



“When You Talk - We Listen!”



MANITOBA PUBLIC UTILITIES BOARD

re:

MANITOBA HYDRO

2023/24 and 2024/25

GENERAL RATE APPLICATION

Hearing

Before Board Panel:

Robert Gabor, KC - Board Chairperson

Marilyn Kapitany - Board Vice Chair

Carol Bellringer - Board Member

Hamath Sy - Board Member

George Bass, KC - Board Member

HELD AT:

Public Utilities Board

400, 330 Portage Avenue

Winnipeg, Manitoba

June 9th, 2023

Pages 3940 to 4150

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1	LIST OF UNDERTAKINGS		
2	NO.	DESCRIPTION	PAGE NO.
3	70	Mr. Bowman, subject to check, accept	
4		that the loss on retirement and	
5		disposal of assets account shown on the	
6		screen from Board book of documents	
7		comprises both the un-depreciated	
8		capital costs and the cleanup costs	
9		associated with the Selkirk plan. And	
10		if not, advise otherwise	4115
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1 --- Upon commencing at 8:59 a.m.

2

3 THE CHAIRPERSON: Good morning,  
4 everyone. Rumour has it that today is Friday.

5 Mr. Hombach...?

6 MR. SVEN HOMBACH: Yes. Good morning,  
7 everyone. Today is the last day of oral evidence in  
8 the hearing, and I hope we all find ourselves  
9 significantly wiser but only marginally more wizened.

10 The item on the agenda today is the  
11 presentation by and examination of Mr. Patrick Bowman  
12 who is the expert witness for MIPUG. I will point out  
13 that while Mr. Bowman's evidence includes evidence on  
14 depreciation, that was dealt with on June 5 and will  
15 not be the focus of the hearing today.

16 Mr. Bowman has previously been sworn  
17 in, but we'd agreed among counsel that his credentials  
18 would be established at the beginning of this morning.  
19 So I would suggest, Mr. Chair, that we turn it over to  
20 Ms. Beaumont to walk Mr. -- Mr. Bowman through his  
21 credentials.

22 THE CHAIRPERSON: Right. You have the

23 --

24 MS. MELISSA BEAUMONT: Good morning.

25 THE CHAIRPERSON: You have the red

1 button.

2 MS. MELISSA BEAUMONT: It works.

3 THE CHAIRPERSON: That's 50 percent of  
4 it, to find the button so thank you.

5 MS. MELISSA BEAUMONT: Thank you.

6 Good morning, Mr. Chair, Board members. Well, it's my  
7 first time up at the mic, and so I'm delighted to --  
8 to be here.

9 On that note, I'll just take ten (10)  
10 seconds before -- before we dive in. I just wanted to  
11 acknowledge the Board members, the Board staff, the  
12 parties and their counsel have made this a very  
13 welcoming environment for a first timer, so I thank  
14 you.

15 As Mr. Hombach introduced, we're joined  
16 today by Mr. Bowman who's providing independent expert  
17 evidence on behalf of MIPUG in this proceeding.

18 We're also supported in our back row by  
19 Mr. Dale Friesen, senior consultant, and Mr. Joshua  
20 Dyck, research analyst with InterGroup.

21 As Mr. Hombach pointed out, Mr. Bowman  
22 was already sworn in on D-day this past Monday, and so  
23 I'll jump right into leading him through his  
24 qualifications.

25 And I'll also note, as was pointed out



1 earlier, that Mr. Bowman is testifying today to the  
2 areas in his evidence other than depreciation.

3

4 MIPUG PANEL:

5 PATRICK BOWMAN, Previously Sworn

6

7 EXAMINATION-IN-CHIEF BY MS. MELISSA BEAUMONT:

8 MS. MELISSA BEAUMONT: So with that,  
9 Mr. Bowman, can you please confirm that your CV has  
10 been entered on the record and is attached as Appendix  
11 'A' to your pre-filed testimony, which is MIPUG  
12 Exhibit 6, correct?

13 MR. PATRICK BOWMAN: That's correct.

14 MS. MELISSA BEAUMONT: And, Mr.  
15 Bowman, you're the principal consultant of Bowman  
16 Economic Consulting, which is an economic consulting  
17 firm focussed on utility rate regulation, correct?

18 MR. PATRICK BOWMAN: That's correct.  
19 I am also an associate at -- at InterGroup who is the  
20 -- the main service provider to the Industrial Power  
21 Users Group in respect of these matters.

22 MS. MELISSA BEAUMONT: Thank you. I  
23 see that Bowman Economic Consulting is a member of the  
24 Society of Depreciation Professionals, correct?

25 MR. PATRICK BOWMAN: That's correct.

1 MS. MELISSA BEAUMONT: And prior to  
2 that, you've had approximately twenty-four (24) years  
3 of experience with InterGroup Consultants, and that  
4 experience includes conducting research for regulatory  
5 and rate reviews of electric, gas, and water utility -  
6 - water utilities in approximately nine (9) Canadian  
7 provinces and territories and internationally,  
8 correct?

9 MR. PATRICK BOWMAN: Correct.

10 MS. MELISSA BEAUMONT: Your experience  
11 also included preparing evidence and expert testimony  
12 for regular -- regulatory hearings?

13 MR. PATRICK BOWMAN: Yes.

14 MS. MELISSA BEAUMONT: And assisting  
15 in utility capital and operations planning to assess  
16 impacts on rates and long-term stability?

17 MR. PATRICK BOWMAN: Yes.

18 MS. MELISSA BEAUMONT: You hold a  
19 master's of natural resource management from the  
20 University of Manitoba, correct?

21 MR. PATRICK BOWMAN: That's correct.

22 MS. MELISSA BEAUMONT: I also  
23 understand that, for approximately the past decade,  
24 you were mentored by Patricia Lee who is a trainer  
25 with the Society of Depreciation Professionals and

1 faculty member of the National Association of  
2 Regulatory Commissioners, Regulatory Studies Program?

3 MR. PATRICK BOWMAN: That's correct.  
4 That's in respect of matters of depreciation, and I  
5 worked very closely with Pat Lee for about a decade.

6 MS. MELISSA BEAUMONT: Okay. And I  
7 won't take you there, but if we looked at your CV, we  
8 can see that since 1998, you have experience  
9 participating in over eighty (80) utility -- utility  
10 regulatory proceedings, correct?

11 MR. PATRICK BOWMAN: I'll trust your  
12 math. It's -- it's getting hard to fit on two (2)  
13 pages.

14 MS. MELISSA BEAUMONT: And your  
15 participation in those hearings was on behalf of -- of  
16 a number of parties ranging from utilities,  
17 Interveners, and regulators, correct?

18 MR. PATRICK BOWMAN: That's correct.

19 MS. MELISSA BEAUMONT: And we can also  
20 see that -- that going back to approximately 2005, you  
21 did work for Yukon Energy in the area of depreciation.

22 MR. PATRICK BOWMAN: 2005 was the  
23 first proceeding where I had a significant role in  
24 depreciation, correct.

25 MS. MELISSA BEAUMONT: And I

1 understand you coordinated Yukon Energy's depreciation  
2 filing in that proceeding, correct?

3 MR. PATRICK BOWMAN: That's correct,  
4 and I testified to it.

5 MS. MELISSA BEAUMONT: Okay. And what  
6 did that involve?

7 MR. PATRICK BOWMAN: Yukon Energy was  
8 one (1) of my clients at the time, and I was working  
9 with their finance department who manages the  
10 regulatory and rate filing.

11 They retained Gannett Fleming as the  
12 depreciation consultants. I assisted Yukon Energy in  
13 assembling their data that was needed for Gannett  
14 Fleming in -- in the review of the work that Gannett  
15 Fleming was doing, and management of that assignment,  
16 and then review of the drafts of -- of Gannett  
17 Fleming's study, and -- and then ultimately being the  
18 -- the person responsible for those matters when they  
19 came before the regulator.

20 Gannett Fleming did not appearing in  
21 that hearing. I was the one who dealt with that in  
22 oral testimony.

23 MS. MELISSA BEAUMONT: Great. Thank  
24 you. And since that time, you've provided evidence in  
25 relation to depreciation in proceedings involving

1 Northwest Territories Power Corporation, Newfoundland  
2 Hydro, BC Hydro, a number of utilities in Alberta, the  
3 Ontario Energy Board, and -- and Manitoba Hydro,  
4 correct?

5 MR. PATRICK BOWMAN: That's correct.  
6 The Ontario -- the one you referenced, the Ontario  
7 Energy Board, is the -- is the client in that case.  
8 The utility is -- is in regards to Enbridge Gas, and  
9 that one is ongoing.

10 MS. MELISSA BEAUMONT: And the utility  
11 proceedings that you have testified in involving Crown  
12 corporations or other government owned utilities  
13 include BC Hydro, Nelson Hydro, Northwest Territories  
14 Power Corp., Yukon Energy. And next week I understand  
15 you'll also be testifying in a New Brunswick Power  
16 proceeding?

17 MR. PATRICK BOWMAN: Generally  
18 correct. I -- I work with Nelson Hydro in respect of  
19 their regulatory matters, but I've never testified on  
20 behalf of them. They -- they haven't had an oral  
21 hearing. But otherwise, I think the list is correct.  
22 I think I heard Newfoundland, and -- and if so, then  
23 that list sounds correct.

24 MS. MELISSA BEAUMONT: And if I can  
25 summarize, the evidence that you've provided relating

1 to depreciation includes reviewing depreciation  
2 studies, methodologies, and principles?

3 MR. PATRICK BOWMAN: That's part of  
4 it, yes.

5 MS. MELISSA BEAUMONT: Mr. Bowman,  
6 with respect to Manitoba Hydro, I understand you've  
7 participated in every Manitoba Hydro PUB hearing since  
8 2001. Is that correct?

9 MR. PATRICK BOWMAN: I've -- I've  
10 testified at every -- at least every major Manitoba  
11 Hydro hearing since 2001 where there was an  
12 opportunity for oral testimony. I think the first  
13 case may have been '98 or '99.

14 MS. MELISSA BEAUMONT: More  
15 particularly, you provided evidence related to  
16 depreciation at the Manitoba Hydro 2012/'13 and  
17 2013/'14 GRA, correct?

18 MR. PATRICK BOWMAN: That's correct.

19 MS. MELISSA BEAUMONT: And in that  
20 hearing -- in that hearing, you gave evidence with  
21 respect to the issues of equal life group versus  
22 average service life and removal of net salvage value  
23 from depreciation?

24 MR. PATRICK BOWMAN: I -- I think  
25 that's where it all started, yeah. Yes, that was --

1 those were the matters that were under review.

2 MS. MELISSA BEAUMONT: And you also  
3 provided evidence related to depreciation in the  
4 Manitoba Hydro 2015/'16 GRA, as well?

