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

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Pages 4923 to 5176

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Corey Shefman (np)	) Manitoba Chiefs

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Daryl Ferguson (np)	) City of Winnipeg
Christian Monnin	) General Service) Small, General) Service Medium) Customer Classes
William Haight (np) William Gardner (np) Kimberley Gilson (np)	) Independent Expert) Witnesses)

TABLE OF CONTENTS

LIST OF EXHIBITS

--- Upon commencing at 9:03 a.m.

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

MS. DAYNA STEINFELD: Thank you, Mr. Chair. Today we will be having cross-examination of the Consumers Coalition/MIPUG witness Morrison Park. We will be starting with the Green Action Centre, followed by Business Council of Manitoba.

We do have to break at 9:45, however, we would suggest that if the first two (2) Intervenors scheduled conclude prior to that time that we may be able to continue on and start the cross-examination by GSS/GSM and KAP.

After the break, which is from 9:45 to 12:30 we will continue through with the rest of the cross-examination, including by Manitoba Hydro and Board counsel followed by any re-examination that is required.

Tomorrow we will continue with Consumer Coalition witness, Mr. Harper. Thank you.

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

MR. WILLIAM GANGE: Thank you, sir.

COALITION/MIPUG PANEL:
PELINO COLAIACOVO, Previously Sworn

CROSS-EXAMINATION BY MR. WILLIAM GANGE:

MR. WILLIAM GANGE: Mr. Colaiacovo, I'm -- I'm over here. My name is Bill Gange and I appear on behalf of the Green Action Centre. I have a few questions, not a great deal, but a few for you.

Sir, you appeared as an independent expert at -- at the Needs For and Alternatives To hearing; is that correct, sir?

MR. PELINO COLAIACOVO: Yes.

MR. WILLIAM GANGE: And you did an analysis of the various options that were open to Manitoba Hydro at the time and ran projections with respect to the effect that different proposals would have and at different rate increases.

Is that correct, sir?

MR. PELINO COLAIACOVO: So in the financial modelling that we did -- given that the -- the different characteristics of all of the different plans and the different economic scenarios and energy scenarios and -- and capital spending scenarios and so on, we had to come up with a way to have a common baseline so that we could distinguish between the effects of all of these different plans.

And the common baseline that we chose was that rates should never go up or down by more than twice the rate of inflation. And -- and so that was the -- the mechanism or tool through which we -- we tried to show the differences between the choices that -- that were available to Manitoba Hydro at the time. And that -- that constraint effectively allowed us to identify conditions where the Company would be in trouble or conditions where ratepayers would benefit because reductions would be possible.

But we almost never allowed rates to change by more than twice the rate of inflation, except in a couple of specific instances where we did some extra analysis and that was more in the -- the second phase of the report from May of 2014 where we actually looked at rate increases of 5 percent instead of double the rate of inflation.

But -- so we didn't -- other than putting that constraint on rates, we allowed rates to float as long as they never changed by more than double the rate of inflation.

MR. WILLIAM GANGE: And your assumed rate of inflation was 2 percent, was it?

MR. PELINO COLAIACOVO: Well, at -- in

the first set of modelling that we did it was actually 1.9 percent, because that was the reference scenario for Manitoba Hydro's NFAT analysis.

And then in the second phase, they had actually adjusted it from 1.9 to 2.

MR. WILLIAM GANGE: Right, and I have the May 2014 review of the updated Manitoba Hydro plans and at that point you are running projections at 3.8 percent and 4 percent; correct, sir?

MR. PELINO COLAIACOVO: That's correct. Yeah because in the -- in the first round it was 1.9 so 3.8 was the constraint, and then in the second round they had adjusted in their estimated inflation rate from 1.9 to 2 which would be four (4) but in order to do comparisons from the analysis we had done in the first round to the second round, we ran it both ways at 3.8 and 4 which even though the difference is small, you -- you would think the difference between 3.8 percent and 4 percent is small, we were looking at time horizons of forty-eight (48) years and so that small difference actually could have a fairly significant impact over the forty-eight (48) year period.

MR. WILLIAM GANGE: And, sir, in the May 2014 update you were considering the effect of drought on the equity ratio; correct, sir?

MR. PELINO COLAIACOVO: Amongst many other analysis but, yes, we did -- we did look at equity ratio.

MR. WILLIAM GANGE: Yes. And -- and in that analysis the debt equity ratio was going to drop fairly significantly, down to, well, 7.5 percent, or somewhere around there?

MR. PELINO COLAIACOVO: Yeah and so this particular graphic that you're showing here, figure 2 -- figure 21, is, as it says there, a challenging hydrology scenario, i.e., drought with reference economics, energy and capital.

And what's depicted are five (5) -- or six (6) different preferred development plans. And -- and you can see that some of the plans have equity ratios that drop more and recover -- and recover more slowly or vice versa. I mean, the -- the whole purpose of NFAT was to compare different options. So, you know, none of these actually describe the current scenario because things have changed again.

MR. WILLIAM GANGE: Right.

MR. PELINO COLAIACOVO: But -- but at that time it was a comparison of the different options.

MR. WILLIAM GANGE: Right. And -- and at the time, one (1) of the things that you were concerned about was the effect of drought --

MR. PELINO COLAIACOVO: Yes.

MR. WILLIAM GANGE: -- that might have on the debt/equity ratio. And although you didn't go into in significant detail cost overruns, but you were assuming that the numbers -- the values that were being provided for the final cost were -- were -- were the correct values?

MR. PELINO COLAIACOVO: We actually did run sensitivities on cost overruns.

MR. WILLIAM GANGE: Yes.

MR. PELINO COLAIACOVO: At -- at the time, Manitoba Hydro claimed a high degree of confidence in their budgets and schedules, and suggested fairly modest worst-case scenarios.

We actually ran scenarios that were much worse than the scenarios that Manitoba Hydro had included in there NFAT analysis. So we did test those in -- in addition to their sort of base case scenarios.

MR. WILLIAM GANGE: Right. And from my reading of -- of the report, you don't come to a conclusion that, no, this is -- this is undoable and

-- unless you raise rates to a level of -- of 8 percent per year?

MR. PELINO COLAIACOVO: So our recommendation in both the first and second reports that we did which were January and May, if I remember correctly, of 2014 was that the preferred development plan which included Conawapa was not the best option. And the conclusion that we came to was that either the plan which continue -- which -- which included continuing the Keeyask project, or the All Gas Plan were close enough from an economic and financial perspective that it would not be advisable to recommend stopping Keeyask, right, was -- was how we very carefully put it.

The -- so the emphasis that we had was really on the preferred development plan, and whether it made sense given the circumstances at the time to choose to proceed with expenditures on Conawapa. And our view was that it did not.

MR. WILLIAM GANGE: Right. And -- and one (1) of the conclusions that you came to with respect to just proceeding with Keeyask in comparing it to the All Gas Plan was that -- that -- that there was a significant difference between the economic benefit of the All Gas Plan versus the economic benefit of Keeyask; is that correct, sir?

MR. PELINO COLAIACOVO: Just -- I want to be careful here. So -- so we were testing it against the baseline of never more than two (2) times the rate of inflation rate increases, which as you -- as you noted earlier was either 3.8 or 4 percent.

And with that constraint, we said that comparing Keeyask plans with All Gas Plans, there was not a significant difference between the two (2). Hence, we did not object to continuing with Keeyask and --

MR. WILLIAM GANGE: Okay, thank you. Sir, during your testimony yesterday, you -- you made mention of the fact that one (1) of the things that has affected the -- the -- the analysis of the debt/equity ratio is the change from -- in accounting practices?

MR. PELINO COLAIACOVO: Correct.

MR. WILLIAM GANGE: Can -- can you say -- is -- is this possible and -- and -- and I'm asking this completely out of ignorance so -- so I'm not pretending anything here, but just if -- if you were using the old standard versus the -- the current standard, can you say what the difference is between the -- the equity ratio just right off -- off the bat?

Is there -- in other words, is there a bias that can be quantified between those two (2) standards?

MR. PELINO COLAIACOVO: Yesterday as an appendix to my presentation I provided a small Excel spreadsheet which actually talks about exactly that issue. The approximate estimate depending on the year is 2 to 3 percent is the -- the difference that I calculated.

MR. WILLIAM GANGE: Two to 3 percent down?

MR. PELINO COLAIACOVO: It's 2 -- 2 to 3 -- so debt appear -- the debt ratio appears to be 2 to 3 percent higher under the new accounting standards than it would have under the old accounting standard.

MR. WILLIAM GANGE: Thank you. Sir, if we can go to your presentation from yesterday, which I believe is Coalition 45. And we look at -- at slide 7.

You make mention of the fact that -- that Manitoba Hydro it's -- that it's important that it manages the message to capital markets but that Manitoba Hydro's proposed rate is not a balanced response.

With that in mind, sir, what would be, in your view, the appropriate targets and guidelines for rate increases for starting off with the next year? Can -- can you -- can you advise the Board on what you think would be an appropriate target?

DR. BYRON WILLIAMS: Mr. Gange, I'm happy to have this witness answer this question, but if you can just make clear, are you asking the witness to assume that Hydro's expenditures and forecasts are reasonable?

MR. WILLIAM GANGE: Yes, yes.

MR. PELINO COLAIACOVO: So the -- the issues that I was asked to address, that I'm confident to address, have to do with the potential response of capital markets to the decisions of the Board. Also, you know, at the level -- all of my analysis occurs at the level of revenue requirement, not at the level of individual customer rates which require a cost of service model and a whole bunch of other analysis.

So, at the level of revenue requirement on a wholesale basis, you know, is 7.9 percent increase in revenue requirement required? No, I don't believe it is required.

One (1) of the things I talk about is hydrological risk. There is a lot of hydrological risk that Manitoba Hydro faces and because of that hydrological risk, it's important that there be some reserves. There -- it's important that there be some flexibility to manage this hydrological risk.

So, I am by no means suggesting in my presentation that -- that's not a real issue that has to be taken into account. But I do point out that some other Utilities apply rules. They -- they -- they choose some sort of a rule to help guide their rate-making process.

In the case of Bonneville Power, they have a very clearly stated rule that -- that looks at a two (2) year time horizon, and looks at a range of hydrological scenarios. And they say, you know, We have to be able to manage 95 percent of the hydrological scenarios for the next two (2) years, and we need reserves that are at that level. And that's perhaps a good rule, perhaps not a good rule, but it's a rule that helps guide rate-making. And I would suggest that having a rule of some kind would help guide rate-making and allow you to make the kind of determination that I think you would like me to offer.

But, you know, do you -- do you choose 3 percent? Do you choose 3.5 percent? Do you choose 4 percent or 4.5 percent? How do you make that distinction between relatively small increments of percentage increases without the guidance of some kind of rule, right? The -- the benefit of a rule is that it points you in a direction, and, you know, it -- if you -- to my mind, the real challenge is selecting a rule, having some good reasons to select a rule that are -- a rule that will be balanced and fair in its -- in its effects. And if you select the rule, and the rule -- and you -- you apply that rule, and it leads you to three point five (3.5), or it leads you to three point seven (3.7), or it leads you to four (4), or four point two (4.2), well, then, that's a balanced and fair outcome because it's the application of a rule that you decided on.

I think part of the challenge that you face here in Manitoba is, you don't have those rules enunciated. So it's -- it makes it much more challenging on a -- a two (2) year basis to, you know, to come up with a -- a number that is a relatively small increment different.

You know, you're -- at -- your interim ruling was 3.36 percent. Do you choose that again? Do you choose three point seven (3.7)? Do you choose three point nine (3.9)? How do you choose? And, you know, if -- if you adopted a kind of a rule, then it would it -- would be much easier to make that determination.

So to me, asking what should be our rate increase is almost, in a sense, the wrong question. And I think the question you should be asking is: What should be the rule that we apply to the circumstances in order to figure out what our rate increase should be?

CONTINUED BY MR. WILLIAM GANGE:

MR. WILLIAM GANGE: Okay. And given that -- that Manitoba Hydro's capacity is -- is so water-dependent, what recommendation are you making to the Board to be able to safeguard against that -- that the risk of drought?

MR. PELINO COLAIACOVO: Right. And -- and so one (1) of the things that I suggested in the presentation, I also suggested in the report that I provided previously to the Board is that you -- you look -- well, in fact, you have looked in the past at five (5) year droughts, at seven (7) year droughts. You have looked at those risks. Manitoba Hydro has provided any number of calculations about the potential impact of a five (5) year drought, or a seven (7) year drought. In fact, you have that data, because they -- it's been provided to you.

But as best as I can tell, you have not

used a -- a formula based on the data. There -- there is no sort of clear enunciation of a rule that says, We need to have rates that are sufficient so that our financial reserves will last through a drought for the next five (5) years, or the next seven years, or -- or, you know, whatev -- whichever choice you choose to make.

I would suggest because you have a history of looking at five (5) and seven (7) year droughts, that you may choose to -- to use one (1) of those time horizons. And -- and so you would ask yourself, in -- in a very challenging drought scenario, a five (5) or a seven (7) year drought, if our rates were 'X' percent over that seven (7) years, would the Company continue to be self-supporting, perceived as self-supporting through that entire period?

And if the rates are high enough, well, then, that helps guide you to a- -- a decision that those rates are sufficient. Then, you would also ask yourself, if water was at more typical levels over that period, over that five (5) or seven (7) year period, what would be the effect? Would it be -- would we be making progress on our financial targets more broadly? Would be -- we be repaying capital?

Right?

So the rule doesn't have to be overly simple. It can be quite sophisticated. It can be multilayered. But you -- you would look at what happens during difficult scenarios, what happens during typical scenarios, what happens during, you know, high water scenarios, because the reality is, for the past twenty 20 years, Manitoba has been benefitting from relatively high water levels as compared to historical averages.

So, you know, you always want to make sure that in a challenging scenario, you have enough reserves, but you also want to pay attention to what happens when water is at typical levels and -- and -- and that -- that kind of an analysis, I think, would guide you to making a rate decision.

MR. WILLIAM GANGE: If we could go to slide 33. Sir, at the -- at the bottom of slide 33, you've -- you have the last bullet which says:

> "For public power utilities, one point five (1.5) to two (2) times interest coverage is consistent with an 'A' rating, while for investor-owned utilities, it would be a sub-investment grade of 'B'."

Is that -- that formula of one point five (1.5) to two point zero (2.0) interest coverage, is that also something that you would establish as a rule or recommend to the Board to establish as a rule when -- when considering these issues?

MR. PELINO COLAIACOVO: So interest coverage will rise and fall, depending on performance. I think when -- when Moody's is doing their analysis of a company, they're looking at three (3) to five (5) years in history. And they'll say, Have you achieved this target metric in the last three (3) to five (5) years on average, and is your rate design such that you will likely hit this metric in the next three (3) to five (5) years?

It's not that you would necessarily -- your rates would lead you to achieve that target every single year, because water can fluctuate, you know, up or down by 20 percent in any given year, but it -- you know, over a medium-term period of three (3) to five (5) years, your rates, you know, your rate design should lead to results that average in -- in those areas.

And I think the point -- rhe point of this slide was, you know, one (1) of our -- one (1) of our jobs was to comment on the targets and the interest coverage target that Manitoba has and has had for quite some time. Well, actually not -- not for quite some time in this instance, but the interest coverage target that they've established at one point eight (1.8) on an EBITDA to interest basis is reasonable because it's consistent with targets that public power utilities in the United States use, and -- and one point five (1.5) to two (2) times, as Moody's recognizes is a reasonable target for a -- a public power utility. And so that -- the point of the slide, really is just to say that.

MR. WILLIAM GANGE: Okay. Thank you. If we could go to slide 14. In -- on this slide, sir, you talked about financial treatment, and that there are many options for payment of capital cost. And you make the reference at these -- that this can be done faster or slower.

In -- in looking at this, part -- lower total costs, and lower long-term rates, and lower financial risk, aren't those all desirable outcomes?

MR. PELINO COLAIACOVO: I'm sorry --

MR. WILLIAM GANGE: Well, if -- if the payment is made faster, you reach the -- the -- you -- you reach the lower total cost more quickly, correct, sir?

MR. PELINO COLAIACOVO: So, in financial analysis, you have to make a distinction between at least three (3) different kinds of calculations. One (1) is nominal dollars, one (1) is inflation-adjusted dollars, and one (1) is discounted dollars. And depending on which of those three (3) options you choose, you can come to different conclusions when you're looking at financial options.

There is no question that in nominal dollar terms, the cheapest way to pay for something is to pay for it in cash. If you pay for a hundred dollar item in cash, it costs a hundred nominal dollars, period, full stop. On the other hand, if you choose to finance something, it will cost more nominal dollars, because the cost of interest has to be included in that. But if you're paying for something over time, you're also not using the same dollars as you would if you paid in cash, because if you're making payments in the future, those -- those payments in the future are inflation-adjusted dollars. They're -- they're actually worth less in -- when you -- when you take time into -- into account. And if you consider them from an opportunity cost basis, you actually have to discount them, and the discount rate is typically higher than the inflation rate.

So it makes sense if you're looking at a purchase through either an inflation-adjusted lens or through a -- a discounted lens to not pay for it in cash, to spread the cost out over time, because some of those dollars in the future are worth, quote-unquote, in some sense, less than the dollars are today. And so by delaying the payment, that delaying the payment might actually make sense. And there's a benefit to delaying payments, and that benefit is you spread the cost across when you're actually using the thing that you're buying.

So yes, in nominal dollar terms, it's always true that paying for something faster will cost you fewer nominal dollars, but that doesn't necessarily mean it's the right thing to do.

(BRIEF PAUSE)

THE CHAIRPERSON: Mr. Gange, you -- you only have a few minutes.

MR. WILLIAM GANGE: Yes. Thank you.

(BRIEF PAUSE)

CONTINUED BY MR. WILLIAM GANGE:

MR. WILLIAM GANGE: And -- and sir, from your perspective, is it possible that -- that to -- to achieve down the line lower rates in the future by virtue of higher rates up-front?

MR. PELINO COLAIACOVO: There's no question that you can do that. The -- the -- one (1) of the questions that arises when you're making capital investments for long-lived goods is always the tension that arises between who is paying for that good over time, and who's using that good over time? And as I -- I tried to explain yesterday, the typical accounting way of managing long-lived investments doesn't necessarily lead to a -- a clear -- or a -- or a direct relationship between the use of a service and the payment for that service.

The -- the accounting treatment leads to some ratepayers paying a lot more to use a service than potentially ratepayers would in the future. And in a utility that has lots of different assets and spreads the purchase of those assets over time, that tension disappears, because every year, you're replacing some assets, and -- and each one (1) of them represents a tiny little sawtooth, for example. But when we layer all those sawtooths one (1) on top of another, it turns into a flat line, right?

The challenge with very large assets with a utility that has to spend money on one (1) or two (2) very large assets every once in a while, is that the sawtooth becomes noticeable. It sticks out above the flat line and then you actually have to try and manage it. So if you -- the -- the taller you make the sawtooth the lower your nominal dollar expenditure is going to be, but that doesn't make it fair or sensible from an inflation-adjusted or a discount rate adjusted basis.

MR. WILLIAM GANGE: Thank you. Those are my questions. Thank you very much, Mr. Chair.

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

CROSS-EXAMINATION BY MR. KEVIN WILLIAMS:

MR. KEVIN WILLIAMS: Good morning, Mr. Chair, Board members, and the Mr. Colaiacovo. I'll apologize in advance if I mispronounce your name. I'm here on behalf of the Business Council of Manitoba. The Business Council has a narrow focus in this proceeding. Their primary concern relates to the fiscal health of Hydro and the Province of Manitoba, in particular, as it relates to credit ratings, interest costs, and the necess -- necessity to grant a rate increase that will minimize the risk of any cre -- credit downgrade that will see interest costs increase for Hydro and the Province of Manitoba. As part of our involvement in this we served Information Requests on Morrison Park.

You're aware of that?

MR. PELINO COLAIACOVO: Yes.

MR. KEVIN WILLIAMS: And I take it, sir, that -- that in responding to our Information Request, Morrison Park did so on a truthful basis and in good faith.

Is that fair?

MR. PELINO COLAIACOVO: Yes, we did.

MR. KEVIN WILLIAMS: And there was no attempt on the part of Morrison Park to be flippant or evasive in terms of how it responded to the Information Request put forward by the Business Council.

Is that fair?

MR. PELINO COLAIACOVO: That's fair.

MR. KEVIN WILLIAMS: If I could have you turn to Information Request Number 7, please.

(BRIEF PAUSE)

MR. KEVIN WILLIAMS: In this Information Request, we asked Morrison Park as to whether the credit rating agencies -- whether the bond purchasers and traders routinely rely on the credit rating agency reports as inputs in their analysis of their buy/sell trade decisions.

The response we received from Morrison Park is that -- that sophisticated financial market participants take advantage of all infor -- available information, including that from credit rating agencies. You make the point that given that credit rating agencies are for-profit entities, they would not continue to operate without active customers. And it's reasonable to believe that their information is widely disseminated.

Well, you would know, sir, that the information produced by the credit rating agencies is widely disseminated; isn't it?

MR. PELINO COLAIACOVO: To their paying customers, yes, it is.

MR. KEVIN WILLIAMS: Right. And -- and you then go on and say where the bond purchasers and traders rely on the analysis of the credit rating agencies as opposed to forming their own views or relying on market analyst or advisors is unknown.

That's what would you say -- your -- you -- that Morrison Park doesn't know; right?

MR. PELINO COLAIACOVO: I actually would argue that -- credit rating agencies typically put out reports either on an annual basis or on an at-request basis when client is -- or a -- an issuer is putting out a debt instrument. Traders make decisions in liquid markets on a daily basis. So to suggest that traders are relying on credit rating agency reports in making their trades, I think is problematic because they make many more trades at many more times than credit rating agencies issue reports.

Do they take into account information from credit rating agencies when that information is available once per year, or once periodically? I think it's reasonable to assume that they do take that information into account. Does that information drive their decision-making on a daily basis when credit rating reports are not available? I would find it hard to believe that that would be the case, but I point out here that short of speaking directly to traders, I think you can't really make a conclusive judgement about that.

MR. KEVIN WILLIAMS: Okay. And -- and so I take it then, sir -- sir, I -- I note that then you went on to say that, you know, that -- that Morrison Park would be prepared to do an analysis on that, but it was only if they were paid for by the PUB.

Is that -- is that the balance of your response?

MR. PELINO COLAIACOVO: Well, my point is that, in fact, we have done similar assignments --

MR. KEVIN WILLIAMS: Right.

MR. PELINO COLAIACOVO: -- for other agencies where we canvass capital market participants directly about their views on a particular issue. We've not done that in this case.

MR. KEVIN WILLIAMS: Right. And -- and -- but you were prepared to do so, if you -- if you were to be paid for it.

Is that fair?

MR. PELINO COLAIACOVO: We're a for-profit company, too, yes.

MR. KEVIN WILLIAMS: That's going to be my very next question, sir. If we can turn to slide 4, please, from your presentation yesterday.

Like the credit rating agencies, Morrison Park is an investment bank, and it's a for-profit entity; isn't it?

MR. PELINO COLAIACOVO: Yes, it is.

MR. KEVIN WILLIAMS: Okay. Now, it says, "All opinions are opinions of the firm." And that's underlined. I -- I take it that's because of the fact that there's a number of people that collaborate in these presentations and responses that are put forward?

MR. PELINO COLAIACOVO: That's correct.

MR. KEVIN WILLIAMS: Okay. And so -- so, in terms of your own particular experience, sir, no disrespect intended, but -- but I look under the last bullet there on that page and it says you have degrees in law, economics, political science/international relations. I -- I looked at the website for Morrison Park and -- and I see that -- that what you identify yourself as having is a -- is a Bachelor of Arts and a Bachelor of Law.

Is that an accurate description as to what your -- your education is?

MR. PELINO COLAIACOVO: That's right.

MR. KEVIN WILLIAMS: Okay. And -- and so your degrees in economics, political science, and international relations, I take it, were your major and minor in your arts degree.

Do I have that?

MR. PELINO COLAIACOVO: Actually it was a specialist, a major, and I also had a minor in philosophy.

MR. KEVIN WILLIAMS: Which was a specialist and a major?

MR. PELINO COLAIACOVO: International relations is a specialist, which includes political science, history, and economics. Economics was the major and philosophy was the minor.

MR. KEVIN WILLIAMS: Right. So what you have is two (2) degrees then, I take it, neither of them --

MR. PELINO COLAIACOVO: That's right.

MR. KEVIN WILLIAMS: -- neither of them are post -- postgraduate degrees; correct?

MR. PELINO COLAIACOVO: Neither of those is a postgraduate degree.

MR. KEVIN WILLIAMS: Okay. So now if we can turn to Information Request 4, please.

(BRIEF PAUSE)

MR. KEVIN WILLIAMS: The question -- the first question we asked you there is:

"What is the potential risk of a credit downgrade for the Province of Manitoba by Dominion bond rating service? Provide discussion with specific reference to your submissions or the submissions of others where applicable."

And you see that question, sir?

MR. PELINO COLAIACOVO: I do.

MR. KEVIN WILLIAMS: The response to that is:

"The potential risk a credit downgrade for the Province of Manitoba is a matter beyond Morrison Park's scope."

You see that, sir?

MR. PELINO COLAIACOVO: I do.

MR. KEVIN WILLIAMS: Yeah. And -- and so -- so that was true when you -- when you answered that Information Request; was it not?

MR. PELINO COLAIACOVO: It was.

MR. KEVIN WILLIAMS: Okay. And if -- and -- and we asked you the same questions at -- at Information Request 5, as it relates to Moody's. And it -- as it relates to Information Request 6, as it relates to Standard & Poor's. And in each case you said the risk of a potential ground -- downgrade for the Province of Manitoba by any of these trade rating -- credit rating agencies was beyond your scope.

That's how you folks responded; correct?

MR. PELINO COLAIACOVO: So the question asks about the potential risk of a credit downgrading for the Province of Manitoba bearing no relation to what the risks are, or what the circumstances might be. And -- and what I read from that question is: What is the risk of a downgrade in the Province of Manitoba's credit rating writ large? And I cannot answer that question.

If the Province of Manitoba comes up with a new budget or an economic update, or a statement of intention or policy which has some critical effect on the finances of the province, then there would be a risk given of a credit rating downgrade. But that's well beyond the scope of what we've been asked to look at.

MR. KEVIN WILLIAMS: I see. So -- so if you turn to slide 23 from your presentation yesterday, in these bulleted points isn't Morrison Park expressing opinions that it said was beyond its scope?

MR. PELINO COLAIACOVO: The opinions--

MR. KEVIN WILLIAMS: The appro -- the potential for the impact on the -- on the province's credit ratings?

MR. PELINO COLAIACOVO: The opinions on slide 23 relate specifically to Manitoba Hydro not to the province writ large, not to provincial budgets, provincial in -- economic statements, provincial policies that have nothing to do with Manitoba Hydro.

