MANITOBA PUBLIC UTILITIES BOARD

Re: MANITOBA HYDRO

2017/18 and 2018/19

GENERAL RATE APPLICATION

PUBLIC HEARING

Before Board Panel:

Robert Gabor	-	Board Chairperson
Marilyn Kapitany	-	Vice-Chairperson
Larry Ring, QC	-	Board Member
Shawn McCutcheon	-	Board Member
Sharon McKay	-	Board Member
Hugh Grant	-	Board Member

HELD AT:

Public Utilities Board

400, 330 Portage Avenue

Winnipeg, Manitoba

December 14, 2017

Pages 1841 to 2030

APPEARANCES

Bob Peters (np)	)Board Counsel
Dayna Steinfeld	)
Patti Ramage	)Manitoba Hydro
Odette Fernandes (np)	)
Helga Van Iderstine (np)	)
Byron Williams (np)	)Consumers Coalition
Katrine Dilay	)
William Gange (np)	)GAC
Peter Miller	)
Antoine Hacault	)MIPUG
George Orle	)MKO
Senwung Luk	) Assembly of
Corey Shefman (np)	) Manitoba Chiefs
Kevin Williams (np)	) Business Council
Douglas Finkbeiner (np)	) of Manitoba
Daryl Ferguson (np)	) City of Winnipeg

LIST OF APPEARANCES (cont'd)

Christian Monnin (np)	)General Service)Small, General)Service Medium)Customer Classes
William Haight (np) William Gardner (np)	)Independent Expert)Witnesses

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LIST OF UNDERTAKINGS

NO.	DESCRIPTION	PAGE NO.
10	Manitoba Hydro to extend the chart at slide 55 of Manitoba Hydro Exhibit 64, to and including the year 2036 and underlying data	1895
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--- Upon commencing at 9:03 a.m.

THE CHAIRPERSON: Good morning, everyone. Ms. Steinfeld, would you like to take us through today.

MS. DAYNA STEINFELD: Thank you, Mr. Chair. MIPUG will be continuing its cross-examination of the revenue requirement panel. They're scheduled here until 11:00 but I understand that likely the majority of the morning will be used, if that's acceptable.

We expect that the Assembly of Manitoba Chiefs will commence this afternoon at 1:00. Green Action Centre will also be conducting cross-examination today. Mr. Gange is required to attend at the Court of Queen's Bench this afternoon, but expects to be available at 3:00. So we may be taking breaks, as required, depending on availability. Thank you.

THE CHAIRPERSON: I understand that we're probably going to have to finish around four o'clock this afternoon, 4:00-4:15. Thank you.

Mr. Hacault...? Oh, sorry, Ms. Ramage, anything to --

MS. PATTI RAMAGE: Oh, two (2) things --

THE CHAIRPERSON: -- any undertakings or --

MS. PATTI RAMAGE: -- and I'm not sure what the four o'clock time was. We had requested a 5:15 at the latest.

THE CHAIRPERSON: Well, yeah, we have -- we have a panel member who has to catch a flight.

MS. PATTI RAMAGE: And that's fine, we just wanted to make sure it wasn't on our account.

THE CHAIRPERSON: And -- and it was -- everything was set up very well and then the airline decided to move up the schedule by an hour so.

MS. PATTI RAMAGE: It happens to everyone.

THE CHAIRPERSON: Yes.

MS. PATTI RAMAGE: We do have one -- maybe a clarification. I was going to ask Mr. Cormie to make on information that he provided Mr. Williams just before we start and I'll alert Mr. Williams to look on -- or is he around the corner?

THE CHAIRPERSON: Yes, Ms. Dilay -- Ms. Dilay is here. So, Mr. Cormie...?

MR. DAVID CORMIE: Good morning. Yesterday, Dr. Williams and I were having a conversation about the Clean Power Plan in the United

States and the state of potential changes to that.

And all I wanted to relay to Mr. Williams is that the Environmental Protection Agency is currently soliciting comments on a docket regarding repose -- a proposed repeal of the Clean Power plan. They haven't actually proposed it but they're -- they're asking people about comments on that. And so I just wanted to clarify that for the record.

That conversation took place on page 1664 of the transcript from yesterday. Thank you.

THE CHAIRPERSON: Thank you. Mr. Hacault...?

CONTINUED MANITOBA HYDRO PANEL 2 re REVENUE REQUIREMENT

LIZ CARRIERE, Previously Sworn
LOIS MORRISON, Previously Sworn
DAVID CORMIE, Previously Sworn
SANDY BAUERLEIN, Previously Sworn
JOEL WORTLEY, Previously Sworn
SUSAN STEPHEN, Previously Sworn
CHUCK STEELE, Previously Affirmed
JAMES MCCALLUM, Previously Sworn
HAL TURNER, Previously Affirmed
GERALD NEUFELD, Previously Affirmed

DAVID SWATEK, Previously Sworn
TERRY MILES, Previously Sworn
GREG BARNLUND, Previously Sworn

CONTINUED CROSS-EXAMINATION BY MR. ANTOINE HACAULT:

MR. ANTOINE HACAULT: Yes, good morning members of the panel and all Hydro witnesses, and everyone.

Yesterday we were -- started in a discussion with respect to comparing various IFFs. I propose to put that off until after the morning break cause I understand that Hydro has graciously agreed to do another run with that -- sorry to use the acronym, but the twenty (20) year WATM because there's been discussion about that and to amplify the table that was in our book to also reflect the extra column and that extra run. So I'll defer that discussion until we have that information.

The discussion this morning I'll start with is about rate -- rate smoothing. We had a bit of that discussion yesterday and there are some materials at tab 8 of our book of documents at page 66 of the PDF. This relates to a discussion which I had started to have on the very first day of my cross-examination with Hydro witnesses but, at that time, we didn't have -- just by way of background, the excerpt I had put to the Hydro panel was an excerpt from March 21 and it was a discussion between Mr. George Orle and Mr. Rainkie and that discussion referred to a previous discussion. So, Mr. Rainkie was saying, oh I discussed this with the chairman the day before.

And so what we've extracted is what we believe to be this -- the discussion from the date before.

Ms. Carriere, have you had a chance to look at those extracts?

MS. LIZ CARRIERE: Yes, I have.

MR. ANTOINE HACAULT: And I'll start with a general question: Did I fairly extract the discussions on rate smoothing, in other words, did I start early enough and go far enough or do you feel I missed a relevant part of the extra -- extracts of the transcript on that specific discussion?

(BRIEF PAUSE)

MS. LIZ CARRIERE: Yes, but there is -- there was a whole hearing on this so -- on the rates -- well not the entire hearing, but a large portion of the hearing on -- on the rates -- rate impacts of the

NFAT development plans.

MR. ANTOINE HACAULT: Thank you, but my question was specifically with rate smoothing. I perhaps missed it in the word search but I didn't find any other discussion in the transcripts about that specific subject as -- in a detailed way as we've extracted here.

MS. LIZ CARRIERE: I'm -- I didn't review the entire transcript, so I can't comment on where rate -- rate smoothing did or didn't appear elsewhere in the transcript.

MR. ANTOINE HACAULT: Okay, thank you. I'll direct your attention to page 1020 -- or 3027 of the March 20 transcript, which is a part of the exchange between Mr. Rainkie and the Chairman of the Public Utilities Board.

For those who haven't had the benefit of meeting Mr. Rainkie, could you remind us what his position was in Manitoba Hydro at that hearing -- or as of the date of that hearing?

MS. LOIS MORRISON: Mr. Rainkie was the vice-president of finance.

MR. ANTOINE HACAULT: And is it fair to say that he was really the lead in senior management with respect to this hearing?

MS. LIZ CARRIERE: Yes. I should also say that it was in -- when I say "finance," it included regulatory affairs.

MR. ANTOINE HACAULT: Okay. So it's, yes, that he was the lead senior manager or executive on this NFAT hearing.

MS. LIZ CARRIERE: Yes. In terms of I -- I believe Mr. Thomson was also a -- a policy witness early at the -- at the outset of the hearing.

MR. ANTOINE HACAULT: And if we go to line 4 which provides some context to the highlighted portion at line 8, and I'm quoting for the record:

> "I started summarizing the evidence in my own mind and wondering how the Board was going to deal with that. What I call the correction factor in that year after, you know, the end of the twenty-year time period."

So, let's stop there. That was what you referred to as the hockey stick effect in the twenty (20) year projections?

MS. LIZ CARRIERE: That's correct.

MR. ANTOINE HACAULT: And Mr. Rainkie is explaining what he did to try and deal with that and that part is in highlight at lines 8 to 11 and continuing, I'll quote for the record:

"And I actually asked my staff, could we somehow smooth out -- that out and show a little bit more of what we thought -- thought would really happen, and I was trying to do that a little bit yesterday. So I really appreciate the question, actually."

And that kind of ties into what we were looking at yesterday and the comments that the mechanical exercise of reaching a 25/75 debt equity -- or 75/25 debt equity ratio led to that unusual result and we were looking at various other integrated financial forecast runs to give us an idea of what might happen if we change those strict parameters.

Is that correct?

MS. LIZ CARRIERE: I think you're referring to the alternate rate setting methodologies, is that --

MR. ANTOINE HACAULT: Yes, that's --

MS. LOIS MORRISON: Yes, we were discussing those yesterday.

MR. ANTOINE HACAULT: Members of the panel, I don't propose to go through the rest of the transcripts excerpts. I think they're on the record and they accurately record what was said by Mr. Rainkie. So, I'll move on to the next -- another subject.

The next subject which I propose to deal with is at tab 10, which is page 111 of our book of documents. It's a very small, discrete subject which deals with the metric that is shown at page 117 of our book of documents, at the bottom and to the left-hand side of the slide. If we go -- left, I need to see the headings, please. Thank you, Kristen.

Close to the bottom there's some acronyms. Could someone on the panel explain what those acronyms are? It says CFO to Capex ratio.

MS. LIZ CARRIERE: CFO stands for cash flow from operations and Capex, I think we clarified yesterday, that's capital expenditures.

MR. ANTOINE HACAULT: Could somebody help this Board understand what goes into the capital expenditures in that particular form? What gets included and what gets excluded?

MS. LIZ CARRIERE: So the capital expenditures in this schedule includes --

MR. ANTOINE HACAULT: Sorry to interrupt, Ms. Carriere, maybe we could pick a line and -- and refer to some numbers so that the transcript ties your explanation to some numbers, please.

MS. LIZ CARRIERE: Okay. So electric PP&E is from the cash flow statement.

MR. ANTOINE HACAULT: Okay and what's PP&E?

MS. LIZ CARRIERE: Property, plant and equipment.

MR. ANTOINE HACAULT: Thank you.

MS. LIZ CARRIERE: Which includes the total electric capital expenditures for Manitoba Hydro. And as well, it includes deferred expenditures, such as demand-side management.

The next line is capitalized interest included in property, plant and equipment. In the cash flow statement it includes the interest capitalized in each of the projects, and what we're doing here is simply reclassifying it to interest paid so that it -- the interest paid in the line above you can see it's coming out of electric property, plant and equipment, and in this line and being added back in to the interest paid or the cash flow going out of the Corporation.

MR. ANTOINE HACAULT: Okay, could we

just take that by looking at a specific line so I make sure I'm following you as to what's being taken in and out here.

MS. LIZ CARRIERE: So if we look at the first column in 2013, we are deducting $104 million from total capital expenditures of 1.3 billion, and adding it into interest paid above. So you can see the same $104 million being added to 467 million for a total of 571 cash interest paid being paid to bondholders.

MR. ANTOINE HACAULT: Thank you, please continue.

MS. LIZ CARRIERE: Then -- so we have a total capital expenditure forecast of cash flows, including deferred expenditures of $1.2 billion in 2013. And then we are deducting from that major -- major projects which include Bipole III, Keeyask, MMTP or Manitoba/Minnesota transmission project and the Great Northern transmission line to arrive at a total of capital expenditures in 2013 of $791 million.

MR. ANTOINE HACAULT: And could you explain the two (2) stars at the bottom left-hand corner? There's a single star. Help us understand the rationale for the different treatment of Bipole III in the first set of calculations which leads to cash flow from operations.

MS. LIZ CARRIERE: So in -- in the cash flow from oper -- operations on the top portion of the schedule to the $571 million of total interest being paid to bondholders, we've removed interest capitalized relating to Keeyask, Manitoba/Minnesota transmission project and the Great Northern transmission line.

And we've removed those because they are -- they provide significant revenue generation. So we have not included those in the cash flow from operations calculation.

We have left Bipole III in because the line losses are approximately in terms of revenue provide an incremental $20 million. So, we're not considering that provide a significant revenue generation potential.

In terms of the capital expenditures, we have removed all of the major projects so that would be Keeyask, Manitoba/Minnesota transmission project, Great Northern transmission line, as well as Bipole III.

Recognizing that we have an expectation to borrow for those projects, so, we're not expecting to cover those costs -- or those capital -- cash capital expenditures from the cash flow from operations.

MR. ANTOINE HACAULT: Thank you very much. Now, I neglected to give an introduction as to what this particular run was based on.

Am I correct it -- that this was basically an NFAT run? If we go to the very top of this slide, we should have a heading.

Could you confirm that this was based on the IFF13 presented at the NFAT hearing?

MS. LIZ CARRIERE: I'm on the wrong page in my book of documents here. Sorry. Well, it's -- I was on the -- I was. I am sorry, I was on the preferred development plan 14 under base DSM and you are on -- it looks like on page -- your page 117, is that correct? Okay.

MR. ANTOINE HACAULT: Yes.

MS. LIZ CARRIERE: Sorry.

MR. ANTOINE HACAULT: Oddly enough, all the numbers matched.

MS. LIZ CARRIERE: Well for 2013, I would expect that it would, yeah.

Okay, so this is the calculation for Keeyask in 2019, followed by gas with DSM level 2, based on the rates -- submission -- or main submission rate methodology. And yes, this was based on the 2013 IFF.

MR. ANTOINE HACAULT: And that was chosen because it was the closest to what matched to the recommendations of the Public Utilities Board; is that correct?

MS. LIZ CARRIERE: I'm sorry, Mr. Hacault?

MR. ANTOINE HACAULT: This run was chosen because it was the one that was the closest to what ended up being recommended by the Public Utilities Board out of the NFAT report; is that correct?

MS. LIZ CARRIERE: This particular schedule was not but the financial statements were, yes.

MR. ANTOINE HACAULT: Okay. And just to perhaps try to clarify that more. This came out of an interrogatory and it's in the previous pages, but it was a run that Hydro did as a result of that interrogatory using this scenario; correct?

MS. LIZ CARRIERE: Well, the run had been done previously in 2014, but we extracted the data from -- from that run to -- to develop this schedule.

MR. ANTOINE HACAULT: And what was developed in this schedule, I would suggest for the first time, was giving us the metric which we initially talked about, the cash flow from operations to capital expenditures ratio as defined and set out in this analysis; correct?

MS. LIZ CARRIERE: Yes, it is -- it's extracted from the cash flow statement that was prepared at the time of the NFAT in 2014.

MR. ANTOINE HACAULT: But what I'm looking for, and I didn't ask my question as accurately as I should have. This is the first time that Hydro runs the data to give us the cash flow from operations to Capex Ratio; is that correct?

MS. LIZ CARRIERE: Yes, that's correct. We extracted the data to populate this schedule.

MR. ANTOINE HACAULT: And this metric of cash flow to operations -- or from operations to Capex was not a metric which was used or discussed at the NFAT hearings, was it?

MS. LIZ CARRIERE: This schedule was not used at the hearings. No, I think Mr. McCallum established that earlier on.

MR. ANTOINE HACAULT: This is a

different metric that is now being presented to the Board to assist in the analysis that's being made in this hearing; is that correct?

MS. LIZ CARRIERE: This is a presentation modified from the cash flow statement to give you a better picture of the actual cash leaving the Corporation.

MR. ANTOINE HACAULT: And could you remind us what Hydro considers to be the minimum ratio that it wants to achieve under that metric?

MS. LIZ CARRIERE: Which metric, I'm sorry?

MR. ANTOINE HACAULT: The cash flow from operations to Capex Ratio. What's the minimum target it seeks to achieve?

MR. JAMES MCCALLUM: We have not established a minimum target as Ms. Carriere said and, as I said earlier, this -- this analysis is meant to draw from financial statements really important and specific articulation of the cash flow situation of the Company. It's meant to demonstrate that we have a serious problem.

We haven't -- we have not established a -- a target for this, as you're calling metric or ratio.

MR. ANTOINE HACAULT: Could I take you to your general application at Tab 2, and page 22 of that application.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: The reason I was asking the question, Mr. McCallum, on the Company's minimum is that I had looked at figure 2.18 in your application, which I understand graphs out this metric that we've been talking about. So let's start with that.

Is the intention of this graphic to show in a visual way what's happening in that metric, being cash flow from operations to Capex ratio?

MR. JAMES MCCALLUM: Yes, it is.

MR. ANTOINE HACAULT: And what was the purpose, then, of putting the dotted line at a ratio of one (1) in Manitoba Hydro's application?

MR. JAMES MCCALLUM: I think it demonstrates that when you're below one (1), you are consuming cash to run your basic operation.

MR. ANTOINE HACAULT: Okay. So is it the evidence of the Corporation today that I am misreading this graph in interpreting Hydro's position that the Capex ratio should be a minimum of 1?

MR. JAMES MCCALLUM: The Company does not have this ratio or a target for it. We're demonstrating a cash flow deficiency. So if you're below one (1) you are cash flow deficient.

My point of view is, as a planning matter, you should never target one (1) as your target, meaning you spend your last -- you're exactly balanced between the dollars you expect to bring in, and the dollars you expect to spend, much like I don't believe it's prudent for a company to target nil or zero net income.

MR. ANTOINE HACAULT: Is that the position of the Company, or your personal view, because you said, My personal view, and I had understood the panel to be --

MR. JAMES MCCALLUM: You can take it as the position of the Company.

MR. ANTOINE HACAULT: It's the position of the Company?

MR. JAMES MCCALLUM: Absolutely.

MR. ANTOINE HACAULT: So help me understand, if that's the position of the Company that having a ratio of one (1) is an objective, how does that differ from it being a minimum target? I'm not getting the distinction you're -- appear to be drawing, sir.

MR. JAMES MCCALLUM: Well, I -- I guess I interpreted your question to mean, What is the -- what is Manitoba Hydro's target as a planning matter? Should we be planning to be one (1) times, one point two (1.2) times, one point eight (1.8) times? And I'm trying to say that Manitoba Hydro hasn't turned its mind to that question.

The minimum suggests that, again, below one (1), you are cash consumptive. You are running your business via deficit. So as a -- as a immediate test to whether you are deficit funding your business, you need to be above a minimum of one (1).

MR. ANTOINE HACAULT: And if we go back to page 117, of the PDF, which is at Tab 10 of our book of documents, under that metric, going into the NFAT hearings and up to and including this year, there's only about half of that metric that's being met as it's defined in this run, correct?

MR. JAMES MCCALLUM: That's correct, and I think that would lend support to statements I've made earlier that we were not asking for the right rate increases, and that we were allowing a situation now identified by Moody's, of rate increases not keeping up with our costs.

MR. ANTOINE HACAULT: And what kind of a rate increase, a one (1) time rate increase, would we have needed in 2013 to have that metric met?

MR. JAMES MCCALLUM: Well, to meet cash flow neutrality, you would need $340 million more revenue, a little bit less. There would be some interest savings that -- that accrue to you when you have additional revenue.

MR. ANTOINE HACAULT: And --

MR. JAMES MCCALLUM: -- order of magnitude and kind of just estimating for your purposes, 20 percent.

MR. ANTOINE HACAULT: Okay. And we get that number if we're looking at the column 2013 by looking at the capital expenditures first of seven ninety-one (791). Is that the starting point, sir?

MR. JAMES MCCALLUM: I was looking at the deficit of 340 million, and just based kind of cuffing it against a -- a domestic revenue of 1.4 to 1.5 billion.

MR. ANTOINE HACAULT: But I'm trying to assist the Board in understanding is your mind -- you're like my son. He does all the calculations in his mind, and I know where it came from, but I'm not so sure everybody else in the room has followed. So the capital expenditures number seven ninety-one (791) is one (1) number, and then you subtract from that the cash flow, which is 451 million, and that's where you get your $340 million that you need to find somewhere. Is that right?

MR. JAMES MCCALLUM: It -- it more or less is. I would just restate it that we start with the cash flow four five one (451) and we subtract from that the capital expenditures of seven nine one (791).

MR. ANTOINE HACAULT: And that gives you your 340 million --

MR. JAMES MCCALLUM: Negative.

MR. ANTOINE HACAULT: -- and then you're doing a subsequent calculation. If you're saying that it's about $17 million for each percent increase, the increase in that year would have had to be in the order of 20 percent to meet that target?

MR. JAMES MCCALLUM: As a one (1) time increase, that's right.

MR. ANTOINE HACAULT: I'm not good at accounting terms, and I always get criticized at this, but I think I heard you say, The deficit. Am I understanding that from a financial perspective, that means that you would have to be borrowing to do things like what we reviewed yesterday, renewing Pine Falls for the next thirty (30), forty (40), fifty (50) years?