5 MR. PATRICK BOWMAN: I did. In that  
6 GRA, I was complimented by Pat Lee. We -- we both  
7 submitted evidence and -- and testified together. Pat  
8 dealt with some of the more technical matters related  
9 to the history of ELG and why -- and its use in the --  
10 in the United States in particular, and -- and I dealt  
11 with more of the -- the rate implications.

12 But -- but, yes, depreciation was part  
13 of the matters that I spoke to in that hearing.

14 MS. MELISSA BEAUMONT: And was your  
15 evidence accepted by this Board during that  
16 proceeding?

17 MR. PATRICK BOWMAN: My -- all of the  
18 evidence that I submitted was -- was part of the  
19 record. And -- and the Board did reference and use  
20 that in the -- in the final decision.

21 MS. MELISSA BEAUMONT: Mr. Bowman,  
22 since the 2015/'16 GRA, I understand you've  
23 participated in over nineteen (19) additional hearings  
24 dealing specifically with depreciation.

25 Do I have that right?

1 MR. PATRICK BOWMAN: That's correct.

2 MS. MELISSA BEAUMONT: Mr. Bowman, do  
3 you adopt the following evidence as being true and  
4 accurate to the best of your knowledge, MIPUG Exhibit  
5 6?

6 MR. PATRICK BOWMAN: Yes, subject to  
7 one (1) small correction that was addressed in the --  
8 in the IRs which I believe you'll probably come to  
9 next.

10 MS. MELISSA BEAUMONT: PUB 16?

11 MR. PATRICK BOWMAN: That's correct.

12 MS. MELISSA BEAUMONT: Manitoba Hydro  
13 21?

14 MR. PATRICK BOWMAN: Yes.

15 MS. MELISSA BEAUMONT: Okay. And the  
16 presentation that you will give today?

17 MR. PATRICK BOWMAN: Yes.

18 MS. MELISSA BEAUMONT: Okay. And if  
19 we could have Mr. Bowman's presentation marked as  
20 Exhibit MIPUG 21.

21

22 --- EXHIBIT NO. MIPUG 21: Patrick Bowman's  
23 presentation

24

25 CONTINUED BY MS. MELISSA BEAUMONT:



1 MS. MELISSA BEAUMONT: Mr. Bowman,  
2 I'll confirm, your pre-filed testimony filed as MIPUG  
3 Exhibit 6 is, indeed, your report and that it was  
4 prepared by you or someone under your supervision?

5 MR. PATRICK BOWMAN: Yes.

6 MS. MELISSA BEAUMONT: And for the  
7 record, we're confirming -- I believe you just did,  
8 but we're confirming that -- that MIPUG Exhibit 6 is  
9 the version of your pre-filed testimony containing a  
10 redaction to page 16?

11 MR. PATRICK BOWMAN: That's correct.  
12 On page 16, I had originally input a copy of a graph  
13 from Manitoba Hydro's filing, which Manitoba Hydro  
14 later determined they would rather not be on the  
15 public record. And so, we filed the revised version  
16 that redacts that -- that graph.

17 I believe the full version is still  
18 available to the Board. I don't intend to use that  
19 today or have any -- any reference to that  
20 confidential material. I don't think the redaction  
21 changes the substance of the report.

22 MS. MELISSA BEAUMONT: And your  
23 evidence and your pre-trial testimony pertains to  
24 several different areas.

25 I'll list them. Cost of Service?

1 MR. PATRICK BOWMAN: Yes.

2 MS. MELISSA BEAUMONT: Rate design?

3 MR. PATRICK BOWMAN: Yes.

4 MS. MELISSA BEAUMONT: Revenue

5 requirement?

6 MR. PATRICK BOWMAN: Yes.

7 MS. MELISSA BEAUMONT: And

8 depreciation, which you've previously testified to?

9 MR. PATRICK BOWMAN: Yes.

10 MS. MELISSA BEAUMONT: All of those

11 areas that I just listed, those are areas that you

12 have previously provided expert evidence on in

13 numerous other proceedings, correct?

14 MR. PATRICK BOWMAN: Yes.

15 MS. MELISSA BEAUMONT: Mr. Bowman, do

16 you acknowledge that it is your duty to provide

17 evidence in relation to this proceeding that is fair,

18 objective, and non-partisan?

19 MR. PATRICK BOWMAN: Yes.

20 MS. MELISSA BEAUMONT: And I'll have

21 you confirm, it's your duty to provide opinion

22 evidence that is related only to matters that are

23 within your area of expertise?

24 MR. PATRICK BOWMAN: Yes.

25 MS. MELISSA BEAUMONT: And do you

1 acknowledge it is your duty to provide such additional  
2 evidence as the Public Utilities Board may reasonably  
3 require to determine a matter in issue?

4 MR. PATRICK BOWMAN: Yes.

5 MS. MELISSA BEAUMONT: And finally,  
6 that these duties prevail over any obligation that you  
7 owe to MIPUG or any party by whom or on whose behalf  
8 you are engaged. Correct?

9 MR. PATRICK BOWMAN: Yes.

10 MS. MELISSA BEAUMONT: Thank you very  
11 much. I'd like to invite you to now lead us through  
12 your presentation.

13 MR. PATRICK BOWMAN: Thank you. Good  
14 morning, Mr. Chair, Vice-Chair, members of the Board.

15 I'm going to be referring to Exhibit  
16 MIPUG-21, which I believe has been pulled up on the  
17 screen in front of us.

18 At the start, there's a slide with the  
19 outline of the -- of the presentation for today. I'll  
20 be dealing with these in -- in groups, but there's  
21 seventeen (17) recommendations in the report and they  
22 are highlighted as we move through this presentation.

23 Starting with slide 3, we're going to  
24 deal with the revenue requirement and the overall  
25 level of rates. I've noted on slide 4 and to get it

1 out of the way early, on the basis of my review I had  
2 concluded that the average increases that have been  
3 proposed by Hydro in the revised filing, which is to  
4 finalize the interim 3.6 percent and have a further  
5 two (2) increases of 2 percent on average are  
6 reasonable given the context that has been provided in  
7 this Hearing.

8                   And when I say "the context," I'm  
9 really relying on two (2) key parts. First, is the  
10 context regarding the facts and Hydro's financial  
11 performance. And the second is the context regarding  
12 the legislative regime.

13                   I will note, as set out in this section  
14 of my report, that the context for this Hearing, in  
15 the way that I have approached it, is heavily defined  
16 by Bill 36. I'll refer to it as Bill 36, although, as  
17 acknowledged in this room, it is now legislation.  
18 It's understood to have been passed and proclaimed and  
19 it is understood that, as written, it will take effect  
20 for future rate periods and, presumably, the next rate  
21 increase that comes before this Board.

22                   THE CHAIRPERSON: Sorry to interrupt,  
23 Mr. Bowman. Did you just say that Bill 36 has been  
24 passed and proclaimed?

25                   MR. PATRICK BOWMAN: That is my

1 understanding. There continue to be transition  
2 provisions.

3 THE CHAIRPERSON: Yeah. Okay. Part  
4 of it has been passed and received -- and received  
5 Royal assent.

6 The second part has not been proclaimed  
7 yet, so. I mean, the parts in relation to what you're  
8 talking about have received Royal assent. I just  
9 wanted to make it clear that not the entire Bill has  
10 been proclaimed.

11

12 CONTINUED BY MS. MELISSA BEAUMONT:

13 MR. PATRICK BOWMAN: Thank you, Mr.  
14 Chairman, for that clarification. I would be dealing  
15 with the matters dealing with rate proposals. And my  
16 understanding is that that is passed and is -- is  
17 proclaimed into law and will take effect subject to,  
18 at this time, the -- the transition provisions.

19 Moving to slide 5. In order to  
20 understand the approach that I took and the logic in  
21 coming up with those conclusions, I thought it  
22 important to go over the context for Manitoba Hydro  
23 regulation.

24 Some background on the way we deal with  
25 Hydro regulation is that, in looking at this utility,

1 we have ju -- pretty consistently looked to the long  
2 term, not just the next two (2) years.

3 We do that through a long-term  
4 financial forecast, which Hydro has prepared and filed  
5 in each of the hearings that I have been in, but one,  
6 and -- and testing of those financial forecasts.

7 I -- I have said before that regulating  
8 Hydro is like steering a super tanker. One needs to  
9 look -- look well into the distance and -- and -- and  
10 make decisions early and with an eye to where you need  
11 to be. That is both a fact -- reflects the factual  
12 situation of Hydro, in that many of their -- of their  
13 costs and trends are -- are -- are stable over the  
14 short term and change over the long-term and, so, we  
15 need to consider how those things are changing over  
16 the long term, but it also is an opportunity with  
17 respect to Hydro that's very different than other  
18 utilities.

19 So, we look to the long term for two  
20 (2) reasons. With respect to Hydro's existing  
21 regulatory model and, by "existing", I mean the model  
22 that -- that would apply to this hearing. Hydro's a  
23 cost recovery utility. Mr. Colaiacovo went over some  
24 of the background on that. It's one of the last of  
25 its kind.

1                   There was a time that this was a very  
2 common model in Canada. Hydro is -- up -- up until  
3 this proceeding -- was -- was one of the few that  
4 remained and, when I say it's a cost recovery utility,  
5 there are various aspects that are built into that  
6 model. The first is that it does not raise  
7 shareholder equity from base rate from investors. It  
8 doesn't have an expectation of returns to pay to those  
9 investors and, in that regard, it means you -- there's  
10 not the same necessity to set an annual revenue  
11 requirement on which those investors can expect a  
12 stable return and the ability to pay dividends to  
13 raise capital. That's not the type of utility we are  
14 here.

15                   I do work with utilities of that type  
16 and I will tell you that rate reviews for those type  
17 of utilities are a very different experience than  
18 this.

19                   The second is that this type of -- of -  
20 - of utility is financed heavily with debt. That debt  
21 is nominally guaranteed -- or issued by government and  
22 the debt is used for two (2) reasons. One is because  
23 we don't go to Bay Street to sell shares to raise  
24 capital and the second is because the debt is actually  
25 the cheapest source of capital. It helps keep rates

1 low.

2 I'll -- I'll deal with this a bit more,  
3 as we work through this slide. But the key is that  
4 that debt is backed by a strong franchise and by the  
5 ratepayers and the rates that are paid in the  
6 Province. By "strong franchise," I mean Hydro is  
7 secure in its ability to operate in the Province.  
8 It's not going to get bought out or forced out or have  
9 the serve -- its service area decide it wants to  
10 change providers. It's protected by law.

11 I'm dealing with another situation in  
12 Northwest Territory (sic) right now where a town  
13 decided it wanted to change utility providers and it  
14 is going through buying out the assets of a utility.  
15 That -- that isn't the case here. A -- a -- a lender  
16 to Hydro can be pretty sure that Hydro has a secure  
17 asset base and a secure customer base and that it's  
18 going to be here a while to be able to collect those  
19 revenues and that gives comfort.