MR. KEVIN WILLIAMS: But that's not how you responded to the Information Request; did you?

MR. PELINO COLAIACOVO: The Information Requests did not specify anything.

MR. KEVIN WILLIAMS: Yeah. But you certainly were aware of the fact that based on the Information Requests that we were concerned about the interrelationship between Manitoba Hydro's fiscal position and the province's fiscal position.

And -- and you're aware of that when you answered the Information Requests?

MR. PELINO COLAIACOVO: With all due respect, it's not our role to assume anything about a question in an IR, certainly not a question that's put -- put to us in such an open-ended manner.

MR. KEVIN WILLIAMS: I see. Okay. If you could turn now to slide 20, please.

(BRIEF PAUSE)

MR. KEVIN WILLIAMS: Now, you indicate that there is no practical risk that Manitoba Hydro would ever have trouble raising debt funding. And then you indicate that unless the world ends and provide an example of another financial crisis freezing the capital markets.

I -- I take it, sir, that -- that you're aware of the stock market crash in '87?

MR. PELINO COLAIACOVO: Yes.

MR. KEVIN WILLIAMS: And that had an impact on the financial markets; did it not?

MR. PELINO COLAIACOVO: The stock market crash of '87 had profound -- well profound -- had a -- a very significant impact on the stock market, actually did not affect the lig -- the credit markets for sovereign debt or some sovereign debt, particularly much at all.

MR. KEVIN WILLIAMS: I see. And -- and would you make the same comment about the -- the tech bubble in 2000?

MR. PELINO COLAIACOVO: I would actually suggest that a bigger issue for the sovereign markets was the 1998 credit crisis when sovereign credit from a number of countries in Asia was troubled. The tech bubble in 2000 was mostly limited to the stock market again.

MR. KEVIN WILLIAMS: I was not here yesterday, but understand you spoke of the fact that you were attempting to access the capital markets in September 2008 for a few transactions. And you couldn't, in fact, close those transactions till early 2009.

Do I have that correct?

MR. PELINO COLAIACOVO: That's absolutely correct.

MR. KEVIN WILLIAMS: And I take it, sir, that -- that when you were able to close the transactions that they were at higher interest and borrowing costs than they were when you were approaching the markets in '08?

MR. PELINO COLAIACOVO: I -- I think it's fair to say that all credit costs in the immediate aftermath of the 2008 credit crisis spiked. And if you were to look at statistics dealing with credit costs in -- in that time period you would see a very significant spike in credit costs during that period.

MR. KEVIN WILLIAMS: And -- and my point in these questions, sir, is that there's significant events that occur in the economy periodically, and -- and they can have dramatic effects on the ability to obtain capital and the cost of that capital.

Is that fair?

MR. PELINO COLAIACOVO: It is fair. And in general they are short-term in nature.

MR. KEVIN WILLIAMS: Okay. And I take it that -- that Morrison Park is not in a position to say whether such event -- such -- another such event will occur next week or next month or next year.

Is that fair?

MR. PELINO COLAIACOVO: That's fair because no one (1) is in a position to make statement.

THE CHAIRPERSON: Sorry, Mr. Williams, you've got a couple of minutes.

MR. KEVIN WILLIAMS: Thank you.

(BRIEF PAUSE)

CONTINUED BY MR. KEVIN WILLIAMS:

MR. KEVIN WILLIAMS: If you could turn, sir, to slide 22, the challenges Manitoba Hydro faces.

You've identified project cost overruns, so -- so that's a fact that were attempting to deal with; is it not?

MR. PELINO COLAIACOVO: I believe it is, yes.

MR. KEVIN WILLIAMS: Yeah. And -- and at -- at some point time all those costs are going to have to be paid for one (1) way or the other, right?

MR. PELINO COLAIACOVO: Yes, they will.

MR. KEVIN WILLIAMS: Okay. And you've talked about hydrological risk this morning. I -- I take it that -- that the -- the risk of -- of us moving into more of a drought scenario is -- is -- the probability of that occurring is higher than it not occurring in the near term?

MR. PELINO COLAIACOVO: I have no way of making that analysis. I think the -- statistically the answer would be the probability at any given time of a drought beginning next year is the same. There -- there is no reason to think that past history affects the future when you're -- when you're talking about a truly random variable like water inflows.

MR. KEVIN WILLIAMS: Sir -- sir, interest rates and inflation are at all time lows; are they not?

MR. PELINO COLAIACOVO: I -- I think that's true.

MR. KEVIN WILLIAMS: And so the probability of higher interest rates -- of -- of interest rates and inflation increasing is greater than it is decreasing in the near term; is it not?

MR. PELINO COLAIACOVO: Again, I would be very careful about using the words -- using terms around probability. I think if you asked that question five (5) years ago the answer would have been yes. And yet interest rates have remained flat or lower than five (5) years ago. No one can actually predict with accuracy what's going to happen with interest rates and inflation.

MR. KEVIN WILLIAMS: And as a consequence of that it's better to be more conservative in your approaches to these financing matters; isn't it, sir?

MR. PELINO COLAIACOVO: That is a matter of opinion and debate.

MR. KEVIN WILLIAMS: Thank you. Those

my questions.

THE CHAIRPERSON: Thank you very much, Mr. Williams. We will adjourn now until 12:30. Thank you.

--- Upon recessing at 9:47 a.m.

--- Upon resuming at 12:56 p.m.

THE CHAIRPERSON: With the -- with the free time we're going to have Man -- Manitoba Hydro's going to put in some exhibits.

Yes, we are on the record and Manitoba Hydro will be introducing some exhibits.

(BRIEF PAUSE)

THE CHAIRPERSON: The good news is Dr. Grant is back so. Well, don't worry, you don't have to run.

(BRIEF PAUSE)

THE CHAIRPERSON: Ms. Ramage...?

MS. PATTI RAMAGE: Yes, and I can indicate with Mr. Grant's arrival the undertakings have been distributed to the Board not those in the room, so we don't take that time. None of them relate to what we're dealing with today.

The first is Manitoba Hydro Undertaking Number 25 dealing with revenue from MKO First Nations, and that we will assign Manitoba Hydro Exhibit 113.

--- EXHIBIT NO. MH-113: Undertaking Number 25 dealing with revenue from MKO First Nations.

MS. PATTI RAMAGE: The next is Manitoba Hydro Undertaking Number 26, which is determining the level of incremental revenues from MKO communities with the 7.9 percent rate increase; that we will be assigning Manitoba Hydro Exhibit 114.

--- EXHIBIT NO. MH-114: Undertaking Number 26, which is determining the level of incremental revenues from MKO communities with the 7.9 percent rate increase.

MS. PATTI RAMAGE: And lastly, is

Undertakings 30 and 31 dealing with estimated marginal values. And that is being assigned Manitoba Hydro Exhibit 115.

--- EXHIBIT NO. MH-115: Undertakings 30 and 31 dealing with estimated marginal values

THE CHAIRPERSON: Thank you. Thank you, Ms. Ramage. Thank you. M. Monnin...?

CROSS-EXAMINATION BY MR. CHRISTIAN MONNIN:

MR. CHRISTIAN MONNIN: Thank you, Mr. Chair and members of the Panel. Good afternoon, Mr. Colaiacovo. I'm legal counsel for the General Service Small and General Service Medium customer classes, as well as the Keystone Agricultural Producers who are intervening in this matter.

And I'd like to let the record show that I too have a philosophy degree and in this exercise I will undertake I will do my best to not be a shining example of the Socratic paradox of if I know one thing is I know nothing.

I'd like to ask you some questions with -- firstly, with regards to the debt-to-equity ratio.

And these first series of questions will be a demonstration of my grasp of the obvious but there's method to my madness.

In this application you agree with me that Manitoba Hydro has taken the position that it should strive to achieve the debt-to-equity ratio target of 75/25 by the end of the fiscal year ending March 31st, 2027, correct?

MR. PELINO COLAIACOVO: That's what they've applied -- in -- that -- that's what it says in their application.

MR. CHRISTIAN MONNIN: And you agree with me that this is about half the time that was proposed by Manitoba Hydro -- arguably proposed by Manitoba Hydro during the Needs For and Alternatives To the hearing; correct?

MR. PELINO COLAIACOVO: Yeah. I'm -- in the NFAT reference cases for Manitoba Hydro's preferred plans, they typically showed the achievement of 75 percent sometime in the middle of 19 -- middle 2030s. And so moving -- though I don't think they ever actually said flatly that it was a -- a timing goal that achieving by 'X' on such a date is what we want to do.

But certainly in the reference versions

of their preferred options, that's what was always the case. So I think it's -- it's reasonable to assume that that's what they were striving to achieve and, clearly, 2027 is much sooner than that.

MR. CHRISTIAN MONNIN: Thank you. And we can all agree that the rate increase that Manitoba Hydro's proposing in these proceedings is 7.9 percent.

MR. PELINO COLAIACOVO: Yes.

MR. CHRISTIAN MONNIN: And would you agree that if Manitoba Hydro's goal was not 75/25 debt-to-equity ratio or if the goal to achieve this target was not ten (10) years rather than give or take the twenty (20) years that was arguably mentioned in the NFAT, is it safe to say that Hydro would not need the proposed 7.9 percent rate?

MR. PELINO COLAIACOVO: I think that's fair.

MR. CHRISTIAN MONNIN: And I understand your evidence, Mr. Colaiacovo, that it's MPI's conclusion that Manitoba Hydro is arbitrarily setting a ten (10) year timeframe for the achievement of the 75/25 debt-to-equity target; is that correct?

MR. PELINO COLAIACOVO: I've used those words, yes.

MR. CHRISTIAN MONNIN: And why -- why

have you used those words arbitrarily setting?

MR. PELINO COLAIACOVO: The explanations given in the application by Manitoba Hydro use the terms "financial strength" repeatedly and use the terms "unacceptable risk," but without providing numerical demonstration that, you know, what the probability of the occurrence of that unacceptable risk is, that would require such an extraordinary rate increase and -- and certainly such an extraordinary repetition of rate increases.

In the NFAT process there was a lot of time and effort spent on showing that rate increases at two (2) times the rate of inflation were going to be sufficient to -- to pay for their preferred development plan. Many, many scenarios were run and -- and there was some discussion about that earlier today. And in a very, very small number of scenarios it -- you know, we demonstrated in our own analysis that two (2) times the rate of inflation might not have been enough, right. But those were a very very small number of potential cases.

Now in the application, Manitoba Hydro has asked for four (4) times the rate of inflation because the previous paths were unacceptably risky. But what does that actually mean? And it -- it doesn't appear from the material that we read that they've provided any clear logical links between the data and the request other than -- than using terms like "unacceptably risky." What threshold of probability is unacceptably risky? What threshold of consequences are unacceptably risky? Yes, there are cases where 4 percent, for example, two (2) times the rate of inflation is not enough.

But how many cases, under what scenarios and what is the likelihood of those occurring and should you be raising rates by four (4) times the rate of inflation because there is, for example, a 5 percent probability of that scenario arising? Should you raise rates if there's a 10 percent scenario? Should you raise rates if there's a 20 percent probability? They haven't talked about any of that.

They've simply said, we want to raise rates at four (4) times the rate of inflation to achieve this target by 2027, because the alternative is unacceptably risky. To me, if you don't provide the data, if you don't provide thresholds, if you don't provide analysis, it's arbitrary.

MR. CHRISTIAN MONNIN: Thank you. And in addition to that, Morrison Park draws a conclusion that setting since arbitrary ten (10) year timeframe is particularly insupportable; is that correct?

MR. PELINO COLAIACOVO: Yes.

MR. CHRISTIAN MONNIN: And that is on account of this arbitrary timeframe being set in the face of massive investments in new projects, is that correct?

MR. PELINO COLAIACOVO: Yes.

MR. CHRISTIAN MONNIN: And what this arbitrary timeframe is doing is effectively requir -- requiring today's ratepayers to contribute in the next ten (10) years, 25 percent of the full amount spent to date on Bipole III, Keeyask and related projects; correct?

MR. PELINO COLAIACOVO: That's correct.

MR. CHRISTIAN MONNIN: In addition it's asking today's ratepayers to contribute in the next ten (10) years, 25 percent of all the remaining produc -- all the remaining projects until they are completed, that is Bipole, Keeyask, et cetera.

Is that correct?

MR. PELINO COLAIACOVO: Yes.

MR. CHRISTIAN MONNIN: I understand your evidence is that Keeyask and Bipole are two (2) of the largest projects Manitoba Hydro's ever seen; is that safe to say?

MR. PELINO COLAIACOVO: Yes, it is.

MR. CHRISTIAN MONNIN: And Mr. Colaiacovo, in view of that what would you -- be your response to the argument that imposing the proposed rate increases are -- that we're dealing with today, and the timeframe on ratepayers is what is consistently and normally done from time to time with a publicly owned verti -- vertically integrated electrical Utility?

MR. PELINO COLAIACOVO: Yes, I think Manitoba Hydro itself has a history where they built large projects. Other similar Utilities build large projects from time to time and have to face the same challenges. How do you -- how do you integrate that large project into your balance sheet and your rates over time so that it's fair and balanced.

MR. CHRISTIAN MONNIN: And what is being proposed -- are you able to -- to provide an opinion, is this fair and balanced in light of the fact that we're dealing with two (2) of the largest projects that Manitoba Hydro's ever seen?

MR. PELINO COLAIACOVO: So after our own analysis of the risks and -- and our own analysis of the evidence about those risks, in our view, the case has certainly not been made that the 7.9 -- a series of 7.9 percent increases are required to manage the risks that -- that they have indicated are out.

MR. CHRISTIAN MONNIN: I'd like to ask you a few questions about the export market for Manitoba Hydro.

My understanding is -- your evidence is that Manitoba Hydro is the only Utility which combines a full cost recovery model with an explicit mission to develop electrical -- electricity resources for export purposes?

MR. PELINO COLAIACOVO: That's correct.

MR. CHRISTIAN MONNIN: And would it be -- would you agree with me if I suggested that the decision to develop Keeyask to a certain extent forms part of that mission?

MR. PELINO COLAIACOVO: I -- I think that's absolutely true in the -- in the NFAT process there was a discussion about the -- the choice of building Keeyask earlier or later.

If Keeyask was built earlier then most of the output from Keeyask in the early years would go to exports and, in fact, Manitoba Hydro put a lot of effort into signing export contracts for some of that output. Whereas in other scenarios, Keeyask would be built later principally to serve the domestic market and less for export purposes.

So the objective to build a project specifically for export is -- is part of that mandate.

MR. CHRISTIAN MONNIN: And would you agree with me that to a certain extent Bipole III as well forms part of that export mission?

MR. PELINO COLAIACOVO: So the -- well, our understanding of the objectives for Bipole or the -- the purposes of constructing Bipole are domestic reliability and security of the transmission grid.

I don't believe that there is any official statement anywhere which says that Bipole III was built in order to enable exports and -- and construction of -- of projects for export purposes. On the other hand, the preferred development plan in the NFAT which included Keeyask and Conawapa would not be possible without Bipole III. And so it's just a conjecture that at least one (1) of the reasons Bipole III was built was not just for reliability purposes, but also to enable an export focus for the Company.

MR. CHRISTIAN MONNIN: I'll take that answer and move on, Mr. Colaiacovo, thank you. Continuing on -- on the export -- development of export sales, it -- is it safe to say that the business model and risks associated with Manitoba Hydro's exports are fundamentally different from the business model and risks associated with other domestic monopoly utilities?

MR. PELINO COLAIACOVO: Well, the -- the only other two (2) Utilities that have explicit mandates to construct projects for the purposes of exporting power at the moment are Quebec and Newfoundland.

Historically, Ontario Hydro did that but Ontario Hydro no longer exists, and BC Hydro does not actually currently have a system which allows it to have net exports on a consistent basis. Some years they export and some years they import energy. So Manitoba is -- is in select company in terms of building projects that have the capacity to export.

However, both Quebec and Newfoundland, the way those companies are structured, they pay profits to their governments and are explicitly required to pay profits to their government. So, the government is benefitting from the exports and -- and also putting capital into those companies in order to benefit from those exports.

So, Manitoba is unique in being pure cost recovery and export focused.

MR. CHRISTIAN MONNIN: And looking at the Hydro Quebec, for example, would you agree with me that there's a -- a -- a built-in protection for ratepayers with regards to these -- the export mission?

MR. PELINO COLAIACOVO: Yes, that's correct. Hydro Quebec has a defined heritage pool of electricity, which is used for domestic consumers and the price of that heritage pool of electricity is tied to inflation, the growth and the price is tied to inflation. The rest of their power they sell on the market, and that, you know, results in whatever price they can get on the market through contracts and -- and through spot market sales.

MR. CHRISTIAN MONNIN: And would you -- thank you for that. But would you agree, therefore, with the following, that keeping that in mind what we've discussed about Manitoba Hydro's export mission, would it buttress Morrison Park's position that the proposed increases and timeframe are unsupportable because the financial consequences regarding decisions on export projects are largely borne by the domestic ratepayers?

MR. PELINO COLAIACOVO: Well, I think all the costs of Manitoba Hydro, ultimately, our -- how to put it, a liability for ratepayers. Exports are -- revenues are great but there are no guarantees for export revenues. Export revenues ultimately are whatever the market will bear.

But, those costs have to be recovered and if they're not recovered in export markets, they must be recovered from domestic ratepayers, that's what the legislation says and -- and that's what has always been the case.

MR. CHRISTIAN MONNIN: Thank you. In your report at page 4 of 161. Diana, you don't need to go there. I'll just read this into the record. However, you -- you state that:

> "The sharp increases in rates designed ostensibly to protect ratepayers from undue financial risks and burdens in the future instead appears to create significant burdens for ratepayers in the short term, with uncertainty -- pardon me, on certain utility for

ratepayers later."

What -- what do you mean by "on certain utility for ratepayers later?"

MR. PELINO COLAIACOVO: So there's no question that the rate increases our burden immediately. There is considerable uncertainty as to whether in the future Manitoba Hydro will need to continue raising rates, or could freeze rates or could actually, in some cases, reduce their rates.

And, you know, ratepayers in the future could face, in fact, a power at a much lower nominal dollar price and a much -- a dramatically lower inflation adjusted price or not, because it -- it isn't unclear from the -- certainly what -- the statements that Manitoba Hydro has made what their long-term policy actually is.

In their modelling that they included with the rate application, they showed the debt ratio, in fact, not only being achieved by '27 -- 2027 but then being exceeded and -- and debt falling sharply in -- into the 50 percent range.

Alternatively, in response to some IRs, they showed the possibility that they could actually cut rates, but then there have been statements made by executives at Manitoba Hydro that you can't actually run a Utility with negative net income and -- and that suggests that they might not actually reduce rates, they might instead only choose to flatline rates.

So there's a lot of uncertainty as to -- as to what would happen, but the one -- one issue that there's no uncertainty about is that ratepayers beginning immediately would be facing a much, much larger burden.

MR. CHRISTIAN MONNIN: Thank you, Mr. Colaiacovo. I'd like to ask you some questions with regards to construction risks.

My understanding is that construction risks in your report is identified at one of the five (5) broad categories of risks that an electric utility, such as Manitoba Hydro, may face; correct?

MR. PELINO COLAIACOVO: Yes.

MR. CHRISTIAN MONNIN: And Manitoba Hydro as we know is in the process of building two (2) major projects: Keeyask and Bipole III. And as you've noted in your report, as has already occurred, these construction projects, Keeyask in particular, has had delays with the schedule and budget; correct?

MR. PELINO COLAIACOVO: Yes.

MR. CHRISTIAN MONNIN: In your report you indicate that Manitoba Hydro provided financial analysis of a thirty-two (32) month delay of the Keeyask project. But you also go on to say that on account of confidentiality concerns that information was redr -- redacted.

And under the issue of risk modelling in your report, still dealing with Keeyask, you note that while construction risks associated with Keeyask were also significant, they were unfortunately not investigated.

Do you recall saying that in your report?

If you want we can go to page 40 to refresh your memory on that.

MR. PELINO COLAIACOVO: Yeah, if -- just to get the context of the statement would be helpful.

MR. CHRISTIAN MONNIN: Page 40 of 161, please, Diana.

MR. PELINO COLAIACOVO: All right.

MR. CHRISTIAN MONNIN: And we'd be looking at the top of the page.

(BRIEF PAUSE)

MR. CHRISTIAN MONNIN: I'm sorry, that

would be page 42, still top of the page. It'd be the second full sentence, lines 1 and 2.

MR. PELINO COLAIACOVO: Oh, could -- could you go to the beginning of the paragraph on the bottom of 41. Thank you.

MR. CHRISTIAN MONNIN: And for completeness, Mr. Colaiacovo, you might want to read the footnote 32.

MR. PELINO COLAIACOVO: Right. Now -- now I recall what -- what this is talking about.

Yes. So there is a table in Hydro -- Manitoba Hydro's application which showed potential risks and -- and how much of a consequence they might have, plus or minus a percentage interest rate, a drought scenario, and so on and so forth.

And they -- based on the magnitude of those risks, on the magnitude of the impact of those risks, they decided to investigate some things further and other things not. One (1) of the risks that they listed was capital cost overruns and based on the amount of capital cost overruns that they had invested -- they had -- had analysed in that table, they decided it was not important enough to pursue further.

In actual fact, it appears that there is a risk of a considerably higher construction cost overrun and had they chosen a higher number, the magnitude of the risk would have been large enough than they -- that they would have likely done more investigation, but that wasn't what they chose to do. Hence the term "unfortunately not investigated."

MR. CHRISTIAN MONNIN: Thank you. I'd like to ask you -- appreciating I have about ten (10) minutes left, I'll -- I'll do the best that I can. I'd like to ask you some questions with respect to Manitoba Hydro being a self-supporting entity.

In its filing Manitoba Hydro has stated that a financial plan that returns the Corporation to a 25 percent equity level over almost a twenty (20) year -- over -- over -- almost twenty (20) years is not credible as a commitment to being a self-supporting entity.

Is it safe to assume that you don't necessarily agree with that statement, Mr. Colaiacovo?

MR. PELINO COLAIACOVO: Yes. I think in the NFAT, as I -- as I mentioned earlier, the preferred development plan that Manitoba Hydro strenuously supported through that whole hearing process, in fact, appear to include an assumption that achieving 75 percent would only be done after the passage of approximately twenty (20) years under a reference scenario.

And the outcome of the NFAT process was approval of the Keeyask project going forward. Markets did not react badly to that, in fact, there was no real market reaction. There's no indication that -- the problematic course of action to take. Manitoba Hydro has now said that they believe it's an unacceptable risk and -- and an unacceptable timeframe for achievement of that target, but they've not said that because anyone has reacted to it.

So, you know, it -- it -- it raises the issue of why they've come to the conclusion that it's so unacceptable.

MR. CHRISTIAN MONNIN: Mr. Colaiacovo, in your report you state that Manitoba Hydro is -- and this is at page 34 of 161, if we need reference.

But in the interest of time I'm not going to ask you to go there. In your report you state that Manitoba Hydro is self-supporting as long as it has cash flows -- as long as its cash flows continue to be sufficient to cover its costs including the debt costs.

MR. PELINO COLAIACOVO: That comes directly from the first page at the top of DVRS's report. It's an -- almost a quote.

MR. CHRISTIAN MONNIN: And do you adopt that?

MR. PELINO COLAIACOVO: Yes.

MR. CHRISTIAN MONNIN: And so in your opinion, is it safe to say Manitoba Hydro does not need the proposed rate -- rate increases or the time frame to attain this?

MR. PELINO COLAIACOVO: I believe that's true. I -- I don't think that there is sufficient support to justify the -- the application that they've made.

MR. CHRISTIAN MONNIN: In your evidence, Mr. Colaiacovo, was that this Board, the Public Utilities Board, should provide some clarity and signal to capital markets but whether Manitoba Hydro is self-supporting?

MR. PELINO COLAIACOVO: I think the capital markets do believe that Manitoba Hydro is self-supporting. I think Manitoba Hydro itself has thrown some confusion by the statements that they've made in their application, suggesting that they're facing unacceptable risk.

It would be helpful and beneficial if the risk issues were clarified and if the long-term rate path was clarified somewhat to provide reassurance to capital markets that, in fact, the rate -- the Board at least is not concerned about Manitoba Hydro's self-supporting status.

MR. CHRISTIAN MONNIN: And how -- how would the Board go about doing this, Mr. Colaiacovo?

MR. PELINO COLAIACOVO: I think by enunciating a policy on how rates are going to be managed and -- and reassuring markets that rates will be managed in a fashion to ensure that Manitoba Hydro continues to pay its bills, as it has in the past.

And I think that will be a reassuring message.

MR. CHRISTIAN MONNIN: Thank you. Diana, could you please go to page 11 of 161. Looking at lines 11 down to 15.

Mr. Colaiacovo, I just -- and I'm also going to take you then to slide 35 of -- of your presentation. I'm just trying to get clarification from you.

Here in your report you write:

"It's important to note that despite the change in forward projections based on Manitoba Hydro's target, debt/equity ratio and timing goal, Manitoba Hydro has not

not] requested that PUB formally endorse or otherwise agree with either the target level or the timing goal."

And it goes on. If you can please go to slide 35 please, Diana. And under the first bullet:

"Manitoba Hydro has emphasized its debt ratio target and timing goal in its application." [you write] "The previous timing goal mid-2030s for achievement of the target has been explicitly repudiated and the PUB is being asked to endorse a new position through its rate decision."

And there seems to be a --

MR. PELINO COLAIACOVO: Yeah, a --

MR. CHRISTIAN MONNIN: A little discrepancy.

MR. PELINO COLAIACOVO: Yeah, perhaps I can clarify. I think in the -- in the -- in the report I was saying that the application is asking for rates for two (2) years specifically. I think the only way that you can come to a conclusion that those rates are required is if you believe that the target of 75 percent debt and the timing goal must be achieved by 2027; if you don't believe that, then the 7.9 percent rate increase, I believe, does not have sufficient support.

Wh -- I've restated it perhaps with a poor choice of words using the word "endorse," but on this slide, what I'm essentially saving -- saying is unless -- well, it's the same point, unless the Board comes to the conclusion that achieving 75 percent by 2027 is, in fact, important in the way that Manitoba Hydro has described it in its application, then you know they -- they will not come to the conclusion that 7.9 percent is the right number.

If, on the other hand, the previous timing goal of mid-2030s for achievement of 7. -- 7.5 percent continues to be supported by the PUB, then you won't get to a 7.9 percent increase, you'll get to some other increase that's not 7.9 percent.

So I apologize if that the -- the - the words appear to be in conflict but the message has been the same.