MR. JAMES MCCALLUM: We're borrowing to do that. We're borrowing to meet our interest payments. We're borrowing to meet our sustaining capital needs. We're borrowing to meet our payments to the City of Winnipeg. We're borrowing to meet our mitigation obligations. Yes.

MR. ANTOINE HACAULT: Could we go back to what I was reviewing yesterday, which is at page 14 of our book of documents.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: And just to help the Board understand, was this calculation that we went through yesterday the same metric, sir?

MR. JAMES MCCALLUM: Yes.

MR. ANTOINE HACAULT: Okay. And if we go to the page that describes the business operations capital expenditures, which is the next page, in this particular fiscal year, that page provides a complete listing of the capital expenditures that comprise that $586 million, correct?

MR. JAMES MCCALLUM: Yes.

MR. ANTOINE HACAULT: And if we flip back to the previous page, according to that metric -- I know there's other numbers, but we would be saying that there would be a deficiency of $228 million, which, technically, we'd have to go out on the market and borrow based on this metric?

MR. JAMES MCCALLUM: It's not a technicality. We do go borrow in this scale to fund the business.

MR. ANTOINE HACAULT: But you're not suggesting, sir, that all these capital projects that are listed as comprising the $586 million are projects that only have a one (1) year benefit?

MR. JAMES MCCALLUM: No, of course not. They're long-lived assets. However, the -- the immediate benefit for a lot of these expenditures is that if we don't make them, quite literally, the lights don't stay on.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: So thank you, sir. Going back to page 117...

(BRIEF PAUSE)

MR. ANTOINE HACAULT: Is it fair to say that the Corporation, in advancing its position on the preferred plan at NFAT, and indeed with respect to the business case to go ahead with Keeyask, at no time suggested to the Board, who then heard all the evidence, that Hydro was in a difficult position and shouldn't be undertaking anything because they were so far behind on their cash flow from operations to Capex ratio?

MS. LIZ CARRIERE: I hate to sound like a broken record, but I think we said we established that this was -- it wasn't a rate-setting hearing. These were -- these runs or plans were developed for comparative purposes, and we had to find a way to remove any subjectivity or bias from the -- from the rate-setting methodology so that they were used consistently from plan to plan. And I believe I also said yesterday that -- and we discussed at length that we would not likely -- a lot of -- in using that rate-setting methodology, that you sometimes ended up with spurious results. And we wouldn't actually use that for rate setting in practice.

So these were developed for -- to

compare development plans against one another, and the -- the rate-setting methodology did not have an objective to minimize cash deficiency or minimize losses in the -- in the first run, in the main submission.

MR. ANTOINE HACAULT: But remind me, didn't not Mr. Peters go through very early on in his questioning, and remind everybody that Mr. Rainkie, on behalf of the Corporation, was saying that the Company was never stronger and a better position to undertake these projects? Wasn't that the evidence of the Corporation?

MR. JAMES MCCALLUM: That was Mr. Rainkie's evidence. I think that -- you know, and -- and I'm -- I'm mindful of the Chair's caution yesterday around speechmaking, but, like, the purpose of this analysis is to demonstrate where we are at and where we will be under a certain path of rate increases.

At the end of the day, the deficit funding of Manitoba Hydro has happened. It's in the past tense. It's in our debt today. It's a function of not having asked for the right rate increases. But what we are trying to lay clear -- lay bare here is that it is still an ongoing issue.

You can -- you can deficit fund a business, and I believe Manitoba Hydro has perhaps been allowed, or allowed itself to do that too much because of the availability of credit from the Province of Manitoba. But at some point, you have to come to terms with the need for Manitoba Hydro's ratepayers to pay the cost of the business on an ongoing basis. And what our analysis shows is that we haven't been, and paths forward, and that's what, really, we should be, I think, focusing on here is -- is views of the path forward shows that with -- with -- without the rate increases we've been asking for, it becomes very difficult.

You -- you just can't keep borrowing and borrowing and borrowing to run your business. All you are doing -- and we talked about intergenerational equity yesterday, and I -- no doubt we will again, is you're building up a balloon, a big problem that you're parking on tomorrow's ratepayer. It's the reality of it.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: But you're not suggesting, sir, that the Corporation intentionally kept this analysis and metric away from the Public Utilities Board to advocate a position?

(BRIEF PAUSE)

MS. PATTI RAMAGE: Mr. Hacault, I find that suggestion offensive, and if you have any evidence to suggest that, I suggest you put it forward. If not, I don't think that question is worthy of an answer.

MR. ANTOINE HACAULT: Okay.

(BRIEF PAUSE)

CONTINUED BY MR. ANTOINE HACAULT:

MR. ANTOINE HACAULT: Just to confirm, the IFF13 forms the foundation and the facts on which everybody was proceeding in the NFAT hearing. Isn't that correct?

MR. JAMES MCCALLUM: It would appear to me that that's correct, and that the IFF13 that underpinned the NFAT hearing, and again, to re-break Ms. Carriere's broken record, the NFAT hearing was not a rate process. It -- it was a comparison of development plans and relative impacts on rates.

But the NFAT -- the IFF13 and IFF-14, subsequent to NFAT, included an assumption of deficit funding the business. That's clear from these charts.

MR. ANTOINE HACAULT: And so I'm understanding you to acknowledge the IFF14, which was used for the net -- next rate application, and the IFF15, which was used for the interim rate application, are also reflected and would have had these deficits, according to this particular metric of cash flow from operations to Capex ratio, correct?

MR. JAMES MCCALLUM: That is correct, and what we were saying with this application is, Let's stop doing this.

MR. ANTOINE HACAULT: Okay. I think I can move on. I'd like to move to a different subject, which is at page 60 of our book of documents. That's Tab 7. And in the book of documents, we've entitled this forecast 'Certainty'.

And I'd like to go to page -- got to get it right -- 62 of that document, and while I start going through that document, Kristen, could you also bring up PUB Manitoba Hydro's Second Round interrogatory 41. Do you have it? If you could put that one up first, then.

Mr. Cormie, I'll ask you a couple

questions with respect to that interrogatory to better understand it, if -- the -- there's figures that are produced, and I'd direct your attention to -- firstly, is this an interrogatory which you might be able to assist in understanding, Mr. Cormie?

If you could scroll down a bit. Kristen, so that this witness can look at it.

MR. DAVID CORMIE: And could you continue to scroll down, please. No, I -- I'm not prepared to speak to this IR.

MR. ANTOINE HACAULT: Okay. There --

MR. DAVID CORMIE: I think this is Ms. Carriere?

MR. ANTOINE HACAULT: There may be, between yourself and Ms. Carriere, some explanations. One is not so much on how to interpret this particular response, but if we go to page 416, it's more related to what seems to be happening on this graph as of 2025. And I think you may be able to assist with that, Mr. Cormie.

We can see that this graph shows export revenues continuing to increase and plateauing in the year 2025. Does that correspond with the end of certain export contracts with Northern Power sales, now referred to as Xcel?

MR. DAVID CORMIE: Yes, I believe the drop that you see in -- showsing -- showing up in the 2026 year is as a result of the end of the contracts with Xcel Energy that -- and in -- in the spring of 2025.

MR. ANTOINE HACAULT: And could you give us a brief description of the two (2) -- I -- I know there's three (3) ending. I don't know if all three (3) are relevant, but of the contracts that would be relevant to this particular drop?

MS. PATTI RAMAGE: Mr. Chairman -- Mr. Cormie is a ways down from me, so it's hard to communicate, but we are getting in dangerously close--

THE CHAIRPERSON: Yeah.

MS. PATTI RAMAGE: -- to CSI here, and I'd like to be able to speak to him as we go, at a minimum, maybe also have Mr. Miles come up, if he could.

MR. ANTOINE HACAULT: I'm not. And thank you very much, counsel. I'm not intending at all to get into commercially sensitive information, but I was just -- I -- I think there's three (3) -- three (3) contracts, a one twenty-five (125) and a -- a three (3) -- and they're listed already in the materials, and I just wanted this witness to put on --

something that's already on the record. I'm not looking for any details of the contract or any commercially sensitive information.

MS. PATTI RAMAGE: No, fair enough, Mr. Hacault. It's just the way we're set up here. Usually, we have to have a -- different parties know different pieces of the puzzle, so --

THE CHAIRPERSON: Well, let --

MS. PATTI RAMAGE: -- it's a sensitive topic.

THE CHAIRPERSON: -- yeah, let's -- let's see how many questions are in this area, and if necessary, we can reorganize.

CONTINUED BY MR. ANTOINE HACAULT:

MR. ANTOINE HACAULT: Okay. In the IFF, Integrated Financial Forecast, Appendix -- or sorry, the application at Appendix 3.1, there's a listing of the contracts for long-term firm export sales. And this is where I was getting my information that there were three (3) contracts with Northern States Power, now called Xcel, as I understand it, ending in April of 2025.

And what I was just seeking is to confirm that when you're talking about contracts ending, which of these contracts is relevant to that? It may be all three (3), and if you could just identify and indicate whether it's relevant to that change.

MR. DAVID CORMIE: Yes, first of all, Northern States Power is a subsidiary of Xcel Energy. And the contract is with Northern States Power. And these -- and -- and right -- today we are -- we -- we have two (2) contracts with Northern States Power, 375 megawatts in the summer, which goes down to 325 megawatts in the winter. And we also have a 350 megawatt seasonal diversity contract where we supply them 350 megawatts in the summer and they supply us with 350 megawatts in the winter. That con -- that contract started in May 2015 and it ends in -- at the end of April of 2025.

The third contract is the Northern States Power 125 megawatts system power sale that was tied to the construction of Keeyask. And that starts in May 2021 and it goes to 2025. And so you can see at the end of April of 2025, we have those three (3) contracts ending for total of 850 megawatts of capacity and energy. And there's -- there -- so the revenue stream associated with those ends at that point.

MR. ANTOINE HACAULT: So with respect to these contracts, which ones would be considered contracts that deal with dependable energy, if I'm using the term correctly?

MR. DAVID CORMIE: They -- they all deal with dependable energy. The seasonal diversity contract is a capacity swamp -- swap and so there's no capacity revenue associated with that, but there is dependable energy associated with that. But there is capacity revenue associated with the 375 megawatt sale in the 125 megawatt sale.

MR. ANTOINE HACAULT: And, Mr. Cormie, could you give us a bit of history as to how long we've been dealing with Northern States Power and -- and when we started contracting and the renewals or extensions? I'm maybe not using the right word, because there are different contracts, but it's been occurring for a couple of decades now; correct?

MR. DAVID CORMIE: Our major contracts with Northern States Power started in about 1972, and with the construction of the existing 500 kV line in 1976, we began the -- this -- this type of arrangement with large-scale transfers of capacity and energy to Northern States Power. So we've been contracting with them for over forty (40) years on -- on this scale.

MR. ANTOINE HACAULT: And what was the size of the contract which went up to May of 2015, or contracts?

MR. DAVID CORMIE: It was 500 megawatts year-round capacity and dependable energy. Plus we had a 200 megawatt seasonal diversity and a 150 megawatt seasonal diversity for total of 350 megawatts of seasonal diversity. Essentially the same amount of power that we would have at the end of 2025.

MR. ANTOINE HACAULT: Okay. And again, without trying to elicit any commercially sensitive information, I had gone to that whisker (phonetic) analysis, but it also shows up on the sheets that I was referring to.

What type of sale, I'm not looking for amounts, but what type of sale is assumed for forecasting purposes once those contracts come to an end?

MR. DAVID CORMIE: I'll have to let Ms. Carriere speak to the assumptions around post 2025.

MS. LIZ CARRIERE: It's assumed that that energy is into -- is still available as a firm sale, but it's priced essentially at opportunity prices.

MR. JAMES MCCALLUM: And -- and just to add to that, when you no longer have in your financial forecast a firm sale due to the underlying contract having expired, we're also freed of a set of costs associated with firming that energy and low water conditions.

So our financial model changes in two (2) ways. The capacity value comes out, and this is all post 2025, and the -- and certain assumed expenditures for fuel and power purchased go down, because we don't have to firm -- we call it 'firm up' that contract.

MR. ANTOINE HACAULT: And am I understanding it correctly, then, that this was what was referenced to as the policy decision, given that we don't have term sheets confirming that this forty (40) year relationship will continue. We're assuming the forty (40) year relationship will end in 2025.

Is that what we're doing, then, as a policy decision, sir?

MR. JAMES MCCALLUM: We are as a policy matter not counting on it renewing and certainly not counting on it renewing at the same pricing. I think it there's a couple of things to point out here. I mean, we can -- we -- I -- I talked in my opening remarks about, you can change the model. You know, you can -- you can assume good things happen in the model, but if you use that as a basis for not taking -- making the right choice today, you're going to find yourself wishing you could go back in time when good things you were counting on happening don't happen.

And what we're saying is that our -- our -- we believe the best planning assumption for the purposes of dealing with -- with a critical balance sheet issue is to not assume a whole bunch of good things happen. It's not as though Mr. Cormie and his team aren't working very hard every day to -- we're -- we're aware, obviously, that we have excess energy that we would like to extract value from on behalf of Manitoba's customer -- you know, our Manitoba Hydro's customers.

But we're being cautious about assuming we're going to succeed and assuming pricing in a -- in a very -- in a changing environment for -- for these types of the sales. And particularly when these type of sales can't practically occur for seven (7) or eight (8) years.

And so -- so as a policy matter, we've taken a more cautious view, knowing that we're going to be back before this Board several times where we can talk about, we hope, good news, including having signed new export contracts. And we hope interest rates have stayed down or -- or gone down further. We hope load is growing. We hope export prices on the opportunity market go up. And so we -- we want all these things, but we are saying we shouldn't count on them.

THE CHAIRPERSON: Mr. Hacault, can I ask --

MR. ANTOINE HACAULT: Absolutely, sir.

THE CHAIRPERSON: -- Mr. McCallum a question? Mr. McCallum, in terms of these projections on the revenue and expenditures for export sales, are they based on binding contracts? I mean, you -- you were talking about how the numbers change and you adjust them with the contract ends. I assume that they change because you don't have a -- you don't have a contract with -- with a customer.

MR. JAMES MCCALLUM: We have -- so in the forecasted and -- and Mr. Cormie can jump in if I misspeak, but in our forecast we've got an existing set of contracts, all of which have -- have contractual pricing terms. And that that's in our forecast that we -- we make those sales and we receive those -- those prices. And then there's the pricing associated with -- with excess energy when we -- we're not in low water conditions that we put to the opportunity market. And we're a price taker there. We're just taking whatever the -- the -- you know, I'm oversimplifying, but basically taking the price that's available for our excess energy.

What I think Mr. Hacault is getting to is that -- that in the case of Northern States Power in 2025 a contract we have, which includes capacity value and a price for our energy falls by the wayside. And so, from 2025 onward we're assuming that energy. We're not achieving a capacity value and we're not achieving a -- a dependable energy value. And we're instead getting the assumed opportunity price, the same price we get for our excess water.

THE CHAIRPERSON: Right. Right. I guess the question I was going to follow-up with, is -- is that a change in policy or was the policy in terms of how you -- how you record that consistent? I mean, have you changed that policy at some --

MR. JAMES MCCALLUM: We changed that policy. In the past what would've happened is, we would've -- we'd have, for example, this Northern States Power contract. We would have assumed a -- a renewal. Now, we wouldn't have necessarily assumed a renewal at the same pricing. We also have forecast pricing of capacity values and dependable firm values, and -- and those two (2) have been heading south.

But -- but we would have in -- in past integrated financial forecasts assumed that in -- again, eight (8) years out that when this contract renews somebody, a customer X, could be Northern States Power renewing or somebody else stepping into -- into that available capacity is. And we have a contract with a forecast of those contract terms.

THE CHAIRPERSON: And -- and the assumption for the price you would've charged, right now it's your -- it's being, I would assume, lower to an opportunity price.

In the previous -- under the previous methodology, what price would you have assumed?

MR. DAVID CORMIE: The -- the prices for power and -- and energy would be based on the Manitoba Hydro's export electricity price forecast, which was the consensus.

THE CHAIRPERSON: Okay. Thank you.

MR. DAVID CORMIE: And -- and further to what Mr. McCallum says, we would -- we would convert that expectation based on the price forecast into a contract at the moment we've signed a term sheet which binds the company. So we don't necessarily have to have a binding contract. But as soon as we have a commitment we would put that into the IFF.

And it may take another year or two (2) years to finalize the contract and -- and legally establish it, but we -- we didn't -- we would -- we've never taken -- we've never pre-assigned that sale to any particular customer. We've just shown it as a surplus we expected to sell at the electricity price forecasted amounts.

THE CHAIRPERSON: Right. So I chose the wrong word. I was thinking as a commercial lawyer. The term sheet is the -- is the trigger.

MR. DAVID CORMIE: It's -- it's not -- it's not --

THE CHAIRPERSON: It's -- it's not the -- it's not the binding contract. It's the term sheet in anticipation.

MR. DAVID CORMIE: It would -- it would be enough of an indication from the customer that we would put into our IFF at that time.

THE CHAIRPERSON: Thank you.

MR. DAVID CORMIE: And -- and as Mr.

McCallum says, we don't have term sheets yet with -- with the with Northern States Power. We're having conversations, but we're -- we don't have a -- we don't have a deal. We haven't talked about a deal. We're having -- you know, they -- they -- those conversations are going on.

As soon as they get to the point where they can write us a letter saying, We're -- we're committed to this transaction. Let's work it through. We will let -- we will let everybody know. It'll go into the IFF, but we're not there -- we're not there yet.

THE CHAIRPERSON: Thank you for clarifying that.

MS. LIZ CARRIERE: Just for the Board's information, the Daymark energy advisors have a description in their -- in their export pricing and revenues review. And they refer to NSP's resource plan from 2016 to 2030. And that identifies that the new baseload is needed in 2026, as one would expect after the end of that contract. But in that resource plan they do not identify a renewal of -- of the contract with Manitoba Hydro as part of their plan. They are -- they discuss wind and -- and other resources in that plan.

THE CHAIRPERSON: Thank you.

CONTINUED BY MR. ANTOINE HACAULT:

MR. ANTOINE HACAULT: No, thank you. That assists in understanding the corporate -- Corporation's policy decision.

With respect to the last comment of Ms. Carriere, Ms. Carriere, would you recall that -- the issue which you brought up of Manitoba Hydro not specifically being identified was dealt with publicly in the -- in the papers? And that the Company, through its manager of public relations Scott Powell, actually set out the Company position on that issue?

MS. LIZ CARRIERE: I'm not clear on what the issue is.

MR. DAVID CORMIE: Mr. Hacault, I can speak to that. And yes it -- it has been in the public domain. Xcel's policy is that they have dozens of power purchase agreements, and they make no assumptions with any of them, including the Manitoba Hydro whether they will be rolled over or not.

So it's -- it's a similar to our situation. We don't assume that we roll them over. They don't assume that they roll over -- they -- they roll their contracts over with any of their suppliers.

It's just -- it's -- it's just kind of normal planning policy for -- for utilities not to make those assumptions.

MR. ANTOINE HACAULT: Yeah, and I would suggest that the public statement made on behalf of the Corporation was that Xcel Energy and Manitoba Hydro have a long-standing relationship dating back to the 1970s, and both utilities expect to continue that relationship in the future.

MR. DAVID CORMIE: Yes, and I think Mr. McCallum has said that -- that we all hope that this will happen. And -- and I -- I -- I'm just -- I don't think hope is a plan, and -- and we've said this over and over again. And I think this policy that Mr. McCallum has stated is -- is not one (1) that says, We're not working on it. It says that -- that we'll count it when we actually have something signed.

MR. JAMES MCCALLUM: And -- and not to break the record again, but I just think it's important for -- for the audience -- for the Board to -- to appreciate that, you know, even if we want to assume that the contract rolls over or we're able to find somebody to -- to take on this -- this available uncommitted energy, we're really talking about 2025. It's not of great assistance in the next seven (7) or eight (8) years.

MR. ANTOINE HACAULT: But you'll agree with me, sir, that to the extent that IFF20, so the twenty (20) year time frame, helps inform us in a general way as to what's happening, that changing assumptions with respect to what's going to happen in about nine (9) years from now can change the type of information which is put in front of this Board for the second decade of IFF.

MR. JAMES MCCALLUM: I -- I don't know how one would disagree with that statement. I think we've made clear that looking out for eleven (11) to twenty (20) years in an environment that we're in, looking at what we're seeing in the next ten (10) years and -- and comforting yourself that an inefficient, or sorry, inefficient -- an insufficient rate path will turn out okay, so long as we can just get the year fifteen (15), is not our -- not our view as prudent.

I mean, we can run the model out to fifty (50) years if we want, but it doesn't change the reality we face and the risk we face over the next ten (10) years, which this application is trying to address.

MR. ANTOINE HACAULT: Thank you, sir.