20 On the other side, it's backed by the  
21 ratepayers, so that there's a bullet there that I note  
22 "can be raised." It probably should say "rates can be  
23 raised when needed," but they only need to be raised  
24 with recognition that the capital that is contributed  
25 by higher rates has an opportunity cost, because it



1 removes that productive capital from the Manitoba  
2 economy, whether that's from businesses who could be  
3 using that to invest or from households who could be  
4 paying down debt levels or -- or, you know, deciding  
5 how they would use their -- their -- their funds.

6           Equity -- when we talk about equity in  
7 Hydro, we really mean customer contributions, over and  
8 above the costs of producing power. Equity occurs  
9 when Hydro has a net income that exceeds its -- the --  
10 the -- or that is positive and where -- where revenues  
11 exceed costs, and remember that those costs already  
12 include the costs for depreciation, which is the  
13 consumption of the assets in service.

14           So, even if Hydro had a zero net  
15 income, ratepayers are still funding the use and the  
16 consumption of the assets currently in service. It  
17 only gets to a positive net income when the revenues  
18 exceed that and that -- the same will be true on a  
19 cash basis, and I'll deal with that in a minute.

20           So, you have this package idea of a  
21 utility that can raise significant amounts of debt,  
22 that can finance assets with debt, that can rely on  
23 that debt as its lowest cost source -- cost source of  
24 financing, and that has the ability to tap into secure  
25 ratepayers who are buying an essential product and it

1 could raise rates when it needed to.

2                   That's the essence of the model that we  
3 used to call the -- the Cost Recovery or Interest  
4 Coverage Regulated Utilities. That used to exist in a  
5 lot of Canada: Ontario, New Brunswick, Nova Scotia,  
6 Newfoundland, BC, the Northern Canada Power  
7 Commission.

8                   In -- at -- at a certain point there  
9 were a lot of utilities regulated this way. Most have  
10 now gone a different route and Hydro was one of the  
11 last. Most of those different routes involve various  
12 degrees of either governments electing to privatize,  
13 such in Nova Scotia where they sold the utility, or  
14 electing to convert to a more private-sector model  
15 where the government can earn a dividend or a profit  
16 off of the utility and expl -- and explicitly do that.

17                   Or, in some cases, being forced there  
18 because the -- the form of assets that the utility  
19 uses did not lead to the ability to have low enough  
20 rates that you could rely on recourse to ratepayers.

21                   And that would tend to be the case in  
22 Ontario where after -- where Ontario had power at cost  
23 and relatively low rates and then ended up making  
24 investments in nuclear plants, which drove need for  
25 rate increases and hit a point where the rate

1 increases were actually driving the load, particularly  
2 the industrial load that was there.

3                   And so, it didn't have that same  
4 backing where it knew it could always go back to the  
5 ratepayers and still have a secure source of added  
6 revenue. And the -- the model started to break down  
7 and it -- it ended up leading to the decisions that  
8 were made in the late '90s and the early 2000s to --  
9 to break up that -- that old Ontario Hydro into a  
10 different model.

11                   We here are blessed by the ability to  
12 retain this model, at least through this point in  
13 time. It's not always the case. People who don't  
14 have Hydro assets or have a lot of fuel costs in their  
15 base, and fuel, of course, being an unstable, and  
16 unpredictable and I will say non-mean reverting cost,  
17 means that it's difficult to try to keep to this  
18 model, or -- or places that have made decisions for  
19 equity returns, they have not been able to keep to  
20 this same kind of model for the utility.

21                   But that's where we were coming into  
22 this hearing and due to the transition provisions, I  
23 would understand to still technically be the -- the  
24 regime that applies to Manitoba Hydro.

25                   However, as I noted, that regime means

1 looking to the long term and the long-term future for  
2 Hydro is not necessarily that same model. Go to the  
3 next slide.

4                   We're now talking about the approach to  
5 Bill 36 in the evidence. I didn't mean to be too  
6 pejorative here, but the question on financial targets  
7 I -- I put, "Am I in the wrong hearing?"

8                   When I prepared the evidence I did have  
9 some small discussion about financial targets. I did  
10 not expect there to be as much justification of the  
11 targets by Hydro, or challenge of the targets by  
12 others in this proceeding given that they're written  
13 in stone and -- and they're not, then that will apply  
14 for the long-term.

15                   Hydro's always had directional  
16 financial targets, different types, interest coverage,  
17 and capital coverage, those targets provide guidance.  
18 There were never black and white requirements.

19                   They changed over time. They were  
20 updated as needed. They always gave an idea of where  
21 you were heading but they were never an absolute  
22 requirement that was locked in that you had to meet  
23 over a certain time -- time period.

24                   If you go back in history, you'll find  
25 Hydro had 85/15 as a target for a while for a long-

1 term equity standard. That was changed to 25 percent.  
2 The date at which they were trying to reach those  
3 changed.

4           Almost every hearing I think I was in,  
5 there was a small tweak to the targets as we were  
6 adjusting for the facts as they arose. And those  
7 targets were generally raised at times where the  
8 Utility was in a position to see positive returns and  
9 to be able to adjust the targets concurrent with an  
10 ability to show a plan that rates could meet those  
11 targets.

12           An example was given of Limestone and  
13 the returns from Limestone. A lot of these -- these  
14 debt-equity targets, for example, first arose after  
15 Limestone was in service and providing the types of  
16 returns that it -- that -- that we now attribute to  
17 it.

18           But the key is the main purpose of the  
19 targets ended up being to communicate where we were  
20 going without being locked into them. And they were  
21 also flexible. We had a -- a PUB that had a wide  
22 scope to vary from the target when -- when it needed  
23 to, with reasons.

24           But it still could use the targets to  
25 help confirm a commitment to making -- making progress

1 and to where the system was going.

2                   On the basis of Bill 36, it's my  
3 understanding that we will not be reviewing financial  
4 targets here for the long term in future, after 2025,  
5 because those are set by legislation, subject to being  
6 tweaked by -- by regulation as permitted in the -- in  
7 the Manitoba Hydro Act.

8                   The result of this is that we have  
9 turned targets from a directional communication tool  
10 and -- that is -- that is actively managed into  
11 something that's black and white as a requirement.

12                   And harking back to the previous slide,  
13 there -- the -- the idea that we are -- we're a  
14 utility -- we had a utility who could operate with a  
15 relatively high debt percentage backed by ratepayers  
16 who could pay, rates could face rate increases, if  
17 needed, but ought not face those rate increases unless  
18 needed, that -- that's basically been turned on its  
19 head.

20                   We now have the ability -- the  
21 requirement to get to a certain rate target. We could  
22 hit adverse conditions along the way. Absent an  
23 assumption that someone's going to change the target,  
24 we need to find a way to be able to deal with those  
25 bumps along the way.

1                   And -- and it appears that the Bill  
2 recognizes that and recognizes that setting targets in  
3 stone could cause rate instability. For example, if  
4 we started a five (5) year drought tomorrow, it would  
5 make it very difficult to think about achieving those  
6 targets. It's not raining. We may have started the  
7 five (5) year drought today for all we know.

8                   It would make it very difficult to  
9 achieve those targets, and the only way to do it the  
10 way the Bill is written is to -- is -- is to have rate  
11 increases.

12                   As a result, the Bill inserts a second  
13 provision which says, but don't worry, those rate  
14 increases won't be above inflation. And in that  
15 regard, it effectively turned the balanced financial  
16 model on its head. We can move to slide 7.

17                   I've -- I'm warned to use analogies  
18 with -- with trepidation, but the image of the Utility  
19 and the risks it faces and its reserves, sometimes in  
20 my head it's like too the idea of a -- of a plane  
21 flying through the mountains, and the question is:  
22 How does one make sure that you're safe in that  
23 environment?

24                   Well, one (1) way to do it is to fly  
25 high, but that takes a lot of fuel to get up there and

1 a lot of investment of, you know -- in -- in doing the  
2 climb and in maintaining that. And the other way is  
3 to have a big engine so you can climb when you need  
4 to.

5                   And effectively, what the model in Bill  
6 36 does is it takes away the big engine. It takes  
7 away the opportunity to do rate increases in the  
8 unlikely event that something happened in future. And  
9 as a result, we effectively need to now replace that  
10 with climbing early and often in order to gain that  
11 altitude to make sure that we can manage risks in that  
12 way.

13                   And that's why I would say that Bill 36  
14 turns the regulatory model on its head and, being  
15 where we are and accepting that this is -- this is the  
16 law of the land that is coming, I end up with a  
17 conclusion that we don't need to debate Hydro's  
18 targets in the same way.

19                   We don't need to debate the regulatory  
20 model in the same way, but what we do need to do is  
21 accept that the new regulatory model requires us to  
22 act early and often with rate response when we can  
23 because we need to move towards the -- the altitude  
24 that's needed to provide -- provide the security and  
25 safety that ratepayers would -- would want and that



1 our Utility needs.

2                   And I contrast that to Order 59/'18  
3 which was very clear, variable matters such as drought  
4 should be managed by reserves as well as some degree  
5 of rate response, while trends in costs such as  
6 interest rate increases or adverse export market  
7 movements would be dealt with by future rate increases  
8 when they arise.

9                   That was the Board's decision. I'm  
10 paraphrasing, but that was effectively the Board's  
11 decision in 59/18, and I'm -- I'm -- my conclusion is  
12 that second bullet has lost a degree of the  
13 flexibility that was otherwise assumed in it.

14                   Consequently, we need to be on a path  
15 today to meet the Bill 36 targets, and that includes  
16 absorbing what we would consider expected -- I'll say  
17 even likely -- adverse future movements in the next  
18 few years.

19                   And the two (2) that stand out are that  
20 our plan shows we need to refinance a billion dollars  
21 of debt a year which will be at higher rates than is  
22 present -- presently -- that we're presently paying,  
23 and that we have the ending of the Northern States  
24 Power Contract, and there's insufficient capacity to  
25 replace that sale as firm power exports, which means

1 we won't receive the same degree of prices.

2                   Those aren't speculative future  
3 conditions. We know that there will be debt to  
4 refinance. It's true, we don't know the rates it will  
5 be at, but I think we can be reasonably comfortable  
6 that the likelihood we get the rates that we were  
7 getting the last few years is pretty low, and we  
8 should assume that.

9                   And as a result, when you put those  
10 type of facts up against the -- the requirement in --  
11 in Bill 36 that rates not go up by more than  
12 inflation, it means you probably need to be doing the  
13 type of rate increases that Hydro is proposing today.

14                   I did note in support of my  
15 recommendation 3 I had some disappointment that we  
16 have effectively a single key scenario in the  
17 financial forecast.

18                   That scenario in behind runs waterflow  
19 scenarios on probability that reflects an average of  
20 all the waterflow outcomes, but it doesn't reflect  
21 other types of probabilities and sensitivities in that  
22 scenario.

23                   Work had been ongoing to produce  
24 something called the -- we called the uncertainty  
25 analysis, but effectively more of a probabilistic

1 picture of Hydro's feature.