MR. CHRISTIAN MONNIN: Thank you. Mr. Colaiacovo, previously we had heard evidence from Dr. Adonis Yatchew and he gave testimony, in broad terms, in order to assess likely impacts and responses of various customer groups of rate increases of the proposed magnitudes, as well as the implications for the Manitoba economy as a whole.

And in his concluding observations, I'd just like to see if you're able to comment on this. In his concluding observations, Mr. Yatchew indicated that approval of the increases that are being proposed by Manitoba Hydro, 7.9 percent, will suggest the acceptance of Manitoba Hydro's arguments and its focus on the time profile of future financial ratios.

Is that something that you would agree with?

MR. PELINO COLAIACOVO: Yes, I think he's essentially saying the same thing I am. The only way you can rationally conclude that 7.9 percent is necessary is if you believe 75 percent must be achieved by 2027; other -- if you don't believe that 75 percent debt must be achieved by 2027, then I don't think there is a rational basis for concluding that 7.9 percent increases are necessary.

MR. CHRISTIAN MONNIN: Thank you. And this is a -- I have one (1) or two (2) more questions. I'm almost done, Mr. Chair.

Returning to your report at page 53 of 161, in particular, at lines 10 through 14, you state:

"However, if the PUB chooses to clarify how it would approach the issues of reserves and rate stability in the future, it will simplify the process of ratemaking, both for Manitoba Hydro and for Intervenors. With the settlement of these issues and the adoption of a standardized methodology, the question of reserves and plan addition to reserves could become focused on mathematical and probabilistic calculation rather than debate over principles and potential impacts."

And the question I have, as follows: is -- is -- I understand your evidence is that you're not giving a specific recommendation as to what the rate ought to be, rather that this Board gives guidelines and rules.

And in light of that, would it be your recommendation that in doing so this Board proceed with rate applications that are shorter and -- there's less time frame between -- between rate applications not on a two (2) basis but on a rolling basis that's more like one (1) year, given the circumstances that we're in?

MR. PELINO COLAIACOVO: I -- I don't think I have a strong opinion, frankly, on whether the Board should review rates annually or every two (2) years or every three (3) years. I think my focus is if the process were more rule-based and formula-based, it would lead to much shorter processes and fewer issues of -- of conflict than, you know, the -- the current situation where there is a lot of debate over principles that should -- that should be enforced through a rate application. Whether it was one (1) year or two (2) years or -- or, you know, et cetera, I -- I think it's entirely up to the Board.

MR. CHRISTIAN MONNIN: Thank you, Mr. Colaiacovo. Those are my questions, Mr. Chair, thank you.

THE CHAIRPERSON: Thank you, Mr. Monnin. Mr. Ghikas...?

CROSS-EXAMINATION BY MR. MATTHEW GHIKAS:

MR. MATTHEW GHIKAS: Good afternoon, Mr. Chairman and members of the Panel. Good afternoon, Mr. Colaiacovo. My name's Matt Ghikas, G-H-I-K-A-S, for the record, and I'm one (1) of several counsel for Manitoba Hydro here. And you and I can have a dual to see whose name gets mispronounced more often.

All right, what I'd like to start with today -- oh, and I should say before I get going, Mr. Chairman, we have circulated electronically a book of documents for cross-examination. I would propose at this point to mark that book of documents, the electronic version as Manitoba Hydro Number 116, Number 116 and it's in print services getting printed as hard copies as well, but I think we can -- most of the materials are already in the record as well.

THE CHAIRPERSON: Thank you.

--- EXHIBIT NO. MH-116: Book of documents for cross-examination of Mr. Colaiacovo by Manitoba Hydro.

CONTINUED BY MR. MATTHEW GHIKAS:

MR. MATTHEW GHIKAS: So, Mr. Colaiacovo, I want to start with something that -- an exchange that you had with Mr. Gange this morning. You were talking about a test when looking at rates and you suggested that you want to make sure you have enough reserves.

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Okay. Now, I'd suggest to you that when it comes to managing distress that comes with an event such as drought, the critical issue is the magnitude of the outstanding debt on the balance sheet, not the size of the retained earnings.

MR. PELINO COLAIACOVO: I don't think I would necessarily agree with you. I don't think magnitude of debt in isolation has any relevance. Debt in relation to assets so, you know, if your assets are highly leveraged it wouldn't matter but if you have $50 billion of assets and $25 billion of debt is 25 billion an important number? I don't actually think so.

So the magnitude of the debt in isolation is just a fact.

MR. MATTHEW GHIKAS: Okay. Now as a couple of people have alluded to, and you alluded to as well, you did testify at the NFAT proceeding?

MR. PELINO COLAIACOVO: I did.

MR. MATTHEW GHIKAS: Okay and you provided responses to Information Requests as well?

MR. PELINO COLAIACOVO: I did.

MR. MATTHEW GHIKAS: Okay. I'd ask -- I -- I believe your answer that you've just given me is a little different than what your information response has said at the NFAT so let's just call up one of those. This is NFAT IR CAC-MPA-13.

So, Mr. Colaiacovo, I'll just let you read that for a moment. This is a question that was posed in the context of an issue regarding drought and it was posed by your current client and you've -- you were asked about retained earnings and your response was that the critical issue is the magnitude of outstanding debt on the balance sheet, not the size of the retained earnings.

Do you see that?

MR. PELINO COLAIACOVO: Yes. Is there any more to the response?

MR. MATTHEW GHIKAS: No, that's it. So --

MR. PELINO COLAIACOVO: Right.

MR. MATTHEW GHIKAS: Go ahead.

MR. PELINO COLAIACOVO: The -- the retained earnings are room which allows you to issue debt, in essence, right you can increase your debt ratio closer to 100 percent debt at any given time. If 100 percent debt is actually problematic than the further away you are from 100 percent debt, the more room you have.

Retained earnings are not cash, right. There's no question about that. And I think elsewhere in our -- in our reports and documents we talk about the distinction that it's actually not cash. And there's -- there's no question about that.

The magnitude of the outstanding debt tells you how much interest, as it says here, the interest charge is related to the large outstanding debt represent a real call on cash flow because cash flow is the issue.

And so if drought causes your cash flow to fall, you have a problem that you have to manage.

MR. MATTHEW GHIKAS: And you'd agree with this statement then that a large pool of retained earnings in this environment would be beneficial in that the Company balance sheet potentially could sustain a series of annual losses but balance sheet retained earnings bear little relationship to the availability of cash resources.

You'd agree with that, sir?

MR. PELINO COLAIACOVO: Yep.

MR. MATTHEW GHIKAS: Now, you would also agree with me that adverse development since the

NFAT have been driving debt higher and faster than expected, sir?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And higher than expected debt brings with it higher than expected interest cost, doesn't it?

MR. PELINO COLAIACOVO: It does.

MR. MATTHEW GHIKAS: And not only does it bring higher interest costs, that cost is now expected to be recovered over fewer kilowatt hours than anticipated at the time of the NFAT, correct?

MR. PELINO COLAIACOVO: But just to take a step back, higher than expected debt brings higher interest cost if the interest rate is assumed to be stable.

However, if the interest rate is declining, higher interest rate -- higher debt doesn't necessarily require higher interest payments because it's the combination of the rate and the size of the debt.

MR. MATTHEW GHIKAS: And have you been seeing interest rates decline lately, sir?

MR. PELINO COLAIACOVO: I think Manitoba Hydro has been experiencing a decline of interest rate -- in interest rate over the past five (5) years.

MR. MATTHEW GHIKAS: The long Canada bond rates are rising, though, aren't they, sir?

MR. PELINO COLAIACOVO: The long Canada bond rates have been rising in the past few months, but have certainly been falling over the past five (5) years.

MR. MATTHEW GHIKAS: And projections are that they'll continue to rise?

MR. PELINO COLAIACOVO: I think the short-term interest rate projections that Manitoba Hydro and everyone else has access to are forecasting an increase in those rates, modest increase in the next three (3) years. However, they also forecasted a modest increase three (3) years ago and it didn't happen over the course of the last three (3)years. Those are just --

MR. MATTHEW GHIKAS: And these are --

MR. PELINO COLAIACOVO: -- forecasts.

MR. MATTHEW GHIKAS: And we're experiencing historic low interest rates, correct?

MR. PELINO COLAIACOVO: Yes, we are.

MR. MATTHEW GHIKAS: And so if we were to go back to the 1980s, for example, we'd be up in the high teens or early 20s?

MR. PELINO COLAIACOVO: Absolutely.

MR. MATTHEW GHIKAS: Now, I believe that you also said, sir, that in response to questions that in ord -- that to make sure that the Company is perceived as self-supporting through the drought period, you have to have enough reserves.

Do you recall that?

MR. PELINO COLAIACOVO: Absolutely.

MR. MATTHEW GHIKAS: Okay and I believe you suggested possibly in the range of five (5) to seven (7) years was based on historic numbers?

MR. PELINO COLAIACOVO: I pointed out that Manitoba Hydro has, in this application, and in the NFAT and previously, provided cases and examples of five (5) and seven (7) year drought. There have been longer droughts historically, but five (5) and seven (7) year droughts are an analysis that Manitoba Hydro has provided on a number of occasions.

MR. MATTHEW GHIKAS: And certainly in your -- your presentation deck at slide 29, you cite that equity and reserves should be at a level sufficient to manage a defined level of scenarios, right?

MR. PELINO COLAIACOVO: That's right.

MR. MATTHEW GHIKAS: Okay. Now, if Manitoba Hydro, as you said -- let me back up. As you said, Mr. Colaia -- Col --

MR. PELINO COLAIACOVO: It's all right.

MR. MATTHEW GHIKAS: Okay, Mr. Colio -- oh my God. Do it once more for me?

MR. PELINO COLAIACOVO: Colaiacovo.

MR. MATTHEW GHIKAS: Colaiacovo. This from the Ghikas, right.

Mr. Colaiacovo, as you said the reserves that Manitoba Hydro has are not cash; correct?

MR. PELINO COLAIACOVO: No, they're not.

MR. MATTHEW GHIKAS: And so -- and as you indicated that effectively what the reserves are is room, if I can put it this way, room to borrow more.

MR. PELINO COLAIACOVO: That's correct. They -- in a -- in a drought environment where cash flow is reduced because of the consequences of a drought, Manitoba Hydro would have to borrow more funds from the province of Manitoba and, therefore, the ratio of debt to capital would rise.

MR. MATTHEW GHIKAS: And if -- if Manitoba Hydro was able to borrow throughout a drought period, there would be no risk to its self-supporting status?

MR. PELINO COLAIACOVO: I think no risk is perhaps harsh or -- or aggressive, but certainly the -- the objective of having a rule that looks at a potential drought and saying, do we have enough reserves to withstand a potential drought, is a rational way of going about setting those rates.

MR. MATTHEW GHIKAS: Okay, if we can go to -- I circulated to your counsel last Friday, a note just indicating that I would be potentially referring you to your NFAT report. And so I'd like to refer you to that now. And it's -- there are some pages from it that are in the book of documents. It's not the entire report because I didn't need the entire report, but it's around the first thirty (30) pages that is in -- in tab 8 of the book of documents.

Now the passage that I'd like to take you to right now, sir, is at page 27. And this is the January 24, 2014 commercial evaluation of Manitoba Hydro preferred business -- preferred development plan business case. Page 27.

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: All right, so in this section of your -- your report, Mr. Colaiacovo, you were going through the business case and you had to section dealing with the government of Manitoba and you were discussing the government's interests starting on page 26 of 94. And then over on page 27, you have a discussion here about what occurs in the event of a drought. And at line 15, say:

"On its face the legislative requirement that Manitoba Hydro cover all the costs of Manitoba Hydro after export revenues are deducted seems to mean that government would never be called upon to pay Manitoba Hydro's debts. After all, Manitoba Hydro needs more revenue -- if Manitoba Hydro needs more revenue to pay its costs then it can simply request that the PUB raise customer rates. However, in an extreme situation of financial distress for Manitoba Hydro, for example, caused by prolonged drought, the need to pay debt costs may conflict with the need to maintain competitive electricity rates. For example, if electricity costs were to rise dramatically, implying the need for a substantial rate increase, large manufacturers might threaten to close their doors and move production to other jurisdictions unless the government intervened to provide assistance."

And here's the sentence I want to focus on:

"If rates were kept low and Manitoba Hydro simply absorbed the financial losses for a period of years then Manitoba Hydro's status as a financially self-supporting entity could be called into question."

And you'd agree with that statement, sir?

MR. PELINO COLAIACOVO: I continue to agree with that statement.

MR. MATTHEW GHIKAS: So the mere fact that Manitoba Hydro would be experiencing the need to acquire additional debt in a drought scenario could put that status in question?

MR. PELINO COLAIACOVO: I think there were a number of adjectives in those sentences that you're skipping over such as "prolonged drought." And, you know, "costs rising dramatically," and "substantial rate increase versus low rates."

So if you'll recall from the discussion this morning around the NFAT, we were modelling rates that were never allowed to change by more than two (2) times the rate of inflation, either up or down because that was considered to be a significant change. A rate of change which was the most that ratepayers could reasonably absorb.

And so we were modelling the assumption that in a drought scenario rates would continue to rise by twice the rate of inflation through the course of a drought. And then we tested using our financial modelling whether the Company could actually survive a very, very serious and prolonged drought if it was raising rates by two (2) times the rate of inflation.

And what we found was that under a very select number of scenarios, very bad scenarios, that the Company could not; that two (2) times the rate of inflation would not be enough in some very, very harsh circumstances.

And then in those cases, it would be a risk for the province of Manitoba that Manitoba Hydro might not be considered self-supporting.

MR. MATTHEW GHIKAS: And two --

MR. PELINO COLAIACOVO: In this -- in this rate of application, Manitoba Hydro has come forward and asked for four (4) times the rate of inflation, which is, you know, double the size of the rate that we modelled that would have applied to a very, very serious drought and there is not currently a drought.

MR. MATTHEW GHIKAS: And two (2) times the rate of inflation is roughly 3.95 percent?

MR. PELINO COLAIACOVO: Approximately. It -- at the time -- in one (1) run of models we used 3.8, and in the next run of models it was four (4).

MR. MATTHEW GHIKAS: And you indicated there's no drought currently. In your evidence you suggested that based on past history there's a 10 percent chance that Manitoba Hydro is embarking on a five (5) year drought.

MR. PELINO COLAIACOVO: That's -- that's what the numbers imply. The historical record implies that there's pretty much always a 10 percent risk that you're about to be starting a five (5) year drought.

MR. MATTHEW GHIKAS: And if you are experiencing...

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: Now, let's set aside droughts for a moment. I'd just like to go back to your presentation, if we could, Diana. And this is slide 12, in particular.

And you'll see the first bullet there:

"Manitoba Hydro rates do not include a return on equity and no cost of equity appears in any of Manitoba Hydro's financial statements or plans."

Do you see that?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Now, I'd suggest to you, sir, that rates approved by the Board should, as a matter of course, be set so that they include a return on equity component to ensure that Manitoba Hydro actually earns net income that can be retained.

MR. PELINO COLAIACOVO: Sorry.

MR. MATTHEW GHIKAS: Would you like me to hit you with that again?

MR. PELINO COLAIACOVO: Is that something that you're saying?

MR. MATTHEW GHIKAS: I'm -- I am asking you a question. I'm asking whether you will agree with the statement that rates approved by the Board should, as a matter of course, be set so that they include a return on equity component to ensure that Manitoba Hydro actually earns net income that can be retained.

MR. PELINO COLAIACOVO: So in the NFAT, Manitoba Hydro modelled the various development plan options using an assumption of 25 percent equity and a return on equity in order to construct their weighted average cost of capital.

We had analysis in our report in the NFAT about the assumptions they were making about the cost of capital that was used. If you'll note in my presentation from yesterday, I talk about customer contributions. Customer contributions to the Company are the equivalent of what would be called equity and a -- a customer contribution that's included as part of the revenue requirement would stand in the place of what, for investor-owned utilities, would be a return on equity. It's another component of the revenue requirement.

So, if you actually go to the appendix to my presentation, which I did not run through yesterday, but in the -- I think it's starting at about slide 40 --

MR. MATTHEW GHIKAS: We'll -- we'll have lots of time for your appendix, sir, but my -- my question was a lot simpler than that, Mr. Colaiacovo.

It was whether you agree with this statement that rates approved by the Board should, as a matter of course, be set so they include a return on equity component to ensure that Manitoba Hydro actually earns net income that can be retained.

I don't want you to get caughtup. Let's call it a notional return on equity component, if you'd prefer.

MR. PELINO COLAIACOVO: Yep.

MR. MATTHEW GHIKAS: It should include those? Rates should include those?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Okay. And a healthy business over time should generate sufficient cash flows to not only pay for its requirements, but also to generate net income, correct?

MR. PELINO COLAIACOVO: Well, in a pure cost recovery utility, you don't. In fact, you're statutorily not allowed to.

In a pure cost recovery utility, the net income or retained earnings that you're earning on an annual basis, effectively, is an equity contribution. And so if you want to maintain a specific debt ratio, then you need to have some net income in order to maintain that debt ratio because if -- if your net income is negative, what happens is that your debt ratio rises; if your net income is positive, your debt ratio falls in a pure cost recovery utility.

So it depends. And since in a company like Manitoba Hydro where revenues go up and down with exports and with water, you can't actually predict these things perfectly in advance. It makes sense to have some cushion, to have some equity in the Company and to adjust your rates accordingly over time.

MR. MATTHEW GHIKAS: So you would agree with this statement than that ov -- over time a healthy business should generate sufficient cash flows to pay for its capital expenditures and necessary interests and returns on equity associated with that capital, but in any given year it's not required?

MR. BOB PETERS: I think that's true.

MR. MATTHEW GHIKAS: And the reason it's not required is because of the variances potentially?

MR. PELINO COLAIACOVO: Yeah, that's right.

MR. MATTHEW GHIKAS: And a sign that a business has been retaining net income over time is that the equity portion of the capital structure is increasing, correct?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And similarly, net losses erode the capital structure, erode the equity portion?

MR. PELINO COLAIACOVO: That's right.

MR. MATTHEW GHIKAS: All right. I want to -- to turn to your report, slide 30, please. Thank you, Diana.

Right now on this slide which you've titled Should Other Risks Be Managed By Reserves, you say -- you reference export prices, interest rates, inflation and indicate that they're not predictable.

And then you say that -- in the second major bullet:

"Reserves should not be used to

smooth these kinds of risks,
especially over the long-term, e.g.,
20 years."

Do you see that?

MR. PELINO COLAIACOVO: M-hm. Yes, sorry.

MR. MATTHEW GHIKAS: Now, I'd just like to take you to the book of documents that I prepared, Manitoba Hydro Exhibit 116, and this would be tab 3.

All right. So this -- you recognize this as an Information Response that you prepared for the -- the NFAT proceeding?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Okay. And this is numbered -- for the record, this is numbered PUB-MPA-1-30(a).

And so this is discussing the -- the analysis that you were doing. It's discussing the equity risk premium. And just to back up for one (1) moment, the equity risk premium is a component of determining a return on equity as it were?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And you were

asked -- or there was a preamble that - that indicates that MPA states:

"Manitoba Hydro has a high degree of exposure to hydrology risk. Its financial exposure to market prices, ambitious construction program, including preferred development plan, the general issue can be raised with respect to what would represent an equity risk premium -- a reasonable equity risk premium."

And then they asked you what you believe the equity risk premium should be and the rationale for its selection. And the part that I'm most interested in, you'll see it starting at line 2 where you refer to:

"Manitoba Hydro's target equity ratio is a comparatively thin 25 percent."

Do you see that?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Okay. Now you go on to say at line 7:

"Assuming that legislation has accepted at face value and domestic rates could rise to whatever level they were required at any given time to maintain Manitoba Hydro's solvency, under any circumstances, then a legitimate question is whether an equity risk premium is applicable. Now, on its face legislation, coupled with the provincial debt guarantee, suggests there is no risk to equity and, hence, the premium should be 0 percent. In reality, however, rates do not rise and fall annually but are smoothed over time. This suggests that equity returns should be built into rate structures to provide a cushion for inevitable swings in cash flows that derive from noncontrollable events such as hydrology and export prices. Moreover, the possibility of prolonged financial distress also suggests that equity premiums and a healthy equity ratio target are required."

Do you see that?

MR. PELINO COLAIACOVO: I do.

MR. MATTHEW GHIKAS: Okay. Now, you'd agree with me, sir, that in that response you were referring to not just hydrology but also export prices?

MR. PELINO COLAIACOVO: I am.

MR. MATTHEW GHIKAS: Okay. And you would also agree with me that export prices are noncontrollable; right?

MR. PELINO COLAIACOVO: Absolutely.

MR. MATTHEW GHIKAS: And they drive swings in cash flow?

MR. PELINO COLAIACOVO: Yes, they do.

MR. MATTHEW GHIKAS: And interest rates are a noncontrollable factor?

MR. PELINO COLAIACOVO: They are.

MR. MATTHEW GHIKAS: And they drive changes in cash flow as well?

MR. PELINO COLAIACOVO: Yes, they do.

MR. MATTHEW GHIKAS: Now, if we can turn to one (1) of the IRs that you prepared in this proceeding, changing gears.

MR. PELINO COLAIACOVO: But I would add, you referred to my presentation earlier and on my presentation on that slide at the bottom of the page, there is a reference to export prices in the short term being reserved against but not in the long-term.

On the actual slide that you referred to and that's echoed in my report as well. I was drawing a distinction between short-term export price and the long-term. Actually, was it on this slide? It might not have been. I apologize, but it certainly was in the report.

MR. MATTHEW GHIKAS: You're saying in the bullet reserves should not be used to smooth these kinds of risks, especially over the long-term.

MR. PELINO COLAIACOVO: Right, especially over the long term.

But there was reference in my report to how export prices, in the short term, are unpredictable and it may make sense, for example, to smooth export prices over five (5) years and simply accept that over the long term they're going to go where they go.

MR. MATTHEW GHIKAS: All right. Turning now to a different topic. This is Exhibit Business Council of Manitoba, IR-5(a).

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: Thank you, Diana. This one isn't in the -- in the book.

Now in -- you'll see the question and I'm actually -- I'm sorry, I'm looking for the response, the MPA response to it. Okay. Sorry, it's -- it's a -- sorry, wrong IR. It's BCM-Coalition 11, please. Thank you. Sorry about that.

Now -- so you'll see in this IR, the Business Council was quoting a passage from DBRS's report dated November 25th, 2016 in which it identified as a challenge high leverage and talking about the capital -- the target capital structure of 75 percent debt.

And they asked you to confirm that DBRS is indicating that the number 1 challenge facing Manitoba Hydro is its debt/equity ratio. And your response starts off by saying:

"Clearly DBRS describes high leverage as a challenge."

So, I'm just pausing there. You take no issue with the presentation or the quote?

MR. PELINO COLAIACOVO: It's on the cover page of that report.

MR. MATTHEW GHIKAS: Okay. And then

you go on to say:

"The test for self-supporting status, however, relates to the sufficiency of cash flows."

Do you see that?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Now, first of all, I just want to clarify your response. Were you indicating in your response that the test -- were you talking about DBRS only, or rating agencies generally or the markets generally or all of the above?

MR. PELINO COLAIACOVO: DBRS describes self-supporting status as the sufficiency of cash flows to cover operating cost plus debt. That's also in the same report on the same page.

MR. MATTHEW GHIKAS: No, I -- I understand that and my -- my question -- I was just seeking clarification as to whether or not your response, you were responding just to DBRS or whether you -- whether that answer also applies generally?

MR. PELINO COLAIACOVO: No, that -- that -- that's a specific reference to DBRS. To their -- their statement that it was a challenge, but also their definition of self-supporting status.

MR. MATTHEW GHIKAS: Okay. Now if we

turn to -- if you can turn, Diana, to the book of documents, tab 1. There is a response to CAC-MPA-1-2 and you -- you've seen this before?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Okay. We -- what I'd like to do is -- and I should say, you -- you prepared this response for the NFAT?

MR. PELINO COLAIACOVO: I did with my colleague Ben, yes.

MR. MATTHEW GHIKAS: Pardon me?

MR. PELINO COLAIACOVO: I did with my colleague Ben.

MR. MATTHEW GHIKAS: Okay. Thank you. And the question was: Provide any documentation that supports the statement that the 25 percent level of equity has either been agreed to or is required by the shareholder.

And you say a number of things about -- about that. You also say, on line 15:

"Moreover, the target ratio is referred to by credit-rating agencies when they consider whether Manitoba Hydro is financially self-supporting. And given the importance of this view to Manitoba

Hydro, if the ratio were of a
concern, then government would
likely have suggested a change."

Now, the target ratio of 75 to 25 is still referred to by credit-rating agencies, including DBRS, isn't it?

MR. PELINO COLAIACOVO: They do.

MR. MATTHEW GHIKAS: DBRS hasn't changed their methodology in a fundamental way in some time?

MR. PELINO COLAIACOVO: No, they have not.

MR. MATTHEW GHIKAS: Okay. Now, if we can turn to -- I should say, with respect to your response to the Business Council IR that the test is -- is a self -- test for self-supporting is sufficiency of cash flows, would you agree with me that if in the course of a drought, the mere fact that Manitoba Hydro is borrowing can be -- can put that status at risk, would you not agree with me that logically speaking, the test can't simply be just cash flows?

MR. PELINO COLAIACOVO: So I think it's -- it's helpful to look a real case. In the early 2000s, there was a year of significant drought, and Manitoba Hydro's financial performance suffered dramatically that year. Its cash flow dropped far below its desired levels. The credit-rating agencies did not respond. There was no change to Manitoba Hydro's credit rating, despite the fact that they had one (1) very bad cash flows year because, in fact, the next year was much better.

Credit-rating agencies look at cash flow over time. They look at three (3) to five (5) years of cash flow in the past. They look at cash flow -- expected cash flows in the future, and they want to ensure that there is a reasonable sufficiency of cash flow over time. They recognize that hydrology is what it is, and it changes. And so one (1) year is not going to change everything.

MR. MATTHEW GHIKAS: Yeah, not -- maybe were speaking at cross purposes, here. I was referring back to the passage in your report that you prepared for the NFAT where you indicated that successive years of low rates may -- and low rates and losses may indicate or may put at risk the self-supporting status. Do you recall that?

MR. PELINO COLAIACOVO: I do. And -- and that was in the context of a prolonged drought, causing, you know, a prolonged series of losses. And if there was not a sufficient rate response to those losses over time, it would call into doubt the self-supporting status of the company.

MR. MATTHEW GHIKAS: And just a simple question: cash flow and negative net income are not synonymous, are they?

MR. PELINO COLAIACOVO: They're not.

MR. MATTHEW GHIKAS: And -- and that's because there are non-cash factors like depreciation expense, which flow into net income?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Now if we flip back to your -- if we flip back to your slide presentation, slide 7, please. Thank you, Diana.

