HACAULT: And -- and do you
11 have data to explain how much is in each category of
12 cable?

13 MR. MICHEL MORIN: Yeah, we have -- we
14 have some high-level estimates on -- on the volume of -
15 - of cable in each class, yeah.

16 MR. ANTOINE HACAULT: Okay. If you go
17 to page 111, Diana, please, one (1), triple one (1).
18 This is another page with respect to the underground
19 cables. And the paragraph under that heading, the full
20 -- first full paragraph:

21 "Due to the extreme difficulty in
22 inspecting buried cables, there's no
23 regularly scheduled inspection
24 program in place to evaluate the
25 health of these assets."

1 So how are you able to come up with the
2 thirty (30) and seventy (70) years depending on the
3 life of the cable if you aren't able to do inspections?

4 MR. MICHEL MORIN: I think there's a
5 lot of industry knowledge out there of what cables life
6 expectance of these certain manufactures of cables. As
7 I'd mentioned before, that -- that one (1) pocket that
8 was put in in the '70s and '80s, we have initiated a
9 pretty comprehensive cable remediation program where
10 we're actually testing the cable, and then selecting
11 whether we're going to inject or replace what's
12 required and defer what passes that test, and that's
13 fairly new technology.

14 Most utilities, there's inspection
15 programs quite new. But the idea of what we did on
16 poles, like, going out to test poles, you -- you
17 traditionally do that on cables, to have it on a
18 frequency of disconnecting it and trying to test it.
19 There wasn't very many tests available.

20 Well, this new test that -- that
21 utilities are -- are kind of going on is something
22 we've just embarked on in the last couple years, and --
23 and moving forward with, and that'll provide more
24 information on that health. But as a demographic,
25 utilities have kind of pegged those -- those cables at

1 a certain life expectancy, and -- and we use those --
2 those estimates.

3 MR. ANTOINE HACAULT: Thank you. And
4 the -- the last part I'll just get a little bit of
5 clarification on is the wood poles. Before I jump to
6 that, though, in your area of responsibility, are you
7 able to give us details of when a particular asset was
8 retired, and, if so, how far back?

9 MR. MICHEL MORIN: Yeah, we wouldn't
10 have that record of the retirement records other than
11 the recent projects that we've done. But with the
12 sheer volume of projects, we wouldn't have the actual
13 retirement information.

14 MR. ANTOINE HACAULT: So for -- can you
15 help us, Ms. Bauerlein, with --

16 MS. SANDY BAUERLEIN: We do have a fair
17 amount of retirement information from the accounting
18 perspective.

19 MR. ANTOINE HACAULT: And in his area,
20 what detail would you have with respect to retirements
21 and how far back would it go? Is it the same answer as
22 before? It goes back to about 2003?

23 MS. SANDY BAUERLEIN: I would -- I
24 would really need to confirm that. I know we've done
25 some extensive work the last number of years on

1 gathering retirement information. I'm just -- I don't
2 have all the --the details at my fingertips, here. We
3 could talk to that, though, at the end --

4 MR. ANTOINE HACAULT: Rather than try
5 to speculate as to the quality of the data that you
6 have on retirement, to -- could you either point me to
7 somewhere on the record if it has been answered, or to
8 answer, could you undertake to give an answer to that
9 with respect to distribution?

10 So -- so I'll let -- I can let you ref -
11 - try to reformulate in your own language with respect
12 to the distribution group, but I'd like an undertaking
13 to the effect of to let me know when you can provide
14 data under the generation assets as to when particular
15 items described in the asset report -- or asset
16 condition report were retired.

17

18 (BRIEF PAUSE)

19

20 MS. SANDY BAUERLEIN: Do you want...

21 MR. ANTOINE HACAULT: So for example,
22 he -- you may tell me that we have the data as to when
23 poles or breakers were retired going back to 2005.
24 After that, we'd have to go into paper, or -- or -- you
25 know, I don't know how your records are segregated, and

1 what you can -- what you could give me a report on if I
2 asked one. I'm not asking for one, but I'd want to
3 know the quality of your data and how far back it goes.

4 MS. SANDY BAUERLEIN: So you're looking
5 for not the retirement data itself, but in terms of
6 approximately when -- for each sort of asset category,
7 when we started collecting retirement data. Is that --

8 MR. ANTOINE HACAULT: That would be
9 able to answer the question as to when each asset was -
10 - the -- the asset group -- how many retirements in
11 each asset group.

12 MS. SANDY BAUERLEIN: We could
13 undertake.

14 MR. ANTOINE HACAULT: Do you want to
15 take a stab at reformulating that, or do you think the
16 record is clear enough?