2                   And with that tool, I think it's  
3 possible we would have concluded that a lower rate  
4 increase may have been possible, and we'd still have a  
5 high likelihood of meeting the targets and we would be  
6 able to ascribe some likelihood to that.

7                   But we don't have that tool today, and  
8 -- and absent that, we can't draw that type of  
9 conclusion. My recommendation is Hydro would resume  
10 work on that tool, and I believe they've -- they've  
11 committed to do so.

12                   In my evidence, I -- I -- oh, next  
13 slide, sorry. Slide 8.

14                   In -- in my evidence, I inserted a  
15 table that was noting for the record that, if it  
16 weren't for Bill 36 -- and as we sit here today, as  
17 much as Hydro put in a case about its debt levels and  
18 about the challenges it faces -- we need to recognize  
19 where we are in the investment cycle with Manitoba  
20 Hydro.

21                   We are at a place that no one dreamed,  
22 I would say. We have quite spectacular performance  
23 with regard to the period after in-service of the  
24 major projects, as this table noted, and I find the  
25 negative net income column perhaps the most

1 persuasive.

2                   When these projects were being approved  
3 and even in periods after they were approved, it had  
4 always been expected that there would be a difficult  
5 period with many years of forecast negative net  
6 income, you know, even at average water, many years  
7 and in many cases nine (9) figures, hundreds of  
8 millions, almost a billion in one case, of negative  
9 net income after the projects came in. And that was  
10 part of the plan.

11                   We're not in that situation today. We  
12 are -- we are so much better off than that, it's --  
13 it's stunning. And I think if this information --  
14 this type of forecast had been available earlier, I  
15 think people would have found it -- found it  
16 surprising.

17                   Again, it's a little bit like the -- I  
18 don't know, the image I have in my head of the -- the  
19 anaconda that just -- just ate a pig or something  
20 lying on the road, and it's -- you know, I guess it's  
21 doing pretty well but, you know, just -- just give it  
22 a minute, you know. It's got to digest this thing  
23 that it -- that it just -- just caught.

24                   And on that, I'll -- we'll move to the  
25 next slide on -- on cashflow to try to keep moving

1 here.

2 Hydro is showing a projection of  
3 cashflow -- this is from the new Manitoba Hydro  
4 Undertaking 41 which I can walk through, but this  
5 projection shows that Hydro's forecasts of cashflow in  
6 green is the cash from operations, from the amended  
7 financial forecast scenario.

8 The other various shading reflect  
9 different parts of what that cash is consumed by.  
10 Now, cash from operations, the green line, is already  
11 after you've taken the revenues less operating costs  
12 as -- at the levels forecast, including the growth  
13 that Hydro's projecting, all the interest costs, all  
14 the taxes and fees averaged over all of the  
15 waterflows, we end up with -- with that -- that level  
16 of cash from operations as shown in the green line.

17 That cash is needed for the Utility for  
18 reinvestment. The -- the largest blue section you  
19 will see is the basic sustainment capital. It makes  
20 sense for that to be funded by cash. The bar above it  
21 that's a blue wavy line is the business operations  
22 support capital. That's the kind of thing that  
23 someone finances from cashflow. And above that is the  
24 purple squares which is the other investing costs.  
25 These are things like mitigation activities. That's

1 another cash obligation of Hydro.

2                   Those are the types of things one would  
3 finance by cashflow under any -- under any normal  
4 circumstances.

5                   The bottom section, however, is -- the  
6 -- the blue checkers is growth. That's -- that's  
7 assets being added for capacity and growth. It's nice  
8 if they could be funded by cashflow, but there is a  
9 utility principle in some cases where people say  
10 growth pays for growth, existing ratepayers don't pay  
11 for growth, we're going to add revenues because of  
12 that growth. That's to hook up new customers. That's  
13 to -- to hook up new subdivisions, that sort of thing,  
14 or -- or for load growth, and with that will come  
15 revenue.

16                   I think it's nice if we can cashflow  
17 that. I don't think we have to assume that that's  
18 necessarily a cashflow item.

19                   And, of course, above that is the major  
20 capital in -- in orange, which is small in this  
21 forecast, and the -- and the repayments of debt or  
22 sinking fund contributions in pink, which is -- which  
23 is perhaps the thing that, while we're digesting the  
24 projects, I don't think we need to be beating  
25 ourselves up because we're not busy paying down the

1 debt on those projects faster than we're consuming  
2 them, right.

3           If the debt was to hold steady through  
4 this period which, in effect, it does, I think that's  
5 -- that's a pretty good achievement for the period  
6 after we're -- we -- we just brought into service some  
7 of the biggest assets Hydro has built in dollar terms.

8           To finish this section on revenue  
9 requirement, slide 10. I'll say final notes on the  
10 rate increase. You'll notice I referenced the Bill a  
11 number of times, but I do want to be explicit. I am -  
12 - I am not a lawyer.

13           Bill 36 has transition provisions which  
14 it's possible I have misread. They're not the -- not  
15 the clearest thing. We know that, at some point in  
16 the future, a new condition will arise, and that new  
17 condition is not expected to be applied today. But if  
18 we're doing a long-term forecast, does that mean we  
19 include it or not? I think that's less than clear.  
20 And I think parties of good -- good will in this room  
21 have arrived at different conclusions and -- and will  
22 be arguing different conclusions on that.

23           I took the perspective I did, and --  
24 and I -- I'll be explicit about. And the Board can  
25 weigh whether that's an appropriate perspective in --

1 in coming up with the -- the rate increase for Hydro.

2 On the legal question, if I'm -- if I'm  
3 wrong, then I would submit, based on the last two (2)  
4 slides, there's actually no basis for 2 percent  
5 increase today. I think rate -- ratepayers have faced  
6 significant increases as we've been bringing the  
7 projects into service.

8 We have time to absorb those projects.  
9 And we are outperforming financially what we ever  
10 dreamed that we would be today, and there's -- there's  
11 time to -- to absorb that if it weren't for the fact  
12 that -- that we now need to get on to the next job,  
13 which is dealing with the Bill 36 rate targets -- or  
14 debt/equity targets.

15 I do want to note that -- that,  
16 overall, I take note of the concerns that are raised  
17 about reliability. And I think any of my  
18 recommendations with regards to rates the Board will  
19 want to view through the lens of testing whether --  
20 whether those -- those recommendations can be  
21 implemented without undermining reliability and with  
22 dealing with some of the acute problems that the Board  
23 heard about during the industrial presentation, so.

24 I don't want the suggestion to be -- to  
25 be made that by, you know, recommending two (2) or



1 zero, that -- that we're not saying that the -- that  
2 Hydro's performance and reliability needs to improve.

3           Moving to slide 11, also in regard to  
4 revenue requirement matters, other items. I note my  
5 scope did not include reviewing O&M normal capital or  
6 export price forecasts which were confidential. If  
7 the Board identifies savings or benefits in those  
8 areas, or undue conservatism, there may be room to  
9 adjust the -- the rate increase down.

10           So, even if we needed 2 percent to be  
11 on the -- the Bill 36 pathway under Hydro's forecast,  
12 but the Board concludes O&M in Hydro's forecast is --  
13 is too high, we can still be on the Bill 36 pathway  
14 with something less than 2 percent in that situation.

15           I have a recommendation about customer  
16 impact of rate increases. I think it's a good  
17 practice when rate increases don't occur more than  
18 once in a twelve (12) month period. It helps with --  
19 certainly helps customers with budgeting, particularly  
20 industrial customers who are planning scheduling.

21           As a result, I think the 2024 increase  
22 may be best slated to take effect twelve (12) months  
23 after the 2023 increase which, you know, I -- I assume  
24 we're on a path for September.

25           And the last point was recommendation

1 4, was already dealt with in -- in previous  
2 submissions about the deferral balances. My  
3 submission to this Board is it's best to avoid  
4 deferral balances that are only about rate smoothing.

5 I think there are times to have  
6 deferrals for things like DSM, but if they're only  
7 about rate smoothing, if they're needed, then -- then  
8 fine, but in general, they don't represent assets that  
9 future customers will benefit from, and we should  
10 consider amortizing those when possible and -- and  
11 removing those from the balance sheet.

12 Conawapa, if accepted, has a defined  
13 amortization period. And -- and the Board may want to  
14 stick with that for -- for regulatory certainty  
15 purposes. Selkirk's decommissioning however does not.  
16 Right now, it's just sitting in an account. And --  
17 and I think cleaning those up as quickly as possible,  
18 and even getting on with potentially accruing balances  
19 for Selkirk's eventual decommissioning is probably  
20 prudent in the near term.

21 I will say that a conclusion about  
22 changing the Conawapa amortization period wouldn't be  
23 understood as -- as sort of Hydro eating the balance  
24 or writing it off. Even though I may have used that  
25 language, I think it was -- I think it was imprecise

1 when I wrote the evidence. And I would -- I would  
2 more correctly say it would change into a one (1) year  
3 amortization in a year where we can do that without  
4 undermining the -- the purpose for which that deferral  
5 was set up in the first place, which is rate -- rate  
6 stability.

7           On matters of cost of service and rate  
8 design, this is not generally a major set of  
9 recommendations on cost of service methodology. That  
10 methodology has changed over time. Most times that we  
11 deal with cost of service methodology the changes are  
12 small and incremental.

13           I have a few further small and  
14 incremental items that I would raise at this time;  
15 that's not uncommon. Most utility phase 2 hearings  
16 that I'm in people talk about -- and we're on slide  
17 13, now, sorry -- people talk about -- about small  
18 changes to cost of service, and then have occasional  
19 major reviews of cost of service and updates. And, of  
20 course, we did major reviews in 2005 and in 2016.

21           Rate design, on the other hand, has  
22 seen very few changes for Manitoba Hydro. They've  
23 been -- been very small, particularly compared to --  
24 to what you see in other places. There's further  
25 small changes in this Application that affect the

1 largest customers, industrials.

2 I would describe those as -- as sort of  
3 -- as timid for a resource plan that shows, you know,  
4 pending need to deal with capacity and peaks. I think  
5 Hydro's going to have to push getting considerably  
6 more innovative if it wants to get the customer  
7 response it needs that will help in that situation. I  
8 will deal with that a bit more as we move through.

9 Cost of service tweaks need to also  
10 reflect updated facts and cost drivers. The system  
11 doesn't look the same today as it did in 2005. It  
12 doesn't even look the same today as it did in 2016.  
13 There are some things that are changing and evolving.  
14 As they do today, demand needs are becoming more  
15 acute. We heard about that for Manitoba Hydro. It's  
16 also consistent with the rest of the industry. Every  
17 utility is dealing with this.

18 As we see challenges on things like  
19 decarbonization, whether that's daily peaks for things  
20 like charging electric cars or seasonal peaks for  
21 things like adopting more electric heating, the -- the  
22 peaks are becoming a bigger deal.