I want to refer -- just look at -- just talk about your justification, your reference to it in the second bullet being distinctly lacking, the reference to the 25 percent of total capital being distinctly lacking. Now, you gave extensive mark -- commentary on the markets at the NFAT proceeding, didn't you?

MR. PELINO COLAIACOVO: I -- I'm not sure it was extensive. Most of the job that -- that we had in the NFAT proceeding was actually financial analysis of the various plans. There was some commentary on capital markets.

MR. MATTHEW GHIKAS: Right. And you did comment also on the self-supporting status test?

MR. PELINO COLAIACOVO: Yes, we did.

MR. MATTHEW GHIKAS: And you never indicated at any time in your evidence there that the use of a target of 75/25 was distinctly lacking?

MR. PELINO COLAIACOVO: We did not comment on the targets. We did not comment on a variety of issues during the NFAT process. The -- we limited ourselves to the scope of work we were given.

MR. MATTHEW GHIKAS: And I guess the exception to that would be your comment in CAC/MPA-2, where you said:

> "Moreover, the target ratio is referred to by credit-rating agencies when they consider whether Manitoba Hydro is financially self-supporting, and given the importance of that view, if that ratio is a concern, then government would likely have suggested a change."

That would be an exception to that, sir?

MR. PELINO COLAIACOVO: We -- that's

not an exception. It's merely a comment that we did not look at Manitoba Hydro's targets, examine them, and provide any opinion on those targets.

MR. MATTHEW GHIKAS: The ratings reports for Manitoba Hydro include multiple financial metrics, don't they?

MR. PELINO COLAIACOVO: Yes. There -- there are quite a number of metrics that they look at.

MR. MATTHEW GHIKAS: And not just cash flow metrics?

MR. PELINO COLAIACOVO: The -- I think the -- the language that I used was, The test for self-supporting status is cash flow. The rating report itself looks at a -- a long list of different metrics.

MR. MATTHEW GHIKAS: And it -- it includes the debt/equity ratios, right?

MR. PELINO COLAIACOVO: Yes, it does. It's part of the financial fundamental, so-called, of -- of any firm.

MR. MATTHEW GHIKAS: And you'd agree with me that the reference to the 75/25 that DBRS makes in its rating reports as being the target, that doesn't occur in the section that deals specifically with self-supporting, does it?

MR. PELINO COLAIACOVO: If I recall correctly, DBR -- DBRS recognizes that the Company's target is 75/25, and that they're not there currently, and that they want to get back there. Those are all statements that DBRS makes in its report.

MR. MATTHEW GHIKAS: Right. And the -- the part that you're focusing in on is the statement that they -- well, let's look at it. It's at Tab -- Tab 11 of the book of documents, please. There's a couple of -- sorry, wrong one. Tab 7.

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: So just in terms of the portion that you're referring to, you're referring to the rating update over on the second page, page 2 of 40? Over on the second page, there. That -- that -- when you're talking about the test for self-supporting, that's what you're zeroing in on, correct?

MR. PELINO COLAIACOVO: That is their language in terms of how they summarize the test.

MR. MATTHEW GHIKAS: Right. And the reference to the -- the capital structure occurs on page 7, I think, if it's there. Yes, it is, on page

7. Under the heading 'Regulation', you'll see in the first bullet under electricity?

MR. PELINO COLAIACOVO: Right.

MR. MATTHEW GHIKAS: Right. So based on your comments at the NFAT, it doesn't matter whether these discussions are occurring in the -- in the section dealing with the rating update, they still are considered in the context of the self-supporting test, right?

MR. PELINO COLAIACOVO: I'm not sure I understand the question.

MR. MATTHEW GHIKAS: Well, based on your response at the NFAT, you were pointing out that the rating agency refers to the fact that the target is 75/25, right?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Okay. And it doesn't do that in that one (1) paragraph that you're focused in on, does it?

MR. PELINO COLAIACOVO: No. And I think it would be helpful -- in the presentation I gave yesterday, the -- there was a statement I make about self-supporting status. I believe it's in section 4, approximately slide 20.

(BRIEF PAUSE)

MR. PELINO COLAIACOVO: No, it may be the -- the...

(BRIEF PAUSE)

MR. PELINO COLAIACOVO: It's the -- sorry, 23. Yeah, there it is.

So here, I say that:

"Self-supporting effectively means as long as there is a positive assessment of the regulatory regime, the ability to raise rates and financial reserves as compared to cost overruns, droughts, and other risks, et cetera."

The technical definition of self-supporting is a cash flow based definition, but when you're looking forward in time, you have to estimate those cash flows somehow, and you estimate those cash flows by looking at the regulatory regime, looking at the willingness to raise rates in response to conditions, and looking at the financial fundamentals of the firm. That's how you do a forward estimate of cash flows, which is what the rating agencies care most about.

Yes, they look at the history of your cash flows, at your average cash flows over time, but they also look at what, you know, but they -- they estimate what your future cash flows are going to be, and you can't just estimate the future on the basis of the past. You also need to make some assumptions. And assumptions about the regulatory regime, the financial reserves, and the ability to -- to raise rates all form part of that estimation process.

And so, yes, in -- in simplest terms, self-supporting status is about cash flow, but estimating cash flow takes a lot more than just a few numbers.

MR. MATTHEW GHIKAS: Okay, so your response, then, to the Business Council was significantly incomplete. Is that what you're saying?

MR. PELINO COLAIACOVO: I will entirely admit to the response to the Business Council being shorter than it could otherwise have been.

MR. MATTHEW GHIKAS: All right. So...

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: The debt/equity ratio is relevant to self-supporting status because it's an indication that electricity ratepayers have actually been paying for Manitoba Hydro's costs, isn't it?

MR. PELINO COLAIACOVO: I'm sorry, could you repeat that?

MR. MATTHEW GHIKAS: Sure. The debt/equity ratio is relevant to self-supporting status because it's an indication that electricity ratepayers have actually been paying for Manitoba Hydro's costs, isn't it?

MR. PELINO COLAIACOVO: I think Manitoba Hydro's customers will have been -- as long as the debt/equity ratio is lower than a hundred percent, then it -- it means that Manitoba Hydro ratepayers have been covering the costs of -- of the system in some sense of the word. The -- how much below a hundred percent the -- the ratio is requires more questions than just that one.

MR. MATTHEW GHIKAS: Okay. Well, maybe I'll put it this way. Would you agree that a rising equity ratio typically suggests adequate cost recovery in rates?

MR. PELINO COLAIACOVO: A rising

equity ratio means that customers are contributing enough to the Utility -- well, what it means is that they are contributing more than the last -- the previous year's ratio of capital expenditures, minus depreciation, and -- and so the ratio is changing. A -- a pure cost-recovery utility, the -- the formulas are a little bit opaque.

MR. MATTHEW GHIKAS: And the converse is also true?

MR. PELINO COLAIACOVO: Yes.

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: Now, cash flow includes interest charges, correct?

MR. PELINO COLAIACOVO: Yes, it does.

MR. MATTHEW GHIKAS: And so it's significantly influenced by capital structure?

MR. PELINO COLAIACOVO: Yes, it is.

MR. MATTHEW GHIKAS: And you'd agree with me that there is no one (1) single metric that capital markets look at, and that rating agencies look at when they're assessing self-supporting status?

MR. PELINO COLAIACOVO: In ord -- as I'd mentioned earlier, in order to calculate cash flow, you have to look at the whole set of financial statements, particularly in order to -- to come up with a forward estimate of what cash flow is going to be, you have to look at the whole financial statements, as well as the regulatory environment, and -- and the business. And if you look at the criteria that rating agencies use in their analysis, they talk about all of these different factors.

MR. MATTHEW GHIKAS: They're also interested not just in whether the -- whether the cash flow is sufficient today, but the risk to that cash flow going forward, aren't they?

MR. PELINO COLAIACOVO: That's correct.

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: Now, one (1) of the things that -- so I should -- I should back up. And you -- you consider, then, that cash flow is the primary test for self-supporting in the markets?

MR. PELINO COLAIACOVO: I believe that's what both DBRS and Moody say, that their forward estimates of cash flows are the critical part of the test because if, in their view, if Manitoba

Hydro is not -- does not have sufficient cash flow to cover its costs plus interest, then it will not be considered self-supporting.

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: Now...

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: T1he capital markets also look at business risks, right?

MR. PELINO COLAIACOVO: Absolutely.

MR. MATTHEW GHIKAS: They'll be looking, for example, for a deterioration in export revenues?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And they'd be looking for potential increases in capital costs?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And they would be looking for declining domestic load?

MR. PELINO COLAIACOVO: That's

correct.

MR. MATTHEW GHIKAS: And a pattern of those things is something that they would take notice of?

MR. PELINO COLAIACOVO: They would, and in particular, they would want to understand whether there is any response to those things.

MR. MATTHEW GHIKAS: Just in terms of the -- the basics, here, you -- you consider it to be important to ensure that Manitoba Hydro does not weaken or harm the creditworthiness of the Province of Manitoba?

MR. PELINO COLAIACOVO: Yes, I think that's important.

MR. MATTHEW GHIKAS: And you understand that Manitoba Hydro's debt represents a significant portion of the provincial debt?

MR. PELINO COLAIACOVO: Yes, it does.

MR. MATTHEW GHIKAS: And so information about Manitoba Hydro is critical to any potential bond buyer's view of Manitoba Hydro, of Manitoba -- Province of Manitoba?

MR. PELINO COLAIACOVO: I think there is an understanding that while the Province of Manitoba has a significant number of bonds outstanding, a significant portion of all of that debt outstanding is actually the responsibility of Manitoba Hydro, and -- and they understand that difference. It's reported quite widely.

MR. MATTHEW GHIKAS: And Manitoba Hydro's ability to make good on the terms and conditions of its bonds form a significant part of the story for all Manitoba bond issuances, correct?

MR. PELINO COLAIACOVO: I think that's true. The -- the amount of Manitoba debt that is, for better or worse, understood to actually be Manitoba Hydro's debt is an important consideration.

MR. MATTHEW GHIKAS: And in choosing a rate path, project -- protecting and preserving the credit of the Province must be a priority?

MR. PELINO COLAIACOVO: I think that -- well, in all utility rate-making, regulators are more or less concerned about protecting the interests of debt holders. Some regulators prat -- place a greater emphasis on protecting debt holders, and some regulators put a lesser emphasis on protecting debt holders.

The capital markets have a pretty sophisticated understanding comparing one (1) regulator to another regulator. Some regulatory regimes favour debt. Some regulatory regimes favour equity. It -- it's an understanding that market participants have.

Where -- in a place like Manitoba, where debt is supported by government, it's also understood, and, you know, the -- the capital markets want to understand how the regulation is set up and how the regulator behaves in relation to protecting debt holders.

MR. MATTHEW GHIKAS: So, Mr. Colaiacovo, my question was, I think, simpler than that, and the words should sound familiar to you, sir. In choosing a rate path, protecting and preserving the credit of the Province must be a priority, right?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And the key to preserving the credit of the Province is that Manitoba Hydro is viewed as self-supporting?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And being perceived as no longer self-supporting would ultimately affect the government of Manitoba's access to capital markets and its ability to raise capital in the debt markets, wouldn't it?

MR. PELINO COLAIACOVO: If Manitoba Hydro were no longer perceived as self-supporting by the capital markets, yes, it would have a consequence for Manitoba.

MR. MATTHEW GHIKAS: All right. And once -- I'd suggest to you that once the perception of Manitoba Hydro changes with respect to being self-supporting, it would take time and effort to res -- to reverse the views of analysts about the financial nature of the Corporation?

MR. PELINO COLAIACOVO: I believe those words sound familiar to me because I wrote them in the NFAT. And yes, that's true.

MR. MATTHEW GHIKAS: You've been doing your background reading. That's good. And the -- the difficulty of retaining self-supporting status is also an appropriate consideration for the Board, isn't it?

MR. PELINO COLAIACOVO: Yes. And -- and to be clear, I wrote those comments in the context of analyzing the potential effects of a severe and prolonged drought, and what might happen if in response to a severe and prolonged drought, rates were not raised, and cash flows not improved. And so the view formed that the Company was no longer self-supporting.

MR. MATTHEW GHIKAS: Now, sir, I'd suggest that if the Board was to wait until credit agencies were signalling an issue with Manitoba Hydro's self-supporting status, it could well be too late, couldn't it?

MR. PELINO COLAIACOVO: I -- I think it would be entirely possible that if circumstances were allowed to become so negative after prolonged and severe drought and limited policy and rate response, that, yes, it would -- once a perception changes, it becomes difficult to reverse that perception. However, even in the face of a drought that happened in the past in the early 2000's, that perception did not change overnight, and there's also no evidence that the perception has changed now.

MR. MATTHEW GHIKAS: Okay. Let me -- let me back up. I'm not talking about a drought, here. I'm talking more generally, and I'm simply suggesting to you that if the Board was to wait for the credit agencies to say, We're concerned that there's no longer going to be a self-supported debt, that could be too late, because they're not the canary in the mine, are they? The markets act before, as you said, correct?

MR. PELINO COLAIACOVO: Yes. And --

and I think that's why, in my recommendation, I suggested, amongst other things, communicating to the capital markets directly. The implementation of rules tests on whether a level of reserves was reasonable or not, because I do think all of those things are important, and I think sending messages and reassuring capital markets are important.

MR. MATTHEW GHIKAS: And as you indicated, agency reports are only issued periodically?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: They often occur after an event?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And sophisticated investors do their own analysis in real-time, don't they?

MR. PELINO COLAIACOVO: That's correct.

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: And changes in

bond prices will often precede announcements of opinions by credit -- credit-rating agencies rather than follow them?

MR. PELINO COLAIACOVO: They do.

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: Now, as you indicated in your slide deck, in dealing with the market, it's all about confidence and expectations. And so I want to look at those in the context of your comment in the NFAT IR that we were looking at, the CAC/MPA-13, which is that the critical issue is the magnitude of the outstanding debt. So I want to talk about the magnitude of the debt for a moment, okay?

All right. Now, I put the Business Council IR to you, and it had a quote in it about the -- the challenge of the leverage being the -- the number 1 challenge for DBRS, correct?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And you'd agree with me that identifying something as a challenge, in this case, high leverage, is only worth mentioning if the challenge would affect the people who are reading your report?

MR. PELINO COLAIACOVO: I think that's fair.

MR. MATTHEW GHIKAS: And you'd agree with me that the primary audience of the rating reports is the capital markets who are lending to the Province of Manitoba?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Now the second -- perhaps we can go back to the book of documents, the DBRS report, which is Tab 7, and just look at the second page of that. Under 'Rating considerations, challenges'.

So there you see on the right-hand side, the high leverage that we've just talked about. And then you see the second one is -- the second challenge is that the Utility is currently undergoing a period of substantial Capex, and at the end, you say, As such -- or sorry, DBRS says:

> "As such, average Capex for the medium-term may continue to climb and further pressure the already high debt levels."

Do you see that?

MR. PELINO COLAIACOVO: I do.

MR. MATTHEW GHIKAS: Now, Moody's also cites debt levels as a concern, doesn't it?

MR. PELINO COLAIACOVO: Yes, they do.

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: And they're -- they're saying that in the context of it putting growing pressure on the Province's rating, since it raises the contingent liability of the Province and increases the risk that Manitoba Hydro could require a capital injection or other support from the Province, correct?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: S&P also cited the significant debt load of Manitoba Hydro as a reason for taking rating action?

MR. PELINO COLAIACOVO: They did.

MR. MATTHEW GHIKAS: And it's high and rising leverage, correct?

MR. PELINO COLAIACOVO: I -- I cannot speak to whether that was the reason for their rating action or not. They mentioned a number of factors that contributed to their rating action.

MR. MATTHEW GHIKAS: Well, in your report, you quote something in -- on page 32 of your report, line 22, you say, "In its rating action six (6) months later, however, S&P makes the statement about:

"Significant debt on lend to Man -- to the MHEB, which we consider -- we no longer consider self-supporting, mainly due to its high and rising leverage."

MR. PELINO COLAIACOVO: Right.

MR. MATTHEW GHIKAS: So that's what they say?

MR. PELINO COLAIACOVO: That's what they said. But my only quest -- my only issue was the rating action was a rating action on the Province of Manitoba, and in that rating's report on the Province of Manitoba, they cite this, and they also cite several other factors as leading to that rating action. So how much of a role Manitoba Hydro had in that rating action, I -- I don't think there's any way for us to comment on.

MR. MATTHEW GHIKAS: Okay. So, irrespective of whether you agree or disagree with the basis for their rating action, and whether it's legitimate or not, they're citing high and rising leverage as a concern?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And in your report, with respect to that S&P rating, you've essentially surmised that the unfavourable -- or the downgrade-based -- and the change in the self-supporting status test was possibly just a change in key personnel?

MR. PELINO COLAIACOVO: It's one (1) possibility.

MR. MATTHEW GHIKAS: But you have no knowledge of that?

MR. PELINO COLAIACOVO: Well, they did change the personnel who were involved in the process.

MR. MATTHEW GHIKAS: Do you have no reason -- you have no basis to think that that is the reason why the -- the test changed? You're just -- you're just hypothesizing?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And S&P is one (1) of the largest rating agencies?

MR. PELINO COLAIACOVO: It is.

MR. MATTHEW GHIKAS: It's well-established and credible?

MR. PELINO COLAIACOVO: Absolutely.

MR. MATTHEW GHIKAS: Now, at page 32, if we can go to page 32 of your report, line 35, you -- you actually suggest that S&P has misapplied its own basic criteria for credit ratings. Do you see that there?

MR. PELINO COLAIACOVO: I do.

MR. MATTHEW GHIKAS: And then you go on to quote some of the methodology on the next page, right?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And in -- in your view, looking at this methodology would help give us an understanding or a more reasonable assessment of what self-supporting tests should be?

MR. PELINO COLAIACOVO: Yeah. So I think it's important to understand that both S&P and Moody's have ratings criteria in the United States. Well, three (3) different ratings criteria, at least, one (1) for general corporates, one (1) for investor-owned utilities, and one (1) for public power utilities. And the criteria for public power utilities are similar to the criteria that used to be applied by S&P in Canada to provincial utilities, which they have ceased to utilize.

They made clear in their ratings report in 2016 that they were adopting a different standard, and not -- not judging a -- a provincial utility as self-supporting unless it met the general criteria of an investor-owned utility. That's not what they do in the United States, and not what they did previously in Canada. Moody's continues to apply a standard in Canada which is much more similar to the standard that's applied in the United States to public power utilities.

MR. MATTHEW GHIKAS: So just in terms of sti -- sticking with why you're talking about this in your report, you're talking about this general corporate methodology because you believe that the considerations S&P has discussed there is -- are more reflective of what the markets would look at in terms of whether something is self-supporting?

MR. PELINO COLAIACOVO: Yes. I think the markets had a very good understanding about what S&P meant previously when they had the same policy on this issue as Moody's and DBRS. They changed that policy in 2016. It did not appear to have any impact in the markets when they changed that policy. They were not followed by Moody's and DBRS. They made that change in isolation.

And I dwelt on this topic in the report because Manitoba Hydro had focused on this topic in its application evidence, and so I felt it was necessary to respond.

MR. MATTHEW GHIKAS: Okay. And so similarly, you would think, in your view, it would be appropriate when considering what the market would think about self-supporting to look at the general methodologies of DBRS and Moody's as well?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Now, in terms of what S&P says here, you have focused in on and underlined in the paragraph 12:

"Cash flow to leverage analysis determines a company's financial risk profile assessment."

Right?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And you'd agree with me that in a cash flow to leverage ratio analysis, there's actually two (2) variables. One (1) is cash flow, and one (1) is leverage?

MR. PELINO COLAIACOVO: That's

correct.

MR. MATTHEW GHIKAS: And leverage is the amount of debt?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And high and rising leverage would affect that metric, wouldn't it?

MR. PELINO COLAIACOVO: Yes. In order to have the same cash flow to leverage ratio if you had rising leverage, you would also need to have rising cash flow, otherwise that metric deteriorates.

MR. MATTHEW GHIKAS: Right. The higher the leverage or debt on the balance sheet, other things being equal, the metric deteriorates?

MR. PELINO COLAIACOVO: Correct.

MR. MATTHEW GHIKAS: Now, you go on to line 21 there, where you say:

"S&P further defined seven (7) -- seven (7) metrics that it focuses on with respect to cash flow. Note the first two (2) are the primary metrics, and the other five (5) are secondary, the sheer number of which provides an illustration of the level of focus on cash flow in S&P's

typical financial risk analysis.
These are..."

And then you set them out?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: So the first two (2) are the primary ones, right?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And both of those metrics are a function of debt?

MR. PELINO COLAIACOVO: They are.

MR. MATTHEW GHIKAS: And in the first ratio, the higher the debt, the ratio declines, other things equal?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And in the second ratio, as the debt increases, the ratio increases, other things being equal?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And if we look at the secondary ones, we see the first three (3) of those secondary ones, they also have the amount of issued debt as a variable?

MR. PELINO COLAIACOVO: That's

correct.

MR. MATTHEW GHIKAS: And the amount of issued debt as a result has a direct impact on the ratios, doesn't it?

MR. PELINO COLAIACOVO: It does.

MR. MATTHEW GHIKAS: And as debt rises, all of those metrics will decline, other things being equal?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And EBITDA to interest, that is not one (1) of the two (2) primary metrics that's last on the list, correct?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And you'd agree with me that increasing debt increases the risk of cash flow distress?

MR. PELINO COLAIACOVO: Other things being equal.

MR. MATTHEW GHIKAS: The more debt you have, the more exposure to interest rate changes, right?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And that can

create cash flow distress?

MR. PELINO COLAIACOVO: Other things being equal, unless cash will respond appropriately.

MR. MATTHEW GHIKAS: Now, on page 31 of yours, and you've referred to -- you've referred to this in speaking over the last day or so. There's a diagram of bond spreads, and you've indicated on the right where the S&P downgrades occurred.

The point that you're making is that even though they downgraded, the bond spread was also declining at the same time, correct?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Okay. Now, you didn't put on there Moody's downgrade, did you?

MR. PELINO COLAIACOVO: No.

MR. MATTHEW GHIKAS: And Moody's downgraded in July 2015?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: So if we were to just make a little note where that is, you'd agree with me that the spreads are rising during that period?

MR. PELINO COLAIACOVO: M-hm. And then they -- the -- the rising spreads, I believe, actually predated the Moody's -- Moody's downgrades a little bit, but yes, they're in that -- in that zone.

MR. MATTHEW GHIKAS: So you'd agree with me that many things can affect bond spreads that have nothing to do with Manitoba Hydro?

MR. PELINO COLAIACOVO: I -- I think that's true.

MR. MATTHEW GHIKAS: And you can't speak to what the spreads otherwise would have been doing in the absence of the S&P downgrade, can you?

MR. PELINO COLAIACOVO: I don't think anyone can.

MR. MATTHEW GHIKAS: Right. Mr. Chairman, is there a convenient point do -- that you want to break at? I'm con -- happy to -- I'll just keep going until you say so.

THE CHAIRPERSON: Well, we were -- I was looking at anywhere between quarter to 3:00 and three o'clock. What I didn't want to do is I didn't want to have a break that would disrupt you in --

MR. MATTHEW GHIKAS: Okay.

THE CHAIRPERSON: -- your cross-examination, so.

(BRIEF PAUSE)

THE CHAIRPERSON: Boy, five (5) weeks in, and I'm still admonished. I didn't want to -- to interrupt your cross-examination, so any point in the next fifteen (15) minutes where it's a good place to break.

I have you with a maximum time till 4:45. So I don't know if you'll use the full time, but any -- any time between now and three o'clock would be just fine to break.

MR. MATTHEW GHIKAS: Okay. Thank you.

CONTINUED BY MR. MATTHEW GHIKAS:

MR. MATTHEW GHIKAS: All right. One (1) of the cash flow metrics that you have cited in your report is cash flow -- sorry, is debt to cash flow, right?

MR. PELINO COLAIACOVO: Correct.

MR. MATTHEW GHIKAS: And EBITDA is -- or EBITDA is a proxy for cash flow?

MR. PELINO COLAIACOVO: So typically, EBITDA metrics are based on the income statement. Cash flow from operations metrics are based from the cash flow statement.

They are somewhat correlated, but there are certain technical differences between them to do with regulatory movements, and -- and certain things that are accrued or not accrued. I believe I mentioned -- I explained some of this in the report. There are some differences between accrual accounting and cash accounting, and -- and so often, you know, an analyst will look at both, because sometimes there are differences between those things.

MR. MATTHEW GHIKAS: Okay. But one (1) such metric that would fall in that basket is the EBITDA to -- the debt to EBITDA?

MR. PELINO COLAIACOVO: Right.

MR. MATTHEW GHIKAS: And that's one (1) of S&P's primary metrics that we just saw?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: So, if we look at the S&P methodology in a little more detail, the -- the S&P methodology was attached, and it's in Tab 9 of the book. It was attached to IR -- MIPUG Exhibit 7, IR MIPUG to Manitoba Hydro 1-8. And there were a number of attachments to that. I didn't attach all of the attachments, because S&P is -- has -- well, there's a lot to say, so I've left out those pages, but what we need is actually quoted in the IR itself. And so it's table 18 there.

You'd agree with me that table 18 that

we're looking at, here, that's what you were referring to? That's in the document you were referring to when you were talking about S&P's methodology?

MR. PELINO COLAIACOVO: That's right.

MR. MATTHEW GHIKAS: Okay. And you'll see in the -- along the top there, there's core ratio, supplementary ratio, supplementary payback ratios. Where -- I'm focused on one (1) of the core ratios, which is the debt to EBITDA?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Okay. So if -- just so we're on the same page in terms of how to read this metric, a lower ratio on this one is better, and a higher one is less desirable?

MR. PELINO COLAIACOVO: That's correct. Now I would just jump in, because as you mentioned, S&P has lots of different versions of this, and in fact they do. This is the general corporate methodology. The methodology for utilities is going to be the same generic structure, but it's going to have different numbers in all of those boxes. And in the United States, they have a third one, which is public power utilities, which again has different numbers in each of those boxes, even though the methodology is similarly structured and organized.

MR. MATTHEW GHIKAS: Okay. And over on the left-hand side, sir, you see the -- S&P in this calls three point five (3.5) to four point five (4.5) significant?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And then they call four point five (4.5) to five point five (5.5) aggressive?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And they call anything over five point five (5.5) times as highly leveraged?

MR. PELINO COLAIACOVO: Correct.

MR. MATTHEW GHIKAS: And so these bands are essentially going up by one (1) time, give or take?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Now, we don't have to go to Mr. McCallum's opening presentation, but he -- he talks about what these ratios are for Manitoba Hydro at slide 56. And we don't -- we don't have to turn there. I'm not going to ask you to confirm the calculations.