17 THE CHAIRPERSON: I hope you can frame
18 that undertaking, because I can't. Who wants to make a
19 -- a crack at it?

20

21 (BRIEF PAUSE)

22

23 MS. SANDY BAUERLEIN: So you're looking
24 for information, for example, underground cables, when
25 did we start obtaining retirement data -- what year did

1 we start obtaining retirement data? So for each major
2 asset category --

3 MR. ANTOINE HACAULT: Yes.

4 MS. SANDY BAUERLEIN: -- you want it
5 for each asset category, or is there just select asset
6 categories? There's a lot of asset categories, so.

7 MR. ANTOINE HACAULT: Well, the asset
8 categories that are set out in the asset condition
9 report. There's a defined number of categories under
10 distribution, and I'd like to know when you can start
11 providing data with respect to retirements in each
12 category that's set out in the asset condition report
13 under distribution.

14 MS. SANDY BAUERLEIN: So the retirement
15 -- the year of retirement -- we can start providing
16 retirement data for each asset category as outlined in
17 the asset condition report.

18 MR. ANTOINE HACAULT: Correct.

19 MS. SANDY BAUERLEIN: Okay.

20

21

22 --- UNDERTAKING NO. 32: Manitoba Hydro to provide
23 retirement data in each
24 category set out in the
25 asset condition report

1 under distribution

2

3 MR. BRENT CZARNECKI: And just add,
4 we'll -- we can use our best efforts to try and
5 determine a date, or maybe even a range of dates,
6 because I think it'll be difficult for her to pinpoint
7 a year, potentially, so.

8 THE CHAIRPERSON: Perhaps -- perhaps
9 you could enlighten us, the panel, at least, where
10 you're going with this?

11 MR. ANTOINE HACAULT: Well, the
12 depreciation methods, as will be explained by our
13 depreciation expert, you need certain basic data for
14 ELG. To be able to make a depreciation under that
15 system work, you'll need to have costs and date of
16 installation of a particular item, the retirement date
17 of a particular item, and unless you know that -- this
18 is more a matter of argument, but -- and I -- I'm not
19 intending to argue, and I'm not intending to give
20 evidence, but unless you can have that, the ELG method
21 is missing underlying data for its implementation.

22 So to the extent that Manitoba Hydro has
23 or does not have information, it'll assist in providing
24 guidance to this Board of the accuracy that can be
25 achieved by ELG, or by ASL for that matter, both

1 different depreciation methods. But one (1) takes an
2 average service life of the entire group, and it's
3 maybe not a fair characterization of -- of the
4 evidence. But in the report we were looking at,
5 there's an expected life that's shown on each table and
6 then turnover based on replacement rate. So an average
7 turnover over that time period.

8 And if you have seventy-five (75) years'
9 expected life and we're turning them over in seventy-
10 five (75) years, we're meeting budgetary requirements
11 for these three (3) gentleman that are meeting -- or
12 sitting up here, correct?

13 If over the -- if you've got an expected
14 life of poles for seventy-five (75) years and you've
15 got a turnover rate of seventy-five (75) years for
16 those poles on a replacement program, that would meet
17 your expectation with respect to your responsibility,
18 would it not, Mr. Morin?

19 THE CHAIRPERSON: Okay. You're not on
20 the mic -- your -- the microphone's not on, I don't
21 think.

22 MR. MICHEL MORIN: My apology. It
23 would all depend on when the ins -- when they were
24 installed and the volume installed. But, you know,
25 whether that would be sufficient or not.

1 MR. ANTOINE HACAULT: Thank you. I --
2 that's -- that is -- that's all I can accomplish and I
3 think I've got most of the information I needed. If I
4 need more, I'll deal with it in depreciation or other
5 areas. Thank you.

6 THE CHAIRPERSON: Okay. Thank you for
7 that, Mr. Hacault. And with that, I think I'll call
8 these proceedings to an end unless there's some
9 administrative issues to address. The -- I don't think
10 there are.

11 I want to thank the members of this
12 panel who have been with us now for a number of days.
13 So I -- we've gone through a fair amount of detail and
14 I appreciate the information you've been able -- been able
15 to provide for us. It's been -- you've been very --
16 very useful witnesses from our perspective. So thank
17 you very much for your contribution, each and every one
18 (1) of you. Thank you very much. Keep up the good
19 work.

20

21 (PANEL STANDS DOWN)

22

23 --- Upon adjourning at 4:31 p.m.

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2 Certified Correct,

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7 Bob Keelaghan, Mr.

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