I'll move on to another subject. It won't be that long. I'm not too sure what the Board's plan is for this morning. When does the Board wish to take a break? I'll try to --

THE CHAIRPERSON: I guess the -- sorry. I guess the question is how long do you think your -- your next area will go? I mean, we normally take a break at 10:30 or around 10:30. So, you know, we're --

MR. ANTOINE HACAULT: I think that --

THE CHAIRPERSON: -- we're in your --

MR. ANTOINE HACAULT: Okay. I think the next subject will lead us to about that time, so.

THE CHAIRPERSON: Good.

CONTINUED BY MR. ANTOINE HACAULT:

MR. ANTOINE HACAULT: If we could go to page 29 of our second volume of book of documents, at -- that's tab 5. And could you go to the previous page 28, please. Thank you.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: This is a slide which was extracted from the presentation which you and Mr. Shepherd made, specifically slide 55. I know there's been a lock -- a lot of documents.

But do you recognize that slide, sir?

MR. JAMES MCCALLUM: Yes, I do.

MR. ANTOINE HACAULT: And it's consistent with your last answer that when we're looking at the forecast, that forecast is truncated at 2027 in this presentation; correct?

MR. JAMES MCCALLUM: Yes. This chart ends at 2027.

MR. ANTOINE HACAULT: And if we flip to the next page, being page 29, there's a chart that's taken from the evidence of InterGroup, which overlays scenarios, but pushes that a further ten (10) years.

Sir, has the Corporation done a similar run with all the data that would show whether it comes to the same or similar conclusions as InterGroup?

MR. JAMES MCCALLUM: We have not to my knowledge -- well, a couple of things. The -- the -- I'd -- I'd just highlight the difference between, and I think we're going to get into this when we come back to where we ended yesterday.

But the chart that's in front of all of us right now from InterGroup, page 29 of your -- your book of documents, is I understand constructed on long-term debt. Long-term debt, just to take a moment, is one (1) line item. It's by far the biggest driver.

Manitoba Hydro focuses on and believes that you -- you ought to focus on net debt. Net debt -- to get from long-term debt and net term -- net debt, you need to also add your short term debt. And -- and I believe Mr. Bowman may have made an -- an assumption of $500 million of short-term debt. Is that -- current portion. And current portion is the portion of long-term debt that -- that comes due in the next year.

And then the other thing that we deduct from that to get to net debt is cash and sinking fund balances. So you kind of look at your debt net of your -- your cash on hand. So I just wanted to clarify that -- that the charts are really, you know, constructed on -- on two (2) things that are related, but a bit different.

And also, I believe Mr. Bowman's chart would include, as it goes out into the -- the out years, would include a gas plant being constructed towards the tail end of the 2020s as part of that plan 5, which is clearly not in our plan. But that's subject to check. So in any event, we certainly can reconstruct our chart on page 28 of your book of documents to extend into the 2030s. But we've, as you've pointed out, we've been focused on the ten (10) years.

MR. ANTOINE HACAULT: Could I have that as an undertaking to have Manitoba Hydro extend the chart which it produced at slide 55 of Manitoba Hydro Exhibit 64, to and including the year 2037 together with the relevant underlying data?

MS. PATTI RAMAGE: Yeah, we'd be stopping it at 36, but otherwise, yes.

MR. ANTOINE HACAULT: So I'll amend my request that the chart and underlying data go to and including 2036.

Is that acceptable?

MR. JAMES MCCALLUM: Yes, that's fine.

--- UNDERTAKING NO. 10: Manitoba Hydro to extend the chart at slide 55 of Manitoba Hydro Exhibit 64, to and including the year 2036 and underlying data

MR. JAMES MCCALLUM: But I think, Mr.

Hacault, I think we can still -- I mean, the charts are going to be close enough that I'm -- if you want to proceed with your questions and --

CONTINUED BY MR. ANTOINE HACAULT:

MR. ANTOINE HACAULT: And this next request is a separate one (1). And I leave it to the Corporation as to whether it wants to do it. But yesterday on the discussions we had, there would also -- there was also going to be some work done with the three-point-nine-five (3.95) assumption, but a twenty (20) year WATM instead of twelve (12) year.

So if the Corporation wishes, because I know that was one (1) of the things that's come out in the submissions, to add an extra line showing the difference between the twelve (12) year WATM and the twenty (20) year WATM, it should feel free.

(BRIEF PAUSE)

MR. JAMES MCCALLUM: Yeah, I think that's fine. So just to be clear, you'd like us to -- where you see, and maybe we can go up a slide, up a page to 28. So where we see the -- because they're both almost the same colour -- the gold long dashed line, the top line in the chart, you would -- that -- that corresponds to a scenario of 3.95 percent. The -- the MH15 rate increases with a twenty (20) year weighted average term to maturity. And you'd like to see added a line which also shows that same scenario with a twelve (12) year weighted average term to maturity. That's fine, we can do that.

MR. ANTOINE HACAULT: Sorry. Correct.

MR. JAMES MCCALLUM: No trouble. And out to 2036.

MR. ANTOINE HACAULT: Correct.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: If we -- Kristen, could you bring up from Manitoba Hydro Exhibit 64, so it's that same presentation --

(BRIEF PAUSE)

MR. ANTOINE HACAULT: It'd be slide 28.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: I have a couple questions, and I think it should only take us to about 10:30. I see there is a red dotted line for BC Hydro debt, which is flat from 1992, and including the year 2027.

Do you see that, sir?

MR. JAMES MCCALLUM: Well, I see the red dotted line for BC Hydro. In parenthesis you see March 2017 in the legend. So the purpose of the line is not meant to show BC Hydro's debt to domestic revenue on a historic or forecast basis. It's meant to show where they sit today.

MR. ANTOINE HACAULT: Thank you for that clarification. So it's not intended to show what's going to happen with the metrics once the $10 billion Site C project gets implemented by BC?

MR. JAMES MCCALLUM: That's correct.

MR. ANTOINE HACAULT: And if we included the $10 billion Site C project, we might see something different than a flat line?

MR. JAMES MCCALLUM: I would anticipate you'd see something different, but I can't speak to the revenue that's going to come off that project or their own progression of costs and revenues on their domestic business. And this chart is -- we -

- we were giving some perspective on the other two (2) Canadian, you know, Hydro dominated generating sources.

And we -- we did this with another important chart in this same presentation looking at debt to domestic load where you can see that Manitoba Hydro, as -- as set like here, effectively, you know, on debt to domestic load we've more than quadrupled. On debt to our revenue we're on a path to more than doubling.

And that's really the message in this chart, is that we are -- have grown our debt out of all historic proportion to our -- to our business dating back to Limestone.

MR. ANTOINE HACAULT: Thank you, sir. A couple other questions with respect to British Columbia. Firstly, does BC Hydro serve the entire domestic load within the province of British Columbia?

MR. JAMES MCCALLUM: I don't know the answer to that.

MR. ANTOINE HACAULT: Anybody else on the panel?

(BRIEF PAUSE)

MR. ANTOINE HACAULT: If nobody can answer it, I'll move on. I'm looking around. I'm not seeing any volunteers to answer that.

MS. LIZ CARRIERE: Not off the top my head, no.

MR. ANTOINE HACAULT: Okay.

MR. JAMES MCCALLUM: But this is the debt to their domestic revenue.

MR. ANTOINE HACAULT: Would mentioning the word "Fortis" assist anybody in their memory as to who else serves in the BC market?

MR. JAMES MCCALLUM: I don't think we --

MR. ANTOINE HACAULT: Okay. I'll move on.

MR. JAMES MCCALLUM: -- can speak to the structure of the British Columbia.

MR. ANTOINE HACAULT: What about --

MR. JAMES MCCALLUM: Or the industry.

MR. ANTOINE HACAULT: -- whether British Columbia uses independent power producers and doesn't have to, with respect to those independent power producers, have any debt on its book with respect to the power which would be supplied by those producers.

Can anybody speak to that?

MR. JAMES MCCALLUM: No, I cannot.

MR. ANTOINE HACAULT: I gather from my looking around that nobody's volunteering to speak to that.

MS. PATTI RAMAGE: Mr. Hacault, if I could interrupt. And you don't want me giving evidence, so I won't. But I don't believe any of this information is on the record and the panel simply isn't in a position to speak to it.

MR. ANTOINE HACAULT: Thank you. That'll complete my questioning. I just thought I'd ask those questions because there is a line with respect to British Columbia Hydro, and some additional information that might have been useful to put on the record.

THE CHAIRPERSON: That's fine. We'll break until 10:45. Thank you.

--- Upon recessing at 10:28 a.m.

--- Upon resuming 10:57 a.m.

THE CHAIRPERSON: Sorry, Ms. Ramage. Have -- I assume we have more documents.

MS. PATTI RAMAGE: We do. This is the

undertaking that was dealt with at the end of the day yesterday, which required Manitoba Hydro reproduce page 83 of MIPUG's book of documents with that additional column of maximum debt net.

--- EXHIBIT NO. MH-80: Page 83 of MIPUG's book of documents reproduced with the additional column of maximum debt net.

MS. PATTI RAMAGE: And I under -- and then we had follow-up today. There will be more information on this topic coming, but this was the afternoon's -- or yesterday afternoon's undertaking. And if I could just speak to the people that are watching this in our room downstairs for a moment, could they please send the electronic copy to Mr. Simonsen.

MR. KURT SIMONSEN: Thank you.

THE CHAIRPERSON: Thank you. Mr. Hacault...?

CONTINUED BY MR. ANTOINE HACAULT:

MR. ANTOINE HACAULT: Yes, and I thank Manitoba Hydro for its effort on a quick turnaround on this. Just a couple questions to confirm on the record as to what the -- I'll call it a new run added or changed compared to the Manitoba Hydro second round interrogatories 19 from the Coalition, which was part of our material.

MS. LIZ CARRIERE: Relative to the table in tab 9, the long-term rate increase down the second column, I believe we've just added the years to provide clarity for -- for what the -- the duration of those rate increases. We've also updated on the -- on the negative net income column for the -- if we go to the fourth row under Coalition, the original MH-2-19, we've updated the income from 327 to 347. I believe it was just a typo.

And then we've added the maximum, net debt, the final column relative to the -- MIPUG's original document in tab 9.

MR. ANTOINE HACAULT: And I -- I just want to confirm that the last run which was done assumes a twenty (20) year WATM instead of the twelve (12) year, which was the run that we had put as part of our material.

MR. JAMES MCCALLUM: It -- it does. And -- and perhaps just also to be clear, the fifth line, the final scenario here, the original Coalition-

MH-2-19 asked that Manitoba Hydro provide a scenario that solved, you know, mechanically solved for a rate increase that achieved a 25 percent equity ratio in 2033/'34.

And so we've -- we've -- in shifting to the twenty (20) year weighted average term to maturity, you're no longer achieving that equity ratio in 2033/'34 and so you need to bump up the -- the even annual rate increases for those seventeen (17) years to 4.34 percent from 4.14 percent and that scenario captures that.

MR. ANTOINE HACAULT: Thank you. And the other numbers speak for themselves. I'm not -- I don't think I need to take them through. The most important thing is I wanted the Board to understand what was changed in this last run compared to what we had before.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: I just want to make sure. So that changing the WATM -- sorry for use of the acronym -- from twelve (12), if we look at the retained earnings to a twenty (20) year WATM changes the retained earnings as at 2033/'24 (sic) downward from 6.385 billion down to 6.377 billion; that's the effect of changing that metric?

MR. JAMES MCCALLUM: Well, it's -- it's the combined effect of changing the assumption on the weighted average term to maturity, which is being compensated for by the higher rate increase.

MR. ANTOINE HACAULT: The point 2?

MR. JAMES MCCALLUM: That the -- that's right. Point 2 percent per year for seventeen (17) years.

MR. ANTOINE HACAULT: And again, with the point 2 extra revenue in the rates, the change between the twelve (12) year WATM on maximum net debt as compared to the twenty (20) year WATM issue changes the maximum debt net from 24.506 billion to increase to 24.692 billion, but a couple years later is where we're hitting that maximum debt; is that right?

MR. JAMES MCCALLUM: Yeah, that's right. I think you'd read into that, or should, that by virtue of -- of extending the term to maturity of the debt, you're -- you're increasing your interest costs which is partially being compensated for through the -- through higher rate increase -- through -- through -- you know, this .2 percent of higher interest rates -- interest rates, pardon me, electricity rates.

MR. ANTOINE HACAULT: And just so we're clear, these two (2) comparisons go back to where we were at about six (6) months ago and don't reflect the evidence we received during questions of Mr. Peters on how the Corporation adapted its debt strategy in the last months; is that correct?

MR. JAMES MCCALLUM: That's correct.

MR. ANTOINE HACAULT: And that change in strategy, at least at this point, was caused by the flattening of that yield curve. There isn't as much spread as we thought there was going to be and that's why we --

MR. JAMES MCCALLUM: Yeah.

MR. ANTOINE HACAULT: -- I'm not going to put words into Ms. Stephen's mouth but I understood that that was one (1) of the reasons why we chose to take some longer term debt.

MR. JAMES MCCALLUM: That -- that's right. And we've -- we've got a -- a financial forecast. You need to make choices about your assumptions, but we manage the business in real time in reaction to, you know, the -- the current conditions.

I think if you wanted to understand the impact of all of this, you know, we talked about a $500 million saving opportunity from the twelve (12) year terming being reduced based on today's markets, and it could change again tomorrow, to about a $250 million opportunity. The way to think about that impact would be to take the -- this fourth line -- this fourth line here where were -- the Coalition-MH-2-19, which uses that twelve (12) year terming and you -- you know, want to add about $250 million to the debt in terms of -- at least by 2027.

This would be, in other words, overstated or optimistic by about 250 million by 2027. I'd have to look to see the impact at 2023 on peak debt.

MR. ANTOINE HACAULT: I'm getting into a subject that I didn't think I was going to get into right away, but there is a lot of moving parts to an IFF; isn't that correct? And if we were able to lock in funds at these historically low levels for thirty (30) years at 3 percent -- I think last was it mentioned was 3.02-- the actual results may be different than the forecast results based on what you're actually able to do?

MR. JAMES MCCALLUM: Yes.

MR. ANTOINE HACAULT: And if you were forecasting, and we can look at that later, thirty (30) year rates that more than the 3.02 or 3.05 percent, that might have an impact and we won't know that impact until we get to lock those numbers in.

MR. JAMES MCCALLUM: And that's -- that's exactly right. We've got, you know, in the order of -- of 13 odd billion dollars to -- to borrow and I don't think we would propose. notwithstanding how -- how attractive interest rates are today, we -- we wouldn't propose to borrow all 13 billion for thirty (30) years today. We couldn't anyway. The market just doesn't practically want that much Manitoba debt on thirty (30) year terms right at the moment.

And -- and then we would, you know, find ourselves sitting on $13 billion of cash prematurely, which would not be good for -- for our customers.

MR. ANTOINE HACAULT: Yeah, I'm glad I don't run into those worlds. Is -- isn't it like doing math in my head but, like, about $10 million a day or something.

MR. JAMES MCCALLUM: Well, it's a -- just -- just add zeros.

MR. ANTOINE HACAULT: I'll move to our book -- or sorry. There's one (1) thing that I had asked counsel immediately after the break and it was to have an idea when we might be able to receive a response to the undertaking with respect to, I believe it was, slide 72 of the Manitoba Hydro slide deck.

Could we have an update on that, please? Because I would've had questions on that.

MS. PATTI RAMAGE: In terms of an update, it's -- it is not ready yet. We were scouring the records and I will fully admit, I thought it was -- that slide appeared in rebuttal and I'm not even clear right now if a portioned did, but I thought that was fully in rebuttal.

So we are looking to find the data that underlies that slide on the record, but that involves going through the record to -- to get you that data and -- and so it's not -- it's not coming this afternoon I can say.

MR. ANTOINE HACAULT: Thank you. I can't necessarily predict what -- and how many questions I might have but I just wanted to alert the Board that it was something that was put in front of this Board a couple times, and we hadn't seen it before and from our perspective, didn't have a chance to ask IRs or understand how the data was derived for this. So, we may have questions and at an appropriate time I may be asking the indulgence of -- of the Board to ask questions on that.

THE CHAIRPERSON: That's fine, Mr. Hacault.

CONTINUED BY MR. HACAULT:

MR. ANTOINE HACAULT: Going back to our book number 1 of documents being MIPUG-23-1, there's just some very short cleanup issues that I would like to do and it relates to the -- tabs 6 and 7, which are the transcripts -- extracts from proceedings, and I think I had started to deal with this during the cross-examination of the policy panel.

But just to confirm that this is an extract from a statement of Dr. Adam Borison and could this panel confirm that Dr. Adam Borison was an expert called on behalf of and by Manitoba Hydro?

MS. LIZ CARRIERE: You're asking me to confirm that? Yes, that's correct.

MR. ANTOINE HACAULT: Okay. And could you briefly explain what role Dr. Borison had with respect to the whole uncertainty issue in the NFAT?

MS. PATTI RAMAGE: You can't see him but Mr. Miles is behind me and he will take that one.

MR. TERRY MILES: I'll -- I'll respond to this one. So I'm -- just at the highest level, Dr. Borison's role was to provide support for the development of the uncertainty analysis component for the economic analysis component primarily.

MR. ANTOINE HACAULT: And Dr. Borison had utility background and -- and -- and that's why, in addition to the academic abilities dealing with uncertainty, he was an appropriate witness to deal with utility issues? Is that fair?

MR. TERRY MILES: I believe Dr. Borison had quite a broad range of experience assisting various companies, if you will, in the industry -- electricity industry, et cetera, yes.

MR. ANTOINE HACAULT: And I'll direct your attention to page 2561 of the transcript, specifically, at lines 18 to 21. So 2561, 18 to 21.

And is it fair to suggest that Dr. Borison was being tested on -- there's always unprecedented uncertainty. It seems to come up at every hearing that there's unprecedented uncertainty.

MR. TERRY MILES: Can you just clarify the question a little better -- a little more focus so

I can help narrow my answer.

MR. ANTOINE HACAULT: I was suggesting that Dr. Borison was being tested with respect to whether we were making these NFAT decisions in a period of unprecedented uncertainty.

MR. TERRY MILES: I don't know if unprecedented uncertainty is correct. I don't see unprecedented here. I -- I can say with respect to the uncertainty analysis, it was understood that there are many factors that were uncertain in the NFAT and -- and the role of Dr. Borison, in this part, was to try to help us clarify those; understanding that, you know, we have lots of knowns. We have known, unknowns, and then we have the unknown unknowns, and to try to somehow bring that to a practical analysis.

So, if that's what you mean by "unprecedented uncertainty," then I guess that's correct.

MR. ANTOINE HACAULT: And in any event part of his response -- and I'm going to quote for the record is:

"But it is not as if somehow we can wait magically for a few years and the uncertainty will go away, because most likely what's going to

happen is there'll be some other
issue that comes up."

And -- and I'm not intending that to be a summary of all his evidence but that is a statement he made in -- in the course of the NFAT, sir.

MR. TERRY MILES: This is his testimony, then that's a statement that he made, yes.

MR. ANTOINE HACAULT: Where I got the unprecedented was if we flip in our book of documents at page 2560 Dr. Borison actually uses that 60 -- used that word a couple times. I can see it in line 22, for example. He's --

MS. PATTI RAMAGE: Mr. Hacault, sorry, but could -- what tab are you on in your book of documents?

MR. ANTOINE HACAULT: It's tab 7. Volume 1, tab 6, sorry. Volume 1 tab 6.

And you'll see that when he starts his answer and I should have gone through the whole thing. I had just assumed that somebody had read it, that we can bring it up to line 9, Kristen. It will give us the full dynamic of the discussion and his answer.

THE CHAIRPERSON: Sir, can I just interrupt. Whose witness was he at the -- at NFAT; was he --

MS. PATTI RAMAGE: Manitoba Hydro's.

THE CHAIRPERSON: It was Manitoba Hydro, thank you.

MR. ANTOINE HACAULT: That's -- I tried to clear that up at the outset, Mr. Chairman.

CONTINUED BY MR. ANTOINE HACAULT:

MR. ANTOINE HACAULT: So -- and he's recounting and using the word "unprecedented uncertainty" a couple times and I had suggested it was because he was being tested on that, and I'll -- I'll leave the transcript for everybody's reading. I just wanted to confirm it was Manitoba Hydro's witness and that he was being challenged on that concept.

MR. JAMES MCCALLUM: If -- if I could just add to that. And I think the discussion around this and perspective is provided if you go a little bit further down to line -- the line 19, 20, 22, 23, and the idea of "unprecedented uncertainty" and I quote a reference that Dr. Borison made to an article or a study, or some information back in 1983.

And I'm not sure if he was directly involved in that or -- or if he just pulled a reference out but we -- there was a lot of talk of unprecedented uncertainty today and I believe he made a reference to a number of years ago when a similar situation -- I'm not sure if it was some form of investment -- but that at that time they were in 1983 were in a -- in a situation facing unprecedented -- unprecedented uncertainty way back in time and I think he made the reference that we're always in a state of unprecedented uncertainty because, really, we don't know what tomorrow's going to bring on a whole bunch of fronts.

So, it -- I believe that's the context around this discussion of unprecedented.