What I'd -- what I'd just like to ask is that if the Corporation's debt to EBITDA metric has increased from five (5) times in 2006 to twelve (12) times in 2016, that would represent a significant deterioration in that metric?

MR. PELINO COLAIACOVO: I'm sorry, if it's fallen from where to where?

MR. MATTHEW GHIKAS: If it's -- if it's increased --

MR. PELINO COLAIACOVO: Sorry.

MR. MATTHEW GHIKAS: -- from five (5) times to twelve (12) times in 2016 -- so it went from five (5) times in 2006 to twelve (12) times in 2016 --

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: -- that would represent a significant deterioration in that metric, wouldn't it?

MR. PELINO COLAIACOVO: And -- and it's a signif -- significant deterioration which is entirely consistent with the capital spending of the Company.

MR. MATTHEW GHIKAS: And if that metric was anticipated to go from twelve (12) times in 2016 up to thirteen (13) times in the next few years, that would represent further deterioration of the metric?

MR. PELINO COLAIACOVO: That's

correct. And -- and in my presentation, when talking about major capital investments, I did point out that during the course of a period of major capital investments, particularly in a pure cost recovery company, all of these metrics are expected to deteriorate, and in fact, they have been deteriorating in Manitoba Hydro.

MR. MATTHEW GHIKAS: And in your -- in your testimony yesterday, in response to a question from member Kapitany -- I hope I pronounced your name right -- there was -- you indicated -- you referred back to the early 2000s. 2003, you believed went -- that was an extremely short, sharp shock in that period in the second lowest water year ever. Do you recall that generally?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Okay. And you indicated that Manitoba -- Manitoba Hydro's cash flow plummeted through the floor?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And were you aware that during that period, this metric was only at nineteen (19) times?

MR. PELINO COLAIACOVO: That may well

-- very well be the case.

MR. MATTHEW GHIKAS: All right. Now, at Tab -- we can put that aside for now. At Tab -- sorry, at -- in MPA report on page 3, please.

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: I'm making you work today, Diana. I'm sorry.

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: All right. And right at the end of the page, you indicate, line 35, it's apparent from reading various financial market reports that a primary focus is on the suff -- the expected sufficiency of cash flows to satisfy debt obligations. While the capital structure -- structure of a prospective borrower like Manitoba Hydro is important, it appears to be a secondary issue for the capital markets.

Now, if you can -- you've included in your report as an appendix the Fitch rating methodology, correct?

MR. PELINO COLAIACOVO: From -- from

the United States, yes.

MR. MATTHEW GHIKAS: From the United States, yes. And if you could turn to page 94 of the -- of the report, of your -- your evidence exhibit. So this is the beginning of Appendix E. And you'll see you're referencing Appendix E, and you say in your first bullet, there:

"The Fitch credit rating criteria for US power companies (highlights that cash flow sufficiency and ratings flexibility to maintain that sufficiency is critical to ratings)."

Do you see that?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And you've -- you've included this and you've talked about these public power utilities like Bonneville, and Long Island, and others as being more similar to Manitoba Hydro than some of the provincial Crown utilities in Canada, correct?

MR. PELINO COLAIACOVO: I think that's correct, yes.

MR. MATTHEW GHIKAS: And -- and that's partly why you've included this?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Now, if...

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: If we turn to page 101 of your report, under "financial performance," I'll just read that to you. "Fitch's analysis of standard" -- sorry:

> "Fitch's analysis of financial metrics focuses principally on three (3) core areas: Cash flow, liquidity, and capital structure. No single financial ratio stands apart from the rest. On the contrary, the ratios are examined together, providing a context for utilities' financial position that informs a complete analysis."

Do you see that?

MR. PELINO COLAIACOVO: I do.

MR. MATTHEW GHIKAS: Is that the passage that you were relying on when you were saying that the rating agencies treated capital structure as secondary.

MR. PELINO COLAIACOVO: If you scroll down somewhat, I think they should at some point here have a description of their percentages of each different category that are in included in their overall analysis. Let me find the...

(BRIEF PAUSE)

MR. PELINO COLAIACOVO: My apologies. They -- yeah. My apologies. There isn't -- they did -- it's not Fitch that has the convenient table that has the percentages. You actually have to read through all the material.

But -- and this is not helpful, because Moody's -- Moody's version of this document is not in the book, but in Moody's version of the document, they break down the same sorts of list of issues with different percentages for each of those, and the percentage for cash flow is considerably higher.

MR. MATTHEW GHIKAS: Okay. If we can go to page 116 of your report, then. We're still in the Fitch ratings.

MR. PELINO COLAIACOVO: Okay.

MR. MATTHEW GHIKAS: So there is a

table here called "attributes select financial metrics for retail systems." There is also another one, if we go back a couple of pages. On page 112, there's also one for wholesale systems, right?

Now, you'd agree with me that Manitoba Hydro is a mix of generation, transmission, and -- and distribution system?

MR. PELINO COLAIACOVO: Correct.

MR. MATTHEW GHIKAS: Okay. So they're kind of in between?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Okay. So let's go back to the retail system, first of all. So if you -- on that retail system one, if you look in the lower right-hand corner under the equity capitalization, you'll see less than 30 percent equity is relatively low for retail systems, and may sit -- may suggest limited capacity for additional debt?

MR. PELINO COLAIACOVO: Correct.

MR. MATTHEW GHIKAS: And that's weaker for them?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And we'll -- I'll take you to the other table in a minute. And -- so Manitoba Hydro is currently at eighteen (18), right?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And it's set to decline from that?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Okay. So let's look now at the middle column, debt to FADS. And if we look in the footnote, we see that FADS, funds available for debt service. Do you see that?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Okay. And that's essentially EBITDA, isn't it?

MR. PELINO COLAIACOVO: Yes, it is. It's more -- yeah. It's either EBITDA, or cash flow from operations, depending on which exact metric you're going to use.

MR. MATTHEW GHIKAS: Okay. So this metric that they're putting the debt to FADS is a proxy that we can use more or less for the debt to EBITDA?

MR. PELINO COLAIACOVO: Correct.

MR. MATTHEW GHIKAS: Okay. And if we go to the weaker row, then, under that column, we see greater than eight (8) times debt with a suitable rationale can indicate deficient rate structure.

MR. PELINO COLAIACOVO: I -- I think

you meant without a suitable --

MR. MATTHEW GHIKAS: Sorry, without a suitable rationale can't indicate deficient rate structure?

MR. PELINO COLAIACOVO: Correct. And --

MR. MATTHEW GHIKAS: Right. So -- so you would expect that Fitch would be looking for a suitable rationale, for example, they had already been over eight (8) times for six (6) years.

MR. PELINO COLAIACOVO: And I think a suitable rationale is investment in a major capital program, and -- and that's what that is actually about.

MR. MATTHEW GHIKAS: And they would be looking for a rationale. Would you put it as the capital thing if the -- today it was a twelve (12) times and was going to get worse to thirteen (13) times?

MR. PELINO COLAIACOVO: Yeah, and -- but they would expect that after the completion of the major capital expenditures, that would start to improve.

MR. MATTHEW GHIKAS: And I can short-circuit this, but in the wholesale, just to make sure that we complete the record, here, if -- on page 112, it's -- the weaker capital structure is -- for a -- a purely wholesale system, is less than 10 percent equity is relatively low for a wholesale system and may suggest limited capacity for additional debt?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And greater than ten (10) times debt without a suitable rationale can indicate a deficient rate structure?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Or debt to FADS?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: So Manitoba Hydro is somewhere in the middle?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: All right. That would be a good time to -- to break, Mr. Chairman.

THE CHAIRPERSON: Okay. Sorry. Thank you. We'll -- we'll break until 3:10. Thank you.

--- Upon recessing at 2:57 p.m.

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

THE CHAIRPERSON: Mr. Ghikas...?

MR. MATTHEW GHIKAS: Thank you, Mr. Chairman.

CONTINUED BY MR. MATTHEW GHIKAS:

MR. MATTHEW GHIKAS: Mr. Colaiacovo, just before the break, you referenced the Moody's methodology. You and I both have it but we can't put it on the record but if we were to look at page 5 of that.

You'd agree with me that adjusted debt service coverage debt ratio and liquidity on hand are all weighted equally in the Moody's methodology?

MR. PELINO COLAIACOVO: Yes. And in the Moody's methodology, all -- all three (3) are present in the methodology, but all of those financial metrics have a lower proportion of their total scorecard and the ability to raise rates and -- and in the regulatory regime that -- that supports ratemaking that has a higher note -- those issues have a higher proportion of their scorecard.

And as the -- the ability to raise rates in conjunction with costs is fundamentally about cash flows, that's why I -- I put an emphasis on cash flows as -- as opposed to the -- the debt ratio metric which only appears as a fraction of one of the subcategories dealing with financial metrics.

MR. MATTHEW GHIKAS: So just to be clear on this, they do the same thing as Fitch does in terms of giving equal weighting to those factors?

MR. PELINO COLAIACOVO: Equal weighting within the financial metrics subcategory of their scorecard.

MR. MATTHEW GHIKAS: Correct. Now one (1) of the things you said in your presentation was that it's all about confidence and expectations when it comes to the market, right?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And you indicated that markets, slide 37, markets and -- like rules and track records, and are deeply suspicious of judgment and adjustments?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And as we have already gone through, rating agencies do cite the 75 to 25 debt/equity rate -- target in their reports; right?

MR. PELINO COLAIACOVO: Yes, they do.

MR. MATTHEW GHIKAS: And you'd agree with me that after twenty-two (22) years of using the debt/equity ratio 75/25 that the markets would have come to develop some expectations about the ongoing use of that metric?

MR. PELINO COLAIACOVO: I think that's fair. I would point out that during those twenty-two (22) years, they've actually only achieved that metric in a small number of years.

MR. MATTHEW GHIKAS: And would you agree with me that abandoning that target would decrease certainty and predictability?

MR. PELINO COLAIACOVO: I think if the target was, to use your term, abandoned in favour of a different target, in favour of an explicit rule, then the net impact of that, in my view, would be positive because that target has been very loose over the past twenty-two (22) years. The target was developed in 1995 when, in fact, the Company had 95 percent debt. It did achieve the 75 percent debt metric for a couple of years in the early 2010s, and since then, it has not achieved that metric, and it's -- it's going the other way in the context of a major capital expenditure.

So what exactly in that twenty-two (22)

year context of history does that 75 percent target actually mean? And -- and we saw that -- that target in the NFAT, the Company referred to the target, and provided scenarios where the target would be achieved in a twenty (20) year time span but actually didn't enunciate, you know, did -- did they have to meet that target under all scenarios? Was it only under the reference scenario? What would happen if the scenario was better than the reference scenario? There -- there actually wasn't a lot of clarity.

So, in my view, if the Board chose to adopt a much more clearer rule about how rates were to be developed in the future, then that actually might improve certainty as opposed to the -- the use of the 20 -- the 75 percent target over the past twenty-two (22) years.

MR. MATTHEW GHIKAS: They would like that new clear methodology provided it -- provided it protected them more as bondholders?

MR. PELINO COLAIACOVO: I think the protection of bondholders is their primary concern, yes.

MR. MATTHEW GHIKAS: All right. Now in your report on page 42, there's a discussion about modelling runs that -- that with respect to the rate paths and drought scenarios and the like.

And you make some observations starting at line 17 of page 42. And you go down -- and the one I'm interested in is the -- one at line 29 and 30. It says:

"Interest coverage remains above critical throughout -- throughout on the 3.95 percent rate path. At the P01 position EBITDA to interest plot on the 3.95 percent rate path, the ratio is never below 1. It should be noted that a ratio of 1 means that operating income is just sufficient to cover finance expense costs. In the parlance of Moody's and DBRS, as long as Manitoba Hydro is able to continue to cover all of its costs, including operating costs and interest, it will be regarded as self-supporting and not a burden to the province."

And you go on from there. And you see towards the end of that paragraph, lines 8 and 9:

"At the P50 posi -- position, the 1.8 target is exceeded in more than

half the years, but not generally
until the 2020s."

Now, the one (1) thing I want to focus on here, sir, is you've characterized EBITDA to interest of 1.0 times as the critical level.

And the Board should not conclude from that, based on what we've talked about, that that is a bright line test for self-supporting; right?

MR. PELINO COLAIACOVO: No. I think the -- the -- if you look at the words of -- of "self-supporting" that's what it means; that -- that you have to be able to cover those costs, including interest.

But the test that the -- the -- the timeframe that the rating agencies are looking at is the future. And so, given the fact that there are many variables affecting performance in the future, that is a minimum condition. So, you know, you have to -- you have to have rates that satisfy a minimum condition.

But as I mentioned earlier, that's not the only part of a rule that you should, you know, consider looking at in terms of rates.

MR. MATTHEW GHIKAS: Okay. So -- just so that we're talking the same -- so that everybody's on the same page here, a value of 1.0 times means that operating cash flows before interest charges would be equal to the interest charges, right?

MR. PELINO COLAIACOVO: That's correct. So, if you had that much operating cash flow, you would be covering all of your operating costs, plus interest which is what DBRS used in their definition of self-supporting.

MR. MATTHEW GHIKAS: And if -- if EBITDA to interest value of 1.0 times, there would be no funds left after paying interest charges, right?

MR. PELINO COLAIACOVO: That's right. So any capital expenditures that you would want to make would have to be made with 100 percent debt and if you paid for your capital expenditures with 100 percent debt, then your debt ratio would rise.

MR. MATTHEW GHIKAS: And so there would be nothing to pay down debt principal?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And there'd be nothing to support investment in capital assets?

MR. PELINO COLAIACOVO: You would have to invest in capital assets using debt.

MR. MATTHEW GHIKAS: Okay. And if you

were to be operating at 1.0 times and couldn't finance any of your capital other than borrowing debt, you don't think bondholders would be concerned about unabated debt growth?

MR. PELINO COLAIACOVO: Well, I think in -- in that discussion, I'm talking about the P01 position, right, which by definition is 1 percent of the time. So that's looking at the worst-case hydrology and saying, if you were to set rates such that your EBITDA to interest average over a five (5) year period in the P01 position was 1, then you would have nothing left over during that five (5) years to finance capital expenditures.

But you are in the worst possible scenario, so that -- that is the 1 percent scenario as opposed to a more typical scenario.

MR. MATTHEW GHIKAS: So the Utility, on a typical basis, annually has hundreds of millions of dollars of capital expenditures, right?

MR. PELINO COLAIACOVO: Correct.

MR. MATTHEW GHIKAS: And that includes expenditures that are nondiscretionary, right?

MR. PELINO COLAIACOVO: Correct.

MR. MATTHEW GHIKAS: Right. Emergencies, for example, right?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And capital investments that are necessary to serve new customers?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And so things like that can't be put off, can they?

MR. PELINO COLAIACOVO: No, but they can be financed with debt.

MR. MATTHEW GHIKAS: And are you -- are you aware that Manitoba Hydro has to make annual mitigation and development payments?

MR. PELINO COLAIACOVO: Yes, I am.

MR. MATTHEW GHIKAS: And those mitigation and development costs are costs that are paid to communities adversely affected by past developments, right?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And Manitoba Hydro doesn't remove those payments from its EBITDA, does it?

MR. PELINO COLAIACOVO: No, which is one (1) of the reasons why I point out that I believe it was in an IR, that payments to Winnipeg and payments for mitigation should be included when estimating how much cash flow is going to be required by Manitoba Hydro.

MR. MATTHEW GHIKAS: Right. So by definition they're going to need more than just EBITDA to -- well, they should be included in the EBITDA when you do the calculation?

MR. PELINO COLAIACOVO: Correct.

MR. MATTHEW GHIKAS: Okay. So that -- that also alluded to the $16 million payment to the city of Winnipeg?

MR. PELINO COLAIACOVO: That's right.

MR. MATTHEW GHIKAS: Okay.

MR. PELINO COLAIACOVO: Those are -- those are payments that are not -- that are -- that are unique to Manitoba Hydro. They're not typical. Not every Utility has those kinds of payments but in Manitoba Hydro's case, those payments should be taken into account.

MR. MATTHEW GHIKAS: Now, on slide 33, you refer to 1.8 as a healthy margin. And you indicated also -- and you cited Moody's there at the bottom.

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: As -- for public

power utilities 1.5 to 2.0 times interest coverage is consistent with an 'A' rating.

Do you see that?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Now, would you agree with me that what Moody's is actually looking at when it sets out 1.5 to 2.0 times is debt -- adjusted debt service coverage not interest coverage?

MR. PELINO COLAIACOVO: Yes. But debt service coverage depends --

MR. MATTHEW GHIKAS: Includes principal payments, doesn't it?

MR. PELINO COLAIACOVO: Not always. It actually just depends on the arrangements of the Utility.

MR. MATTHEW GHIKAS: In common financial discourse debt service generally includes interest and principal, doesn't it?

MR. PELINO COLAIACOVO: So it depends on your financial arrangements. Debt service coverage ratio is a typical term but in some instances debt service coverage ratio refers only to interest and some instances it refers interest and principal.

MR. MATTHEW GHIKAS: If it's in -- if it's referring to interest and principal, you'd need more cash flow to cover that, right?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And so logically and EBITDA to interest alone would be higher than that?

MR. PELINO COLAIACOVO: So if you are talking about principal and interest, then you're assuming that you can't refinance the principal, right. And so in a -- in -- in a pure cost recovery environment, you're actually refinancing part of the principal through the depreciation that's included in your revenue requirement.

So, you're -- the -- the economics or the nomenclature is a little different depending on whether a general corporate, whether you're a Utility or pure cost recovery Utility.

So if -- if your capital base is actually shrinking then -- its debt service requires the retirement of principal. If your capital base is actually growing, you don't have to retire any principal. So it -- and in the case of Manitoba Hydro, its asset base is actually growing dramatically. So, you're not ever really retiring any principal anytime soon.

MR. MATTHEW GHIKAS: So this -- the

Moody's Investor Service that you've included there, that relates to US public power utilities --

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: -- like Bonneville and others?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Okay, we'll come to those to see what they actually include in -- in their payments.

Now EBITDA to interest measure, that doesn't indicate whether a company's debt is increasing, right?

MR. PELINO COLAIACOVO: No.

MR. MATTHEW GHIKAS: In order to -- to know that, you'd have to know the other cash outlays that need to be supported to know whether Manitoba Hydro needs to borrow?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And there is no information captured in that metric about the size of the capital expenditure or any of the other nondiscretionary payments that we've talked about?

MR. PELINO COLAIACOVO: That's

correct.

MR. MATTHEW GHIKAS: And so if we take a -- just an example, if the EBITDA to interest ratio is 1.5, and all of capital and nondiscretionary outline -- outlays that we've talked about are greater than the .5, Manitoba Hydro would have to take on additional debt to fund its operations?

MR. PELINO COLAIACOVO: That's right.

MR. MATTHEW GHIKAS: Okay. Now, the EBITDA to interest ratio, it doesn't indicate whether the Company's debt equity ratio is increasing or decreasing either, does it?

MR. PELINO COLAIACOVO: No, it doesn't.

MR. MATTHEW GHIKAS: Okay. And that would depend on whether or not the Company's generating positive or net -- negative net income, right?

MR. PELINO COLAIACOVO: Yes. Net income -- positive net income means you're increasing your retained earnings. And if your retained earnings are increasing at the same ratio as the retained earnings to debt prior to that year -- at the beginning of the year then at the end of the year the ratio will not change.

So it -- the -- it's a growth and rate base thing. If your rate base is growing, if your capital expenditures are higher than your depreciation then that difference has to be financed with some combination of retained earnings, or in my parlance, customer contributions because that's what they are or -- and debt, and in some ratio.

And if the ratio between those two (2) things is different from your pre-existing ratio, then you'll move the ratio at the end of the year.

MR. MATTHEW GHIKAS: Let -- let me just backup maybe that -- maybe we can just simplify this. So I'm going to take a grossly oversimplified example.

But if you had an EBITDA to interest ratio of 1.0 times and you had $1 of depreciation, you would have negative net income -- sorry, net income of negative $1 dollar; right?

MR. PELINO COLAIACOVO: That's right.

MR. MATTHEW GHIKAS: Okay. And now I'd like to -- you've referred made reference in your report to this -- and you referred to in your -- in your evidence about the Bonneville Power Administration, 95 percent standard.

MR. PELINO COLAIACOVO: Correct.

MR. MATTHEW GHIKAS: So I'd like -- I'd like to turn to that. The way -- well, perhaps you can just characterize how you view that test.

MR. PELINO COLAIACOVO: As I pointed out, I -- I included simply as an example of a Utility that has a rule that they follow, that they clearly communicate to the debt markets and they try to consistently follow that rule in their ratesetting to ensure that their rates are high enough so that in 95 percent of foreseeable scenarios, they have enough cash flow combined with reserves so that they can meet their obligations for a two-year period until their next rate hearing.

MR. MATTHEW GHIKAS: Okay.

MR. PELINO COLAIACOVO: They also have some other contingencies in the event that they're in the 5 percent tail and so on.

MR. MATTHEW GHIKAS: Okay. So the reference I was thinking of was slide 29, where you referenced it there. Okay. So let's -- if we can go in tab 4 of the book of documents, Manitoba Hydro Exhibit 116. There is the Bonneville annual report. And if you go to page 39 under "rate tools" at the bottom, do you see that?

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: Sorry, I must have the wrong page. 35. Sorry. Under "rate tools" there.

So you see it says:

"Under BPA's treasury payment probability standard BPA establishes rates sufficient to maintain a level of financial reserves to achieve a 95 percent probability of making all of BPA's scheduled US treasury payments during the two-year period."

Do you see that?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Okay. Now BPA's standard isn't limited to hydrology, is it?

MR. PELINO COLAIACOVO: No, it's not.

MR. MATTHEW GHIKAS: And in terms of -- if we go over to page 83 of the annual report. There's a section on repayment demonstration. And you see it says:

"BPA is required by Public Law 89448 to demonstrate that reimbursable

costs of the FCRPS
Bonneville, right] will be returned
to the US treasury from BPA net
revenues within the prescribed --
within the period prescribed by law,
BPA is required to make a similar
demonstration of the cost of
irrigation projects that are well
beyond the ability of irrigation
water users to repay. These
requirements are met by conducting
power repayment studies, including
schedules of payments at the
proposed rates to demonstrate
repayment of principal within the
allowable repayment period."

Do you see that?

MR. PELINO COLAIACOVO: I do.

MR. MATTHEW GHIKAS: So Bonneville is -- is making scheduled debt repayments and its rates reflect that, right?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Okay. So if we go to page 85.

MR. PELINO COLAIACOVO: It's also borrowing more debt from the capital markets. It has a combination of debt from the US federal government and borrowings from the public markets.

MR. MATTHEW GHIKAS: So if we -- we can see on page 85 there is some debt repayment schedules, graphs there.

And you'd agree with me that based on these diagrams we're talking about significant principal repayments being made on an annual basis?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Okay. And if -- page 44, it actually describes them but it's talking about $478 million in 2016, 219 million in 2015 and 204 million in 2014?

MR. PELINO COLAIACOVO: Correct.

MR. MATTHEW GHIKAS: So 900 million over three (3) years?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And you'd agree with me that if the test for setting rates for Manitoba Hydro was that there needed to be a 95 percent probability of making principal payments over a two (2) year rating period, the 3.95 percent trajectory would fail badly?

MR. PELINO COLAIACOVO: I honestly haven't looked at that.

MR. MATTHEW GHIKAS: Manitoba Hydro is not anticipating making any principal payments in the next few years?

MR. PELINO COLAIACOVO: As I understand Manitoba Hydro's plan, its debt principal is going to be increasing substantially, so, any debts that are coming to term, are simply going to be refinanced.

MR. MATTHEW GHIKAS: Okay. So BPA came up again in another context where you indicated in your report at page 26 and you also did this in your slide presentation. You set out -- you set out to -- sorry, slide 7 in your -- sorry, slide 11.

So you've done a debt-to-utility assets comparison here, and you've indicated the effect -- the reason you've -- you've included this chart, essentially, is to indicate that some of these American utilities, in particular, have a greater indebtedness on this metric than Manitoba Hydro, and they're doing fine. Is that the upshot?

MR. PELINO COLAIACOVO: I -- I think my comment yesterday was there is a story behind each one (1) of these utilities. Both utilities that have higher metrics and utilities that have lower metrics. And while on its face you could draw a simple conclusion that says, well, Manitoba Hydro is in the middle in both columns so it must to be fine, or something along those lines.

I don't think it's actually fair to draw that kind of conclusion. I think there is a story behind each one (1) of these Utilities and so you have to understand the story, for example, Nalco's only 52 but they have huge problems. And, you know, another Utility like Bonneville Power is at 93 but may not have huge problems. And -- and so simply quoting these ratios is not actually determinative of a very much.

MR. MATTHEW GHIKAS: Now, the reason I'm -- I'm asking you that, your -- your presentation is more nuanced than your report. Your report just indicated that some US Utilities were boasting investment grade debt regardless of their debt -- levels of indebtedness, which are higher -- in some cases higher than Manitoba Hydro.

So you're -- you're tempering that in your discussion?

MR. PELINO COLAIACOVO: Well, I think

every one (1) of these Utilities is -- the ones on -- that are listed in the presentation, all of them have investment grade credit ratings.

MR. MATTHEW GHIKAS: Now, just in terms of -- in terms of what -- I think you indicated you used this metric because it -- it allowed for a comparison that didn't have a bunch of caveats associated with it?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: So PPE is property, plant and equipment?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And you focus everywhere else on cash flow, but debt to PPE isn't a cash flow metric?

MR. PELINO COLAIACOVO: No, it's not.

MR. MATTHEW GHIKAS: Okay. It doesn't tell you whether your cash flow is sufficient to cover your interest or other costs?

MR. PELINO COLAIACOVO: No, it's not.

MR. MATTHEW GHIKAS: And what this ratio means, in practice, is that the comparison of the issued debt to the historical depreciated costs, the book value, right?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And because it's based on book value, the values of this ratio will change, depending on how new the asset base is relative to the others?

MR. PELINO COLAIACOVO: Well, there -- an asset can be new but have a high depreciation rate, a different asset can be old but have a low depreciation rate and -- and so...

MR. MATTHEW GHIKAS: In general, newer assets would -- the book value would tend to be higher?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Okay. And when you're using original cost. Obviously if you have -- if you installed assets years ago, they were generally cheaper to install?

MR. PELINO COLAIACOVO: Yes, absolutely --

MR. MATTHEW GHIKAS: -- being fully depreciated, for example?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Okay. And in your -- your comparison here you haven't accounted for the relative age of the asset base?

MR. PELINO COLAIACOVO: I have not. That's another good point. And in the -- in the element of -- there is a story behind every Utility. So if a Utility currently has very old assets, but a low debt ratio, on this metric, and they're about to spend lots of money on new assets, you could expect that their debt ratio would go up.