23 At the same time, energy resources have  
24 been declining with technology advancements and --  
25 and, also, particularly subsidies south of the border,

1 things like wind have gotten very competitive. Solar  
2 and energy as a resource has actually gone down.

3 I will tell you in 2005, the thing we  
4 were talking about entirely was energy. Capacity  
5 barely entered into the discussion. And -- and when I  
6 mean energy cost, it's cost to supply the needed  
7 kilowatt hours where we're not as worried about the  
8 time at which those arise. Demand is more about the  
9 timing at which the -- the power is delivered.

10 There's been some discussion in this  
11 Hearing about the role of cost of service and rate  
12 design. I -- I think Hydro used a useful example of  
13 the pie. It's been used before, but I -- I appreciate  
14 how they have -- have pushed the analogy.

15 And I think this Board may have  
16 received some -- some information that -- that I want  
17 to ensure is complete.

18 Cost of service is an analytical tool  
19 utility wide, industry wide. It's based on  
20 cost/causation. It's generally considered the tool  
21 that is oriented towards and forming the fairness of  
22 the system.

23 It is taking the existing costs, the  
24 book costs, embedded costs, and carving them up among  
25 the customers based on causation. It measures the

1 cost to serve a class versus the revenues paid in a  
2 test year and, also, by type of use, energy versus  
3 demand cost versus customer type costs.

4           It's a very pervasive utility  
5 regulation. Some use the output more rigidly, some --  
6 some less rigidly, but the key is that the Cost of  
7 Service study, as Hydro noted, the revenue requirement  
8 portion will define the size of the pie. The Cost of  
9 Service study will determine the size of the slices of  
10 the pie that each class needs to be responsible for.

11           Rate design, on the other side, is  
12 considering how you take that size of the pie and  
13 collect it from customers. And in most places, rate  
14 design is an important and actively debated topic.  
15 And here, we have very little discussion on it.

16           Somehow, here, when we talk rate  
17 design, it's like a back door to re-debate Cost of  
18 Service and whether people should really pay the slice  
19 of the pie that is allocated to them.

20           In most times, it's about, No, no, now  
21 that I know how much I need to get from this group,  
22 how do I collect it from that group? Now that I know  
23 I need \$200 million from the industry, should I get it  
24 based on their annual use or their winter use? Should  
25 I get it on their peak or should I get it on their

1 energy? Should their peak have a ratchet? Should --  
2 should -- does my metering change? What options are  
3 available to me? If I have residential class, should  
4 I think about inclining rates or declining rates?

5 That kind of -- that's -- that's the  
6 rate design step. And that's where you get into the  
7 art of balancing multiple objectives and dealing with  
8 pricing signals which is where marginal costs come in.

9 And that step is generally oriented  
10 towards efficiency and stability. And when I say  
11 something like "efficiency," when someone wants to  
12 test efficiency, you could design a Residential rate  
13 that collects the Residential class revenue  
14 requirement by saying everybody pays \$120 a month and  
15 that's it. Free power after that.

16 That would be a rate that would be  
17 effective in collecting the revenue requirement. It  
18 would not be efficient. It would not encourage  
19 conservation.

20 You could also do it the other way.  
21 You could say I have no customer charge. I only want  
22 -- I only want to put it on energy charge. That would  
23 put more of a signal on conservation, but it may be  
24 unfair within the class, interclass fairness, for  
25 small users versus big users because a lot of those

1 costs are fixed. And people are running to that  
2 challenge when people -- when houses put solar on  
3 their roof. They may offset almost all of their  
4 energy bill by the solar offsetting their -- their  
5 consumption. And at the end of the day, they are left  
6 with a net cost for the year that's less than the cost  
7 of that wire running into their house. Well, somebody  
8 has to pay for the wire and the metre and all of that.

9                   So there's a lot of jurisdiction  
10 dealing with -- with these challenges in the rate  
11 design section. That's where the -- the balancing  
12 comes in.

13                   The other example, of course, would be  
14 something like inclining and declining residential  
15 rates. If the concern is winter peaks or heating --  
16 I'm in a hearing in New Brunswick next week, where  
17 some of the matters being debated are whether we  
18 should have a residential rate that changes and is  
19 higher per unit in the winter and lower in the summer.  
20 And every -- every September it goes up, and every  
21 February it goes down. Or whatever the appropriate  
22 season is.

23                   And there's obviously pluses and  
24 minuses to that. But that's a type of balancing rate  
25 design discussion that one could have once you -- you



1 get into the rate design step.

2                   Or you could have blocks where the  
3 first six hundred (600) every month is at a particular  
4 price and above that, it's above -- at a higher price,  
5 in order to encourage conservation.

6                   In the old days, when -- when the base  
7 system was expensive and the growth in the system was  
8 cheap -- which, by the way, if you read through the  
9 Bonbright manual, it sort of assumes that that is the  
10 universal condition for utilities. That the marginal  
11 cost is well below the average cost.

12                   It's talking about declining block  
13 rates. We have to collect a certain amount from  
14 customers, get it through their first block. But  
15 above that, given cheap power, let them use it so that  
16 we can, you know, grow the system and -- and get it  
17 cheaper and cheaper over time.

18                   That -- that's not the situation we  
19 generally face today. But that's the kind of thing  
20 that one wants to get into in the rate design. And  
21 that's where art and balancing the multiple objectives  
22 normally rise.

23                   Moving to slide 15, in regard to my  
24 recommendation 11, this is continue to use the  
25 approach to measuring exports that was in Order 95/18

1 as an offset to costs.

2 This is the issue that Mr. Hombach  
3 reviewed in regards to the -- the numerator and the  
4 denominator.

5 Presently, exports are used as an  
6 offset to costs. That is appropriate and should be  
7 continued. It's consistent with the guidance in the  
8 NARUC manual, which is the 1992 manual about Cost of  
9 Service -- you know, how to do Cost of Service, I'll  
10 say.

11 There is the example I provide there so  
12 that people can follow. This is looking at  
13 Residentials and PCOSS24. But when we start with the  
14 Cost of Service study, the calculation where we assume  
15 that Manitobans have to pay for 100 percent of the  
16 system, including Keeyask, including Limestone,  
17 including all of the assets, the Residential share  
18 comes out at \$1.352 billion.

19 When you take off the export share from  
20 that of 471 million, which is a design to help then  
21 pay for some of those assets that were in the first  
22 step allocated to the class, they end up with a total  
23 cost of 881 million. And if you look to the right,  
24 the Residential class pays revenues of eight-hundred-  
25 and-thirty-one-point-six (831.6). And so, there is a

1 shortfall of 49.6 million.

2                   If you do this calculation the way that  
3 -- the alternative way that has been raised by Ms.  
4 Derksen, it's the bottom of the page, you still have  
5 the same 1.352 billion allocated to the Residential  
6 class. You still do the same four-seventy-one-point-  
7 two (471.2) in exports, but you add the exports to the  
8 revenue. So that you end up with a revenue --  
9 supposedly Residential revenues of one-point-three-o-  
10 two (1.302). Of course, that's not what Residential  
11 is paying. But that's the way that that approach  
12 calculates the revenues.

13                   And it still comes up with the same  
14 shortfall of 49.6 million.

15                   What it does to the RCC ratio though is  
16 it makes it appear that they're paying 96.3 percent of  
17 their costs, where the appropriate approved approach  
18 is they pay 94.4 percent of the costs.

19                   And -- and why is that important?  
20 Well, it's important because what you're ultimately  
21 trying to measure is how far are the cost rates from  
22 where they would need to be to be fully recovering  
23 their costs? And when the rates are 831 million, and  
24 you would need to recover a further 49 million from  
25 the class, that is a greater than 5 percent increase.

1                   We don't get to raise the export rates  
2 to the class as part of settling the RCCs. We only  
3 get to raise the rates actually paid by those  
4 customers, so the denominator should be the rates paid  
5 by those customers so that the RCC gives you a measure  
6 of how much the rates need to change to reach unity.

7                   In this regard, I think the Board got  
8 it right in 2016 and I would encourage them to  
9 continue to use that approach. Slide 16.

10                  I also submit to the Board that PCOSS24  
11 is appropriate for use. There's some references to  
12 the data sources there. But PCOSS24 is reasonably  
13 modelling the -- the year in question for which we are  
14 setting the rates.

15                  Also, the results are directionally  
16 consistent for normalized water and, as a result,  
17 they're not -- the RCC results are not highly  
18 uncertain as has been asserted.

19                  I have no issue with the normalized  
20 Cost of Service being used to cross-check whether the  
21 PCOSS that we would otherwise use to set rates is  
22 leading us astray.

23                  So if we're in a situation where the  
24 Cost of Service study says a class needs a downward  
25 rate adjustment, then we say, Well, wait a minute,

1 there might be an anomaly in there. Let's do a  
2 sensitivity and run it with that anomaly. And you  
3 conclude that, No, no, they don't need a downward rate  
4 adjustment, they need an upward rate adjustment.

5           There might be a concern that were you  
6 to implement the results of the main Cost of Service  
7 study, you'd overshoot. We're not in a situation  
8 where we -- we're talking about overshooting.

9           We're taking very timid steps towards  
10 solving a problem and that problem is the exact same  
11 problem in -- whether we have normalized water or not  
12 normalized water.

13           Each of the classes that are within the  
14 zone remain within the zone. Each that were below the  
15 zone remain below the zone. Each that are above,  
16 remain above. So the directionality is -- is -- it's  
17 very consistent between those two (2) studies.

18           So as a cross-check, if anything, when  
19 we adjust out the reservoir levels and use the  
20 2024/2025 reservoir levels, if anything it would  
21 confirm the approach that -- that would otherwise be  
22 arising from PCOSS24. It wouldn't -- it wouldn't  
23 undermine it. Slide 17.

24           The other thing I'll submit is that we  
25 have used the most recent PCOSS to set rates in each

1 of the last three (3) Hearings. And -- and to the  
2 extent that I've submitted evidence in those Hearings,  
3 I relied on the PCOSS in each -- at each time, whether  
4 it showed average rate increases or above average rate  
5 increases or below average rate increases needed for  
6 the class.

7           Of course, for the class I'm dealing  
8 with, it did -- the greater than one hundred (100),  
9 which is the -- the class that everyone tends to focus  
10 on, and -- and this slide tends to focus on, it did  
11 lead to either being above average -- or sorry, below  
12 average rate increases or average.

13           But the GSL zero (0) to thirty (30), I  
14 will remind the Board, it does -- does face above  
15 average at times.

16           But in the right-hand column of this,  
17 you'll see the 2017/18 GRA, when we ran PCOSS18. I  
18 will submit PCOSS18 was an internally consistent and  
19 complete PCOSS. It showed that the GSL greater than a  
20 hundred (100) was at 112.3 percent. The average rate  
21 increases that were granted by this Board in that  
22 Hearing were three-point-six (3.6). That class got a  
23 three-point-three-six (3.36) in order to help deal  
24 with the -- that -- that RCC ratio.