MR. ANTOINE HACAULT: And I would suggest, sir, that people like Dr. Borison, who are familiar with this industry and understand it -- understand its -- the dynamic nature of it and how it changes. Is that fair?

MR. JAMES MCCALLUM: I -- I think I could just comment that I think Dr. Borison was somewhat of an expert in uncertainty analysis as a whole. I can't comment on other than that.

MS. PATTI RAMAGE: If I could jump in. I don't think our witnesses can comment on Dr. -- on Dr. Borison. Certainly in this process, he was brought to the NFAT for the purpose of commenting on uncertainty analysis on the economics that were presented there and I think that -- that is all we can say on the topic.

MR. ANTOINE HACAULT: Thank you very much. Thank you for trying to be of assistance.

CONTINUED BY MR. ANTOINE HACAULT:

MR. ANTOINE HACAULT: The next extract which I had put at tab 7 of our book which is just a couple pages down. Sorry, I don't have a number for you, Kristen.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: It's a -- it continues. It's a transcript of March 21 so it's -- two (2) more pages down.

And I had already addressed part of this extract with Mr. Barnlund -- Barnlund the other day, and don't propose to go through all of the discussion with Mr. Rainkie that's also included in that extract, but I would like to point out some of the evidence with respect to what Mr. Rainkie said starting at page 3244, and continuing on to page 3245.

MS. PATTI RAMAGE: Will there be a question for the witness?

MR. ANTOINE HACAULT: There will be. I just have to put the context to it, please.

CONTINUED BY MR. ANTOINE HACAULT:

MR. ANTOINE HACAULT: Could you go to the bottom of the page. I just wanted to show where the discussion had started on line 25 of 3,244. And then at line 3, and there's a question that will follow. Mr. Rainkie's saying:

"The difficult part we have is that the -- we have hydroelectric plans which will last for a hundred years versus other short-lived assets. Conawapa, as we've talked about many times in this scenario, doesn't finish going into service until 2029."

Does the Corporation agree with the view that when we're talking about hydroelectric plans, there are plans that last for a hundred years versus other, shorter-lived assets, like -- such as gas turbines?

MR. JAMES MCCALLUM: Well, we may as will have the non-engineer answer that one. You know, I think that -- I guess we do have one (1) plant that's a hundred years old, being Pointe du Bois. The others, we're -- we're still going to find out how long they last, but if the -- if the -- I think we can agree that hydroelectric plants are expected to last significantly longer than gas plants, and that kind of suggests that's probably common industry knowledge.

MR. ANTOINE HACAULT: And then -- because the finance person jumped in, I'll lead you to a finance concept that Mr. Rainkie was talking about at line 15 on page 3,245. And I'll quote it, and I'll ask the question following that:

> "I mean, any basic corporate finance text would tell you if you had an asset that was a hundred years long, or if you had a business opportunity that had a -- a hundred years to it, and you had another opportunity that had thirty-three (33) year increments, you would analyze something over a hundred years to get, you know, a good comparison."

And do you agree that that's an appropriate way to look at this from a finance perspective?

MR. JAMES MCCALLUM: So if I may, I'll

just have you scroll up to lines 1 through 8, where Mr. Rainkie says -- and I -- I will answer your question:

"That I think the preparation of this material was designed to show the directional impacts on the different plans over time. The difficult part we have is we have hydroelectric plans which will last..."

And I think he meant 'plants'.

"...which will last for a hundred years versus other, shorter-lived assets."

So I think what he's saying, not wanting to speak for him, is that if you're comparing two (2) different plans, development plans, you need to find a way of being consistent to compare a plan that's based on an asset that lasts a very long time with a plan that's based on an asset that lasts a shorter period of time. Otherwise, the comparison fails.

MR. ANTOINE HACAULT: And thank you for that answer, but I asked whether or not you agreed from a fine -- corporate finance perspective what Mr.

Rainkie said was a valid statement.

MR. JAMES MCCALLUM: I -- I thought I did agree that, for the purposes of NFAT, which was comparing different development plans, you needed to find a reasonable basis to compare the plans.

MR. ANTOINE HACAULT: So you're saying that -- that corp -- corporate finance view is not appropriate for any other purposes, except for choosing which resources you're going to invest in?

MR. JAMES MCCALLUM: I wouldn't have, on the face of it, taken that from what I just said, but.

MR. ANTOINE HACAULT: Well, I'm not too sure why you're limiting it to NFAT, which was choosing which resource we would invest in. When we invest in DSM as a resource, would we invest in all gas as a resource? We were deciding which resource, so I took -- that when you qualified the answer, that this would be useful in -- in the NFAT hearing, that you were agreeing with the concept, but only as it relates to choosing which resource we built?

MR. JAMES MCCALLUM: Well, I had understood your question to be trying to explain Mr. Rainkie's transcript.

MR. ANTOINE HACAULT: Okay. And is

your answer different, then? Are you agreeing that that concept would be useful not only for choosing which resource we built, but for other purposes?

MS. PATTI RAMAGE: Perhaps, Mr. Hacault, you could put those other purposes -- and Mr. Rainkie was dealing with it in a specific context, and as has Mr. McCallum, so if you want to know about those other uses, I think it would be appropriate to put the other use to him.

CONTINUED BY MR. ANTOINE HACAULT:

MR. ANTOINE HACAULT: Well, I'll try to restate my question in a different way, had -- not limiting the question to NFAT purposes, I'll reread Mr. Rainkie's statement. At lines 15 to 21:

> "I mean, any basic corporate finance text will tell you, if you had an asset that was a hundred years long, or if you had a business opportunity that was -- had a hundred years to it, and you had another opportunity that had thirty-three (33) year increments, you would analyze something over a hundred years to get a good comparison."

Now, it -- my question doesn't focus on the very last part on comparison. It focuses: Is this finance approach a useful approach with respect to hundred year generation facilities that Manitoba Hydro builds?

MR. JAMES MCCALLUM: I -- I can honestly say I don't understand what you're trying to get to, and I'm really wanting to help you.

MR. ANTOINE HACAULT: Well, to contrast it, should we, on a hundred year business opportunity, focus only on ten (10) years?

MR. JAMES MCCALLUM: When we're making a decision to build a multibillion dollar plant, you should be looking at it over a very long period of time in comparison to alternatives over a very long period of time.

I think what Ms. Ramage was -- was begging you for was to ask your question in the context of corporate finance principles for a specific purpose. The specific purpose we were dealing with at NFAT was alternative development plans, and this quote is tied to it, but it doesn't mean that you look at every corporate finance problem over one hundred (100) years.

MR. ANTOINE HACAULT: But it would be

fair to look at it over a long term if you have an asset that produces revenue over a long term, wouldn't it be, sir?

MR. JAMES MCCALLUM: If you're looking at investing in that asset, yes, but if you're looking at what you do with the asset you already have, no.

MR. ANTOINE HACAULT: Okay. So if Manitobans are investing into a hundred year Keeyask project, I'm suggesting to you that it's fair that Manitobans should look at this for a longer time period than just ten (10) years.

Do you agree or disagree?

MR. JAMES MCCALLUM: The investment decision should be taken over a longer horizon than ten (10) years, although I think it's clear the investment decision has been taken, and we're now -- in front of us is the decisions around, what do we do about the consequences, the consequences of the debt and the consequences of being on a path to putting into service an asset that is going to leave us with excess energy, which has a cost? We have excess capacity, which has a cost, and how are we going to pay for it?

MR. ANTOINE HACAULT: I'll move on.

The last subject area that I would like to deal with so I can and get a better understanding of some of the issues -- just wait...

(BRIEF PAUSE)

MR. ANTOINE HACAULT: Is the weighted average term to maturity subject, which unfortunately, I've disobeyed all rule -- rules and regulations by calling it WATM. And in our book of documents, starting at page 30 --

MR. JAMES MCCALLUM: Which book and which tab, Mr. Hacault?

MR. ANTOINE HACAULT: Volume II. Sorry.

MR. JAMES MCCALLUM: Pardon me?

MR. ANTOINE HACAULT: Volume II.

MR. JAMES MCCALLUM: And tab...

MR. ANTOINE HACAULT: It's at Tab 6, page 30.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: My questions, and I don't know who are going to -- who's going to want to deal with this, but is to better understand Manitoba Hydro's policy with respect to its debt portfolio. There is a summary of that, or some statements at -- at -- in its own evidence at Appendix 3.5, and there's also some further detail with respect to that in some of the responses to interrogatories.

Perhaps so that we can follow, I can suggest that we go to page 58 of this same book of documents. I think that might assist. And then I'll just ask some questions to better understand what that policy is and when it was enacted.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: What I'll use to guide my questions is the paragraph in the middle of the page, which starts with Manitoba Hydro's interest rate policy on its existing debt for -- portfolio is to -- and then it starts to describe it. So my first question is:

Does this policy exist in the form of a document that was adopted by the Manitoba Hydro Electric Board at one (1) point in time?

MS. SUSAN STEPHEN: This does exist as a document, both the policy and the guideline. Both the policy and guideline were approved by our former CFO Darren Rainkie in July of 2014.

MR. ANTOINE HACAULT: Okay. So what, if anything, existed before July 2014?

MS. SUSAN STEPHEN: Prior to July 2014, we did have on the policy and guidelines in place. They had not been formalized at that point in time. And in July of 2014, we decided to redraw the policy, redraw the guidelines and formalize them.

MR. ANTOINE HACAULT: But generally, are you saying that the policies remain consistent, or when you say you -- they were redrafted, was there a change in policy and approach? Help me understand, please.

MS. SUSAN STEPHEN: The main change that occurred was with respect to the refinancing risk with respect to fixed-rate debt coming due in the next twelve (12) months. In our former guideline, we had a clause that indicated that with an acc -- with any fiscal year, we could have -- not have more than 15 percent of our debt portfolio maturing in that fiscal year. That was subsequently amended to a rolling twelve (12) month average.

MR. ANTOINE HACAULT: Okay. Help me understand that in relationship to a number, and I'll choose $20 billion, because we see numbers below that, and some going above that. With a $20 billion debt portfolio, under current policy, how much of that portfolio can be or should be, firstly, floating-rate debt?

MS. SUSAN STEPHEN: Well, according to our -- our guidelines, we target to keep our floating-rate and short-term debt and fixed-rate maturing within the next twelve (12) months to under 35 percent. As far as our guidelines go, we target to keep the short term and floating-rate debt to between a range of 15 to 25 percent.

Now, what we've seen over the course of the last few years in anticipation of our large new capital expenditures is we've seen a reduction in that floating-rate portion to allow for the additional interest rate risk on our new borrowings. We are going through an unprecedented capital investment process right now, and we deemed it prudent to bring down that floating-rate debt to allow for that in -- the interest rate debt -- interest rate risk on our new borrowings.

MR. ANTOINE HACAULT: And was that decision ever formalized in the way of a changed policy being approved?

MS. SUSAN STEPHEN: I believe it's actually included in our -- in our guideline, that in years where we have large borrowings or large refinancings, we will lower our floating-rates percentage.

MR. ANTOINE HACAULT: Okay. And is there any more specific direction provided in the guidelines as to what that might look like? Would you go down to 5 percent of floating-rate and short-term debt, for example, or is there no number whatsoever?

MS. SUSAN STEPHEN: There is no minimum number. I suppose zero would be the minimum number. Right now, as of November 30th, 2017, considering our new borrowings in the -- into the mix, we are sitting around 24 percent for our interest rate risk profile, which is within our target range.

MR. ANTOINE HACAULT: And when you say, 24 percent, 24 percent of floating-rate debt and short-term debt, or does it go on to item number 3, fixed-rate long-term debt to be refinanced?

MS. SUSAN STEPHEN: It includes all those three (3), and we've also included interest rate risk on new borrowings in the next twelve (12) months.

MR. ANTOINE HACAULT: And you've explained that the guideline suggested that you go to

a lower amount on floating-rate debt, short-term debt,
except -- and is it -- the fixed-rate long-term debt,
is that still being applied for the next two (2) or
three (3) years when we still have significant
borrowings?

MS. SUSAN STEPHEN: That's correct.
We will be keeping our floating-rate debt under 10
percent, and that is included in our debt management
strategy.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: So with respect
to the numbers here, how might we understand the 15
percent of long-term debt to be refinanced within a
twelve (12) month period being less than 15 percent of
the total debt portfolio?

How -- how do we translate that to
current borrowings and what the -- the current policy
is, because it says less than 15. I'm not too sure
what number you guys are looking -- or I say, "you
guys," I should -- sorry for the colloquialism -- the
Corporation is looking to achieve.

MS. SUSAN STEPHEN: All right. So the
15 -- 15 percent figure would be the absolute maximum

that we would tolerate. In most years, we try to keep it much less than that. We have tried to maintain a relatively smooth debt maturity schedule with our most recent movement in the terming from twenty (20) to twelve (12), that initiative was enacted because of the circumstances of the day, where we were anticipating having additional cash available for debt retirement within a certain timeframe, and which is why we thought we would place additional debt in that period and retire the debt, i.e., we would not have refinancing risk on that debt.

MR. ANTOINE HACAULT: Okay. And was -- is this reflected in the written policy that -- in guidelines that you have, this decision?

MS. SUSAN STEPHEN: No. This decision is not reflected within the guideline or the policy, but it would operate within those guidelines. This is a debt management strategy separate from the guideline and policies.

MR. ANTOINE HACAULT: And help me understand when Manitoba Hydro intends to revert back to maintaining an aggregate of floating-rate debt and short-term debt of 15 to 25 percent of the total debt portfolio. When do you start following that policy again?

MS. SUSAN STEPHEN: Well, that will be dependent on future circumstances. We -- as we've discussed there are several factors at play in terms of our forecast assumptions, should we see any further escalation in costs for Keeyask, any further delays in service, interest rates going up, export forecasts not -- not being realized. It's dependent on several factors.

So I would anticipate that when we have a flatter maturity -- or a smoother maturity schedule, we're through our new borrowings, we're able to pay down refinanced debt, I would -- I would assume at that point that we could take on additional interest rate risk by adding floating-rate debt to that mix.

MR. JAMES MCCALLUM: And, sorry, if -- if I may, I mean, in a nutshell what -- what the Corporation has done here, and -- and as somebody who joined it, you know, midstream, I think this is a very elegant, very well thought through debt management strategy.

But they've looked at the situation and --and said -- We've looked at the situation and said, We've got 13, $14 billion to borrow in the next five (5) years we -- that -- that we are exposed to whatever the interest rate is on the day we borrow that money.

You know, as we borrow it in the next five (5) years in advance of that, we had better start really managing and reducing the amount of debt in our capital structure that is floating-rate today. Because that floating-rate debt, you know, is -- is -- gets set at the market price every quarter, and -- and then the money we borrow, we're a price taker. We're going to be taking the interest rate as it exists in the market on that day.

So looking at it on a -- on a multi-year and in an -- in an aggregate view, they've taken the position that we should be moving away from -- from, in this instant, or -- or in this, you know, at a -- at a quarter end, having a certain target for floating-rate and instead saying, Let's -- let's clear some room. Let's keep some dry powder so that we can help absorb interest rate volatility knowing how much we need to borrow going forward.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: I'm not so sure how to fully understand the answer which you tried to give me, and that's probably because I have no clue.

But could we perhaps go to one (1) of the charts that are reproduced in our book of documents that might help me try to understand that a bit better.

For example, maybe the chart at page 36 would -- or, sorry, 34 would help us understand. I don't know if you can zoom in so we can see the numbers a bit better at the bottom, Kristen. Thank you. So part of a similar chart was explained by you, Ms. Stephen, in answering questions of Mr. Peters'.

When we look at this chart, firstly, could you just remind us of what the assumptions are with respect to this particular scenario?

MS. SUSAN STEPHEN: Yes, of course. So this particular scenario is the IFF16 update with interim. And it takes into account the twelve (12) year weighted average term to maturity. So you can see in the pie chart on the right side of the chart, the allocation, the distribution of term.

So we have allocated on essentially 5 percent into the forty (40) year or the forty (40) year plus, or the ultra long space, 15 percent into the thirty (30) year space, 28.75 percent into ten (10) years, and the residual 51.25 percent under ten (10) years. So that would be put on me five (5) years with some threes and sevens.

So any new debt issuance between the years 2018 and 2020 is being termed out based on those assumptions. And those new issuances are what is portrayed in the light blue that you see here. And just to refresh your memory, the green is actually the new borrowings that we're undertaking. The dark blue is our current maturity schedule, and the orange bars represent physical debt maturing, which currently has a swap attached to it.

MR. ANTOINE HACAULT: Okay. Thank you.

MS. SUSAN STEPHEN: So you can see that if we undertake the twelve (12) year weighted average term to maturity terming strategy, we are putting a lot of new debt, 80 percent of the new debt in ten (10) year time frame and under, without any cash available to pay down that debt would create a huge amount of refinancing risk.

MR. ANTOINE HACAULT: Okay.

MS. SUSAN STEPHEN: So if that cash is not available for debt retirement we will not pursue this strategy. You would add too much risk for Manitoba Hydro.

MR. ANTOINE HACAULT: And just so I make sure I understand this graph, Hydro's proposed plan to generate additional cash is reflected by the purple line that goes -- that starts around 2021/2022 and goes to the right after the -- those years.

MS. SUSAN STEPHEN: Correct. Yes, we have surplus cash beginning in 2023.

MR. ANTOINE HACAULT: Okay. So that in the year 2022, for example, we see this, if it had been implemented, the twelve (12) year WATM strategy would add some light blue in 2022, but there really isn't any cash to retire that debt which is put there as a result of the new strategy.

Is that correct?

MS. SUSAN STEPHEN: Correct. So the dark blue is what we actually have existing on our books at the moment.

MR. ANTOINE HACAULT: And this new strategy would have, based on the then assumptions, had a fairly big amount of debt being put in the bucket for 2023.

And we can see that the line for cash is basically at the green line, and anything above that would not be dealt with by the surplus cash; correct?

MS. SUSAN STEPHEN: That's correct.

MR. ANTOINE HACAULT: And there's

always pluses and minuses, but that's cash assuming normal water; correct?

MS. SUSAN STEPHEN: That's correct. Now, another finesse is that with the amounts that we're putting into the year 2023, we would have the flexibility of terming those issues out into shorter terms where cash is available for debt retirement, as opposed to issuing thirty (30) year debt. At that point, you have no opportunity for retirement.

MR. ANTOINE HACAULT: Okay. And when you roll that debt over, you're going to be looking at all the circumstances in 2023 and deciding what makes sense based on the yield spread, based on what's available in the market, and a host of other factors; correct?

MS. SUSAN STEPHEN: Correct.

MR. ANTOINE HACAULT: And the simplifying assumption in the model can't take all those future decisions into account today because we don't know what those circumstances will be in 2023; correct?

MS. SUSAN STEPHEN: That's correct.

MR. ANTOINE HACAULT: And under this scenario, there's a simplifying assumption of certain things that would happen to -- and help me here. I think -- I -- I could look at the chart, but I think it's about $2 billion that you're going to have to make a decision as to what you're going to do in 2023, with respect -- with respect to this potential reterming and -- and refinancing?

MS. SUSAN STEPHEN: Okay. Yeah, just to clarify, we actually have transacted nearly a billion of five (5) year debt, which you see as the dark blue portion in 2023. And as I mentioned the other day, because of changes in interest rate levels and the term spreads has been reduced between five (5) and thirty (30) years. We were actually moving away from this strategy, so I highly doubt that we will see a growth to the 2.5 billion mark in 2023 time frame at this point.

MR. ANTOINE HACAULT: So am I taking your answer to say that the world is evolving and what we see on this graph being portrayed as of 2023, it's probably not what's going to happen?

MR. JAMES MCCALLUM: Yeah. As we've said, there's the plan and then, I mean, you have to manage all aspects of our business, including -- including how we go to the capital markets dynamically. You can't be blind to what has changed just because you had a plan six (6) months ago. You have to be responsive to the way the world works.

But if your question is, if this were to be what happened then, yes, we would be making decisions. I think your question was you'd -- you'd have a decision to make around $2 1/2 billion or so of financing that was coming due. And the answer to that is, yes. We would need to then decide what mix of -- of terming and what mix of fixed and floating we ought to do for the best interest of the Corporation.

MR. ANTOINE HACAULT: And in that year, you would have less than $500 million of cash under your current rate plan, and that's why you're going to have to make all those decisions in 2023; correct?

MR. JAMES MCCALLUM: That -- that's right. We're not going to have $2 1/2 billion of cash flows that year to entirely retire all of that debt. And we're not -- you know, in our -- in our financial plan here we certainly are proposing to -- to, you know, have some level of refinancing risk throughout both the ten (10) years and beyond.

We will always be -- it's -- it's very costly to take refinancing risk out of your -- out of your business. You have to borrow for exceptionally long terms, which is practically very hard to do, and

-- and even to the extent you can is extremely expensive.

MR. ANTOINE HACAULT: Just so I better understand the policy, and that's why I wanted to go through this example, seeing that in 2023, according to the assumptions that existed when this was prepared, we'd have somewhere in the range of a little bit over $2 billion of being -- of having to be refinanced in that particular year.

Does that fall within your policy? And could you explain how it does or it doesn't?