MR. MATTHEW GHIKAS: Okay. All right, well, let's -- let's explore some of those nuances about BPA.

So first of all, if we go to BPA's -- sorry, if we go to your report at page 88, you've got a little synopsis of BPA -- BPA's metrics. 88, sorry, of your report.

And since elsewhere in your report you're looking at cash flow metrics, if we look at the cash flows metrics. If we go down a little further. Keep going down right to the bottom.

The debt service coverage ratio is 5.1 times?

MR. PELINO COLAIACOVO: Yes, in 2016.

MR. MATTHEW GHIKAS: Okay. And we've

looked at the fact that they are making substantial payments -- repayments to the U.S. Treasury, right?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: That would be something that would -- would give comfort for -- in the event of having a high debt burden?

MR. PELINO COLAIACOVO: Well -- yeah, when -- when you go -- go into their annual report and -- and read a series of their reports, they've been reducing the amount of federal debt because they're required to by law. And they've been increasing the amount of private-sector debt.

And so when you actually look at -- at this -- this chart that you have in front of you here, you can see the long-term debt line from 2010 to 2016 has actually been growing but inside that debt the proportion of federal debt to private-sector debt has been changing over time.

MR. MATTHEW GHIKAS: Okay. So if we go to one -- you included a Moody's rating report for BPA in your report. And if you could turn to 129 of that report. Thank you, Diana. The paragraph beginning in...

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: Sorry, just bear with me here. I've got the wrong page. Sorry, it's 130.

You'll see the paragraph beginning, "notwithstanding." So you'll see there that it references that, first of all, that notwithstanding the -- has the regulated utility like rate-making process that BPA operates under, we recognize that BPA has raised rates in difficult situations, such as the power crisis of 2000 to 2001, when BPA raised rates by 46 percent.

Do you see that?

MR. PELINO COLAIACOVO: I do.

MR. MATTHEW GHIKAS: And that willingness on the part of the regulator and BPA to raise rates 46 percent, and in a difficult situation, that would provide some comfort to bondholders regarding BPA's overall debt load?

MR. PELINO COLAIACOVO: Absolutely.

MR. MATTHEW GHIKAS: Okay. And if you go to the next paragraph -- or sorry, the next sentence, you will see a reference to the CRAC. And you can say:

"Additionally, within a rate period
BPA is able to charge an additional
300 million per year starting at the
beginning of the fiscal year under
the cost recovery adjustment clause
if power services accumulated net
revenue is below a level set that is
equivalent to reserves for risk at
zero balance."

Do you see that?

MR. PELINO COLAIACOVO: I do.

MR. MATTHEW GHIKAS: Okay. So you'd agree with me that the ability to raise rates by $300 million within a period -- a test period, that would also provide comfort to bondholders regarding BPA's overall debt load?

MR. PELINO COLAIACOVO: Yes, it would and I think in my presentation I made a statement about the combination of reserves and the willingness to raise rates, and that every Utility makes -- chooses its own balance between those things. BPA is an example of a very short time horizon for reserves and higher willingness to raise rates.

MR. MATTHEW GHIKAS: And just -- I did the math based on page 54, with the assistance of someone who knows how to do math, and I calculated that 300 million is about 10 percent of the sales revenue.

So that's a -- a 10 percent rate increase within the period?

MR. PELINO COLAIACOVO: I would point out that BPA is a wholesale provider of energy that does not have retail customers.

So BPA provides energy to very large industrial customers, usually under contract which limits their ability to raise rates for those customers. It also provides power to distribution utilities that are municipal or rural electric co-ops within its territory, and those Utilities will, in turn, then make decisions about how to pass those costs through to their ratepayers, who tend to be retail customers.

So -- and that -- this applies also to Tennessee Valley Authority. They're both wholesale level providers.

MR. MATTHEW GHIKAS: Okay. And almost half of BPA's debt is owed to the U.S. Treasury?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Okay. And that

is obtained at basically the same cost as the US treasury?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And they're -- so they're paying basically the lowest interest rates available in North America on that debt?

MR. PELINO COLAIACOVO: Well, lowest interest rates available on that debt when it was issued.

MR. MATTHEW GHIKAS: The U.S. Treasury rates are -- tend to be the lowest?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Yes, okay. And that, you'd agree with me, would provide some comfort to bondholders that are not the US government?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And there is a legal obligation, as you referenced, to pay interest on the borrowings from the US Treasury and they are structurally subordinated by law to the debt owed to all other investors?

MR. PELINO COLAIACOVO: That's correct. It's a -- it's a big part of the special arrangements that apply to this particular Utility.

MR. MATTHEW GHIKAS: Right. And that

would provide some comfort, as well, to bondholders about the debt --

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Now, the second Utility -- the second utility that you included in your chart that had a 102 percent ratio on your slide, there was Long Island Power Authority.

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And that -- if we go to the book of documents, tab 5, to the Long Island Power Authority 2016 annual report. That's the report that you referred to in your errata, right?

MR. PELINO COLAIACOVO: Yes, we -- we -- the information that's in the summaries that we prepared in our appendix, we got all of that information from a combination of Bloomberg and the actual financial reports of all the companies.

MR. MATTHEW GHIKAS: And I should say, you had also cited the BPA 2016 report?

MR. PELINO COLAIACOVO: Yes, we did.

MR. MATTHEW GHIKAS: Okay. So if we go to page 29 of the Long Island Power Authority, you'll see rate matters there in the middle of the page? And you'll see that it says:

"The LIPA Act requires that any bond resolution of the Authority contain a covenant that it will at all times maintain rates, fees or charges sufficient to pay the costs of operation and maintenance of facilities owned by -- sorry, owned or operated by the Authority, pilots, renewals, replacements and capital additions and the principal of and interest on any obligations issued pursuant to such resolution as same become due and payable. In addition, the Authority must establish or maintain reserves or other funds or accounts required or established by or pursuant to the terms of such resolution."

Do you see that?

MR. PELINO COLAIACOVO: I do.

MR. MATTHEW GHIKAS: Okay. And Manitoba Hydro doesn't offer any such covenants to its debtholders, does it?

MR. PELINO COLAIACOVO: Well, Manitoba Hydro's only debtholder is the province of Manitoba.

MR. MATTHEW GHIKAS: And the province of Manitoba doesn't offer any such debt -- any such covenants to its debtholders, does it?

MR. PELINO COLAIACOVO: The legislation that you're referring to here, LIPA -- the LIPA Act is similar in nature to the legislation governing Manitoba Hydro that requires Manitoba Hydro to recover all of its cost through rates; that's effectively what this term is saying, that there is a legislative obligation on them to recover their costs through rates.

MR. MATTHEW GHIKAS: If there was a covenant that Manitoba -- the province of Manitoba Hydro had entered into that Manitoba Hydro was repaying principal of and interest on any obligations as they become due and payable, it would be breaching those covenants under a 3.95 percent rate trajectory, wouldn't it?

MR. PELINO COLAIACOVO: I don't think that would be the case.

MR. MATTHEW GHIKAS: It's not repaying any principal --

MR. PELINO COLAIACOVO: Well --

MR. MATTHEW GHIKAS: -- it's refinancing, right?

MR. PELINO COLAIACOVO: But -- but -- yeah, the principal is being refinanced, which is what you do. So you repay principal when you have an amortiser. If you -- if you have a kind of debt that is an amortized debt where you pay a combination of -- well, a mortgage is an example of an amortiser. Every year you pay a combination of interest and principal and at the end of the mortgage, you owe less than what you started.

But, the kind of debt that Manitoba Hydro uses is bullet bonds and bullet bonds, you pay no principal over the life of the bond. You make interest-only payments. And then the full amount is due at the end of the bullet bond. But in a regulated Utility typically -- particularly a regulated Utility that has an asset based that's growing, you never actually retire a bond, you just refinance it and replace it with another bullet bond.

So, I'm not sure, you know, if we're talking the same language or not.

MR. MATTHEW GHIKAS: Well, the -- I mean, we won't belabour it because the document is here and speaks for itself.

But if Manitoba Hydro is not retiring any principal other than through refinancing, is it, in the next several years?

MR. PELINO COLAIACOVO: But -- but you only retire principal in the sense of the word that I think you're trying to get at.

When an asset base is actually shrinking, so -- so if you were to -- think of a windfarm. A windfarm has a twenty (20) year contract to -- license to operate for twenty (20) years. Over the course of that twenty (20) years, a windfarm is going to repay all of the out -- the debt that it borrowed at the beginning of its twenty (20) year contract.

When you get to the end of the twenty (20) years, all of your debt re-principal must be repaid because your contract expires. The project's over. It's finished. And so no lender would lend you money unless you are planning to pay all of the money back during the twenty (20) year contract.

But a Utility is a perpetual organization. A Utility's business goes on forever. And so as long as you're going to keep replacing your assets, you don't actually retire your debt unless, for some reason, your asset base is shrinking. And so, there are a few Utilities out there where customers -- the population is falling in a city and they're going to actually reduce the amount of infrastructure that they have and so their asset base shrinks over time. They would have to retire some of their principal.

But for a Utility like Manitoba Hydro, which is growing, you don't actually retire the principal. You just keep refinancing the debt over and over again which is -- which is exactly what Manitoba Hydro does.

MR. MATTHEW GHIKAS: Okay. Let's go to page 29 -- oh, I should say let -- yeah, page 29 of the annual report.

Now in your company profile on page -- just as an aside, we don't have to go there, but on -- in your company profile for Long Island Power Authority you indicated on page 89 of your report that um -- next to regulation you had New York Department of Public Service. And you will see on page 29 that:

> "The Authority's Board is empowered under its enabling statute to set rates for electric service in the service area without obtaining the approval of the Public Service Commission, PSE, or its staff on the DPS or any other state regulatory

body."

Do you see that?

MR. PELINO COLAIACOVO: I do.

MR. MATTHEW GHIKAS: Okay. Now -- and then over on page 31 -- 31, okay. And you'll see second to last paragraph:

"After the 2016 to 2018 period the Authority and PSEG Long Island are only required to submit a proposed rate increase for DPS review if it would increase the rates and charges by an amount that would increase the Authority's total annual revenues by more than 2.5 percent. In addition, the Authority may place rates in effect on an interim basis and such interim rates are subject to perspective adjustment only. The Authority's Board retains final ratesetting power."

Do you see that?

MR. PELINO COLAIACOVO: I do.

MR. MATTHEW GHIKAS: Okay. So the ability to increase rates by 2.5 percent and to set nonrefundable interim rates, that's not something that

Manitoba Hydro can do, correct?

MR. PELINO COLAIACOVO: No, it's not.

MR. MATTHEW GHIKAS: Okay. And on page 49. And I should say that that is something that bondholders and investors in Long Island would take comfort from?

MR. PELINO COLAIACOVO: Yes. There are certain US public power utilities that have the ability to set their own rates. TVA is the most famous example of that. And those are favoured by the capital markets, principally because most of those Utilities make very clear their focus on always paying their debts, and they have the ability to do so by raising rates.

So -- whereas Utilities that have to go before a regulator and go through a regulatory process typically takes time, takes effort, et cetera, and so capital markets recognize that difference.

MR. MATTHEW GHIKAS: Now, on -- you'll see the first sent -- the first paragraph there, another thing that Long Island can do:

"In the event the Authority determines there's insufficient revenues to pay reasonable and necessary operating expenses or to make payments on bonds or parity obligations, certain senior management are authorized after notifying the finance and audit committee of the Authority's Board to release funds from the OPEC account for such purposes."

I expect that that's not something we see in Manitoba anytime soon?

MR. PELINO COLAIACOVO: Well, but the next -- the next paragraph explains. I mean, the OPEB account funds are money market funds and -- and so they -- they may maintain a certain amount of cash reserves; that's really what they're saying here.

So part of their arrangements are a certain amount of cash reserves that they can use for debt service coverage. Manitoba Hydro doesn't -- well, Manitoba Hydro has a short-term credit facility for those kinds of purposes. Manitoba Hydro also has the ability to raise long-term debt from the Manitoba government in relatively short order, but it's -- it's short-term credit facility is analogous to having some money market funds available.

MR. MATTHEW GHIKAS: Okay. Quickly now to TVA. There's a presentation at tab 10.

DR. BYRON WILLIAMS: Mr. -- Mr. Chair, we certainly have no objections to information relating to TV -- TVA, and specifically tab 10, being put before the panel and My Learned Friend was kind enough to -- to provide this to us, but I don't believe this document's on the record.

So in fairness to the witness and to the Board, we would suggest that the entire PowerPoint be placed on the record. And we have copies here for the Board if Manitoba Hydro has chosen not to.

So my -- my point, Mr. Chair, is the other documents are referenced in Mr. Colaiacovo's evidence. This is something that's not. We're fine with it being put to Mr. Colaiacovo. We're quite happy to deal with it. It's a twenty (20) page PowerPoint that we are -- we believe would be useful. And if Manitoba Hydro's referentially bringing it on the record, we would say the appropriate way to do so is with copies and if -- if they've not brought copies, we have.

MR. MATTHEW GHIKAS: This is the TVA presentation? It's in the book of documents, tab 10, the entirety.

DR. BYRON WILLIAMS: We've just got a link.

MR. MATTHEW GHIKAS: Well --

THE CHAIRPERSON: And we have different tab -- we have different binders.

MR. MATTHEW GHIKAS: No, the -- I mean, what we did -- the -- the link is there --

DR. BYRON WILLIAMS: And we're simply asking that the paper version be you provided to -- to people in the room.

MR. MATTHEW GHIKAS: Oh, okay. Well, the Board has paper version because it's in tab 10.

THE CHAIRPERSON: This was -- this was put in as an exhibit. Our binders have --

DR. BYRON WILLIAMS: Okay, we don't.

THE CHAIRPERSON: -- a copy. I'm just wondering if we could have a copy for the -- for the other parties so that we're all looking at the same document.

MR. MATTHEW GHIKAS: Certainly.

THE CHAIRPERSON: So, as I understand it, Mr. Ghikas, they have electronic versions, but not paper versions.

MR. MATTHEW GHIKAS: They -- they had a link to the document. I'm not sure what's --

THE CHAIRPERSON: Okay.

MR. MATTHEW GHIKAS: -- what the issue

is, but I'm happy if we want to --

THE CHAIRPERSON: He's handing them out right now so it doesn't matter. And this -- the document we have is the binders in as an exhibit so.

MR. MATTHEW GHIKAS: Okay.

THE CHAIRPERSON: Okay.

MR. MATTHEW GHIKAS: Okay.

(BRIEF PAUSE)

CONTINUED BY MR. MATTHEW GHIKAS:

MR. MATTHEW GHIKAS: All right. Just in terms of -- now I appreciate you -- you haven't seen this before. This was taken from the TVA website. You had a chance to look at?

MR. PELINO COLAIACOVO: I have -- I have seen before and yes.

MR. MATTHEW GHIKAS: You have seen it before?

MR. PELINO COLAIACOVO: Yeah.

MR. MATTHEW GHIKAS: And you -- just looking quickly at slide 18, there is on the left-hand side "total financing obligations." This seems to be indicating, you'd agree, that they're bringing down their debt from roughly 26 billion in fiscal year of

'16 to 19.8 billion in fiscal year '23?

MR. PELINO COLAIACOVO: Yeah, it -- it suggests to me that their board has a policy, a desire to do so and the current financial forecasting suggests that the company is going to be able to meet the Board's policy.

MR. MATTHEW GHIKAS: And are you aware that TVA is a shrinking utility?

MR. PELINO COLAIACOVO: The -- I don't believe they are shrinking. I think if -- if you go to the five (5) year, six (6) year history that we have, you'll see that they're not shrinking.

MR. MATTHEW GHIKAS: And in their rate structure on page -- on slide 21, it seems to indicate that .86 cents out of $6 and -- sorry, out of 6.60 cents per kilowatt hour goes to debt service?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Specifically the principal payments?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And on slide 25, where it's talking about effectively managing debt, the blue line -- low -- lower left corner, the blue line indicating a change in gross PPE and the total cumulative change in total financing obligations is in red. Do you see that?

MR. PELINO COLAIACOVO: I do.

MR. MATTHEW GHIKAS: And so what we have here is the debt is relatively flat while they've added $19.3 billion in -- in PPE over eight (8) years?

MR. PELINO COLAIACOVO: I think that their record has been remarkable not only, however, in debt management but in also reducing their rates over that time period and reducing their operating costs significantly and reducing their headcount and increasing their performance metrics as compared to peers across North America.

This is an example of a Utility that's done a fantastic job. Is in a happy place, if you will, of being able to exceed expectations across a whole range of metrics.

And in a -- in a couple of the slides that you skipped over, on slide 22, for example, it shows their comparative performance metrics which are improving over the course of that time.

On slide 23, it shows the dramatic reductions in headcounts that they are making in order to provide -- you know, to -- to achieve those improvements, but in -- on slide 24 it actually shows that their capital expenditures are going down for the next several years which gives them more flexibility to achieve the numbers that they are achieving.

I think TVA is a great company and has been -- and doing an excellent job and would certainly be a -- a company's that -- whose success I think should be examined. But they are in a very, very different set of circumstances from Manitoba Hydro on -- on a lot of these different metrics.

MR. MATTHEW GHIKAS: Right. And that -- that's part of the reason why I'm doing this is because you've -- you've got this debt to PPE comparison in here, and you appreciate that's why I'm putting it to you is --

MR. PELINO COLAIACOVO: I do. And -- and in -- in fact, I -- I mean, as I said, each different Utility has a different story behind it and so, you know, TVA I think is -- is one (1) of those companies that's out there that both effectively manages its debt, but also reduces its rates over time to customers as apposed to increasing them.

MR. MATTHEW GHIKAS: Okay. They're benefiting from natural gas prices going down?

MR. PELINO COLAIACOVO: They are, but they also have nuclear plants and they have been investing in renewable energy. And they -- I mean the

Tennessee Valley Authority was originally structured as a hydroelectric focus company in the Ohio -- sorry, in the Tennessee Valley and so they have hydroelectric as well.

But over the years they've built up a number of other types of generations so now they have a whole portfolio that the manage.

MR. MATTHEW GHIKAS: Okay, let's switch gears here, slides 18 -- 17 and 18 of your opening presentation, please.

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: So this -- this analysis on slides 17 and 18, that wasn't in your report, was it?

MR. PELINO COLAIACOVO: No.

MR. MATTHEW GHIKAS: And it wasn't -- wasn't in Irs?

MR. PELINO COLAIACOVO: Yeah, it did not come up in Irs.

MR. MATTHEW GHIKAS: So it appeared for the first time in your presentation deck?

MR. PELINO COLAIACOVO: Yes, it did.

MR. MATTHEW GHIKAS: And the reference

on slide 19 to some worksheets that you have included, that analysis in the worksheets that wasn't in your report, was it?

MR. PELINO COLAIACOVO: No, it was not.

MR. MATTHEW GHIKAS: It wasn't in your Irs?

MR. PELINO COLAIACOVO: No, it was not.

MR. MATTHEW GHIKAS: Okay. And it appeared for the first time in your presentation yesterday?

MR. PELINO COLAIACOVO: Yes. It was work that I was able to do after the IRs were completed. Having said that, it's a very short number of calculations. The vast majority of that information is directly lifted out of the sources cited.

MR. MATTHEW GHIKAS: No, I -- I appreciate that. What -- but the message that you're putting forward, that's an entirely new theme you've picked up? Well, it is, sir. You didn't raise it in your report, did you?

MR. PELINO COLAIACOVO: I believe in my report I said that the -- shortening the time for the targets increases the burden on customers and this helps to give an example of what that means, how the burden has been increased.

MR. MATTHEW GHIKAS: I would suggest to you isn't the purpose of what the analysis that you've done is you've -- you're trying to demonstrate whether or not customers have been paying for the ongoing operation of the Utility?

MR. PELINO COLAIACOVO: Well, there is that as well.

MR. MATTHEW GHIKAS: Yeah, that's -- that's entirely new analysis?

MR. PELINO COLAIACOVO: Well, the statements have been made that rates over the past five (5) years have been too low to recover basic costs of the Utility and -- and so those statements, frankly, brought to mind this analysis. Aren't -- have they actually been too low.

MR. MATTHEW GHIKAS: And those statements were also in the application, which predated your evidence being filed?

MR. PELINO COLAIACOVO: It's true.

MR. MATTHEW GHIKAS: Okay. Now, in terms of how you performed that analysis, can you just confirm for me, you didn't exclude from the cash collected -- you didn't exclude from the cash collected the Bipole III account in determining your debt and equity?

MR. PELINO COLAIACOVO: I didn't -- I didn't specifically exclude anything that wasn't in the calculations that were there.

MR. MATTHEW GHIKAS: Okay and you didn't adjust for interest capitalization taking into account the income creating effect of Manitoba Hydro's capitalization of interest in a declining rate environment, as was discussed on page 8, and 9 of your report?

MR. PELINO COLAIACOVO: Capitalized interest is -- yeah, it's the amount that has been capitalized by Manitoba Hydro, that's what's included in the sixty-four eighty-three (6483).

MR. MATTHEW GHIKAS: You didn't adjust for it?

MR. PELINO COLAIACOVO: I did not.

MR. MATTHEW GHIKAS: And you didn't exclude the impact of cash received on a repayment of a loan receivable that predated 2012?

MR. PELINO COLAIACOVO: I did not.

MR. MATTHEW GHIKAS: You haven't adjusted for fourteen (14) years of higher than average water flows?

MR. PELINO COLAIACOVO: I don't think that would actually be appropriate, because if water flows had been different over the past five (5) years, then there may have been different requests at the GRA's during those five (5) years.

MR. MATTHEW GHIKAS: You haven't adjusted for them?

MR. PELINO COLAIACOVO: Absolutely not.

MR. MATTHEW GHIKAS: You haven't adjusted the debt and equity for the gain on a sale of land?

MR. PELINO COLAIACOVO: No. But I also didn't adjust for the fact that Conawapa costs are going to be recovered in the future. I assumed those were actually covered over the past five (5) years. I didn't adjust for other items that are in regulatory accounts that are going to be recovered in the future.

So there is a put and take. As I say, on -- on slide 18 in -- in the red bullets, it's one way of -- of looking at this. It's a limited analysis. So I did not go through all of the different puts and takes that you could possibly make.

I -- I simply did a gross level, if you were assuming that all you were doing was financing those projects at 100 percent and everything else was being covered by ratepayers over the last five (5) years as opposed to put forward into the future, then this is one (1) way of considering it. Ratepayers haven't been covering their proper quote unquote "share" of all of those costs.

MR. MATTHEW GHIKAS: Mr. Chairman, just as -- just to make sure I give you notice properly of this, Manitoba Hydro has been running numbers based on a presentation that they believe is more fair and, in our submission, because this is new evidence that has never been seen before it would be appropriate for the panel that is reseatng at a later time to be able to speak to this issue, as this is new evidence.

That would be -- in our submission, that would be the fear -- the fair outcome.

THE CHAIRPERSON: We'll take it under consideration.

MR. MATTHEW GHIKAS: Thank you.

CONTINUED BY MR. MATTHEW GHIKAS:

MR. MATTHEW GHIKAS: Now, just to

cover some -- probably some easy ones here. A higher rate trajectory now will generate more revenue in the early years relative to the 3.5 -- 95, correct?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And it will improve the cash flows in the interim?

MR. PELINO COLAIACOVO: Cash flows will go up, if rates go up, absolutely.

MR. MATTHEW GHIKAS: And it improves the ability to service debt and interest?

MR. PELINO COLAIACOVO: Yeah, the critical issue in the -- in the near term is actually not so much servicing debt as it is financing a portion of -- a larger portion of the capital expenditures through cash as opposed to debt.

MR. MATTHEW GHIKAS: And it would improve the prospects of paying down the principal sooner were that to be appropriate?

MR. PELINO COLAIACOVO: More accurately, less principal would be accumulated in the first place.

MR. MATTHEW GHIKAS: All right. Now, the -- you -- you've indicated that in reality rates get reviewed every two (2) years, right?

MR. PELINO COLAIACOVO: Okay, that's been the practice.

MR. MATTHEW GHIKAS: And you would expect that Manitoba Hydro would adjust its business plans as circumstances change?

MR. PELINO COLAIACOVO: I think it's fair to say that.

MR. MATTHEW GHIKAS: And now if we can turn to page 55 of your report, please. On 55, line 29. So you say here:

"As a pure cost recovery government owned utility, it is not clear why equity should be a priority per se. From the perspective of the ratepayers who are the ultimate funders of all of the Utility's operations, equity is essentially dead money. It earns no return, but nevertheless has been taken out of the hands of ratepayers who could otherwise use it. A review of rate paths through the lens of discounting at the social discount rate helps to stress the importance of making use of ratepayer funds in the most economical way."

Do you see that?

MR. PELINO COLAIACOVO: I do.

MR. MATTHEW GHIKAS: Okay. So in terms of how dead the equity is, if I can put it that way, the equity in the business, as we've discussed, is not cash, right?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Okay. And there's no money sitting in a vault somewhere? The reserves are a reflection of past rates that were generating sufficient net income to cover costs and reinvest in the business?

MR. PELINO COLAIACOVO: "Sufficient" is a loaded term.

MR. MATTHEW GHIKAS: Okay. Were generating more than -- generating positive net income?

MR. PELINO COLAIACOVO: That's right.

MR. MATTHEW GHIKAS: Thank you. And so this equity in a sense reflects a voided debt, doesn't it?

MR. PELINO COLAIACOVO: It does. In a pure cost recovery Utility because there are no shareholders earning a return, retained earnings really are nothing other than a voided debt or net investment in capital as is another one of the names that -- that I -- are used in other companies.

MR. MATTHEW GHIKAS: Right. And debt comes with a cost?

MR. PELINO COLAIACOVO: Debt has cost.

MR. MATTHEW GHIKAS: Okay. So in terms of -- in terms of it being -- that it being dead money, those -- if ratepayers are achieving the benefit of -- or receiving the benefit of less interest on debt, aren't they?

MR. PELINO COLAIACOVO: Yes, but they're actually paying the cost of having given Manitoba Hydro that money in the first place.

There's an opportunity cost to customers and that opportunity cost to customers is actually higher than the cost of debt to Manitoba Hydro. Manitoba Hydro because it gets its debt from the province of Manitoba is getting much cheaper debt than virtually anyone else in the economy can get.

And so what you're doing is you are taking high-cost money from ratepayers instead of getting low cost debt through the capital markets.

MR. MATTHEW GHIKAS: Okay. What I'm

taking issue with, sir, and we'll come to that argument. What I'm -- what I'm taking issue with is that you say it earns no return; that's strictly speaking true, but there is a savings in terms of a voided interest, isn't there?

MR. PELINO COLAIACOVO: That would be true. But as you said, strictly speaking, there is no return on equity in the revenue requirement or in -- or in the financial statements of Manitoba Hydro.