25           And I submitted the same thing. I

1 rejected a large move and submitted there should be  
2 small differentiation which is shown at the bottom.

3 In the 2019 ERA, we had an incomplete  
4 record. We didn't have a PCOSS. You only had an  
5 estimate and that study took a -- an earlier PCOSS  
6 study and I will say shoe-horned in the idea of  
7 Bipole. I don't know that the study was reliable, but  
8 it was the best we had.

9 It showed the GSL greater than a  
10 hundred kV class at 101.9 and I submitted evidence,  
11 saying, as a result, they should get the average rate  
12 increase, 'cause they were very close to -- to unity  
13 and that's what the Board awarded. I think the Board  
14 and I were on the same page on that one.

15 And, of course, in the 2021 hearing, I  
16 did not submit evidence, because there was not an --  
17 an opportunity for evidence, but I will tell you I,  
18 obviously, helped MIPUG consider their recommendations  
19 and they recommended an average rate increase, because  
20 the RCC was at 101.2, even though we knew that that  
21 PCOSS was incomplete because Keeyask was only  
22 partially in service, meaning much of the costs hit  
23 the books, very little of the eventual export revenue  
24 hit the books.

25 So, that study, when -- when -- when

1 you see comparisons to PCOSS 2021, I would tend to put  
2 an asterisks beside that study. It was complete. It  
3 reflected the year in question. We used it to set  
4 rates, but it was a significant transition year for  
5 Hydro and, so, we got to be careful comparing to that  
6 year.

7                   We're not in that situation now. We  
8 now have all of the assets in service that are -- the  
9 major assets that were coming in, Bipole and Keeyask  
10 and MMTP. The benefits of that are -- are -- are  
11 reflected in the -- in the Cost of Service, as are the  
12 costs and so, now, we should be have -- have -- have  
13 arrived at a non-transition peak. Slide 18?

14                   I am informed I have about 15 minutes.  
15 I -- I think that we should be okay.

16                   In PCOSS24, I'm suggesting some small  
17 improvements. These are driven by evolution on the  
18 system, change -- change -- changes in facts, changes  
19 in information that's been made available to this  
20 Board. The key is we need to be aware of the growing  
21 importance of peak demand.

22                   As a result, as I noted in 2005, we had  
23 a growing importance of energy. We changed generation  
24 classification to a hundred percent energy and -- and  
25 weighted it across the year. By 2016, facts had



1 shifted back and, so, we had a balanced approach  
2 between energy and demand. We used a system load  
3 factor.

4 Now, it's demand that's growing in  
5 importance and, probably, will for a while, and I give  
6 the reasons why on the right-hand side, partially loss  
7 of diversity grievance.

8 The options to meet demand are -- are -  
9 - are poor, but we do have good options for meeting  
10 future energy needs. This is not unique.

11 BC Hydro's currently revising its  
12 industrial rates to reflect more focus on demand.

13 In Newfoundland, I'm involved in the  
14 hearing where the entire question is about how to meet  
15 demand.

16 The PCOSS should have a growing eye to  
17 this evolution. It doesn't mean change everything on  
18 its head today, but it means that, as we're looking to  
19 that study and the methods, let's be attentive to what  
20 is the pressures that the Utility is facing.

21 Slide 19 notes the three (3) changes  
22 that I recommend. The first is that -- is wind. I'll  
23 remind this Board that generation classification --  
24 remember classification is the step where costs are  
25 considered to either be related to energy or to demand

1 or to customer.

2                   Generation classification, in this  
3 jurisdiction, looks at generation as a whole, where  
4 generation includes Bipole III -- or in Bipole I and  
5 II. That is a generating unit complement  
6 hydrothermal, all the different pieces, and it takes  
7 all of that together and says, the best way we  
8 consider how that entire group works together is to  
9 consider it the system load factor.

10                   It takes the full sum of all of the  
11 entire system and it doesn't try to say, well, this  
12 hydro unit is for peaking and this one's for energy or  
13 these thermal units or this fuel. No. We take the  
14 entire group and we treat it as a system load factor,  
15 'cause it works together as an integrated whole.

16                   The exception off on the side is this  
17 wind. We say, oh, well, that's not really part of  
18 this grand whole. It's this extra little goody on the  
19 side that produces only energy, so, we'll give it a  
20 hundred percent energy, and, as a result, the end  
21 result is that it's actually a little bit weighted  
22 towards energy more than the system load factor, as if  
23 wind is not an integral part of the system.

24                   My submission is wind is an integral  
25 part of the submission -- system. It's going to be a

1 growing part of the system. Nothing's new in the way  
2 we -- the assets that we have. We always had wind.  
3 It always gave a small capacity benefit. There is no  
4 real debate that it gives a capacity benefit.

5           The debate is whether that capacity  
6 benefit is incidental or whether it's critical to the  
7 system and, as capacity becomes more important, I  
8 submit to you it's -- it is becoming more critical to  
9 the system, and we need to think about recognizing  
10 that capacity value of wind, rather than carving it  
11 out as a special case from the generating column.

12           DSM -- this is also a peak-related  
13 item, but it's -- it's a functionalization item too.  
14 DSM is currently allocated entirely to generation as  
15 if the resource that is yielded by the demand --  
16 demand measures -- demand-side management measures is  
17 fundamentally for generation.

18           The fundamental benefit is generation  
19 and the Board has -- has made that finding. However,  
20 in this hearing we already have one (1) proposal to  
21 recognize something different, to recognize LED  
22 streetlights don't only give a generation benefit,  
23 they also give a benefit to the customers.

24           So, there's some proposals about how  
25 LED streetlights are allocated. My -- my submission

1 to you is in regard to Demand Side Management, and its  
2 role in the system, and where the coming pressures  
3 are. Many of those coming pressures are on the  
4 distribution system.

5           Much of that is driven by peaks that  
6 will be occurring for more things like electric cars.  
7 Never mind electrification (phonetic) of heating, and  
8 that that -- that is not the only benefit of DSM, but  
9 it is at least a small benefit of DSM and that there  
10 needs to be recognition that some of that DSM benefit  
11 is arising on the distribution system. And the intent  
12 of the cost of service is to reflect where those  
13 benefits arise.

14           Causation, if you like, well, the dist  
15 -- the benefits on the distribution system help cause  
16 the opportunity to provide demand side management  
17 services.

18           The last one, which is -- which is an  
19 item that's been in -- in Hydro's Cost of Service  
20 study for many, many years is the -- the use of  
21 measuring peak.

22           We use what most people in the industry  
23 would call a 1CP (phonetic). We use a single winter  
24 peak to allocate demand costs. We estimate that  
25 winter peak by way of using the top fifty (50) hours

1 across the winter, but we don't use a 2CP, which would  
2 be winter and summer, or a 12CP, which would be  
3 weighting every month.

4           No, no. We're looking for the winter  
5 peak. We have a method of estimating it by looking at  
6 the top fifty (50) hours. And we look at those top  
7 fifty (50) hours across the previous eight (8) years.  
8 And that is a method I've supported, I've found  
9 reasonable in the past, and I think was appropriate  
10 when demand was less of an acute issue.

11           As demand is a growing acute issue, I  
12 think consideration needs to be given to the extent to  
13 which that broad measure of hours is, in effect,  
14 giving an energy allocation in the midst of the -- the  
15 demand allocator that, effectively, the more hours you  
16 look at, the more you're considering the average use  
17 across classes rather than the acute peak use.

18           And it's the peak you have to meet with  
19 -- with an electricity system. And I gave the example  
20 there, looking at the data, the highest hour that's  
21 recorded in the data that Hydro provided was 4,519  
22 megawatts, but the 50th highest hour is 225 megawatts  
23 lower than that.

24           And that -- that's a significant  
25 difference. Remember, like Wuskwatim's 200 megawatts.

1 So, that -- that 50th highest peak, if we only  
2 designed the system to meet that 50th highest peak, or  
3 the average of the top fifty (50) peaks, we couldn't  
4 meet the load.

5           When designers are doing this they're  
6 looking at the top peak plus something, plus a margin  
7 for uncertainty. And the Centra cost of service  
8 decision effectively approached this the same way and  
9 said, no, no. We need to look at the highest period,  
10 the one that you designed for.

11           And -- and my submission is fifty (50)  
12 hours is too broad and it doesn't reflect what the  
13 system is designed for.

14           The final topic, and this is about the  
15 differentiated rate increases. And I submit they're  
16 the rings of possible -- reasonable outcomes as we do  
17 these differentiated rate in -- rate increases, but  
18 they're also unreasonable outcomes.

19           Cost of service is imperfect. You've  
20 heard that. This argument supports the idea there is  
21 a zone of reasonableness and that outside of that  
22 zone, rates are not reasonable - with the  
23 reasonableness part of that -- of that quote would  
24 mean.

25           Within the zone the Board can consider

1 balancing competing priorities, such as stability.  
2 For example, just because someone is at 101, we don't  
3 move them down to 100 so that next time they're at 99  
4 and we've got to move them up again. Stability is one  
5 (1) of the considerations you would balance against  
6 the range of possible reasonable rate outcomes within  
7 the zone of reasonableness.

8 I also note that does -- the question  
9 of: Does imperfection in a Cost of Service study mean  
10 you need a bigger range of reasonableness, and the  
11 answer to that would be, No.

12 Imperfection in the Cost of Service  
13 study means you should try all the more to get to 100,  
14 because you have uncertainty about the extent to which  
15 that centre actually reflects the measured costs.

16 You know, if I'm -- if I'm going to the  
17 shooting range with a -- a rifle that's -- I don't, it  
18 doesn't shoot straight, I'm going to have to all the  
19 more aim for the middle of the target to know that I'm  
20 going to hit the target somewhere.

21 If I had a sniper rifle with all the  
22 laser site, I probably don't have to aim as precisely,  
23 because I can hit the target where I'm aiming. But if  
24 you're -- with that imperfection would suggest all the  
25 more focus on trying to get to unity. And the zone of

1 reasonableness is not a free pass to sit at 95 percent  
2 forever.

3                   There has been a claim -- the Board's  
4 words -- "persistent challenges." That was back from  
5 1996. There's a question about which past studies we  
6 can rely on and whether we can produce spaghetti  
7 graphs that just throw in more and more studies and  
8 consider them all valid.

9                   Well, no. Some of these studies are  
10 clearly not consistent with -- with the -- the  
11 principles of the -- the system and the -- the methods  
12 approved by this Board.

13                   I give the example of PCOSS02 which was  
14 filed by Hydro but never accepted by the Board. That  
15 was in 2002, my first hearing. Some have incomplete  
16 sets of facts. I gave the example of PCOSS21. I  
17 accept it was an accurate measure or reasonable  
18 estimate of that year, but it had an incomplete set of  
19 facts because of the issue on the Keeyask in service.