MS. SUSAN STEPHEN: Yes, it would. So should we have 2 billion maturing in that fiscal year, at that time we would have approximately, I believe, debt of around 24 billion, somewhere in the range subject -- subject to check. So that would fall within the 15 percent guideline.

MR. ANTOINE HACAULT: And I don't think I need to go through the immediately subsequent years being 2024 and 2025.

Could I take it that, with respect to anything that's above that purple line, the discussion we've had on the record up to this point would be the same? That you're not sure, number 1, whether those blue lines will be as big as they are; correct?

MS. SUSAN STEPHEN: Well, I think at this point we will just go with the assumptions as they are. Like I mentioned we're working day-to-day with the markets and the circumstances have changed in the markets. So we know for this year that we are adapting our strategy. I think for planning purposes going forward, we will keep to what we have put forward in our plan.

MR. ANTOINE HACAULT: Okay. But will you agree with me to this extent. If that plan had been implemented in each of the years '24 and -- 2024 and 2025, you wouldn't have enough cash to take care of all those refinancings in the light blue?

MS. SUSAN STEPHEN: That's correct. So any -- any debt under the purple line would be repaid theoretically, and any of the blue lines above the -- the purple line would need to be refinanced.

MR. ANTOINE HACAULT: Thank you. I'll take you to page 51. And I'm pretty close to ending this subject, I believe, members of the panel. 51 of the book of documents. This was a response to Coalition/Manitoba Hydro Round One, question 97 (a) to (c).

Are you familiar with this chart, Ms. Stephen?

MS. SUSAN STEPHEN: Yes, I am.

MR. ANTOINE HACAULT: And am I right in assuming that the IFF14 forecast was done on the basis that you previously explained, being the average of several forecasts?

MS. SUSAN STEPHEN: Yes, it was the average -- it was a consensus forecast.

MR. ANTOINE HACAULT: Okay. Now, I think the one (1) thing that would assist me is that you also talk about the weighted average, and what that means as opposed to what you're actually going to be locking new debt in at.

Like, how does -- how do we do the weighted average? What does that mean?

MS. SUSAN STEPHEN: Okay. Perhaps I'll proceed through each of the forecasts and give an explanation of how each was derived. So you can see for the first one, IFF14, which is in orange, we would have had a weighted average term to maturity assumption of twenty (20) years.

And for that particular forecast, we would've taken consensus forecasts, averaging the ten (10) and the thirty (30) year to come up with the rate and the term. We proceeded to have a similar methodology for IFF15, twenty (20) year term, the same averaging process.

With MH16 Update with interim forecast and IFF16 forecast, we employed a different methodology. We moved from a twenty (20) year weighted average term to maturity to a twelve (12) year weighted average term to maturity. And this had the impact of lowering both weighted average term to maturity, and the weighted average interest rates.

So you can see there's two (2) factors here. With a twenty (20) year weighted average term to maturity the simplifying assumption in the IFF in our model is we can only use one (1) term. So any debt issued in 2017 will be shown in our IFF to mature in 2037. Similarly, with a twelve (12) year weighted average term to maturity any debt issued in 2017 will be shown to mature in 2029.

So what we see on this particular graph for MH16 update with interim and IFF16 forecast, is that all of the debt that's issued in 2018 is shown to mature here in 2029/'30. So you see a bit of a blip in terms of it being refinanced at higher rates at that point in time.

MR. ANTOINE HACAULT: I think maybe I'm going to have to break it down in -- in little bites. You know your material way too well. So first, this does not really show -- and there's other graphs that show the expected forecast of the new finances isolated. without looking at all the other financing that's already locked in.

Is that correct?

MS. SUSAN STEPHEN: I'm sorry, can you repeat the question?

MR. ANTOINE HACAULT: This chart is not intended to show what Manitoba Hydro believes its new borrowings will be at. So say, for example, if I go to the IFF14 forecast Manitoba Hydro does not believe -- or did not believe based on the forecast that in 2016/2017 the rates it would have to pay on a twenty (20) year assumption would be somewhere around 5.75 percent.

MS. SUSAN STEPHEN: No. So what this is actually showing, this is showing the weighted average interest rate of our total debt portfolio. So we do have a graph which shows -- and I believe I had a similar grass in my presentation from the revenue requirement panel, which showed the forecast for five (5) year and thirty (30) year, which would give more of an indication of the items that went into our weighted average rates.

MR. ANTOINE HACAULT: Okay.

MS. SUSAN STEPHEN: So would -- do you -- would you want me to pull that up?

MR. ANTOINE HACAULT: And -- and we'll go there.

But what we see -- is it fair to say on this graph within one (1) year the weighted average of all your portfolio was expected to change from the level of IFF14 forecast to the IFF15 forecast using the same base assumption of twenty (20) year WATM?

MS. SUSAN STEPHEN: Are you referring to the specific data point? Sorry, are you referring to the specific data point?

MR. ANTOINE HACAULT: No. The data points going forward.

MS. SUSAN STEPHEN: Okay.

MR. ANTOINE HACAULT: So that we see within one (1) year a variability in your entire portfolio of nearly 1 percent.

MS. SUSAN STEPHEN: Now, we also have to keep in mind that the interest rates -- the consensus interest rate forecast that we had for IFF16 were lower than what we had in MH15 as well. So the full effect is not due just to the terming.

MR. ANTOINE HACAULT: I understand, but I just want to take a little snippet because once we start introducing new variables it's hard to do the comparison. I wanted to do the comparison between IFF14 forecast which uses the same twenty (20) year WATM assumption, and the IFF15 forecast which uses that twenty (20) year WATM forecast. In one (1) year that the forecasts had the effect of changing the whole portfolio by nearly 1 percent.

MS. SUSAN STEPHEN: And I think a lot of that is due to just the sheer volume of debt that we're taking out. We're borrowing up to 4 billion, which is totally unprecedented in our history, at extremely low rates. And that is bound to affect the weighted average interest rate of the portfolio.

MR. JAMES MCCALLUM: Maybe if I can be helpful. I think you're trying to get us to say that the interest rates went down -- our forecast of interest rates went down between IFF15 and IFF14. And I think that was probably covered in the last GRA, and we can confirm it again.

MR. ANTOINE HACAULT: But can anybody help us understand in relationship to the $4 billion of borrowings how many -- how much -- how big was the portfolio before we started to get into this change in weighted average?

MS. SUSAN STEPHEN: March 31st, 2017

at the portfolio side at 16.4 billion. We're currently sitting around, subject to check, around 18.6 million.

MR. ANTOINE HACAULT: Yeah. And I just --

MS. SUSAN STEPHEN: Yeah, and that would be our consolidated position.

MR. ANTOINE HACAULT: Yeah. And just to make sure I understand, and I apologize if I'm asking it again and if my questions aren't clear, but it's the weighted average of the entire portfolio, not just of the new portfolio that you're doing?

MS. SUSAN STEPHEN: That's correct.

(BRIEF PAUSE)

MS. SUSAN STEPHEN: Yeah, the weighted average for new borrowings for this fiscal year is 2.55 percent, excluding the 1 percent guarantee fee.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: To perhaps help me understand a bit more, would it be possible for IFF16 and Manitoba Hydro 16 update to give us an additional line on this graph with -- sorry, two (2) lines with underlying data? So a new line for IFF16 forecast with the twenty (20) year WATM, and the Manitoba Hydro 16 update with interim forecast with the twenty (20) year WATM. Because we've been trying to get that twenty (20) year WATM data out there.

Would it be possible to have that?

MS. SUSAN STEPHEN: Yes, I think we can provide that.

MR. ANTOINE HACAULT: Can the court reporter record that as an undertaking? And I'll leave you to restate it, Ms. Stephen, at the risk of a lawyer trying to say something that he shouldn't be doing.

MS. SUSAN STEPHEN: Manitoba Hydro will be providing as an undertaking a copy of the weighted average interest rates, chart number 8, with IFF16 forecast with a twenty (20) year weighted average term to maturity; as well as MH16 update with interim forecast with a twenty (20) year weighted average term to maturity.

MS. PATTI RAMAGE: If I could interject --

MS. SUSAN STEPHEN: Along with underlying data.

MS. PATTI RAMAGE: We're looking at Coalition/Manitoba Hydro 1st Round 21(a)(c), and that information is already on the record. This is what my back row is advising.

MR. ANTOINE HACAULT: Yeah, it's not at all in one (1) place and it would be useful to have that all in one (1) place if we could, please.

MS. PATTI RAMAGE: Okay.

MR. JAMES MCCALLUM: That's fine.

--- UNDERTAKING NO. 11: Manitoba Hydro will provide a copy of chart number 8, the weighted average interest rates with IFF16 forecast with a twenty (20) year weighted average term to maturity; as well as MH16 update with interim forecast with a twenty (20) year weighted average term to maturity and underlying data

MR. ANTOINE HACAULT: Mr. Chair, I

believe this covers my questions. I may have a couple of cleanup questions. But might I suggest that we take our lunch break, and I expect I'll be able to confirm, subject to the previous area that I had identified I might have some questions on, that I've completed my questions. I think we have a little bit of flexibility in our --

THE CHAIRPERSON: We'll -- we'll come back at 1:15.

MS. PATTI RAMAGE: Oh, Mr. Chair?

THE CHAIRPERSON: Sorry, Ms. Ramage.

MS. PATTI RAMAGE: We might have a lot of flexibility in our schedule. We've been having discussions with counsel for Assembly of Manitoba Chiefs.

THE CHAIRPERSON: Okay.

MS. PATTI RAMAGE: And I don't like to speak for them, but I believe he will -- his cross will be under two (2) minutes at this point, so.

THE CHAIRPERSON: Okay. Ms. Ramage, you just reminded me, before we break I do have two (2) small questions for you on this point. But I was supposed to go to Ms. Steinfeld to discuss the -- this afternoon.

MS. DAYNA STEINFELD: Thank you, Mr.

Chair. So I have had conversations with both Ms. Ramage and Mr. Luke, and I understand that Assembly of Manitoba Chiefs' cross-examination of this panel will be shorter than the time that was originally allotted, as a number of the questions will be deferred to another panel.

I do think there will still be some questions from that Intervenor, but there is some flexibility in the schedule for this afternoon. I believe that Mr. Orle will also have questions of this panel once Assembly of Manitoba Chiefs is done. And then Mr. Gange is -- is scheduled to start at 3:00.

THE CHAIRPERSON: Okay. We can go in one (1) direction. I -- I guess the question is I don't how much time Mr. Hacault is going to require. Are -- what sort of time frame are you talking about, then, for a break; something like two o'clock instead? 1:30? I'll -- I'm willing to take bids.

MS. DAYNA STEINFELD: I -- I would suggest 1:30 because I understand that My Friend opposite also has a flight this afternoon, so it may be that we take a slightly longer afternoon break. But I think 1:30 might be appropriate.

THE CHAIRPERSON: We can -- we can go for -- are you fine with that Ms. Ramage or --

MS. PATTI RAMAGE: I wasn't entirely because I was hoping our panel could actually have time to -- a block of time is more helpful to them than to come back at 1:30 for a very brief, you know, time and then another recess if we can --

THE CHAIRPERSON: Well, I guess the problem is Mr. Hacault has sort of reserved some time for cleanup. If he's got any questions -- if he does have any questions then we can deal --

MS. PATTI RAMAGE: Yeah.

THE CHAIRPERSON: -- with another panel. But that's -- that's -- he certainly has the right to -- I mean, I -- I assume you want to review your notes to see if you have any further questions?

MR. ANTOINE HACAULT: That's -- that's correct. I've been going for about a day and a half now and --

THE CHAIRPERSON: Yeah. Well --

MR. ANTOINE HACAULT: -- if -- if I thought --

THE CHAIRPERSON: I'm -- I'm sorry, Ms. Ramage. I -- I -- yeah, we'll -- we'll do it for 1:30. I -- I just have two (2) quick questions for Ms. Stephen. Okay. And this is -- you mentioned the separate debt management strategy. And this is, I --

I take it, for the floating rate debt of keeping it under 10 percent.

Is this a strategy that was passed by the Board of Directors, or is this a management strategy?

MS. SUSAN STEPHEN: The policy and guidelines --

THE CHAIRPERSON: Right.

MS. SUSAN STEPHEN: -- were approved by our CFO, our former CFO, Darren Rainkie.

THE CHAIRPERSON: Okay.

MS. SUSAN STEPHEN: And the debt management strategy is also approved by the Vice President of Finance.

THE CHAIRPERSON: So it doesn't go to the Board of Directors at all?

MS. SUSAN STEPHEN: It has not had board approval. No.

THE CHAIRPERSON: Okay.

MR. JAMES MCCALLUM: I would just maybe add, not directly as a document, but clearly the debt management strategy forms a part of the integrated financial forecast, which is approved by the Board.

THE CHAIRPERSON: Okay. This -- this

-- the separate debt managed strategy, then, is one (1) that goes back to Mr. Rainkie's time? It's not something that's changed in --

MS. SUSAN STEPHEN: The debt management strategy is updated every year. So, Mr. McCallum would have updated -- would've signed off on this year's version.

THE CHAIRPERSON: Okay. I -- I guess the question I had was on the floating rate, to have a no more than 10 percent.

Did this occur during Mr. Rainkie's time, or is it something more recent with Mr. McCallum?

MS. SUSAN STEPHEN: No, it would have -- it would have gone back to Mr. Rainkie's time. So this is something we've been doing for a few years.

THE CHAIRPERSON: Okay. Thank you. Those are my questions. We'll adjourn till 1:30.

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

--- Upon resuming at 1:37 p.m.

THE CHAIRPERSON: Okay before we start I'm going to turn to Ms. Ramage because I guess we have more exhibits for undertakings.

MS. PATTI RAMAGE: Yes, we do. There's two (2), they both were in response to MIPUG's request. The first is Manitoba Hydro Undertaking Number 10 - by our count - that was extending the chart in slide 55, and that should be noted as Manitoba Hydro Exhibit 81.

--- EXHIBIT NO. MH-81: Answer to Manitoba Hydro Undertaking Number 10 - by our count - that was extending the chart in slide 55

MS. PATTI RAMAGE: The second was provided in the revised chart, page 57 of MIPUG's book of documents, and that added the two (2) additional lines, and that is at -- that should be noted as Manitoba Hydro Number 82.

--- EXHIBIT NO. MH-82: page 57 of MIPUG's book of documents, revised chart that added the two (2) additional lines.

MS. PATTI RAMAGE: And by my count,

that leaves only one (1) outstanding matter with -- in terms of MIPUG's undertakings, and that was the one (1) that we discussed this morning.

THE CHAIRPERSON: Now, we -- we won't be sitting tomorrow. I'm just wondering, Ms. Ramage, if it would be possible to get that to Mr. Hacault before the end of tomorrow? Do you think -- to meet that undertaking because I guess -- sorry, you'll probably want to deal with it on Monday. This will be your one (1) outstanding issue.

I'm trying to figure out how we finish this panel before we get to the next panel. I don't want to bring this panel back if we can avoid it.

(BRIEF PAUSE)

MS. PATTI RAMAGE: We should be able -- I'm getting the signal from the back row that we should be able to pull that one together.

THE CHAIRPERSON: Great.

MS. PATTI RAMAGE: As -- as I indicated, that's -- I'm going to call it my bad in terms of thinking that was in the rebuttal and so we're just pulling the pieces so they can see where it goes.

THE CHAIRPERSON: Yes.

MS. PATTI RAMAGE: I would also note that we feel it's inevitable that this panel will be brought back in terms of between Daymark and MGF, but I know you're trying to keep the record sort of --

THE CHAIRPERSON: Yeah, I'd like to keep it as clean as possible.

MS. PATTI RAMAGE: Yes.

THE CHAIRPERSON: Mr. Hacault...?

CONTINUED BY MR. ANTOINE HACAULT:

MR. ANTOINE HACAULT: Yes, with respect to the response to Undertaking Number 11 with the additional plotting of the updated amount, I'd just like to confirm that all of this plotting is based on forecasts that are no more recent than the summer, so it would be July or so of 2017.

MS. SUSAN STEPHEN: Just to clarify the IFF16 Update with interim actually used the spring rates in the forecast.

MR. ANTOINE HACAULT: Okay. And by spring what month do you mean, Ms. Stephen?

MS. SUSAN STEPHEN: All of the consensus forecasts were roughly around the end of March, and we compiled that forecast in early April.

MR. ANTOINE HACAULT: Thank you.

MS. LIZ CARRIERE: I'll just clarify that the IFF -- or MH16 Update with interim forecast was filed in July and the IFF16 was filed in May with the original -- the original -- or the application itself.

MR. ANTOINE HACAULT: Thank you very much. I'd next like to go to page 41 of our second book of documents. It's a slide that was -- 64 that was part of Manitoba Hydro Exhibit 68, the revenue requirement panel presentation and get a little bit of clarification and perhaps unification of some of the data that we've received during the course of that presentation, and -- and in the subsequent days.

First, compared to the table we were looking at previously, this is not a table which shows us the weighted average of all the borrowings of Manitoba Hydro, it focuses on borrowing rates and forecast rates for borrowing; correct?

MS. SUSAN STEPHEN: Just to explain this, this particular graph, the light blue and the light green represent the forecast rates and the dark blue and the dark green represent the actual rates.

MR. ANTOINE HACAULT: Okay. So let's just take that at -- in little bites. So the thirty-eight (38) year all-in forecasts we see start on the left-hand side of the graph a little bit over 3.5 percent.

Am I getting that right?

MS. SUSAN STEPHEN: Correct.

MR. ANTOINE HACAULT: And that was based on this consensus forecast that you received and compiled in the following month?

MS. SUSAN STEPHEN: That would have been compiled in the spring, yes.

MR. ANTOINE HACAULT: Okay. And is -- and is it from those forecasts that then we see the step-up in each of the years March 31, 2018 to and including the last step-up at March 31, 2023?

MS. SUSAN STEPHEN: Yes, that would be the consensus view.

MR. ANTOINE HACAULT: Okay. And the same would hold true of the five (5) year all-in forecast rates with the lighter green which in March of 2017 starts slightly below 2 percent and then steps up with the last step being in March 31, 2023.

Is that correct?

MS. SUSAN STEPHEN: That's correct.

MR. ANTOINE HACAULT: Okay. And at the top of the graph it says MH16 Update with interim forecast.

So am I to take it that the forecast which we see on this slide is an updated forecast and not the forecast in Manitoba Hydro 16.

MS. SUSAN STEPHEN: The Manitoba Hydro 16 Update with interim forecast would include the 3.36 interim rate that was granted in August.

MR. ANTOINE HACAULT: But I'm looking specifically to the interest forecast.

MS. SUSAN STEPHEN: The interest forecast would be from the spring.

MR. ANTOINE HACAULT: And it's used in both MH16 and -- and MH16 Update?

MS. SUSAN STEPHEN: No.

MR. ANTOINE HACAULT: That's what I was trying to clarify. I didn't think it was, but...

MS. SUSAN STEPHEN: Yeah, the MH16 forecast actually utilized the winter rates.

MR. ANTOINE HACAULT: Okay. And I believe you told us a couple days ago, it was on -- I think it was December 12 that on that particular day of the thirty (30) year all-in rate was at 3.02 percent.

Am I recalling that correctly?

MS. SUSAN STEPHEN: Yes. And that

would be excluding the provincial guarantee fee.

MR. ANTOINE HACAULT: Thank you for that clarification. And you explained that the Company made a business decision to lock in some longer term debt, but it was at a higher rate than that particular rate.

MS. SUSAN STEPHEN: Yes, we had locked a piece of thirty (30) year -- year rate debt in a few weeks prior to that at three nineteen (319).

MR. ANTOINE HACAULT: Okay and remind us of the amount again?

MS. SUSAN STEPHEN: Three hundred million Canadian.

MR. ANTOINE HACAULT: Okay. So there's a lot of moving parts, some of which may be favourable and some of which may be less favourable but at least that debt being locked in at that rate was more favourable than the base assumption shown in this graph; correct?

MS. SUSAN STEPHEN: Correct.

MR. ANTOINE HACAULT: And it may be self-evident, but only time will tell whether or not these forecasts with the forecasted step-up rates actually prove to be accurate either on the high side or low side, correct?

MS. SUSAN STEPHEN: Correct.

MR. ANTOINE HACAULT: Now, before lunch you had mentioned, I believe, for this year's borrowing that the weighted average was at about 2.5 percent.

Did I understand that correctly?

MS. SUSAN STEPHEN: It's 2.55 percent.

MR. ANTOINE HACAULT: So from any borrowings as of January 1, 2017 going forward or is it the fiscal year?

MS. SUSAN STEPHEN: It would be fiscal year. So it would be from April 1 on.

MR. ANTOINE HACAULT: Okay. And would it be possible -- I know you don't have kind of a mark or anything to indicate how that relates to what's shown on this graph and, in particular, the light blue and the light green lights.

Are we somewhere in the middle? Are we closer to the bottom? I'm seeing that, for example, as of March 31, 2018 people are telling us on the forecasts that we'll be close to 2.5. So I'm trying to understand, based on your experience, which is about six (6) months -- or four (4) months from that date, where we're at in relationship to what the forecast was?