MR. MATTHEW GHIKAS: Now, as you've indicated in your report based on the reference assumptions that have been applied, the 7.9 percent rate path will actually be more economically efficient in inflation-adjusted terms than the 3.95 percent path; right?

MR. PELINO COLAIACOVO: Again "economically efficient" is a loaded term. So --

MR. MATTHEW GHIKAS: But it's a term you used so what -- do you want me to go there?

MR. PELINO COLAIACOVO: -- but if you -- yeah, if you compare the inflation-adjusted dollars over time, over a particular period and choose that period, you -- you make an analysis about which one has -- which rate path costs more inflation-adjusted dollars than the other one.

MR. MATTHEW GHIKAS: I don't want you to think I'm using my own loaded terms here, so, maybe we can go to page 46, at line 21. And line -- sorry, line 28. You say:

"This comparison suggests that over a long period of time under reference assumptions the 7.9 percent rate path will actually be more economically efficient in inflation-adjusted terms."

MR. PELINO COLAIACOVO: Right.

MR. MATTHEW GHIKAS:

"This is the benefit that results from paying down debt early rather than paying compounding interest costs over a longer period of time."

So that's a true statement?

MR. PELINO COLAIACOVO: M-hm.

MR. MATTHEW GHIKAS: Okay.

MR. PELINO COLAIACOVO: Yes, sorry.

MR. MATTHEW GHIKAS: And in terms of -- in terms of if Manitoba Hydro had a larger balance sheet, it would be better able to absorb shorter term financial shocks without the risk that it might be perceived as being no longer financially self-supporting, right?

MR. PELINO COLAIACOVO: That has the sound of a quote to it again.

MR. MATTHEW GHIKAS: It does have the sound, doesn't it. Would you agree?

MR. PELINO COLAIACOVO: Can you repeat the statement again.

MR. MATTHEW GHIKAS: Sure. I'll read it really carefully word for word for you.

If Manitoba Hydro has a larger balance sheet, then it would be better able to absorb shorter term financial shocks without the risk that it might be perceived as being no longer financially self-supporting?

MR. PELINO COLAIACOVO: Yes. So if you have a larger balance sheet and you have -- suffer a financial shock which affects your cash flow then what's changing is your cash flow to debt interest -- or cash flow to debt metrics, right, but the ratio is going to change less because of the size of your balance sheet.

So, I think you have to put context around some of these kinds of terms.

MR. MATTHEW GHIKAS: So it's a yes, but? Yes...?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And a more robust corporation could simply wait for the fortunes to turn rather than immediately seeking financial relief through higher rates; correct?

MR. PELINO COLAIACOVO: That's correct and -- and hence, I think the importance of having some level of reserves. The question is: What level is appropriate in a given set of circumstances?

MR. MATTHEW GHIKAS: And you'd agree with me that as a result, in that sense, a larger balance sheet can be cons -- understood as a ratepayer benefit, can't it?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Now, on slide 10 you refer to Manitoba Hydro equity is just a contra -- customer contribution held in trust.

You and I are both lawyers. I assume you don't mean that literally?

MR. PELINO COLAIACOVO: No, it's colloquially.

MR. MATTHEW GHIKAS: I was going to ask you for an undertaking to provide the trust indenture, but okay. No -- okay.

Now, you haven't cited any authority

for the proposition that the Public Utilities Board should be considering the ratepayer cost of capital in formulation of rates, have you?

MR. PELINO COLAIACOVO: No.

MR. MATTHEW GHIKAS: You included the Bonbright principles in appendix C of your report. None of those principles specifies the use of ratepayer cost to capital?

MR. PELINO COLAIACOVO: Well, Bonbright's principles were developed in the context of investor-owned utilities. And in an investor-owned Utility there is a shareholder cost of capital, which occupies a large -- a large part of one of the chapters of the books.

He -- Bonbright did, in fact, when he wrote his first -- the first volume of the book in the late '50s or it came out in '61, actually specifically referenced pure cost recovery utilities like Ontario Hydro and Tennessee Valley Authority as a special case, that would have different issues and -- and so on. But I think you have to be careful to take historical context into account.

MR. MATTHEW GHIKAS: Okay. And you're familiar with deferral accounts? We've discussed these already?

MR. PELINO COLAIACOVO: Absolutely.

MR. MATTHEW GHIKAS: Okay. And they're common in the Utility industry, right?

MR. PELINO COLAIACOVO: They are.

MR. MATTHEW GHIKAS: And Manitoba Hydro has a number of them?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Utilities use deferral accounts to capture forecast variances, for example?

MR. PELINO COLAIACOVO: And for many other purposes, yes.

MR. MATTHEW GHIKAS: And when there's forecast variance accounts, there -- the variances are held and then they're amortized into rates over time?

MR. PELINO COLAIACOVO: Typically.

MR. MATTHEW GHIKAS: And for example, it's routine for gas distribution utilities to have variance accounts around commodity costs; right?

MR. PELINO COLAIACOVO: Yes, they often do.

MR. MATTHEW GHIKAS: And they can also include accounts for smoothing out the rate impact of an unforeseen one time event; can't they?

MR. PELINO COLAIACOVO: Regulatory

accounts are often used for that purpose.

MR. MATTHEW GHIKAS: Like a drought?

MR. PELINO COLAIACOVO: Like a drought or the failure of a major client or, you know, customer that causes a loss and a bunch of other potential eventualities, storm damage, et cetera.

MR. MATTHEW GHIKAS: Okay. So with a forecast variance, for example, with a deferral account that captures forecast variance, if the -- if a positive balance results, and it must be returned to customers, that would mean the customer's rates turned out to be higher than they needed to be?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Okay. And the funds in the account but for the forecasting errors would otherwise have been available to the customers had the forecast been correct?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And while it's in the hands of the Utility and before it's returned to customers, the account balances can attract a return; correct?

MR. PELINO COLAIACOVO: Yeah,

depending on the regulatory jurisdiction, different interest rates are attached to deferral accounts.

MR. MATTHEW GHIKAS: And are you aware of any instances -- any instances anywhere where the regulator has approved a return for the benefit of ratepayers on a deferred credit to ratepayers calculated on the basis of a ratepayer cost of capital?

MR. PELINO COLAIACOVO: Typically, what is used on those deferral accounts, depending on the regulator and -- and the purpose of the account, often it's the --

MR. MATTHEW GHIKAS: Simple interest or AFDUC?

MR. PELINO COLAIACOVO: It's -- well, the actual interest rate that they use is the corporate paper 90 day rate in some cases. I mean, there are a bunch of other -- other bunch -- sorry, several other types of rates that sometimes are used.

MR. MATTHEW GHIKAS: Or AFUDC based on the weighted average cost to capital of the Utility.

MR. PELINO COLAIACOVO: That -- yeah, that's a high one often for those deferral accounts, but yes, sometimes.

MR. MATTHEW GHIKAS: But not the cost

of capital of individual customers?

MR. PELINO COLAIACOVO: Every customer has a different cost of capital. So, --

MR. MATTHEW GHIKAS: And they don't use any of them, do they?

MR. PELINO COLAIACOVO: Well some -- some particular number has to be used.

MR. MATTHEW GHIKAS: Right. And -- but not that number?

MR. PELINO COLAIACOVO: Well, there is no way to know what any individual customer's cost of capital actually is.

MR. MATTHEW GHIKAS: Right. And so they don't use it, right?

MR. PELINO COLAIACOVO: Well, they use a -- a stand-in for the collective cost of capital of all customers, you know --

MR. MATTHEW GHIKAS: They use the Utility's cost of capital, don't they?

MR. PELINO COLAIACOVO: Not always.

MR. MATTHEW GHIKAS: They use the Utility's borrowing rate?

MR. PELINO COLAIACOVO: Well, no, they use a borrowing rate and the regulator chooses which borrowing rate it is.

MR. MATTHEW GHIKAS: All right. Now, you've referenced sinking funds on slide 15. You say:

"Ratepayers before or during construction contribute funds to later -- to reduce later burdens. The theory is that ratepayers will benefit from new assets when in-service and would prefer to spread the burden that would otherwise be severe initially."

Do you see that?

MR. PELINO COLAIACOVO: I do.

MR. MATTHEW GHIKAS: Okay. Now, that -- you have identified that effectively as one (1) of the options that's available to regulators for treatment of large assets, correct?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And ratepayers who contribute before or even during construction may not be the same ratepayers that are present when the assets are in service?

MR. PELINO COLAIACOVO: That's correct which is why sinking funds are always somewhat controversial.

MR. MATTHEW GHIKAS: And the funds themselves can't be pre-collected all at once, can they, that would defeat the purpose of a sinking fund?

MR. PELINO COLAIACOVO: Typically an -- an amount is collected every year over a period of years.

MR. MATTHEW GHIKAS: Right. And there may be a significant lag between the collection of funds and the asset going into service?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Now, you made a reference to -- you made a reference in your opening presentation to the fact that customers were financing these assets and they have 100 hour -- a hundred year life.

And you'd agree with me that the capital cost is depreciated over the hundred years?

MR. PELINO COLAIACOVO: Yes, it is.

MR. MATTHEW GHIKAS: And all those ratepayers are paying for the capital cost?

MR. PELINO COLAIACOVO: Capital cost associated operating cost and the cost of capital --

MR. MATTHEW GHIKAS: On an ongoing basis.

MR. PELINO COLAIACOVO: On an ongoing basis.

MR. MATTHEW GHIKAS: Thank you. Now -- all right. So let's -- you've presented in your report a social discount rate analysis and you compared the two (2) trajectories, the 3.95 and 7.9 using various discount rates, right?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: Okay. And you used the same discount rate for each trajectory?

MR. PELINO COLAIACOVO: That's correct. I believe I used 5 percent in both cases.

MR. MATTHEW GHIKAS: And you'd agree with me that when investors assess investment options, they will apply different discount rates to different investment options depending on the risk profiles?

MR. PELINO COLAIACOVO: And also depending on their preferences. When an investor is doing that kind of an analysis, they will use their own cost of funds in the -- in the analysis. The cost of funds that they believe they will face in making the investment.

MR. MATTHEW GHIKAS: And so, for example, if an investor was deciding whether to invest in a blue chip stock or a speculative biotech stock, they will compare those investments by applying a higher discount rate to the speculative stock to account for the greater risk?

MR. PELINO COLAIACOVO: I think that's the kind of an analysis that an analyst does. It -- it breaks down often when you're dealing with very speculative assets, like, tech investments as you just mentioned.

I don't think very many people apply discount rates when they're making a decision to invest in Amazon or what have you because those are -- the metrics -- the value metrics are typically done on mult -- different multiples.

But discount rate methodology is typical for normal businesses that have recurring cash flows.

MR. MATTHEW GHIKAS: Right and the greater the risk associated with the investment, typically speaking, the higher the discount rate?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: Would you agree with me that the 3.95 percent rate trajectory leaves Manitoba Hydro and customers more exposed to the risk of severe rate spikes than the 7.9 trajectory?

MR. PELINO COLAIACOVO: I think it is a tautology to say that if you have more reserves you can resist more situations that require reserves.

So yes. If the 7.9 percent method -- rate is going to build up larger reserves, then you will be able to resist more of the types of events that require reserves, but that doesn't necessarily mean it's a good idea to build up those reserves because you have to look at what the probability of those events are going to be and your actual requirement for those reserves before you decide to build them up.

MR. MATTHEW GHIKAS: So there'll be a longer period between achieving the targets with the 3.95?

MR. PELINO COLAIACOVO: Yes. If the rates are 7.9 versus 3.95, you will reduce the debt ratio faster.

MR. MATTHEW GHIKAS: And interest rates represent a significant risk exposure for Manitoba Hydro because of the overall debt burden?

MR. PELINO COLAIACOVO: They -- yes, they are a risk for Manitoba Hydro.

MR. MATTHEW GHIKAS: And as the debt grows, the impact to the exposure to the interest rates increases, right?

MR. PELINO COLAIACOVO: That's true, but only partly because as the debt is growing, it's being -- a significant portion of the debt is being put into fixed instruments that are being fixed at relatively low rates of interest for a long period of time.

So interest exposure -- you have to understand the treasury practice of -- of the Company, your amount of exposure is only to a fraction of the portfolio of debt because in any given year, you're only issuing bonds for a fraction of the total debt portfolio.

So any -- any large treasury department that is managing funds has rules about how much of their portfolio's going to be exposed to interest in any given period of time, which is why Manitoba Hydro has been doing thirty (30) year -- has been buying thirty (30) year bonds, for example.

So they don't have risk -- interest exposure on any of those debt issues for thirty (30) years.

MR. MATTHEW GHIKAS: And you'd agree with me, though, that Manitoba Hydro has to refinance close to $20 billion in the next five (5) years.

MR. PELINO COLAIACOVO: I actually don't think exactly what it is. Perhaps by all means, provide me with that number, yes.

MR. MATTHEW GHIKAS: And all of that refinancing is subject to interest rate risk, right?

MR. PELINO COLAIACOVO: Anything that is being refinanced within a period is subject interest rate risk within that period.

MR. MATTHEW GHIKAS: And the higher the rate trajectory is the -- the less exposure to -- the less debt accumulated. Sorry, let me back that up. It's 3:30 in the aft -- 4:30 in the afternoon. Scratch that.

So there's a longer period then before the -- with the 3.95, there's a longer period where Manitoba Hydro's exposed to drought risk?

MR. PELINO COLAIACOVO: Manitoba Hydro is always exposed to drought risk. The question is: How much in the way of reserves do you have at any given time to manage that drought risk.

MR. MATTHEW GHIKAS: Right, I phrased that badly, sir. What I meant was: In your -- in your evidence you calculated based on the history that in the beginning of each year there's roughly a 10 percent chance of -- of a five (5) year drought?

MR. PELINO COLAIACOVO: Yes.

MR. MATTHEW GHIKAS: And there's more years involved and hence more risk? More years until you reach your targets?

MR. PELINO COLAIACOVO: So your res --

MR. MATTHEW GHIKAS: So you're at risk of financial distress in that period?

MR. PELINO COLAIACOVO: So you have -- in a 7.9 percent scenario, you will have more reserves to manage the same amount of risk. The risk is the same. The hydrological risk doesn't change. The only thing that changes is the volume of your reserves. And -- and so --

MR. MATTHEW GHIKAS: The risk of financial distress is different?

MR. PELINO COLAIACOVO: Right.

(BRIEF PAUSE)

MR. MATTHEW GHIKAS: Okay. One (1) of the comments that you made was that, practically speaking, the ability to respond to distress by cost-cutting is limited by the need to continue to deliver utility services to customers, right?

MR. PELINO COLAIACOVO: That's

correct.

MR. MATTHEW GHIKAS: And there is a timing issue too. It takes time to generate savings from cuts, even if they are available?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: And in fact, you ultimately dispense with cost-cutting as an option?

MR. PELINO COLAIACOVO: Practically speaking, yes.

MR. MATTHEW GHIKAS: And you really conclude that there are two (2) options to deal with the risk of drought; the -- either paying down debt to -- sorry, paying down debt to create reserves that may be accessed when financial distress conditions arise or responding to financial distress with rate increases?

MR. PELINO COLAIACOVO: I -- I think those are the two (2) options that face Utilities like Manitoba Hydro that are pure cost recovery utilities.

MR. MATTHEW GHIKAS: Okay. Now, you discussed at page 49 of your report. If we could turn there. Line 26, please, Diana. Oh, sorry, the -- yeah, line -- line 26.

You refer to what would occur when a

drought -- what -- what options are available when -- when a drought occurs. So you say:

"When they occur the cost of a drought could be charged to the ratepayers of the day through an immediate and severe rate increase or could be spread forward in time to ratepayers of the future by delaying recovery of some of the costs until the drought is over and the Utility financially recovers."

Now, dealing first with the option of spreading them forward in time to ratepayers. Future ratepayers didn't cover those costs -- cause those costs, did they?

MR. PELINO COLAIACOVO: That's correct. Drought is not caused by any ratepayer, it just happens.

MR. MATTHEW GHIKAS: And the possibility exists that some of the people who were customers during the drought may not be customers in the future?

MR. PELINO COLAIACOVO: Absolutely.

MR. MATTHEW GHIKAS: And -- but you've proposed that option here because you believe it's a legitimate and fair option from a regulatory perspective?

MR. PELINO COLAIACOVO: The only options that you have are either to increase rates, or incur debt which has to be paid back over time to spread forward, if you will. Those are the two (2) options that are available.

MR. MATTHEW GHIKAS: Okay. All right. Now, let's deal with an immediate and severe increase as you put it.

The -- the option of an immediate and severe rate increase, you'd agree with me, that presumes that there is an appetite on the part of the regulator and government and the public to implement that?

MR. PELINO COLAIACOVO: I think that's correct.

MR. MATTHEW GHIKAS: And (1) one of the things that I've seen you cite in your evidence is that the agricultural sector would already be challenged with the weather and compounded by -- and it would be compounded by a severe rate spike?

MR. PELINO COLAIACOVO: That's true.

MR. MATTHEW GHIKAS: And there's an issue also of rate fatigue when there has been consistent rate increases over time?

MR. PELINO COLAIACOVO: That's correct.

MR. MATTHEW GHIKAS: So if we could just turn back to book of documents, tab 8. Tab 8, this is your NFAT evidence, and I'm at page 27 again. And if we can scroll down. We've seen this -- this passage before. This is where we were talking about -- this is where we were talking about the self-sufficiency from successive losses in a -- in a drought.

And what you indicate here is -- we're at line 23 -- you indicate there is -- well, leading up to that you say, there's either a significant increase, or in line 23:

"If rates were kept low and Manitoba Hydro simply absorbed the financial losses for a period of years, then Manitoba Hydro's status of financially self-supporting entity could be called into question."

And just pause there for a moment, Differing the impact Manitoba Hydro would have to finance that in some way, wouldn't they?

MR. PELINO COLAIACOVO: That's

correct. And that -- that's really what the passage implies. So, if there's a drought and the drought results in a Company having to issue lots more debt and rates do not go up in concert with the drought conditions, then the debt will continue to accumulate and, eventually, that will, you know, bring into question the Company's self-supporting status if it didn't have enough reserves to begin with.

MR. MATTHEW GHIKAS: And so you go on to say:

> "Credit rating agencies which currently do not include Manitoba Hydro debt as an obligation, The province of Manitoba may reconsider that position, at least for the portion of Manitoba Hydro's debt, which could have a significant implications for the government. What this illustrates is that despite the legislation under which Manitoba Hydro operates, a situation of financial distress could force the government to make a difficult political decision avoiding the political -- the potential for such

situations to arise is, therefore,
assumed to be a priority for
government."

And you would assume that the same thing is true today?

MR. PELINO COLAIACOVO: Yes. The -- there is nothing in that passage that is different from -- from what I'm saying now.

There's no question that Manitoba Hydro requires reserves. The only thing that we're debating is what the size of those reserves should be. And then in addition to that, in very significant drought conditions, you know, serious attention has to be paid to rates and whether rates have to be increased.

MR. MATTHEW GHIKAS: Okay. I want a -- that concludes my cross-examination, Mr. Chairman. I want to thank you, Mr. Colaiacovo. I appreciate it.

THE CHAIRPERSON: Thank you. I want to return to a point which is I want to go back to your request to recall the panel, and I'd like Dr. Williams to respond to it.

But I'm -- what I would propose is to take a break for ten (10) minutes and then you could put in again exactly what you want. Dr. Williams would respond to it.

DR. BYRON WILLIAMS: I think I can -- I can respond right now. So as I understand what is being suggested is -- as the Board's well aware the witnesses are able to respond to the case as -- as issues emerge.

What Manitoba Hydro is suggesting is that when they come up for re-examination, they're going to -- they propose to respond to the calculations presented by Mr. Colaiacovo because they believe it wasn't presented in his initial evidence, or his -- and -- and they're that they have a right to raise it.

I would -- I could confer with my colleague Ms. -- Mr. Hacault, but at least as I understand the rules, I don't see an issue with that.

THE CHAIRPERSON: Okay,

DR. BYRON WILLIAMS: So I will just say my one caveat is -- Mr. Hacault had to leave so I would -- would confer with them, but my preliminary -- if that's what my understanding is, Mr. Colaiacovo has responded to the evolving evidence and Hydro is saying that this is something they haven't had a chance to reply to in rebuttal.

And so if that's -- if Mr. Hacault's understanding is consistent with mine, I don't see an objection to that.

THE CHAIRPERSON: That's -- that's fine. The -- sorry, Mr. -- the problem I have is I didn't call on you after Mr. Ghikas put it forward and -- and after saying, well, we would take it under advisement or consideration, it dawned on me that I should be seeking your position before doing so.

DR. BYRON WILLIAMS: I appreciate that. We would've -- we would've -- we would've let our -- our concerns be known if we -- if we felt that, but I do appreciate the courtesy of the Panel.

THE CHAIRPERSON: I was concerned about your shyness, Dr. Williams, that's all. Ms. Ramage...?

MS. PATTI RAMAGE: Yes, in a rare moment of -- I agree with Mr. Williams' comments --

THE CHAIRPERSON: We will put that on -- highlight that on the record.

MS. PATTI RAMAGE: Yes. I think part of why we had Mr. Ghikas raise that is because there is time tentatively set for Manitoba Hydro to reply to any new evidence, but it was tentative and we wanted to make it clear to everyone that we intend to use that time.

THE CHAIRPERSON: That's fine. So I

have the positions, we'll -- we'll take it under advisement. We'll wait to hear from Mr. -- if you could talk to Mr. Hacault first thing tomorrow morning and then we'll deal with it later.

We're going to take ten (10) minutes before Board counsel starts.

DR. BYRON WILLIAMS: And just before the Board leaves, I do want to note our client Ms. DeSorcy is here and we were graced with the presence of Mr. Darwin Paupanakis from PCN who's travelled a long way to be down watching the rate hearing. He's not here now, but he was here earlier and he's a well-known presence in northern Manitoba so it was nice to see him here.

THE CHAIRPERSON: Thank you. Thank you, we'll adjourn until 5 to 5:00. Thank you.

--- Upon recessing at 4:43 p.m.

--- Upon resuming at 4:57 p.m.

THE CHAIRPERSON: Mr. Peters...?

CROSS-EXAMINATION BY MR. BOB PETERS:

MR. BOB PETERS: Thank you. Good afternoon, Mr. Colaiacovo.

From your discussions with other counsel, the Board can take it that regulated utilities in Canada prepare financial statements based on accounting standards?

MR. PELINO COLAIACOVO: Yes, they do.

MR. BOB PETERS: And some have adopted what we've called US GAAP, or Generally Accepted Accounting Principles?

MR. PELINO COLAIACOVO: That's correct. Typically, utilities that have securities in the United -- that they issue in the United States or -- for various reasons. Hydro Quebec is US GAAP, and OPG is US GAAP, and a couple of others, I believe.

MR. BOB PETERS: And others have adopted the International Financial Reporting Standards?

MR. PELINO COLAIACOVO: That's correct.

MR. BOB PETERS: And that would include the -- the BC Hydros and the Nalcors that you've mentioned previously?

MR. PELINO COLAIACOVO: I believe -- I believe both of those are IFRS, yes.

MR. BOB PETERS: And both US GAAP and IFRS are reflective of accrual-based accounting?

MR. PELINO COLAIACOVO: Yes.
MR. BOB PETERS: And that's opposed to the cash accounting?
MR. PELINO COLAIACOVO: Yes.
MR. BOB PETERS: And I know you and Mr. Ghikas just lightly touched on that, but for accrual-based accounting, the costs are matched against the revenues from the expenditure of those costs?
MR. PELINO COLAIACOVO: Yes.
MR. BOB PETERS: And in cash-based accounting, the costs and revenues are expensed in the period that the cash is collected and spent?
MR. PELINO COLAIACOVO: That's right.
MR. BOB PETERS: And an issue that's raised by Manitoba Hydro in this proceeding is that the revenue requirement does not include capitalized interest?
MR. PELINO COLAIACOVO: That's correct. Capitalized interest becomes part of the revenue requirement when an asset goes into service.
MR. BOB PETERS: But should capitalized interest be included in the revenue requirement for rate setting before the asset is in service?

MR. PELINO COLAIACOVO: Well, in some special cases, certain regulators have made that decision to -- to -- I referenced it in -- in my presentation. When AFUDC is paid for during construction as opposed to included in -- in the value of the asset upon in-service. So -- but normally, all multiyear construction projects, the interest is included in the value of the asset when it -- it's brought into service.

MR. BOB PETERS: And doesn't that suggest, then, that the construction of that asset is financed a hundred percent by debt?

MR. PELINO COLAIACOVO: In an investor-owned utility, it's not, and in -- in an investor-owned utility, it's constructed using a combination of debt and equity at the regulated ratio. In a pure cost recovery utility, it could be done at a hundred percent debt, unless there are -- are excess customer contributions that -- that could be used for that purpose.

MR. BOB PETERS: And if the customer contributions are not being sought in advance of the asset coming into service, then it would be financed a hundred percent by debt until it was in service?

MR. PELINO COLAIACOVO: That's right.

MR. BOB PETERS: And then once in service, all of the attendant costs that had been previously capitalized will make their way to the income statement?

MR. PELINO COLAIACOVO: That's right.

(BRIEF PAUSE)

MR. BOB PETERS: The Board has heard from Manitoba Hydro about its new modified cash flow analysis, and I believe Manitoba Hydro's on the record of saying it's not considered a metric, but it is done to show their cash position. You're aware of that?

MR. PELINO COLAIACOVO: Yes.

MR. BOB PETERS: Is that Manitoba Hydro's cash flow to Capex a unique calculation used by Manitoba Hydro, or have you come across it elsewhere?

MR. PELINO COLAIACOVO: Cash flow to capital spending is not unheard of, it's just not a priority metric for most other utilities.

MR. BOB PETERS: When you say "it's not unheard of," is it an analysis that should be used to determine the sufficiency of rates?

MR. PELINO COLAIACOVO: Well, in -- in

order to -- well, if you have a target that you would like to achieve in terms of customer contributions compared to debt that is -- is used to construct new assets, then, you know, I think you need to -- to focus on that kind of a metric. It's -- it doesn't make a lot of sense to me to focus on the cash flow to Capex metric in -- in rates, because what you're really talking about is what debt ratio you want to have.

So one flows from the other. If you want to achieve a certain debt ratio, then your cash flow to Capex is going to have to be at a certain level, depending on all your other expenditures.

MR. BOB PETERS: When you and other counsel were reviewing some of the credit rating reports, is it your understanding that this cash flow to Capex analysis prepared by Manitoba Hydro is not used by any of the reporting agencies that you reviewed?

MR. PELINO COLAIACOVO: Yeah, the -- the reporting agencies will typically look at cash flow to debt, and they'll look at the financial structure, and they'll look at liquidity, and a whole bunch of other metrics, but cash flow to Capex is not on their list.