20                   In general, though, the pattern of the  
21 RCCs is relevant for assessing long-term fairness, and  
22 the basic claims that have been made that RCCs will be  
23 self-correcting. By '23 is a graph that people have  
24 seen many times. This is one that I -- I produced I  
25 think for the first time and probably twenty (20) some



1 odd years ago and continue to add to as -- as new cost  
2 of service studies come up.

3 I -- I was reflecting how I would react  
4 in 2002 if I had seen this graph and knew that this  
5 was the degree of progress we'd be able to make on the  
6 RCC ratios back then when -- when the Board gave a  
7 rate decrease to industrials to try to help solve this  
8 -- this problem, or move towards solving this problem.

9 I -- I also noted PCOSS21 was excluded  
10 from this. I think you could argue that it ought be  
11 included. It did reflect the facts in that year.  
12 Were it included, it would add a dot one (1) step in  
13 from the end where the RCCs were much closer to the --  
14 the zone range during that interim transition period.

15 But I -- I don't think it would change  
16 the overall pattern. The need to address -- need to  
17 address long-standing issues, not to compensate for  
18 past wrongs, not to pay back balances that were  
19 accrued, just to get on with having people actually  
20 pay for the power that they use.

21 I also note that the question of -- of  
22 RCC uncertainty, if anything, presently favours small  
23 customers. I note, even if we don't make the changes  
24 today, there is a need to move to more -- more  
25 weighting of demand. The weighting of demand will

1 lead to more costs being allocated to the small  
2 customers who drive the peaks.

3                   We also don't reflect peak uncertainty  
4 and capacity reserves, and reliability is one (1) of  
5 the things the Utility makes big investments in, but  
6 that reliability is to ensure that it can supply loads  
7 all throughout the year, one (1) type of reliability,  
8 improving its -- its transformers, and another is to  
9 ensure it can meet the peak in the winter even if  
10 conditions are worse than projected.

11                   That costs money. We build a system  
12 with reserves. When we run the Cost of Service study,  
13 we only look at the loads expected. We don't look at  
14 the loads expected plus the degree of load forecast  
15 uncertainty and who drives that load forecast  
16 uncertainty.

17                   So in that regard, we -- we under-  
18 allocate. Costs to winter peak is driven, invest --  
19 where investment is driven by classes that drive the  
20 winter peak and that have load forecast uncertainty  
21 because it -- we have to be able to supply at minus  
22 45, even though we -- we -- load forecast is for minus  
23 35.

24                   And the other thing is, when we measure  
25 RCCs in this Utility, we tend to do it across the --

1 the grand functions. That's unusual. Most of the  
2 utilities where I'm dealing with, there is a degree of  
3 functionalization, for example, in -- in places where  
4 -- where generation and transmission are -- are  
5 separated in different utilities.

6           Were we to do that here, you see in the  
7 example that the costs allocated to residential, for  
8 example, are \$1.352 billion, but three hundred and  
9 seventy-eight (378) of that is to pay for the  
10 distribution system.

11           If you look down at the revenues, the  
12 revenues from the class is eight hundred and thirty-  
13 one (831). Well, let's assume they at least pay for  
14 the distribution system which is the 378 million.

15           When we're done, they have an  
16 allocation of generation and transmission costs of 974  
17 million at the top of the slide and revenues left over  
18 after having paid for the small wires of 452 million.

19           Then we give an allocation of exports  
20 of 471 million against that nine seventy-four (974),  
21 which is 48.4 percent, the exact same ratio that  
22 industrials get, and we end up with a net generation  
23 and transmission cost to the class of five hundred and  
24 three (503), against which they have four hundred and  
25 fifty-three (453) of revenues left over to pay for.

1                   That would be a generation and  
2 transmission RCC of 90 percent. So if you assume that  
3 the smaller classes have to first pay for the  
4 distribution systems -- no revenues pay -- or no  
5 export revenues pay for that, there's no other --  
6 other sources -- then what they're paying towards this  
7 generation and transmission system is 90 percent.

8                   The GSL doesn't have that same issue.  
9 I took the two (2) extreme examples here 'cause it  
10 seems to be the two (2) classes people want to focus  
11 on. You end up with basically the same RCC, a hundred  
12 and thirteen point nine (113.9), and also the exact  
13 same allocation of net exports, 135 million on 275  
14 million in costs, which is again 48.4 percent.

15                   And these same numbers can be generated  
16 for past PCOSS studies just as easily. They're very -  
17 - they're -- they're read right off the page.

18                   Finally, slide 25 is where we actually  
19 get into the rate design steps. This is where we're  
20 dealing with the layers of the pie: How do we design  
21 rates to provide price signals and efficiency? How do  
22 we break up between customer charges and demand  
23 charges and energy and blocked rates and those type of  
24 factors?

25                   These should be applied to homogeneous

1 customer types, and I think it's been recognized that  
2 Hydro has some issues in this regard with some of its  
3 classes, the GSL zero (0) to thirty (30) being one  
4 that is of note. That class includes some very  
5 industrial type of customers. It also includes some  
6 very institutional and commercial types of customers,  
7 and they don't necessarily use power in the same way.

8           You can have a class that is non-  
9 homogeneous and address interclass fairness by the way  
10 that you design the rates within that class. It is  
11 possible. It's much trickier and it makes it much  
12 harder to measure the fairness to that class.

13           There's a final slide. There was rate  
14 design recommendations in this hearing. As I noted,  
15 the moves are somewhat timid that Hydro has proposed.  
16 I think we're going to need to get on and deal with  
17 some of these with a bit more abandon if -- if Hydro's  
18 going to meet some of the assumptions about -- about  
19 load -- load management and -- and the way it's going  
20 to meet future system requirements.

21           Broadly, recommendation 17 notes that  
22 we do need to continue to move more optionality in  
23 rates for large customers, things like time of use,  
24 things like greater availability of curtailable.  
25 These should be of increasing value as we -- as we

1 look at demand becoming a bigger problem.

2                   The on-peak demand charge that Hydro's  
3 proposed is -- is appropriate. It's a method that's  
4 already used by some people. BC Hydro uses an on-peak  
5 demand charge for its transmission customers.

6                   There's no need to cap the off-peak  
7 demand at 100 percent, 110 percent of on-peak.

8 Otherwise, you -- you start paying the -- the extra  
9 for your off-peak demand. That's -- it's -- it's a  
10 way to sort of kneecap the opportunities provided by  
11 the -- the change before it even -- before customers  
12 can even get started using it.

13                   And I'd also submit there's no need to  
14 increase rates -- the approximately nine (9) cents per  
15 kVA -- which is to make up for the apparent lost  
16 revenue by implementing this. The lost revenue  
17 between the two (2) GSL classes adds up to less than a  
18 million dollars.

19                   These are classes that are overpaying  
20 their costs by about 31 million combined, and losing  
21 that revenue, that is lost revenue from customers who  
22 already make greater use of off-peak. If your peak is  
23 an on-peak, this thing does nothing for you, to start.  
24 It's only if your peak is in the off-peak that Hydro  
25 will lose this million dollars.

1                   So the people whose peak is in the off-  
2 peak are the ones who are not causing the problem.  
3 Those are the ones you're trying to incent. So in  
4 effect, this is trying to get back the million dollars  
5 associated with the customers who -- who are already  
6 doing what Hydro wants.

7                   So in that regard, I know people will  
8 say, well, cost of service is a step. We already  
9 defined the pie. We can define the pie. Maybe the  
10 increase should be -- should be 2 percent minus a  
11 million dollars and -- and not implement this aspect  
12 of the -- of the industrial demand proposal.

13                   And I would put the image of the  
14 balance there so that the Board could focus on where  
15 balance really comes into this. Hydro's proposing  
16 that the entire rate increase for the industrials come  
17 on the demand charge, none on the energy charge.

18                   That is appropriate from a price signal  
19 perspective. That is appropriate from implementing  
20 marginal costs. That's the right way to use marginal  
21 costs within a class's rate design. That will help  
22 encourage efficiency, but, at the same time, it will  
23 drive differential customer rate impacts.

24                   That's where the balance comes in. Can  
25 we really do that without having some customers

1 benefit more than is appropriate and some have to pay  
2 a greater-than-average rate increase?

3           And normally, you know, this isn't a  
4 giant difference -- differential impact. I think the  
5 Board -- Hydro did provide the Bill impacts, but it  
6 does lead to certain industrial customers actually  
7 facing an above-average increase.

8           And I think that's very hard to -- not  
9 -- not above average for the class; above average for  
10 the Company, more than 2 percent. I think they go up  
11 to 2.4, if I remember correctly. It's a bit hard to  
12 understand how you could -- how -- how someone in a  
13 class that's overpaying by 13 or 14 percent could be  
14 told, oh, yeah, but your rate is going up more than  
15 average. I mean, that -- that's the trick.

16           And so, when we talk about rate design  
17 balance, that's the type of matter that -- that brings  
18 in this discretion in balance, not how we carve out  
19 the pie.

20           And I believe that's -- that's it.

21           MR. ANTOINE HACAULT: Thank you. Mr.  
22 Bowman is available for questioning of the parties.

23           THE CHAIRPERSON: Thank you. I'll see  
24 if the Panel has any questions. Ms. Kapitany...?

25           VICE-CHAIR KAPITANY: Thanks, Mr.



1 Bowman. Could we go back to your slide 4. So, the  
2 first line you say, "Finalize the interim 3.6, and  
3 then the 2 and 2." You didn't -- that's the last time  
4 that there was any mention of the interim rate.

5 So, what's your understanding of the  
6 purpose of an interim rate?

7 MR. PATRICK BOWMAN: Well, interim  
8 rates are used with utilities commonly where it's  
9 permitted in the legislation. The way they're used  
10 varies quite significantly between different  
11 jurisdictions.

12 In most other places where I've dealt  
13 with interim rates, it's for utilities that have a  
14 more strict definition of a revenue requirement within  
15 a year.

16 So, an interim rate would normally be  
17 set -- looked at as, you know -- let's say the  
18 Utility's collecting 98 million. It comes in to the  
19 Board and says, I need a hundred million. The Board  
20 says, I -- we can't deal with this right away, so  
21 we'll -- we'll give you a million-dollar interim rate  
22 increase so that we don't dig a hole because --  
23 because that utility's going to be entitled to that  
24 extra \$2 million for that fiscal year. That's how  
25 that annual revenue requirement system works. And

1 some day, ratepayers are going to have to pay that.

2 So, we'll give you the interim rate.

3 We'll -- we'll manage the -- the ratepayer impact

4 because we'll -- we'll do a first step, and we won't

5 have to hammer it all at the end, and we'll get some

6 cashflowing to the utility, if indeed they're in a bit

7 of a cash situation, and we'll true it up later.

8 Like, that -- that's -- when people say

9 'interim rates' in this industry, that's typically

10 what they mean.

11 As I noted, Manitoba Hydro's a bit

12 unique. And in regard to Manitoba Hydro, I think

13 interim rates -- first of all, your Act is a little

14 bit different in the way it structures interim rates,

15 as I recall.