MS. SUSAN STEPHEN: Okay. If you just want to know exactly where our -- where our weighted average interest rate on our new long-term debt borrowed this year is on this chart, it would sit slightly above the 2.5 mark.

Now, keep in mind the green -- light green forecast is for five (5) years. The light blue forecast is for thirty (30) years and our weighted average term to maturity for new borrowings is eighteen (18) years.

MR. ANTOINE HACAULT: Okay. So where would the eighteen (18) year line go in relationship to the thirty (30) year forecasted levels?

MS. SUSAN STEPHEN: That I cannot say at this point.

MR. ANTOINE HACAULT: It's not a mathematical exercise between the two --

MS. SUSAN STEPHEN: It could be interpolated but -- it would be something I'd have to come back to you with.

MR. JAMES MCCALLUM: Yeah, so in the capital markets, there -- there are benchmark maturities that are liquid and trade and everybody uses as reference points. There's a five (5) year, a ten (10) year and a thirty (30) year.

And so there's no such thing as an eighteen (18) year bond that everybody can look at and say, that's the benchmark yield.

MR. ANTOINE HACAULT: Thank you for that answer, but would it not be possible to have some sense, for example, what a twenty (20) year debt would be at and -- and that would give us at least a rough idea of -- of where we're at.

MR. JAMES MCCALLUM: Well, perhaps and Ms. Stephen can answer it both with her own answer and speaking to a point I'll raise.

I -- I believe where we're heading and I -- I don't want to predict, of course, we'll go wherever you want to, but -- but Ms. Stephen said we -- we borrowed it -- a weighted average interest rate thus far this year of 2.55 percent. And if you compared that to our target for the year, I think it would be -- what was -- what was our target for the year? 2.55 percent. So, we're bang on our target.

MS. SUSAN STEPHEN: Just to add a little detail and to perhaps give you little bit more perspective.

I have today's rates here in front of me and if we were to average the ten (10) year and the thirty (30) year bonds all in, we would have an average of 2.82 percent today. So, that would be roughly twenty (20) year.

MR. ANTOINE HACAULT: Okay and did I understand Mr. McCallum's answer to say that if we were choosing -- I'll back up.

Does the Corporation actually track, for example, what it's actually expecting on a twenty (20) year weighted average interest rate, and does it try to forecast that?

MS. SUSAN STEPHEN: Well, yes. As I indicated it in the past this is how we actually used to forecast. Is we would average the ten (10) and the thirty (30) year all-in borrowing to come up with our twenty (20) year rate.

So, what I just relayed to you in terms of actual rate, that's what's actually trading in the market today.

MR. ANTOINE HACAULT: And what was the assumption in the modelling for the twenty (20) year WATM, was it 2.8 percent or was it a different number?

MS. SUSAN STEPHEN: In the forecast?

MR. ANTOINE HACAULT: Yes.

MS. SUSAN STEPHEN: I don't have that readily available but we can get that for you if you'd like.

MR. ANTOINE HACAULT: Yes, if you could provide that. I don't know if the back row can provide it.

MR. JAMES MCCALLUM: We're happy to provide that. It would be, I would think, directionally, you know. We've got -- you can see on the page here a thirty (30) year line of -- you know what, pardon me, I'm not going to -- I'm not going to average thirty (30) and five (5) years in my head. I can do thirty (30) and ten (10) but I'll stop there.

MR. ANTOINE HACAULT: Thank you for trying anyways.

(BRIEF PAUSE)

MS. SUSAN STEPHEN: The amount for the ten (10) year plus would be 3.15.

MR. ANTOINE HACAULT: And just to be clear, the 3.15 is the assumption that's used in the modelling of the twenty (20) year WATM in this forecast?

MS. SUSAN STEPHEN: Yes, that would be the assumption that's used.

MR. ANTOINE HACAULT: And the actual, through your good work, that we obtained for eighteen

(18) year WATM is 2.55, correct?

MS. SUSAN STEPHEN: That's the actual that we have secured to date, yes.

(BRIEF PAUSE)

MR. ANTOINE HACAULT: And to put things in some kind of a perspective on the issue of forecasting, through your good management you were able to secure thirty (30) year debt at a rate which is not much higher than what's projected to be a five (5) year rate in March of 2020; correct?

If I go across the line I see March 31 of 2020 we're at a little bit over 3 and I think you said the last one that you secured was at 3.19.

MS. SUSAN STEPHEN: For the fiscal year 2021 it would be the 3.2.

MR. ANTOINE HACAULT: And for the previous year?

MS. SUSAN STEPHEN: It's just slightly under 3, so I would say 2.95.

MR. JAMES MCCALLUM: And so our last long-term bond was at 3.19, roughly the rate of the five (5) year that's being forecast for fiscal 2021.

MR. ANTOINE HACAULT: Which starts on

March 31 of 2020, correct?

MR. JAMES MCCALLUM: April 1st.

MR. ANTOINE HACAULT: Or April 1st, yeah. Ms. Stephen, maybe you already answered this and I apologize if you did.

With respect -- and it's a different subject -- the IFF14, do you have any knowledge as to whether or not that integrated financial forecast was presented to Moody's, firstly; and then secondly, were you there or was it Mr. Schulz and yourself?

MS. SUSAN STEPHEN: In -- for IFF14, I would have been present at the meeting with Mr. Schulz and they would have received the standard presentation that we normally put forward which takes into account corporate profile, our financials. It looks at liquidity, our financing needs, rates, export contracts, so forth.

MR. ANTOINE HACAULT: Thank you. I have another line of questioning which I don't think we'll take very long. And I think Mr. Cormie will be the best place to answer those questions.

The one (1) thing that I had reproduced in book 1 of our documents at tab 6 was the discussion with Dr. Borison but also it flowed into a discussion with Mr. Cormie on the issue of uncertainty. And at page 2562 of that transcript, I had a discussion with Mr. Cormie on that subject, and I had asked him what his view was with respect to uncertainty and what that did with respect to negotiations he would enter into.

And he provided a response, which is on the record, my question to you, Mr. Cormie is: Do you have a different view as to the impact of any uncertainty with respect to the negotiations you conduct in the current climate.

MR. DAVID CORMIE: Mr. Hacault, in -- in -- in -- to put that transcript in context, we were talking about Manitoba Hydro's ability to offer the market fixed price power for long terms given our very low incremental cost of production.

And that was valued by the market and in the context that there are other options at the time were natural gas, which had lots of volatility to it. In today's world our customers have renewable options that are also, essentially, fixed price once they make the investment in a wind or solar facility. So we don't have the same leverage we had previously but we are still willing to commit to -- to long terms. So that's still an advantage but we don't have all the advantages that we used to have.

MR. ANTOINE HACAULT: But does there

continue to be uncertainty in the market, for example, as to what's going to happen with coal, what's going to happen with nuclear, what's going to happen in the markets generally?

MR. DAVID CORMIE: Absolutely, there's uncertainty, yes.

MR. ANTOINE HACAULT: And does whatever certainty continues to exist still provide you with an advantage that works in your favour as a company?

(BRIEF PAUSE)

MR. DAVID CORMIE: I believe we have -- we still have advantages, yes.

MR. ANTOINE HACAULT: Thank you. Next, I just want to explore with you what options Manitoba might have with respect to the surplus power, which we saw on the tables that were reviewed with you and Mr. Peters and are also part of our material. By way of context, also this morning, I had drew to your attention the dip that seems to occur when the NSP sales end.

Sir, do you still have opportunities to serve Great River, and NSP, and Saskatchewan, or have those opportunities totally been closed?

MR. DAVID CORMIE: Mr. Hacault, I don't really want to speak about the individual customers. What I -- what I can say is that we continue to work with all the customers that we are directly connected to. They're almost all facing the same challenge of aging generation, the challenge of dealing with the climate change risk and -- and carbon emissions. Those challenges persist.

I would say that the opportunities are less because companies are slowly implementing their plans and moving in that direction, and we're trying to be there for them as a supply -- as a supplier -- long-term supplier, as we've had in the past, but they do have -- do have alternatives that they didn't have, for example, a year ago, or five (5) years ago, during NFAT.

MR. ANTOINE HACAULT: Okay. And could you talk a little bit about the opportunities that are going to open up to Manitoba Hydro by having the option of expanding your market for electricity into the Wisconsin area? How does that work in the small utilities in that area?

MR. DAVID CORMIE: As part of the new 500 interconnection project with Minnesota, Manitoba

Hydro was able to acquire 500 megawatts of new firm transmission rights into Wisconsin. The Wisconsin market is as large as the Minnesota market is, and so we took advantages -- took advantage of that opportunity to acquire those transmission rights when we -- when we began on the Great Northern Transmission Line Project.

And that expands the suite or the portfolio of utilities that we would deal with in the US to include all the Wisconsin utilities. And once the Great Northern Transmission Line comes into service, we will acquire those rights. And we have been active in the States, making our presence known as a supplier of renewable, non-emitting, competitively-priced power and we're -- continue to having a presence there, both with the utilities, but with the regulators, and with the -- with the politicians to let them know that we're -- we'll be -- we'll be arriving and prepared to do business with them.

MR. ANTOINE HACAULT: And could you remind that this Board in relation to the 2025 year timeframe, when this Corporation expects to have that transmission facility completed into the market?

MR. DAVID CORMIE: The Great Northern

Transmission Line is scheduled to come into service on June the 1st, 2020, and MISO is obligated on that date, when the line goes into service, to grant us the transmission rights, the MISO transmission rights that we reserved, and they will become available for our use at that time.

MR. ANTOINE HACAULT: And when you refer to that market -- hopefully I'm not repeating what you said, or I just want to make it clear, does it nearly double the size of Manitoba's market into the United States of America?

MR. DAVID CORMIE: In -- in terms of US load, yes. There's an -- an equivalent amount of load in Wisconsin as there is in -- in Minnesota. And so potentially, you have more utilities looking for competitively-priced power, so more competition, more opportunity for Manitoba Hydro.

MR. ANTOINE HACAULT: So this new line, is it fair to say is a good thing from a competition perspective? It provides something to Manitoba Hydro in 2020 which would not otherwise have existed if that line had not been built?

MR. DAVID CORMIE: Yes. In the long run, we expect that. We have not included any revenue from an expanded market into the IFF. There is that potential, but that would be many years out into -- into the future. Wisconsin utilities are -- to the extent that they needed resources in 2020, they've already contracted for those resources, and so, you know, we would be -- we -- it would be towards the end of the decade that we would be thinking that there might be some new opportunities. So it's a long-term strategic play that we've made.

We want access to the market. We can do that, essentially, at no -- no incremental cost to building the transmission line into Minnesota. So we took the opportunity, and -- and we're going to work -- work the market to rate benefits down the road for the Utility.

MR. ANTOINE HACAULT: And could you remind me or help me understand again with respect to the Wisconsin -- I've referred to it as a WPS sale, how the firming capacity of Manitoba Hydro helps with respect to what I would call the wind storage? Hopefully, I'm choosing right terminology. You can correct me, and then start explaining.

MR. DAVID CORMIE: Manitoba Hydro's generating stations are quite flexible in their operation, and when -- when there is a surplus of power in the market and the market price drops, Manitoba Hydro can back off its -- its generation and reduce the exports into the market, in effect, supporting the market price, and when the market price is really high, we can use the water that's been stored in the reservoirs and -- and help meet -- meet that demand.

So it -- it complements the variable nature of wind and solar, and so we use our reservoir storage to support intermittents to provide a more -- more stable market price and a more reliable grid through our -- through our operations.

MR. ANTOINE HACAULT: Thank you, Mr. Cormie, and members of the panel. I appreciate your efforts to assist this Board and assist me in answering questions. And subject to any follow-up questions I may have, again, I thank everybody for their participation.

THE CHAIRPERSON: Thank you, Mr. Hacault. Mr. Luk...?

MR. SENWUNG LUK: Good afternoon, Board members. Thank you, Chair Gabor. Good afternoon, panel members.

My co-counsel, Mr. Shefman, and I apologize for not enjoying the past few days of hearing here with you in person. I assure you, we --

we've been following fastidiously and diligently through the transcripts, and we are grateful to the transcriptionists and the Board for providing it goes to us so expeditiously.

So we had -- the Assembly of Manitoba Chiefs had prepared some questions for -- for this panel regarding the -- the demand-side management programs that Manitoba Hydro provides, as well as the classification of customers into general service versus residential. And if I could ask for Manitoba Hydro Exhibit 68, page 3 to be put up, please.

So at -- we had understood that, you know, as per this exhibit, that Ms. Morrison would be answering questions on demand-side management at -- at this panel. But we've been in communication with Hydro counsel, who has informed us that they would prefer that those questions be posed to Ms. Morrison at the subsequent cost-of-service panel, and it -- it -- we had -- we had not known that she'd be available there as well. So now -- now that we have that knowledge, that's -- that's the plan that we are going with.

So we just I wanted to confirm for the record that questions relating to the delivery of demand-side management programs are better answered in the cost-of-service rate design and bill affordability panel, and if could just ask Hydro to confirm that?

MS. PATTI RAMAGE: We can confirm that.

MR. SENWUNG LUK: And if I could also just ask for Hydro to confirm for the record that questions relating to the classification of customers as general service versus residential are better answered at the cost-of-service rate design and bill affordability panel rather than at this panel?

MS. PATTI RAMAGE: Yes, that's also correct.

MR. SENWUNG LUK: Thank you very much, Ms. Ramage, and thank you very much Board members.

THE CHAIRPERSON: Thank you, Mr. Luk. Mr. Orle...?

CROSS-EXAMINATION BY MR. GEORGE ORLE:

MR. GEORGE ORLE: Thank you, Mr. Chair, members of the panel, members of the Hydro panel. Good afternoon. I represent MKO in these proceedings, and I -- I don't have a lot of questions, but there is one (1) question. Because of the -- the length of the -- the questioning on this particular area, and the fact that I was only able to follow some of it on -- on the monitor, this question may have been answered, but if it hasn't, I'd -- I'd appreciate having an answer for it that I can use.

Do the forecasts that use the proposed 7.9 percent rate increase, do they take into account a five (5) year deferral of the payments made to the Province?

MR. JAMES MCCALLUM: A five (5) year deferral of which payments?

MR. GEORGE ORLE: Of the guarantee fee, water rentals, the capital tax, the ones that are shown as being payments made to the -- to the Province.

MR. JAMES MCCALLUM: No. Our forecast would include those being made.

MR. GEORGE ORLE: Okay. The -- Boston Group report talked about reaching the revenue and the equity positions that you wanted in the term of five (5) years, that it was a -- a three (3) pronged approach. And my recollection is that the first prong was efficiencies in Hydro. Am I correct in that?

MR. JAMES MCCALLUM: I don't remember the order, but I can confirm that was one (1) of the prongs, sure.

MR. GEORGE ORLE: Okay. And we've

heard that -- that Hydro has taken some fairly significant steps in dealing with the efficiencies.

MR. JAMES MCCALLUM: I would argue more than what BCG proposed, yes.

MR. GEORGE ORLE: Yes. And the -- the second prong was rate increases for the -- the ratepayers of Manitoba?

MR. JAMES MCCALLUM: Correct. That was one of the levers.

MR. GEORGE ORLE: Okay. And that's been taken into account in your -- in your forecast. But the third prong, as I understand it, was that the Province would defer or give up the payments that were being made to it over the course of those five (5) years.

Do you recall that as being part of the -- the report?

MS. PATTI RAMAGE: Mr. Orle, could you bring up the exact reference in BCG that you're referring to? I think that would assist the witness.

CONTINUED BY MR. GEORGE ORLE:

MR. GEORGE ORLE: I don't have it handy. I -- I didn't think that it would be a -- a matter of any controversy. It seemed to be pretty clear that we'd been all talking about what payments were being made to the government, and --

MR. JAMES MCCALLUM: We -- I think we had this discussion yesterday or the day before, and so yes, it was an element of the BCG work that suggested that there might be a role for government to play, either via the form of an equity injection, or a suspension, or -- or partial amnesty of the -- of -- of basket of payments. We discussed this yesterday.

MR. GEORGE ORLE: Yes. Thank you. Have you done a calculation of what the rate increase would have to be if you took into effect the -- the reduction of the payments made to the -- to the Province?

MS. PATTI RAMAGE: Mr. Chairman, I think the evidence before this panel is that the Province is not considering any sort of equity injection or deferral of payments, so I don't see how this line of questioning is relevant to the panel.

THE CHAIRPERSON: Well, the panel has the ability to make recommendations, and there may be something -- I -- I have no idea -- the panel may want to recommend. I guess the -- I guess the question is that I -- I had understood there are calculations in your -- in the materials that indicate how much the --

how much Manitoba Hydro pays in terms of the -- the taxes and the -- and the water rates, and that. I think they're right in the statements right now.

I think it would be sufficient simply to say, This is how much we're paying. I don't know how far beyond that, because there is no indication, as I understand it, on the record from --

MS. PATTI RAMAGE: If that's -- I think that's fair, if that's your direction.

THE CHAIRPERSON: Yeah. So I -- I --

MR. GEORGE ORLE: If I just -- I --

THE CHAIRPERSON: Pardon me?

MR. GEORGE ORLE: -- before you make your ruling, may I -- may I have an opportunity to --

THE CHAIRPERSON: Sure.

MR. GEORGE ORLE: This matter was addressed at the NFAT hearing, where specifically, it was taken into account as to what reduction there would be in the rate being proposed in the event that water rentals were left back on the table. It was part of the recommendation from the Public Utilities Board as their -- in their NFAT report, that the government should consider taking some of these back because we did have a reference number as to what it would do to the rates.

So I -- I would submit that it would be interesting to know what that number would be. If you're going to write -- make a recommendation and it act -- actually has no effect upon the rate increase, that's one thing; if it has a substantial increase, it may make the -- the question of a recommendation all that more important from the Public Utilities Board.

THE CHAIRPERSON: Okay. Just hold on for a second.

(BRIEF PAUSE)

THE CHAIRPERSON: Can you pull up -- Kristen, can you pull up MIPUG Volume II, page 9.

Mr. Orle, is this the page you're referring to? From BCG?

MR. GEORGE ORLE: Yes.

THE CHAIRPERSON: One point nine (1.9) -- sorry, one billion nine hundred million (1,900,000,000) over -- is there something on the next page?

(BRIEF PAUSE)

THE CHAIRPERSON: Okay. And then two

(2) pages later, page 11, there's reference.

If -- if the issue is how much would be saved by that recommendation and how that translates into rate increases, the Board's prepared to direct that Manitoba Hydro simply produce that number, as to -- if you -- if you receive what is recommended by BCG, in terms of -- I don't know if you want to call it forgiveness or deferral of the water rental capital tax and debt guarantee 1 percent, what would that translate into for a rate increase? I take it that's your question?

MR. GEORGE ORLE: That's correct, Mr. Chairman.

THE CHAIRPERSON: Okay.

MR. JAMES MCCALLUM: We're -- we're happy to comply. We do need a little bit further direction in terms of -- first off, I guess I see on -- on page 11 here, a range of 1.9 to $3 billion.

Do we want an entire forgiveness each year, beginning next year, until we've reached some number? Do we want to prorit -- we can -- we can -- the team is amazing, we can model just about anything. We just need to know what -- what assumption you'd like us to work with.

THE CHAIRPERSON: Well, it's Mr.

Orle's request --

MR. JAMES MCCALLUM: Ask him.

THE CHAIRPERSON: -- so I'll ask Mr. Orle.

MR. GEORGE ORLE: Mr. Chair, I'm -- I'm satisfied that if the numbers -- and -- and they're -- they're PUB MFR-44, which is the -- the document that sets out the payments made to the government for each of the years.

And all I'm looking for right now is that the exact same forecast that has been made by Hydro, including a 7.9 percent rate increase, to meet all of the goals that they have in their -- in their forecast, the five (5) years, the getting to the equity ratio. The only thing I want changed is put back the payments made to the government, as set out in -- in PUB MFR-44, and -- and tell me what the -- what the amount of the rate increase is required.

THE CHAIRPERSON: And -- and you talking about for what period of time, Mr. Orle?

MR. GEORGE ORLE: For the -- the same period of time. The five (5) years that they -- that they had extended for that --

THE CHAIRPERSON: Okay. So for the five (5) year period.

MR. JAMES MCCALLUM: Okay. So I just -- we -- we obviously want to make sure we're clear on this. I'm just trying to find on here the payments to the -- here we are, the second to last column as I move left to right.

So if I -- I think we have to -- well, even though it's mostly over, we'll take 2018. And looking across, I see 374 million rising by 2022 to 463 million. So if I add all that up, I'm going to fall short of the two (2) bil -- you know, the $1.9 billion number.

CONTINUED BY MR. GEORGE ORLE:

MR. GEORGE ORLE: Yeah. Sir, I'm not as concerned with the -- with the amount that they were setting out. I'm -- I'm only concerned with the part that apparently appears to be part of the payments that are made to the government. And -- and the rest of it, I -- I'm not interested in that part.

MR. JAMES MCCALLUM: I -- I'm -- we're only trying to produce what's useful to you, sir.