MR. BOB PETERS: Is it correct that credit-rating agencies would use a free cash flow or discretionary cash flow analysis?

MR. PELINO COLAIACOVO: They could. That's -- that's one (1) of the other -- free cash flow and discretionary cash flow metrics analysis are typically done for investor-owned utilities. Public power-type utilities are -- it -- it's not a big focus.

MR. BOB PETERS: Can you briefly explain what is the cash -- or sorry, the free cash flow, or the discretionary cash flow analysis?

MR. PELINO COLAIACOVO: Yeah. The -- and this -- this was covered in my report, but free cash flow is when you look at the company's cash flow after deducting for working capital and maintenance Capex, maintenance capital required expenditures. Discretionary free cash flow is when you then also subtract required dividend payments from that. And so what you end up with is -- is almost a residual cash flow that the Company has at its disposal after filling all those various and sundry commitments.

MR. BOB PETERS: Well, let's -- let's turn, if we could, to Board counsel's second book of documents, Exhibit 42-2, and over to page 325. I'm going to show you figure 1 on a -- on the screen, Mr. Colaiacovo, and I'm -- I'm not sure if you've had an opportunity to review this, or you want to review the question that gave rise to it. But maybe we can go back a page, please, Diana, to 324 and just get the question (a).

MR. PELINO COLAIACOVO: Right.

MR. BOB PETERS: Do you see that --

MR. PELINO COLAIACOVO: Yes.

MR. BOB PETERS: -- Mr. Colaiacovo? And now if we turn to the chart on page 325, we see a figure 1, which is a -- it's a free cash flow analysis at the 7.9 percent rate trajectory that has been discussed?

MR. PELINO COLAIACOVO: Yes, I see that.

MR. BOB PETERS: So when the -- when the Board is looking at this, Mr. Colaiacovo, the Board notice -- the Board will notice that at least until 2023, Manitoba Hydro has cash flows that are less than their property, plant, and equipment expenditures, correct?

MR. PELINO COLAIACOVO: That's entirely consistent with their Major Capital Expenditure Plan.

MR. BOB PETERS: But -- and that's also consistent with their request of this Board is that they want to keep -- they -- they'd like to, looking at the chart, increase the red bars by decreasing the blue bars as much as possible. They'd like to pay down the interest as early as possible?

MR. PELINO COLAIACOVO: Well, these are actual expenditures on property, plant, and equipment. I -- I'm not --

MR. BOB PETERS: All right. I -- I realized when I said it, it's --

MR. PELINO COLAIACOVO: Interest.

MR. BOB PETERS: -- I'm talking about the interest behind it, but the actual expenditures at this point in time are exceeding the cash flow from operations?

MR. PELINO COLAIACOVO: That's correct, yeah.

MR. BOB PETERS: And at a certain point in time, that changes, correct?

MR. PELINO COLAIACOVO: It does.

MR. BOB PETERS: And why does it change?

MR. PELINO COLAIACOVO: Well, the major capital project is finished, and they are spending money only on what amounts to maintenance capital expenditures -- maintenance Capex. So after 2023, the blue bars are quite low. Those are our typical annual expenditures to replace assets that have worn out.

MR. BOB PETERS: And the -- the maintenance Capex I think were your words. We've heard words in this hearing, sustaining capital, base capital, or business operations capital. All the same?

MR. PELINO COLAIACOVO: All the same -- all the same thing.

MR. BOB PETERS: All right. And so what we do see is the cash flow eventually exceeds the amount of money being spent on particular assets that are in the property, plant, and equipment?

MR. PELINO COLAIACOVO: Correct.

MR. BOB PETERS: So what can Manitoba Hydro do once those red bars exceed the blue bars on page 325 of Exhibit 42-2?

MR. PELINO COLAIACOVO: It essentially allows them to retire debt in significant quantities.

MR. BOB PETERS: Is that their only option with the money?

MR. PELINO COLAIACOVO: Well, either

retire debt or spend it on other large assets that are not currently contemplated. But in a pure cost recovery utility, those are your options. There is -- there is no -- there is no one to pay profits to in a pure cost recovery utility.

MR. BOB PETERS: And because, Mr. Colaiacovo, the cash flow exceeds the property, plant, and equipment starting in approximately 2023, that tells this Board that all of those business operations capital expenses, or what we've called sustaining capital, those are already being paid for by the cash flow from operations?

MR. PELINO COLAIACOVO: Yes.

MR. BOB PETERS: All right. If we can look at -- turn ahead, please, to -- we'll go to figure 4 on page 328 of the same document. This rate trajectory on this graph, Mr. Colaiacovo, is done at a -- a 3.95 percent rate trajectory for twenty (20) years. Are you prepared to accept that?

MR. PELINO COLAIACOVO: Yes.

MR. BOB PETERS: And in terms of the comments, is it correct that in this example, the year in which cash flow from operations is greater than their property -- than -- than the property, plant, and equipment expenditures is pushed out to approximately 2024?

MR. PELINO COLAIACOVO: Yes, it -- it's one (1) year later.

(BRIEF PAUSE)

MR. BOB PETERS: However, on this figure 4, it would be noticeable that the height of the cash flow bars is not as high as it was under the 7.9 percent scenario, correct?

MR. PELINO COLAIACOVO: Yes, correct, and --

MR. BOB PETERS: And that -- and that translates to Manitoba Hydro having less cash available to pay off, as you said earlier, to pay off the debt?

MR. PELINO COLAIACOVO: Yes.

(BRIEF PAUSE)

MR. BOB PETERS: In one (1) of your comments, Mr. Colaiacovo, to one (1) of the other counsel, you had indicated that it would be useful to have information about the relationship between the Capex and depreciation. Do you recall that?

MR. PELINO COLAIACOVO: Yes.

MR. BOB PETERS: If we could turn to what is been marked as Manitoba Hydro Exhibit 89, this is, I believe, the latest -- or one (1) of the latest integrated financial forecast runs that's on the -- on the record.

(BRIEF PAUSE)

MR. BOB PETERS: And if we turn to page 6 of 7, we're into the cash flow statement of this document, Mr. Colaiacovo.

MR. PELINO COLAIACOVO: M-hm.

MR. BOB PETERS: You're familiar generally with it?

MR. PELINO COLAIACOVO: Yes.

MR. BOB PETERS: And I want to understand or have the panel understand your comment.

(BRIEF PAUSE)

MR. BOB PETERS: And it -- it was a -- both a discussion about Manitoba Hydro's revenue requirement includes depreciation expense, correct?

MR. PELINO COLAIACOVO: Yes.

MR. BOB PETERS: But it's largely at historical -- at -- at -- on historical assets?

MR. PELINO COLAIACOVO: Yes.

MR. BOB PETERS: And that doesn't equal the cost of the replacement assets?

MR. PELINO COLAIACOVO: Well, the -- the net in -- the investment in property, plant, and equipment that you see on this line, the -- under investing activities, proper -- property, plant, and equipment, net of customer -- net of contributions, you can see that it's -- it's very large in the 2017 to 2022 period, and almost 3 billion -- over 3 billion, et cetera. And then after 2023, it goes down. That -- that's consistent with the other table that we were just looking at before on -- on the blue bars, which is the investment in capital assets.

But there's also a depreciation figure, which does not appear on the cash flow statement. Depreciation appears on the -- on the income statement, so it -- it's probably on the previous page, would be my guess. And --

MR. BOB PETERS: Let me -- let me interrupt you because I want to take you there. So let's -- let's stick with what you've just brought to the Board's attention.

In the year 2017, you've selected the $2.925 billion as the property, plant, and equipment, net of contribution number shown on Manitoba Hydro's cash flow statement?

MR. PELINO COLAIACOVO: Right.

MR. BOB PETERS: And against that number, if we go back and check on, I suppose, page 2 of 7, we'll see for 2017, Mr. Colaiacovo, under the -- along the depreciation and amortization line, that there's $375 million of an expense for depreciation being charged to ratepayers?

MR. PELINO COLAIACOVO: That's right.

MR. BOB PETERS: And that makes Manitoba Hydro's point that their property, plant, and equipment is multiples of the depreciation expense that they're receiving?

MR. PELINO COLAIACOVO: That's right. They're -- they're investing far more than depreciation, so as a result, the asset base is growing. The -- the rate base of the Company is growing. More -- more -- they're investing in more utility assets than are being worn out, so it's getting bigger.

MR. BOB PETERS: All right. Remembering the blue bars and the red bars as you do, let's turn to the 2024 year on page 6 of 7. And on page 6 of 7, we've seen at a point in time when those red and blue bars are relatively the same size, that signals the end of the major capital projects, and we're back to our base sustaining business operations capital?

MR. PELINO COLAIACOVO: That's correct.

MR. BOB PETERS: And here it shows nice and round at $700 million in the forecast, correct?

MR. PELINO COLAIACOVO: That's correct.

MR. BOB PETERS: So, remembering that $700 million from 2024, let's go back to page 2 of 7 of the same document, and we'll see that the depreciation expense under that column for 2024 is $714 million, correct?

MR. PELINO COLAIACOVO: That's correct.

MR. BOB PETERS: So in essence, after Keeyask is constructed, it appears that the depreciation expense will -- will parallel, if I may, what the additions are to capital will be going forward.

MR. PELINO COLAIACOVO: Broadly speaking, it means that the asset base is not going to be growing anymore at that point, that they are spending enough money on capital to replace the depreciated assets.

(BRIEF PAUSE)

MR. BOB PETERS: I want to turn to some questions about drought risk and drought.

(BRIEF PAUSE)

MR. BOB PETERS: And would it be -- would it be correct to understand your report, Mr. Colaiacovo, to be telling the Board that instead of targeting a 25 percent equity number to meet drought risk, Manitoba Hydro can access debt as a more effective way of addressing that particular risk?

MR. PELINO COLAIACOVO: I -- I think the point that I was making was, how do you -- how is Manitoba Hydro justifying the 75 percent target? And -- and one (1) of the things that they are talking about in their application is managing risk. Drought is a very significant risk, and that drought risk needs to be managed. Does drought risk itself require that the target be 75 percent?

And so I looked at some of the information that was provided by Manitoba Hydro on potential five (5) and seven (7) year droughts to see what happens during those five (5) and seven (7) year droughts under each of the rate paths. And I believe in -- in my presentation, I referred to an IR that the PUB made of Manitoba Hydro, and where I got the figures for -- for that analysis that they had provided.

MR. BOB PETERS: Give me a second, please, to find where you referred to that in your slides. I believe it was on slide 29 of your Coalition Exhibit 45. Is this what you were referring to, Mr. Colaiacovo?

MR. PELINO COLAIACOVO: No. I think it --

MR. BOB PETERS: Sorry, 28, I think might be the page.

(BRIEF PAUSE)

MR. PELINO COLAIACOVO: Yeah, that was -- and so the one I -- I'm referring to is 31, on page

31. So are there, you know, reserves for hydrology risk, and do you need 25 percent and -- and hence a 75 percent debt ratio in order to manage droughts?

And so PUB/MH-2-40, in that IR, there are some tables provided that show the consequences of droughts under the 3.95 percent rate path, and also under the 7.9 percent rate path. If we could pop those up, I think if you --

MR. BOB PETERS: All right, well, let me -- let me take you there. It's, again, conveniently located in Volume IV, Board counsel's book of document, page 149.

(BRIEF PAUSE)

MR. BOB PETERS: But before you -- before we get into this report -- or this page, please, Mr. Colaiacovo, when we talk about Manitoba Hydro's reserves, Manitoba Hydro today has the largest retained earnings in its history, does it not?

MR. PELINO COLAIACOVO: I believe that to be correct, subject to check.

MR. BOB PETERS: And do you have an idea as to the approximate amount of that retained earnings?

MR. PELINO COLAIACOVO: I -- I believe it's in the high 2 billion range.

MR. BOB PETERS: All right. So can we round it off to 3 billion?

MR. PELINO COLAIACOVO: Sure.

MR. BOB PETERS: All right. So let's just keep that number in mind. Is that what you were talking to other lawyers about this afternoon, about having a reserve?

MR. PELINO COLAIACOVO: Yes.

MR. BOB PETERS: Call it -- call it -- and I know you don't like necessarily the words 'equity', but retained earnings, or customer contributions?

MR. PELINO COLAIACOVO: That's -- that's correct.

MR. BOB PETERS: So there's approximately $3 billion in Manitoba Hydro now that's been put there by the ratepayers?

MR. PELINO COLAIACOVO: That's right.

MR. BOB PETERS: And those ratepayers, I suppose notionally would either be -- you said earlier, Well, the exports can help, but it's going to be on domestic ratepayers to make sure that it's -- it's there.

MR. PELINO COLAIACOVO: I -- I think because exports -- because Mani -- Manitoba Hydro is a price taker and exports, it gets whatever revenue it gets from exports, but domestic ratepayers are ultimately responsible for the costs. So whatever cost is not covered by exports must be covered by Manitoba ratepayers. And so that -- that's what I mean by -- by that term.

MR. BOB PETERS: Okay. Well, let's turn to figure 2 on this page, the bottom third of the page, or quarter. And Manitoba Hydro has provided some impacts to its interim -- to its integrated financial forecast that it has filed subsequent to the Board's interim rate decision. And against that, they've put sensitivities of the different periods of drought, correct.

MR. PELINO COLAIACOVO: That's correct.

MR. BOB PETERS: And this was a table that I think you said you were referring to when we got to --

MR. PELINO COLAIACOVO: Yeah.

MR. BOB PETERS: -- eventually to your slide 31?

MR. PELINO COLAIACOVO: I actually

referred to the 3.95 percent because the impacts under 3.95 percent were more severe. But I just wanted to make the point that even though they were more severe, they were still supportable.

I think in this figure, under 7.9 percent rate increases for six (6) years, I think -- what you see is the -- the top line, Manitoba Hydro '16 update with interim is -- is under reference scenarios under their P50 hydrological scenario, retained earnings rise from 3.2 billion in 2019/'20, all the way up to almost 8 billion in 2028/'29.

And then they have five (5) and seven (7) year drought sensitivities, beginning in -- in two (2) different years, 2019/'20 and 2022/'23. And -- and you can see that under a drought, the retained earnings are less than they would be in good water conditions, which is the top line.

MR. BOB PETERS: So that means, Mr. Colaiacovo, that even though in that scenario, Manitoba Hydro's drought isn't reducing the retained earnings of the Corporation, but it's not allowing it to accumulate as much as it otherwise would have?

MR. PELINO COLAIACOVO: Right. And -- and so I think that begs a bit of a question, because if the point of having reserves is to withstand a drought, why are you actually -- why are your rates so high that during a drought, you're still building your reserves? It -- it's a bit problematic, whereas if you look at the 3.95 percent scenario in figure 1 --

MR. BOB PETERS: Diana, if we could scroll to figure 1, at the top of the page.

MR. PELINO COLAIACOVO: What you see there is that you're starting with $3 billion of retained earnings, and there are drought situations, and over the course of the drought, your retained earnings do fall, which is what you would expect to happen during a drought, but -- and -- and that's why I talked about it. I -- even -- even with $3 billion of retained earnings, you still have enough retained earnings to withstand a seven (7) year drought.

In the '22/'23 situation, if you -- you see -- in 2022/'23, you begin with $3.2 billion, and after a seven (7) year drought, you still have almost a billion dollars. So you have enough reserves to withstand a seven (7) year drought as depicted in this -- in -- in this rate path.

In the 7.9 percent rate path, not only do you have enough reserves, but you're actually still building reserves during a drought. So it -- it raises some questions about whether that 7.9 percent rate increase is actually required.

MR. BOB PETERS: All right. Let me -- let me see if I've got this on the record for the panel. Looking at the 3.9 percent rate trajectory shown in figure 1, you're acknowledging that retained earnings start off at about $3 billion. And let's pick the seven (7) year drought starting in '22/'23, they end up at about $2 billion, 2.1 billion, correct?

MR. PELINO COLAIACOVO: They end up at about 1 billion. They fall --

MR. BOB PETERS: I'm sorry.

MR. PELINO COLAIACOVO: -- by 2 billion.

MR. BOB PETERS: I'm sorry. Yes. I haven't done the math. So Manitoba Hydro is still left with approximately a billion dollars of retained earnings, and that's -- that's on the 3.9 percent retai -- rate trajectory?

MR. PELINO COLAIACOVO: That's right. And -- and clearly, that's less than you want to have, but you just suffered a seven (7) year drought. So it's -- that's why you have reduced retained earnings, because you just suffered a seven (7) year drought. And --

MR. BOB PETERS: Okay. Let me --

MR. PELINO COLAIACOVO: -- a seven (7) year drought is a pretty uncommon event.

MR. BOB PETERS: All right. And is there any magic to the year in which the drought starts, from your perspective?

MR. PELINO COLAIACOVO: Well, the -- the timing of the drought just is a question of how sensitive you happen to be to droughts in -- in that particular year.

MR. BOB PETERS: Starting the drought before Keeyask or after Keeyask is one (1) of those sensitivities?

MR. PELINO COLAIACOVO: Exactly.

MR. BOB PETERS: So let's go to the bottom, again, figure 2, and let's follow this through with the seven point nine (7.9) -- sorry. Let's follow through with the rate increases that are requested and are indicative in Manitoba Hydro integrated financial forecast 16 update with interim. And let's just pick the seven (7) year drought line starting in 2019/'20. Are you with me?

MR. PELINO COLAIACOVO: Yeah. And in that case, you're starting with $3 billion of retained earnings. You know, you're suffering a drought, but by the end of the seven (7) year drought, you actually added a billion dollars of retained earnings.

MR. BOB PETERS: So -- so that in and of itself tells the Board that the rates were sufficient to withstand the drought without eroding any of the retained earnings?

MR. PELINO COLAIACOVO: That's right.

MR. BOB PETERS: But it then raises the question -- and I want to understand your point, is if the Board has a reserve, and we have this seven (7) year drought as depicted starting in 2019/'20, there is, in fact, no need to utilize the reserve because the rate increases have already absorbed --

MR. PELINO COLAIACOVO: That's correct.

MR. BOB PETERS: -- the impact?

MR. PELINO COLAIACOVO: Yeah. You're -- the rates are so high that you'd -- actually don't need reserves, so it -- I mean, if -- if the purpose of reserves is to withstand droughts, and you're not actually ever using a reserve during a seven (7) year drought, then how is that the purpose of the reserve?

I mean, your -- your rates are so high that a drought becomes irrelevant. It -- it -- you -- you need -- there -- there needs to be a scenario that's much, much worse than a seven (7) year drought, given the -- the level of rates that -- that are there.

MR. BOB PETERS: I think for the first time in Public Utilities Board hearings, you and Mr. Ghikas talked about dead money, and the essence of that, and I -- I -- we -- we got that full indication, but the panel should take from that discussion your contention is that the rate request would be considered inefficient when you consider the cost of capital of ratepayers?

MR. PELINO COLAIACOVO: Yes.

MR. BOB PETERS: And as I understood your evidence when you were answering questions for Mr. Ghikas, you were saying to the panel, Every ratepayer has their own opportunity cost of their money, and that's -- that's how you should look at it, but because you can't, you picked a proxy?

MR. PELINO COLAIACOVO: That's right.

MR. BOB PETERS: Did I understand that the proxy you assumed was 3 percent real and then 2 percent for inflation, correct?

MR. PELINO COLAIACOVO: That's correct.

MR. BOB PETERS: And that came out to a social discount rate of 5 percent?

MR. PELINO COLAIACOVO: That's correct.

MR. BOB PETERS: And that 5 percent, I'm not sure if I read it in your report. I think I did. That wro -- that number is used by the government of Canada?

MR. PELINO COLAIACOVO: Yes. Both the government of Canada and the government of the United States have used that number for a variety of purposes, usually when they're doing long-term analysis of -- of different policies.

(BRIEF PAUSE)

THE CHAIRPERSON: Mr. Colaiacovo, while Mr. Peters is looking for this, can I just ask a question in relation to figure 1 and figure 2?

MR. PELINO COLAIACOVO: Sure.

THE CHAIRPERSON: These numbers don't preclude the Board from either providing an increased rate when a drought happens, or a rate rider to -- to address the issue of a drought?

MR. PELINO COLAIACOVO: No. Both of -- both of these figures are done on the assumption that the Board makes no changes to rates while the drought is happening.

THE CHAIRPERSON: Okay.

MR. PELINO COLAIACOVO: So the rates continue to rise at the -- the percentages that are listed for each of the two (2) figures. So if the -- if the -- if the -- in the case of the three point nine-five (3.95), if the drought started, and at some point during the drought, the rates were increased by more than 3.95 percent, than the -- the impact of the drought, financially speaking, would be less.

THE CHAIRPERSON: All right. Thank you.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Mr. Colaiacovo, the last area that I wanted to talk to you about is on -- is in Volume II of Board counsel's book of documents, Exhibit 42-2, page 388. And this is a response that you prepared to an information request?

MR. PELINO COLAIACOVO: Yes.

MR. BOB PETERS: And you spoke about it without drawing it, I think, to the Board's attention when you were being asked questions by other counsel, but you prepared what I understand here is to be a relatively simplistic example to determine whether ratepayers, in the vernacular, are better off on a rate path at 7.9 percent, as depicted at the top half of the page, compared to those same ratepayers at a 3.95 percent rate trajectory, shown on the bottom of the page?

MR. PELINO COLAIACOVO: That's correct.

MR. BOB PETERS: The top of the page, if I can draw your attention over to year 11, we note that under the price increase line, there is a negative nineteen point seven-five (-19.75), correct?

MR. PELINO COLAIACOVO: That's correct.

MR. BOB PETERS: And this represents the adjustment that Manitoba Hydro mathematically calculates would be required to stay at a 25 percent equity level after they've achieved it in their year 10?

MR. PELINO COLAIACOVO: That's correct. Yeah. Both -- both the PUB and I asked IRs on this issue asking Manitoba Hydro to -- to prepare a rate path that would maintain the 75/25 debt ratio once it was achieved. And so you -- you know, in year 11, in order to -- to -- assuming that the -- the 75/25 was achieved in year 10, and you didn't want it to change, then you would have to reduce rates by 19.75 percent in year 11. You'd reduce them again by 3 percent in year 12. You'd reduce them again in -- in year 13, and then the rates kind of go up and down a little bit over the subsequent years.

MR. BOB PETERS: All right. In previous discussions with a Hydro witnesses, you can take it subject to check that they've made no promises for the future, and they're not in a position to, and you understand that?

MR. PELINO COLAIACOVO: Yeah. This is a purely mathematical exercise.

MR. BOB PETERS: And in this particular case, let's cut to the chase, demonstrate on here what the impact is discounted at 5 percent for the rate path at the top and the rate path at the bottom.

MR. PELINO COLAIACOVO: Well, so in -- in the last few lines of -- under the 7.9 percent, there is the annual nominal cost of power, accumulated nominal cost of power, but then also the discounted annual and cumulative amounts. And so you can see there's obviously a -- a significant difference between those two (2), because you're applying a 5 percent discount rate.

But after ten (10) years, the cumulative nominal cost of power under the 7.9 percent rate path is fourteen thousand four hundred and twelve (14,412), but in discounted dollar terms, it's ten thousand eight hundred and fifty-two (10,852). And so if you scroll down, the 3.95 percent rate path, at ten (10) years. The nominal cost is twelve thousand (12,000), and the -- the discounted is nine thousand four hundred (9,400). So under the 3.95 percent, you're paying less in the first ten (10) years, which makes complete sense, because your rates are rising more slowly.

Now in year 11, under the 7.9 percent rate path, rates actually come down. Under the 3.95 percent rate path, they keep going up. And -- and so this is the value of -- of discounting. You -- you want to understand, you know, the -- the value of making higher payments early and lower payments later versus a -- a reverse pattern, where you're making lower payments early and then higher payments later.

And -- and so if you move forward from the -- the ten (10) to the fifteen (15) year column, you'll see that in the 3.95 percent rate path, under the -- the fifteen (15) year column, the discounted amount is thirteen thousand seven hundred and seventyfive (13,775), whereas above, you can see that in the same column, fifteen (15) years, under 7.9 percent, it's still higher. It's fourteen thousand five hundred and thirty-nine (14,539). Despite the fact that there was a big rate decrease in year 11, it's not enough to catch up to the -- the -- on a discounted basis, to having had a lower rate path to begin with.

MR. BOB PETERS: And mathematically, Mr. Colaiacovo, in year 19, just to conclude this, if we can scroll to the far right-hand side of the charts, applying your same logic, the -- the cumulative discounted cost at the 7.95 percent path is sixteen thousand nine hundred and twenty-nine dollars ($16,929)?

MR. PELINO COLAIACOVO: Yeah, and -- and --

MR. BOB PETERS: That's almost the same as the sixteen thousand eight hundred and twenty-eight -- twenty-two dollars?

MR. PELINO COLAIACOVO: That's right.

MR. BOB PETERS: So eventually, they -- at the end, their endpoint is relatively the same?

MR. PELINO COLAIACOVO: That's right, because -- and -- and you can see that even under the

3.95 percent, with 3.95 percent, you achieve 75/25 in year 17, and then rates start to fall. And so from that point into the future, in fact, you will have exactly the same rates after year 19.

But for ratepayers, what this is telling you is that under the 3.95 percent rate path, ratepayers are paying a lot less in the early years, and -- and then they're paying somewhat more in later years until they equalize, where it's the reverse at the 7.9 percent.

MR. BOB PETERS: Okay. I have your point. And I would like to thank Mr. Chair, Mr. Colaiacovo for his evidence and his answer to my questions. Thank you.

THE CHAIRPERSON: Thank you, Mr. Peters. Dr. Williams, any re-examination?

DR. BYRON WILLIAMS: The only question I had was taken by the Board Chair, so we thank the Intervenors, Hydro, and PUB counsel for the -- their questions, and we have no re-examination.

THE CHAIRPERSON: Thank you. Mr. Colaiacovo, thank you very much for today. It's been a long day. We appreciate your attendance and assistance to the Board. Thank you.

MR. PELINO COLAIACOVO: Thank you.

(PANEL STANDS DOWN)

THE CHAIRPERSON: We're adjourned until nine o'clock tomorrow morning. Thank you. Sir...?

DR. BYRON WILLIAMS: Sir -- Mr. Chair, just for the court -- I did canvass the issue with Mr. Hacault in terms of --

THE CHAIRPERSON: Yes.

DR. BYRON WILLIAMS: -- Hydro's proposed response, and he concurs --

THE CHAIRPERSON: Okay.

DR. BYRON WILLIAMS: -- we're taking the same position. We would expect that Manitoba Hydro will provide their calculations in advance of the day of the hearing, but he has no objection, nor do I.

THE CHAIRPERSON: Okay. Well, we -- we will issue a ruling in the next day or so. Thank you.

--- Upon adjourning at 5:35 p.m.

Certified Correct,

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Cheryl Lavigne, Ms.