So if I might -- why don't I take a shot at this, and if it's not what you want you can correct. But we will undertake to produce a IFF run that assumes zero payments to government in each of the years 2018 through 2022, and solves for even annual rate increases over the period 2018 to 2027 that achieves a 25 percent equity ratio.

Will that be in satisfactory?

MR. GEORGE ORLE: That's satisfactory. And, Mr. Chair, if that's satisfactory to the panel, I'm -- I'll -- I'll take that as the undertaking.

THE CHAIRPERSON: We're -- we're fine with that, Mr. Orle. Thank you.

MR. GEORGE ORLE: Okay.

MR. JAMES MCCALLUM: Okay.

THE CHAIRPERSON: Thank you.

MR. JAMES MCCALLUM: Hold on, I'm getting a frown from the back row.

(BRIEF PAUSE)

MR. JAMES MCCALLUM: I'll breathe a sigh of relief. I didn't over-commit.

THE CHAIRPERSON: Thank you, Mr. McCallum. Mr. Orle, did you want to continue.

MR. GEORGE ORLE: I've just been discussing a little with Mr. Hacault, and he feels that the five (5) years that I asked for should have been six (6).

Mr. Hacault, is that -- is that the...

MR. ANTOINE HACAULT: All I was just -- the revised plan, I don't know, it's up to Mr. Orle. I just noted to Mr. Orle, the first plan was a five (5) year plan of 7.9 percent increases, but the current plan is not five (5) consecutive years; it has been increased, since the interim decision, to six (6) consecutive 7.9 percent increases. So I don't know what information would be more useful if we'd match it to the seven point nine (7.9) over six (6) years or not, but that's up to Mr. Orle.

MR. GEORGE ORLE: No, I'm -- I -- I would prefer that, so that they -- they matched completely in the same way. So it's a matter of adding an extra year on.

THE CHAIRPERSON: Six (6) years, Mr. McCallum, that's okay?

MR. JAMES MCCALLUM: Six (6) years, it is. I don't want to -- we're -- we're happy to produce scenarios. I do note there is a -- perhaps a little bit of inconsistency, in that I don't, you know, we're -- we're talking about this in lieu of a 7.9 percent rate increase; it kind of infers that the alternative is zero. I don't think that's ever been on the table.

But we'll run the scenario and see what it shows. It will show an arc of lower rate increases, it can't not.

THE CHAIRPERSON: Thank you.

--- UNDERTAKING NO. 12: Manitoba Hydro to produce an IFF run that assumes zero payments to government in each of the years 2018 through 2023, and solves for even annual rate increases over the period 2018 to 2027 that achieves a 25 percent equity ratio

MR. GEORGE ORLE: Thank you. Panel members, I -- I'm in the same position as my Learned Friend from the Assembly. I believe the rest of my questions are more adequately put towards the -- the next panel.

THE CHAIRPERSON: Thank you. Mr. Gange...?

MR. WILLIAM GANGE: Can I have five (5) minutes, Mr. Chair?

THE CHAIRPERSON: Certainly. We'll break for five (5) minutes.

---Upon recessing at 2:29 p.m.
--- Upon resuming at 2:35 p.m.

THE CHAIRPERSON: Okay, Mr. Gange...?

CROSS-EXAMINATION BY MR. WILLIAM GANGE:

MR. WILLIAM GANGE: Thank you, Mr. Chair. I don't expect to be very long panel but I have a few questions and -- and I hope that I'm not going over issues that have already been discussed while I wasn't here.

But, Mr. McCallum, if you -- if we could go to Manitoba Hydro 68, the presentation, and if we could go to page 16. On this chart, sir, as I understand it, the -- the concern that's raised here is that the -- the forecast for consumption of energy in Manitoba has gone down quite substantially since the year 2014.

Is that a fair analysis of this chart?

MR. JAMES MCCALLUM: I -- I would say that's a reasonable conclusion, yes.

MR. WILLIAM GANGE: And -- and -- and,

therefore, because the use of energy is predicted to be lower, it has an impact upon your -- your net revenue requirements.

MR. JAMES MCCALLUM: Yes, absolutely.

MR. WILLIAM GANGE: And I'm -- I'm just wondering, sir, what assumptions are built into these forecasts regarding the electrification of the car fleet over the next twenty (20) years? Ms. Morrison...?

MS. LOIS MORRISON: We perform a forecast that we include related to plug-in electric and plug-in hybrid vehicles and at this point in time, we are projecting to be at the end of 2017/'18 to be approximately -- well, to be two hundred and seventy-eight (278) plug-in electric vehicles and over the twenty (20) year horizon at the end of that period we'll be at 22,560 plug-in electric or hybrid vehicles.

MR. WILLIAM GANGE: Can you put that into perspective, 22,560 at -- at the end of twenty (20) years.

MS. LOIS MORRISON: It represents 97 gigawatt hours of energy.

MR. WILLIAM GANGE: Thank you. And -- and in terms of the -- of the vehicle fleet, what does

22,560, what percentage approximately would that be?

MS. LOIS MORRISON: It represents 1.7 percent of the total vehicles on the road -- that are forecast to be on the road at that time.

MR. WILLIAM GANGE: And in -- in -- in making that assessment, Ms. Morrison, is -- is that based on an assumption that within the next ten (10) years the cost point 4 electric vehicles will be equal to the cost point of gas vehicles?

MS. LOIS MORRISON: That assessment is based upon a review of information in the marketplace at the time. It's recognizing that there will be some reduction in costs. It's recognizing the turnover of new vehicles purchased every year, and assuming a percentage of new vehicles every year being purchased being electric vehicles, as we discussed in our direct evidence, the purchase of an electric vehicle is driven by more than just the energy cost savings by having an electric vehicle versus an internal combustion engine which is fueled by gasoline.

The market has to bring selection. It has to bring better range, and it has to bring a better price point. And so those three (3) things have to come together. There's been a lot of progress in this marketplace but what we are projecting in our forecast is what we believe to be a reasonable uptake of electric vehicles. We do include as a sensitivity in our sensitivity and scenario section of what if all the vehicles switched over to electric vehicles, and that is substantive but it's also highly unlikely within the next five (5) to ten (10) years to see the entire fleet of vehicles on the road switch over to electric vehicles.

MR. WILLIAM GANGE: Right. And I think that's -- that would be generally conceded that that -- that's -- that within the next ten (10) years that's unlikely.

But, does your -- does that analysis make an assumption that as predicted by a number of -- of bodies and we don't have them on the evidence, but -- but Bloomberg reports predicts that by 2040. So, which is just past the endpoint of this analysis, half the cars in the United States that are being sold will be electronic -- electric vehicles.

Is that -- is that consistent with the assumptions that you've made?

MS. LOIS MORRISON: No, those would be much more optimistic than the assumptions that we've made.

MR. WILLIAM GANGE: Okay, is it -- is

the statement that I made that within the next ten (10) years -- because one (1) of the points that you raise, you raise three (3) things. One (1) was the price point and my understanding is, again, from -- from Bloomberg in terms of their prediction that the -- it's expected that the price point in -- in the United States for electric cars will be equal by 2025, within the next eight (8) years actually.

Is -- is that consistent or is that, again, a more optimistic view than what Manitoba Hydro has -- has forecast?

MS. LOIS MORRISON: I would say that is a more optimistic view than what we have forecast in terms of electric vehicle uptake.

What I will put on the record is that prior -- over the last five (5) to ten (10) years when the beginning of discussions of electric vehicles were coming in, there were a lot of projections out there about the uptake of what electric vehicles would be, and how quickly they would be adopted in -- in the marketplace.

And some of the earlier projections that were even being discussed within the Corporation were very, very aggressive. And what we found is that we've taken a more moderate view looking at the actual number of customer -- vehicles being purchased per year, and taking a percentage of those new purchases per year and what we found is that we've pretty much tracked very closely as to what the actual uptake has been. As I mentioned for 2017/'18 we're in -- we had forecast two hundred and seventy-eight (278) vehicles to be in the market in Manitoba and as of December 1st, we've got two hundred and fifty-two registered through MPI.

So, I'm -- I'm comfortable with the projections that we're putting forward as being a reasonable estimation of the uptake of electric vehicles.

MR. WILLIAM GANGE: And, Ms. Morrison, when you said -- you gave a number of 97 gigawatts hours in terms of -- of electrical usage.

What's that in -- in relation to? To -- to how many vehicles?

MS. LOIS MORRISON: That would be the 22,560.

MR. WILLIAM GANGE: Oh, so at the end -- the end of the projection period of twenty (20) years?

MS. LOIS MORRISON: That is correct.

MR. WILLIAM GANGE: Okay. And -- and

you mentioned range as being one (1) of the issues with respect to the uptake of electric vehicles, correct?

MS. LOIS MORRISON: That is correct.

MR. WILLIAM GANGE: Would the corollary of that be serviceability with respect to electric depost to -- to recharge?

MS. LOIS MORRISON: I'm -- I'm not certain I understand the question, Mr. Gange.

MR. WILLIAM GANGE: You didn't understand Gange to English. So -- so what I mean by that, Ms. Morrison, is at present how many docking stations are there for dog -- for -- for cars in -- in the province of Manitoba?

MS. LOIS MORRISON: In terms of charging stations, there's three (3) levels of charging stations that electric vehicles can use. So a level 1 charger is basically similar to your -- the same type of connection that you have for your stove or your dryer. You can install it in your garage and charge at home.

You can -- then the level 2 chargers are the one -- and so that if you charge at home, it will take about -- overnight to recharge your car fully.

If you've got a level 2 charger it can charge in a much shorter period of time. And it's you can -- sorry, so the little ones you can basically have an adapter and charge in any outlet in your house.

Level 2 is the one you install at your home that is similar to a dryer vent -- dryer connection or a stove connection. So a lot of people who have been purchasing these electric vehicles traditionally charge at home and they charge at home overnight.

And some of the literature and the surveys that have been done, even in the States where people have electric vehicles, they're finding that the charging behaviour is typically at night.

So, one (1) of the advantages that I will say that Manitoba has is that we typically have outlets on the outside of our houses to allow for us to plug in our cars overnight during the cold weather. That can easily be adapted for customers to charge their cars overnight.

What Mr. Gange is rel -- I think asking about is the availability of charging stations outside of people's homes and the number that are -- are across the province. And I should also note there is one (1) more type of level charging station, it's a level 3 charger which is a -- is a fast charger which means you can, essentially, charge your vehicle within -- fully charge your vehicle within, you know, twenty (20) to twenty-five (25) minutes period of time.

Now, the number of these -- there are a number of level 2 chargers in the city of Winnipeg. I don't know the actual number of them. They're privately owned and they are not -- and they're offered to some -- some commercial customer -- some commercial industries are putting them as -- as -- in their lots or in their facilities as benefits for their customers or their employees. So, there are a few of those out there.

To date, there are no level 3 chargers available in the province.

MR. WILLIAM GANGE: Ms. Morrison, last week there was a report that came out in Ontario saying that -- that the -- the -- one (1) of the biggest obstacles for electric vehicles currently in Ontario is the lack of charging stations, so that the consuming public has a lack of faith that they're going to be able to go on long distance drives because of an inability to plug in at home.

And --- and this study said that that

was one (1) of the largest impediments to the electrification of the car fleet right now. Just with that, does Manitoba Hydro currently have a strategy to increase the number of charging sta -- stations that would be available to -- to the public?

MS. LOIS MORRISON: At this point in time what Manitoba Hydro is -- is doing in terms of charging stations, is we're generally supporting private industry. If a customer comes to us and asks for us to install the connections required for them to put in place an electric charging station, we do that as part of our general service offerings.

We do not, at this point in time, have a plan in place to actually own and operate electric charging stations.

MR. WILLIAM GANGE: Looking at this chart and looking at the potential for the electrification of the car fleet, would you agree with me, Ms. Morrison, that it would be of benefit to Manitoba -- to Manitoba Hydro in particular, but also to Manitoba in general to have a -- a ramping up of the electrification of the car fleet?

MS. LOIS MORRISON: Manitoba Hydro supports the electrification of transportation for a number of reasons. Of course, we would be very favourable to the additional revenues that would come to Manitoba Hydro and the reduction in greenhouse gas emissions that would also result which would be consistent with what both the provincial government and the federal government are attempting to achieve with their climate change plans.

In terms of what Manitoba Hydro's role is, the concern is that the utilization of the charging stations. So, if Manitoba Hydro were to invest in charging stations, the number of chargers right now or the number of cars charging right now, it's very, very low. So the infrastructure and the cost of installing these charging stations would have to be recovered from somewhere within the rate base.

So at a time when the Corporation is looking to achieve operational efficiencies, manage capital, we prefer to invest our dollars where the customer has come and asked for us to bring service to their location. There are -- as I mentioned, there are -- there are commercial enterprises that are coming to speak to Manitoba Hydro about installing service for these types of level 2 chargers for customers to make use.

Many of them are looking to install them in what would be generally centralized areas,

areas where people will come and, say, shop for a while and then they can park their car and then leave. So at this point in time until the capacity becomes greater and the demand becomes greater and we can support a business case for investing in electric charging stations, I think we're in a position where we are a little bit in the wait-and-see mode right now.

The -- we have to remember that -- as -- as I mentioned, there are only two hundred and fifty-two (252) of these cars in Manitoba -- actually two hundred and fifty-two (252) vehicles; four (4) of them are buses. So for us to start putting in infrastructure without knowing that we've got a revenue stream to accommodate or to -- to offset that cost is a little concerning right now. It's not saying that we won't in -- in the near future, or if there is a customer that -- commercial enterprise that comes to us and wants to seek this type of opportunity, we're not opposed to having those discussions.

MR. WILLIAM GANGE: Is -- is this a -- a strategy, or a program that will stay within Manitoba -- Manitoba Hydro, or is this something that is likely to go with Efficiency Manitoba, when

Efficiency Manitoba comes into existence?

MS. LOIS MORRISON: So maybe I should explain what cur -- Manitoba Hydro's current strategy is in terms of electric vehicles.

We have done -- we -- we focus on education. So, what we've done is we've got quite a bit of information up on our websites talking about how electric vehicles work within Manitoba; the benefits of being able to use -- to be able to plug in at home; the -- the -- talking on issues around range anxiety.

So what we've provided is more so an education approach to electric vehicles. We're not specifically looking to incent or -- or drive electric vehicle purchases. We recognize that that is more of a provincial direction, because it's in the transportation industry.

But we recognize there is a potential benefit for Manitoba Hydro by the increased adoption of electric vehicles, as I mentioned, from a revenue perspective and then also from a greenhouse gas and renewable perspective.

So, we also have included in our portfolio of what we offer is we also include on our financing plan customers that want to finance the installation of a level 2 charger can do so on our -- our Power Smart residential loan, and so we've taken that type of approach. We've worked with industry to try and encourage better understanding of electric vehicles, take away some of the concerns around range anxiety, how well they work in winter months.

Now, as Mr. Gange pointed out, when Efficiency Manitoba moves forward, there is language within the legislation that speaks to the ability to expand their mandate to include transportation. And so, yes, I would see that they would take a much stronger role in terms of promoting electric vehicles themselves. We would still maintain our position as a supplier of electricity to help support that -- that end use of electricity going forward.

MR. WILLIAM GANGE: On a couple of instances you referred to a level 2 charger. And -- and do I understand that the level 2 charger is what you described as similar to a -- a dryer vent outlet; is that correct?

MS. LOIS MORRISON: Yes, it's -- it's not your basic 120 volt outlet that you have in your house. It's the -- I think it's a 240 volt outlet -- hopefully there's no engineers, they're going to correct me on this -- but it is a higher voltage connection that -- that provides the faster charging for the vehicle which is what customers are looking for. The -- one (1) of the other concerns or I guess the cultural shifts that have to happen is that people are used to when they go to -- when they're driving their vehicle and they have to fuel up, they're used to run -- going to the gas station, you're there five (5) or ten (10) minutes, maybe a little longer if you want to go in and get something that tastes good while you're there, but, you're in and you're gone. And you're fully fueled up.

The -- the difference with the electric vehicle is that with the earlier evolutions when you -- if you're charging at home on a -- on a regular plug-in, it would take overnight and people had concerns about, well, do I have enough charge. How long do I have to wait. What if my car is not ready to go when I need to go.

So, the benefits of the higher voltage charging is that you get a quicker charge on your vehicle, and it allows you to be able to -- you may not get a full charge within the period that you want but you can get enough to get to where you want to be.

MR. WILLIAM GANGE: Thanks, Ms. Morrison. You know, it -- I -- that was my misunderstanding. So the level 2 charger is the -- the accelerated charger; that's what you're referring to. So that for instance, as an example, if a Tim Hortons or a Robin's Donuts -- I don't want to cause any problems in terms of endorsing -- but if -- if a doughnut shop had one (1) of these charging stations, a person could go in, get a -- a double-double and -- and -- my own personal favourite, cream cruller -- and -- and -- and by the time that they finished, the charging process may have been completed within that twenty (20) minute time period.

Is that -- is that what you mean by a level 2 charger?

MS. LOIS MORRISON: No, that -- you'd be looking closer to a level 3 charter for the twenty (20) minute turnaround.

All I'm saying -- most of the places such as what you mentioned the Tim Hortens or the Robins Donuts or some of the shopping centres that have installed these level 2 chargers, it's really just to get you to your next place. It's not to necessarily get you fully charged. It will get you maybe -- maybe a quarter of a tank per se so that you get to your next location.

MR. WILLIAM GANGE: Okay, thank you.

Those -- thank you for -- that's very helpful for me.

If we could go, Kristen, to slide 30. It's still on, I'm just not facing the -- the mic, that's all.

Mr. Cormie, and -- and you may have answered a whole bunch of questions on this and -- and if so please forgive me but in this slide 30 of -- of Manitoba Hydro 68, it's -- it's in reference to Saskatchewan system power sale.

That -- that -- that's the brief description of this slide, sir?

MR. DAVID CORMIE: Yes, the first bullet refers to the system power sale that was signed after the NFAT proceeding was over.

MR. WILLIAM GANGE: And -- and, sir, do -- do I understand it correctly that Saskatchewan is planning to construct new gas turbines as -- as part of their attempt to wean themselves from the -- the coal-fired power plants?

MR. DAVID CORMIE: Yes, Saskatchewan is building combustion turbines, I believe, as we speak. They're involved in a project to -- to help meet their -- their needs into the future.

MR. WILLIAM GANGE: And at the NFAT process, sir, one -- as -- as I recall one (1) of the options that was explored by Manitoba Hydro in -- in making the presentation with respect to Keeyask was the possibility of building a gas combustion turbine in southern Manitoba.

Is my memory correct on that, sir?

MR. DAVID CORMIE: Yes, our -- I think our reference case in all -- in all of the alternatives that we looked at was to meet our future needs at least capital cost, which involved building a combustion turbine.

MR. WILLIAM GANGE: And on a -- on a high level, sir, can you advise the panel, if -- if you can, and -- and certainly I'm not asking for commercially sensitive information. And if -- if I am I'll accept the slap on the wrist, but, is it -- can you, from your perspective, compare the relative costs of production of electricity in a gas combustion turbine such as is being built in Saskatchewan to the cost of production of electricity from Keeyask?

MR. DAVID CORMIE: I don't think I can speak to that at this moment, Mr. Gange. They're not -- they're not equivalent. One has a hundred (100) year life, and one has a thirty (30) year life. One has the risk of -- of natural gas prices and -- and the cost of emissions. One has -- they're just --

they're just different and you need to go through an NFAT process to do that calculation and I don't have the current numbers available.

MR. WILLIAM GANGE: Right. But -- and fair enough, but is it -- would it be fair for me to say that -- that if you were -- if you were pressed on this, not that I'm going to press you, but if you were pressed on this, that it -- it would be possible for you to make an argument that -- that Manitoba power from Keeyask would -- would ultimately be better for Saskatchewan in terms of overall costs and greenhouse gas emissions issues and -- and -- and longevity.

Would you be able to make that argument?

MR. DAVID CORMIE: Yes, assuming the transmission system is capable of -- of moving the power. This transaction worked for Manitoba Hydro because the incremental cost of this small piece of transmission that we had to bill is very -- is relatively cheap. This was the last piece of low hanging fruit from a transmission perspective.

MR. WILLIAM GANGE: So is it possible, sir, that -- that over the next ten (10) years with respect to -- to load forecast, is -- is it possible that we may be in future rate applications be considering your recommendation with respect to approving power sales into Saskatchewan because of -- of the various arguments that could be made with respect to costing?

MR. DAVID CORMIE: I -- I think in my -- my direct testimony, Mr. Gange, I'm not sure if you read that, what I -- what I talked about was the federal government study.

MR. WILLIAM GANGE: Right.

MR. DAVID CORMIE: And whether the investment in major transmission between Manitoba and Saskatchewan was a cost-effective way of reducing emissions in -- in Saskatchewan as opposed to Saskatchewan developing their own renewable alternatives.

And when you talk about major -- when you include the cost of major transmission, it essentially doubles the delivered cost of power to Regina from Manitoba. So, if -- it's -- it just doesn't make a lot of economic sense for Utilities to -- to do that, given Saskatchewan has their own renewables. They have wind. They have solar. They have -- have natural gas, and they have -- they have alternatives that are probably less expensive than a major power sale from Manitoba, including the cost of major transmission.

So this is why the federal government is interested because the federal government is interested in -- in -- rather than having Saskatchewan build emitting resources like gas turbines, if they were able to subsidize the cost of transmission you'd get a -- you'd be able to supply the power at -- with zero omissions from Hydro for Manitobans. So this is what that federal study is -- is -- is looking at.

MR. WILLIAM GANGE: And -- and one (1) possible outcome -- and -- and I didn't use the word 'probable', but possible, is that the federal government could possibly assist in terms of funding new transmission line capacity east/west?

MR. DAVID CORMIE: Yes, and if the federal government had $2 billion and was able to bear those costs, there is a huge opportunity for Manitoba to deliver its surplus energy, some of which is coming from Keeyask, and some of which is coming from the rest of the system --

MR. WILLIAM GANGE: Do --

MR. DAVID CORMIE: -- to Saskatchewan and -- and could avoid the construction of -- of meeting generation in Saskatchewan.

MR. WILLIAM GANGE: Thank you, Mr.

Cormie.

Mr. McCallum, you're my last target for today. So I want to address a couple of policy issues. Basically, you've come here to say in terms of -- of this panel, the rate -- or pardon me, the -- the revenue panel, your whole point is, Look, we need rate increases, because we need more money into this Corporation, correct? That -- that I -- if I strip away everything else, you need more money?

MR. JAMES MCCALLUM: Yes, I suppose.

MR. WILLIAM GANGE: And --

MR. JAMES MCCALLUM: Simply, that's fair. Usually I like to point out why, but -- when asking for money, but --

MR. WILLIAM GANGE: Yeah, no. I'm -- I'm stripping away everything. I'm just -- and -- and I -- and I -- I don't mean to be underhanded or -- or trying to trip you up here. And it just seems to me that that -- it's obvious you're saying, We need a whole bunch more money, and that's why we need a 7.9 percent increa -- rate increase?

MR. JAMES MCCALLUM: That's right. More -- more money more quickly.

MR. WILLIAM GANGE: And -- and then Kirsten, if you could go to page 9 of -- of our documents.

And -- and, sir, this is -- is a -- is a slide that comes from the Boston Consulting Group. And -- and you've seen it before. It's -- it's been before the panel before. In terms of the rate increase, the Boston consulting group says that there is -- there is one (1) segment of your customer base that is especially affected by rate increases, and that's the residential low income group, correct, sir?

MR. JAMES MCCALLUM: Yeah. I mean, what they appear to be -- "they" being Boston Consulting Group appear to be doing, if I'm looking to the left-hand chart here is -- is trying to form a matrix, and I -- I can't speak to how they came to -- to all the reviews here, but a matrix of ability to pay with feasibility. And they've got a few points on feasibility, but I'm --

MR. WILLIAM GANGE: Right. So what this -- what the chart on the left-hand side is -- of -- of this page is saying is that the ability to handle a rate increase is the -- the group that has the least ability is the residential low income, correct, sir?

MR. JAMES MCCALLUM: That is what they're saying here, yes.

MR. WILLIAM GANGE: And --

MR. JAMES MCCALLUM: That's my interpretation of it.

MR. WILLIAM GANGE: And they're also saying that the feasibility of raising rates for low income people is also the lowest. You're -- you're not -- you're -- well, but -- you're all -- the feasibility is almost at zero for low income, correct, sir?

MR. JAMES MCCALLUM: Yes, accord -- and -- and according, I guess, to the criteria for feasibility the Boston Consulting Group has established here.

MR. WILLIAM GANGE: Yes.

MR. JAMES MCCALLUM: Yes.

MR. WILLIAM GANGE: Yes, and --

MR. JAMES MCCALLUM: Yeah.

MR. WILLIAM GANGE: -- obviously, this is within the framework of what they've defined here, and -- and the definitions are set out on -- on this page.

MR. JAMES MCCALLUM: M-hm.

MR. WILLIAM GANGE: But --

MR. JAMES MCCALLUM: Yes.

MR. WILLIAM GANGE: -- basically,

they're saying, Well, there's very little ability, and there's very little feasibility in terms of raising rates with respect to the low income group, correct, sir?

MR. JAMES MCCALLUM: That -- that -- I agree that seems to be what they're saying.

MR. WILLIAM GANGE: And on the other hand, the chart is saying that -- so just picking the largest yellow circle, the residential medium to higher income groups -- group has a pretty high ability to assess -- to -- to absorb a rate increase, according to the Boston Consulting Group?

MR. JAMES MCCALLUM: I think this chart indicates that view, yes.

MR. WILLIAM GANGE: Yes. And -- and in terms of feasibility, from my looking at this chart, it seems as though it saying that's in the midrange for the residential medium and higher income class for -- for -- to -- to handle a rate increase, correct, sir?

MR. JAMES MCCALLUM: Yeah. I see that on the page.

MR. WILLIAM GANGE: So would you agree with me, sir, that the biggest obstacle in terms of your presentation before the Public Utilities Board to justify a rate increase is the residential low income class?

MR. JAMES MCCALLUM: I'm not sure I understand your question. "Obstacle" meaning...

MR. WILLIAM GANGE: Well, maybe I'll -- I'll try to redefine it, then, sir. Let me take residential medium/higher income.

So I'm going to fall into that medium income group, so I fall into that big circle. This chart is saying that if I was upset with a rate increase, you'd be able to say, You know what, Mr. Gange, grow up, you can afford a rate increase, and -- and it's not affecting you in a -- in a terribly negative way.

You wouldn't say it in -- in those kinds of words, because you're far more diplomatic than -- than I would be, but -- but basically, that's -- that's the -- the effect of what this chart is saying?

(BRIEF PAUSE)

MR. GREG BARNLUND: Mr. Gange, if I might --

MR. WILLIAM GANGE: Well, I guess you

can, Mr. Barnlund. I didn't ask you anything, but --
MR. JAMES MCCALLUM: I'm bringing in a ringer.
MR. GREG BARNLUND: Everyone else had a coloured chart to speak to, so I thought I'd join. If we look at the heading on this slide, and -- and I'm not entirely sure of Boston Consulting's thrust in terms of this slide, but they're talking about the constraints and feasibility of implementing differentiated rates across segments.
And I think that this provides some insight in terms of the potential of -- of not just going with an across-the-board rate increase, but potentially differentiating the rate increases amongst customer groups or between customer groups. And I think --
MR. WILLIAM GANGE: Right. I -- could I just interrupt you for a second, Mr. Barnlund?
MR. GREG BARNLUND: Sure.
MR. WILLIAM GANGE: I'm going to get to the differentiated rates, but -- but isn't this chart just -- the one that we're looking at, the assessment of relative ability to raise rates, isn't this chart restricted to the bigger question of who can afford an increase in rates? Isn't that what it's

doing?

And -- and I'll -- and -- and I'm going to give you -- I -- I am going to go to the differentiated rates. So you can raise that when -- when we do, but -- but this chart is -- is something different than the heading.

MR. JAMES MCCALLUM: I'll accept that, I -- you know, maybe with the caveat that I've never discussed this chart with the Boston Consulting Group.

MR. WILLIAM GANGE: Right. And -- and fair enough. I -- I understand that. But when I look at that chart -- so -- so when I said the biggest obstacle to your rate increase is the lower income group, what I mean by that is, you've heard the submissions that have been put forward as -- as opening statements of rate shock and -- and of moderation in -- in rate increases, and -- but -- but this chart is saying that certain groups in our society and the Manitoba society have a relatively good ability to absorb a rate increase.

Doesn't -- isn't that what it is saying?

MR. JAMES MCCALLUM: It -- it seems to, and I suppose -- I mean, I'm -- I'm not trying to dance around anything -- it would stand to reason that those who are fortunate to have more income would have an easier time absorbing any rate increase, big or small.

MR. WILLIAM GANGE: Right, exactly. So -- but -- but the -- the difficulty in terms of your presentation to this Board is that there are going to be arguments against Manitoba Hydro to say that this rate increase is unfair because certain segments of our society cannot afford the rate increase. Wouldn't you agree with that, sir?

MR. JAMES MCCALLUM: I think we've clearly seen that argument taken, yes.

MR. WILLIAM GANGE: And -- and Mr. Barnlund, I'm going to get to you now. So page 8, Kristen, of -- of this.

And so in the parts that I haven't highlighted, the Boston Consulting Group has suggested to Manitoba Hydro that one (1) of the ways to deal with the issue of the negative impact upon the -- the disadvantaged in our society would be to have differentiated rate increases?

MR. GREG BARNLUND: Yes, that's one (1) of the -- the suggestions or observations they've made here, yes.

MR. WILLIAM GANGE: And Mr. Barnlund,

you had the -- you've had the pleasure of being here for a number of different hearings, and -- and you know that this is a theme that the Green Action Centre, it -- it's a bone that we just won't let go. And -- and we've come to you on -- on numerous occasions.

That would -- that would be a fair description, sir?

MR. GREG BARNLUND: Mr. Gange, I think it's also fair to say that Manitoba Hydro and its wholly-owned subsidiary, Centre -- Centra Gas, have been very, very active in terms of the looking for solutions and addressing issues in terms of certain affected customer groups.

So we can go back to 2008, and the -- the, you know, the startup of the Furnace Replacement Program, for example, for Centra Gas, and -- and the development of our Affordability Program, which we're going to speak to at quite some length next week, I'm sure, when that panel sits.

But -- but, yes, I mean, Green Action has been a -- a real proponent behind taking action in that regard.

MR. WILLIAM GANGE: Right. And -- so -- so that in the past, sir, you've heard Mr. Colton on -- on two (2) different occasions come here and urge the Board to -- to consider the adoption of a -- of -- of a -- a special rate with respect to -- to low income people, correct, sir?

MR. GREG BARNLUND: I think this is a matter we see as front and centre that we will be dealing with next Tuesday with the -- with the cost-service-rate design.

MR. WILLIAM GANGE: And -- and we're going to go through that, sure. We're -- we're definitely going to go through with that then. I'm just asking in terms of policy questions with respect to revenue requirement. And so I'm trying to tie it in to the same thing.

I -- we are going to have a lengthy discussion on that, no -- no question about that.

MR. GREG BARNLUND: Yeah.

MR. WILLIAM GANGE: But -- but my point is that -- that you've heard Mr. Colton come and make his case for a -- a poverty rate, an energy poverty rate for Manitoba citizens, haven't you, sir?

MR. GREG BARNLUND: Mr. Colton has made, you know, several recommendations over the course of time with respect to bill affordability programming, and -- and the potential for different rates for different types of customers, yes.

MR. WILLIAM GANGE: And -- and in fact, as a result of his last appearance, matters were referred to the Affordability Group, which I'm -- I'm not sure if you chaired that, or -- or -- but -- but you certainly were a -- a key component to the Affordability Group review?

MR. GREG BARNLUND: Well, Manitoba Hydro organized the Affordability Group. I had the pleasure of participating on that, at did -- as did Professor Miller.

MR. WILLIAM GANGE: Yes. And -- and you're aware now, in -- in this hearing, and -- and we'll discuss that again down the line, but Mr. Chernick has made proposals with respect to a -- a -- affordability and rate design?

You're aware of that, sir?

MR. GREG BARNLUND: Yes, yes, I am. Yeah.

MR. WILLIAM GANGE: And -- and, sir, do you remember -- do you remember this from Mr. Colton's evidence, in both situations that he's appeared here -- that -- that he came here and he testified that a large part of his work that he does is designing energy poverty programs on behalf of the utilities themselves. Do you recall that, sir?

MR. GREG BARNLUND: I, you know, generally speaking, yes. I mean --

MR. WILLIAM GANGE: And -- and do you recall -- and -- and you don't have to remember it in any kind of detail, but just generally speaking, that he came and he testified that one (1) of the reasons why he gets so much work from places like Xcel Energy -- he talked about Colorado, that he had just recently done a -- a proposal on behalf of Xcel Energy in -- in Colorado -- was because it allowed the Utility to come before its regulator to say, We're asking for a rate increase.

But -- but the -- the portion of the population that's going to be most badly affected, most seriously affected by this rate increase, we've designed a program so that it won't be as hard on them. Do you recall that, sir?

MS. PATTI RAMAGE: I could interject, I believe Mr. Gange is testifying at this point. We're bringing Mr. Colton. I haven't -- believe I've had the pleasure of being in the room with Mr. Colton, but we're bringing his evidence into this process through Mr. Gange, and not only -- I -- I have evidentiary concerns, but I also have concerns in terms of the revenue requirement panel.

MR. WILLIAM GANGE: No.

MS. PATTI RAMAGE: No --

MR. WILLIAM GANGE: So -- so, Ms. Ramage, here's -- here's my -- I'm not trying to -- to make this evidence. I'm just trying to lay a foundation for the final question that I'm going to ask here, which is a conclusion that I'm going to ask because I think that Mr. Barnlund can say, Yes, I do recall. I think that he's going to say that, that -- that Mr. Colton testified that that was the purpose of those energy plans that he develops for utilities.

So I'm not -- I'm not -- it's not going further than that.

THE CHAIRPERSON: Okay. We'll allow it.

MR. GREG BARNLUND: Mr. Gange, I -- unfortunately, I don't really recall the specifics because Mr. Colton has filed a considerable volume of evidence in 2010, and -- and other -- and other times.

I would say that Mr. Colton's main recommendation in terms of -- which this Board addressed in 73/15, was to look at the issue of bill affordability for our customers and to view it from a business case perspective. In other words, that the potential savings that could be obtained should result in a revenue-neutral approach, or those savings would offset the costs of providing that assistance to those customers.

And -- and I'd like to leave it at that, because I think we're going to -- we're going to, like, really leverage off of that discussion next Tuesday, and we'll have a much further discussion of that in our direct evidence in terms of the mandate of the working group and how we've proceeded with regards to those activities since the issuance of 73/'15.

CONTINUED BY MR. WILLIAM GANGE:

MR. WILLIAM GANGE: Right, sir. And -- and you're right, that the -- that Mr. Colton did come here and -- and urge the Board in -- especially in his second appearance, that -- that what he was doing was making a business case for Manitoba Hydro as to why it -- it made sense to do that. You're -- you're absolutely bang-on on -- on that point.

But, sir, the -- is -- the -- the question that I have is with -- with respect to this panel, that this panel is saying, We need this much money to be generated by a 7.9 percent rate increase over a period of time in order to get -- to get our revenues into a proper -- proper position.

Why is it that Manitoba Hydro does not take that same approach with respect to its application to say, We need this much money that would be generated by a 7.9 percent rate increase, and we're going to protect the -- the people that are your biggest obstacle, the low income group?

Why don't you do -- adopt that?

MR. GREG BARNLUND: Well -- and I think that we will be looking to demonstrate that to this Board panel next week when we provide our evidence on our bill -- bill affordability programming at the time, sir.

MR. WILLIAM GANGE: Thank you. That's -- those are my questions. Thank you, sir.

THE CHAIRPERSON: Thank you, Mr. Gange.

Are there any other matters before us? If not, Ms. Steinfeld, do you want to take us again through what Monday looks like?

MS. DAYNA STEINFELD: Thank you, Mr. Chair. If you just give me a moment.

(BRIEF PAUSE)

Thank you, Kristen. So on Monday we'll be continuing with the revenue requirement panel. The Business Counsel of Manitoba will conduct their cross-examination, followed by the General Service Small/ General Service Medium, and Keystone Agricultural Producers cross-examination. At that time, if requested by Manitoba Hydro, there will be re-examination.

I also understand that counsel may have follow-up questions arising from undertakings that are being provided or may be provided between now and Monday.

THE CHAIRPERSON: Thank you. Just one (1) other issue, and I put this forward before, I think the day before yesterday, and -- and perhaps we can deal with it on Monday. Ms. Ramage has this puzzled look on her face. I -- I haven't found it in the transcript.

But earlier on I raised the issue of the Business Operations Capital Budget, and the question -- there was a question about prioritization, and the fact that, essentially, you have three (3) different units: distribution, transmission, and generation, and there are different factors that each look to in terms of budgeting. There was a suggestion that there's -- that the Company is looking at trying to establish one (1) way to prioritize, and I had asked before if perhaps Manitoba Hydro could spend, you know, ten (10) minutes or so indicating what you do now in terms of decision-making for budgeting, verses where you would like to end up in three (3) to five (5) years, which I believe was the time frame.

We can all go back to the transcript and take a look and see what I actually did say. But I'm still interested in the issue and I'm wondering on Monday -- I suspect we can have time on Monday, if we -- if we could deal with it?

MS. PATTI RAMAGE: Yeah. I can tell you our -- our panel, and I don't think they're all here right now, was ready to go on that. Mr. Peters asked us to hold off for now.

THE CHAIRPERSON: Yes.

MS. PATTI RAMAGE: So we can do it Monday.

THE CHAIRPERSON: Yes. Well, quite frankly, I was trying to figure out the timing for -- for all of this.

MR. JAMES MCCALLUM: We'll have --

THE CHAIRPERSON: So Monday looks like we will have time.

MR. JAMES MCCALLUM: We'll have Mr. Wortley and Ms. Bauerlein --

THE CHAIRPERSON: Yeah --

MR. JAMES MCCALLUM: -- who can help you do that.

THE CHAIRPERSON: -- that'd be great. It -- it would be greatly appreciated. Anyways, with -- oh I'm sorry, Ms. Mckay?

BOARD MEMBER MCKAY: Just so I get some sleep this weekend, I'm going to put a couple questions on the record.

THE CHAIRPERSON: Okay.

BOARD MEMBER MCKAY: Anyway. The first one has to do with the question that was answered earlier in how financial policies are approved. Granted I've been on different boards, but any -- any time -- any of the boards I've been on, the -- the responsibility in approving the budget was always the responsibility of the Board.

And I -- I'm just wondering how does that fit within Manitoba Hydro when it's the VP that's approving policies rather than the Board? That's the way I'm understanding it, but maybe you can clarify that.

MR. JAMES MCCALLUM: So, I can -- I

can try certainly, and -- and Ms. Stephen is -- was relieved of duty here this afternoon, so I'm in -- at a bit of a -- a deficit to speak to -- to all of the policy around Manitoba Hydro Board approval, versus what -- what management is left in charge of.

The approval of the integrated financial forecast is absolutely a Board matter. Ms. Stephen was speaking to an annual debt management strategy which really talks about, kind of, our game plan for the next year or next several years around managing our -- our debt portfolio and our borrowing program, which I approve as the, kind of, accountable financial -- financial officer.

So the decisions we -- we take under the debt management strategy form the assumptions that go into the integrated financial forecast, which is approved by our Board. And in the discussion with the Board of Directors each year when we -- when we do this -- and sometimes it takes a few meetings -- but is a discussion around the debt management strategy: what we're doing; what our parameters are; what our assumptions are. And so there's -- that discussion goes into populating the Boards, you know, understanding of our -- our business plan and -- which they -- they give approval of.

So -- but the actual formal document doesn't -- as a discrete, you know, one (1) piece of -- of that puzzle go to the Board of Directors. We've got -- and -- and Ms. Carriere has a chart that, kind of, lays out all the pieces of forecasting and analysis that we do that kind comes together into our integrated financial plan. Each of those pieces does not individually come to the Board; we would bring the end product.

BOARD MEMBER MCKAY: Yeah. What I'm most familiar with is policy around all that that's developed. That -- I'm just talking about the pro -- the process under which policy is created and approved. That -- that was my only point of it.

The second point I wanted to make was, in the statements that we're getting, for example on page 179, Volume I, Board Counsels' book of documents, it starts out with the assumption that the percentage increase, for example, under 2018 is listed as three point three six (3.36), and that's -- that's the interim increase that was granted this past summer. But it really should have started at three point three six (3.36) from last year. While I appreciate this says the Manitoba Hydro 16 Update with interim, from our last GRA this should have all increased by three point three six (3.36).

So we get to, for example, to 2025, the cumula -- cumulative percentage increase should actually be closer to almost 74 percent, right?

MS. LIZ CARRIERE: You're absolutely right. It's a bit of -- you're right. The -- the label descriptions are probably a misnomer. The three point three six (3.36) is in fact included in at the approved rates and probably could have been presented more clearly by putting it in the additional. You're right.

BOARD MEMBER MCKAY: Yeah.

MR. JAMES MCCALLUM: So the -- the cumulative --

BOARD MEMBER MCKAY: I raise that because those were interim rates, and still are interim rates until this is done.

MR. JAMES MCCALLUM: They -- they are. And -- and -- thank you, we acknowledge -- we acknowledge that. The -- the calculation of cumulative percentage increase is really assuming March 31, 2017 as your starting point. But you're absolutely right, that there was a rate granted in August of 2016, which is still interim.

BOARD MEMBER MCKAY: Okay. Thank you.

THE CHAIRPERSON: Any other questions? If not, thank you. And we'll see you Monday. Have a good weekend. Thank you. We're adjourned.

(PANEL RETIRES)

--- Upon adjourning at 3:33 p.m.

Certified correct,

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Cheryl Lavigne, Ms.