16 But -- but more importantly, on the

17 financial side, interim rates I don't think for

18 Manitoba Hydro, for all practical purposes, are -- are

19 easily refunded.

20 Now, interim rates are -- once interim

21 rates are set for a year, that has a particular

22 meaning for the Utility's books because they don't

23 have a degree of certainty about the revenues they

24 received or, indeed, the cost they received. The

25 Board still has kept its powder dry on the decisions

1 it can make about that fiscal year.

2 It could always go back and adjust the  
3 rates, or it could always go back and adjust other  
4 things within its jurisdictions.

5 And so, I would say for -- for this  
6 Board, the -- the options are available to it for  
7 those interim years to make any of the decisions that  
8 it -- within -- within its jurisdiction about -- about  
9 those years, whether that's a rate increase or whether  
10 that's other things, like, deferrals. And I'm putting  
11 aside, of course, accounting reporting.

12 Rates are interim and -- and the  
13 Board's decisions are interim and the costs are  
14 interim, and the Utility knows that and ought --  
15 reflect a certain degree of uncertainty about that  
16 when it's considering its books.

17 VICE-CHAIR KAPITANY: So, you talked  
18 about true it up later. And in the case where there's  
19 quite a change in circumstance, does that change your  
20 view --

21 MR. PATRICK BOWMAN: Well --

22 VICE-CHAIR KAPITANY: -- on how  
23 interims should be dealt with?

24 MR. PATRICK BOWMAN: Not in respect of  
25 Manitoba because I think this goes to that image of

1 sort of stirring the super tanker. We -- we made the  
2 turn. We may have turned a little farther than we  
3 should have, it'll correct.

4           Rather than sending people cheques or  
5 doing something like that, you know, we'll -- we'll  
6 allow that correction to flow through in the way that  
7 we project Hydro's revenues going forward and the way  
8 that we do rate increases going forward.

9           Now, that's with one big asterisk,  
10 which is dealt with in my recommendation 4, which is,  
11 not only are rates interim, but I would -- I would  
12 submit, based on my understanding, the other decisions  
13 that are available to this Board are interim for those  
14 years, too, setting the revenue requirement, setting  
15 the deferrals, setting the -- the other -- other  
16 aspects.

17           And I -- I think that fits in a bit to  
18 -- to the recommendations about whether -- you know,  
19 whether we want to do something with -- with deferral  
20 accounts and -- and change the way that -- that  
21 deferral accounts are dealt with.

22           You know, this is not to -- to cherry  
23 pick a good year. This is not to have Hydro, you  
24 know, eat costs or something. This is -- this is for  
25 the purposes of ratepayers.

1                   If -- if 3.6 was overpaying, we can do  
2 three (3) things. We can live with it. We can refund  
3 it; that's hard. Or we can find a way that -- the  
4 fact that ratepayers paid more than they probably  
5 ought have to give them a future benefit for that.

6                   And that's where some of the  
7 consideration I think goes into, saying, well, why are  
8 we still deferring balances that were only there for  
9 rate smoothing.

10                   VICE-CHAIR KAPITANY:     Okay.

11                   MR. PATRICK BOWMAN:     You know, maybe -  
12 - maybe this is the opportunity to -- to clean some of  
13 that.

14                   VICE-CHAIR KAPITANY:     So, then if we  
15 can move to your slide 10. And I believe you said on  
16 this slide that your basis for saying that the 2  
17 percent rate increases should proceed was solely based  
18 on Bill 36 with maybe, you know, a small nod to  
19 reliability.

20                   Did I understand that correctly?

21                   MR. PATRICK BOWMAN:     I'm not sure I  
22 heard the end of your question. I'm sorry.

23                   VICE-CHAIR KAPITANY:     So, it was based  
24 -- your recommendation was solely based on Bill 36  
25 with maybe a small nod to reliability?

1 MR. PATRICK BOWMAN: Well, the -- the  
2 recommendation on -- on 2 percent was based on -- on  
3 the two (2) things I highlighted, the -- the first  
4 slide, which is Bill 36, which limits the ability to  
5 respond with rate response in the future, and the  
6 financial projections which show that there are some  
7 things that are going to, I'll say, move against us in  
8 the next few years, the -- the ending of the NSP  
9 contract and refinancing debt, for example.

10 When you look at those two (2) in  
11 combination and you say, you know, we can't hold our  
12 powder dry and only respond to interest rates when  
13 they arise, then we should -- then we have to respond  
14 today because, in all likelihood, I think that that  
15 would probably be refinanced at a rate higher than  
16 people were getting, you know, in the past.

17 VICE-CHAIR KAPITANY: I have some  
18 questions on cost of service, but I think I'll hold  
19 them and see whether -- how the questioning goes. And  
20 if they're not answered, maybe I could come back to  
21 them at the end.

22 THE CHAIRPERSON: Thank you. Mr.  
23 Sy...?

24 BOARD MEMBER SY: Thank you, Mr.  
25 Bowman. I find your presentation to be very

1 educational. I just wanted to go back to page 23 and,  
2 you know, about the ZOR.

3 So, basically, we can identify three  
4 (3) variables here. There is upper limit, the lower  
5 limit, and then the spread between the two (2).

6 Did I hear you correctly when you say  
7 when PCOSS is imperfect, the load limit should be set  
8 at a hundred percent? Is that -- is that -- did you --  
9 -- that what you said?

10 MR. PATRICK BOWMAN: Well, generally,  
11 yes. I -- I don't think I used the word 'limit'. And  
12 I -- I'm -- I would -- cautious about -- about  
13 defining anything with a hard limit.

14 BOARD MEMBER SY: Okay.

15 MR. PATRICK BOWMAN: But I think  
16 imperfections in the -- in the Cost of Service study  
17 are not a justification for, you know, accepting even  
18 more variability. If anything, I would submit that  
19 they're a justification for trying even harder to get  
20 to the -- to the -- the hundred percent level that it  
21 measures because then the imperfections mean that --  
22 that you haven't, you know, doubled up on -- on the  
23 imperfection, if I can put it that way.

24 BOARD MEMBER SY: Okay. So -- so,  
25 then the -- the next question I have, this is -- you

1 know, this is hypothetical.

2                   So, if we know that, you know, there is  
3 what rental fee that have been, you know, reduced, and  
4 well -- as well as the debt guarantee fee, those two  
5 (2) have been reduced by 60 percent each.

6                   If everything stays the same, would the  
7 lower limit be lower or higher?

8                   MR. PATRICK BOWMAN: Well, I think the  
9 change in fees changes -- changes the cost. I don't  
10 know that it changes the -- the appropriate decision  
11 about what the zone of reasonableness is. And I --  
12 and I don't -- I don't think it changes, to a major  
13 degree, the degree of -- of uncertainty in the study.  
14 I don't think it makes us more or less confident in  
15 the results of the study.

16                   And remember that these affect all of  
17 the customers classes. Like, we say that for the  
18 large customers, generation and transmission matters  
19 more; that -- that's true. Remember the large  
20 customers pay about four (4) or five (5) cents and  
21 Residentials pay about ten (10).

22                   But actually, if you look at generation  
23 and transmission costs, Residentials are allocated  
24 more on a cents per kilowatt hour basis for generation  
25 than industrials are because their load pattern is



1 less efficient.

2                   So, if you take the costs allocated,  
3 and I happen to have the ones in front of me, on  
4 average, the Residential generation transmission cost  
5 in PCOSS24 is six point two (6.2) cents. The General  
6 Service Large is four point four (4.4) cents because  
7 the Residentials peak at those expensive times and all  
8 of that. The gap is -- is one point eight (1.8)  
9 cents. And in 2021 it was also one point eight (1.8)  
10 cents.

11                   So, when -- when we bring in those  
12 water rental charges and changes -- or -- or interest  
13 rate changes, remember water rental only affects  
14 generation; interest affects all the assets. But when  
15 we bring in those changes, I don't think it's changed  
16 anything underlying the Cost of Service study because  
17 it's affecting all of the classes.

18                   It changes the revenue requirement  
19 dramatically. Remember we went from three and a half  
20 (3 1/2) to two (2). Everybody benefited from that.  
21 But in the relative base of the Cost of Service study,  
22 it's -- it's pretty small changes for that reason.

23                   BOARD MEMBER SY: Last question. The  
24 spread between the upper band -- I don't want to call  
25 it limit -- upper band and the lower band of -- of the

1 ZOR. PCOSS96, we had 90 and 110.

2 MR. PATRICK BOWMAN: Yes.

3 BOARD MEMBER SY: Just based on the  
4 graph, right?

5 MR. PATRICK BOWMAN: That's correct.

6 BOARD MEMBER SY: Which is, like,  
7 about 22 percent spread between those two (2).

8 And then, now we are at 95 and 105 and  
9 the spread is about 10 percent.

10 What does that really mean? To move  
11 from 22 percent to 10 percent? What -- what impact  
12 does it do in terms of, you know, how it will impact  
13 the different customers?

14 MR. PATRICK BOWMAN: Well, I'll --  
15 I'll -- I'll tell you, I would submit it probably  
16 shouldn't mean much. In general, and as set out in --  
17 in some of the earlier Orders that Mr. Hacault took us  
18 to -- the purpose here, the best outcome, if it's  
19 possible, is to get to 100 percent.

20 And in some jurisdictions, they do  
21 that. When I'm in Newfoundland, the industrials are  
22 set to a hundred-point-zero (100.0) every Hearing.  
23 Like, there's a law that says Cost of Service matters,  
24 we're going to use it. Industrials don't subsidize  
25 Residentials and they're at 100 percent. And so, they

1 set it to 100 percent every Hearing.

2 That means that we've prioritized  
3 fairness, paying your costs, over stability. Right?  
4 Whether it goes up, whether it goes down, they're  
5 going to have their rates change.

6 The ZOR is -- is a signal about the  
7 extent to which we -- we prioritize other options  
8 available, like stability or -- or other things that  
9 might lead you to change the way you design rates.  
10 Like, understandability or whatever.

11 And -- and this shows you how much --  
12 how much you're willing to accept imprecisions in --  
13 in -- an imperfect achievement of the fairness  
14 criteria while you're considering all those other  
15 things. Right?

16 When the Board, by policy, changed it  
17 from 90 to 110, it was saying, you know -- I'll say  
18 there was a period before this where it was 85/115.  
19 Just so you know. Like, the chart goes to the left a  
20 little bit yet. And that was when Hydro did its first  
21 Cost of Service study, I think, in the early '90s or  
22 its -- its first major undertaking.

23 And as it got better, the Board started  
24 saying, Yeah, we're going to use this to set rates.  
25 This is going to be our priority. And that --

1 narrowing the ZOR is policy decision in that regard.  
2 It's saying, I'm putting a priority on fairness, as  
3 opposed to perhaps other, you know -- other rate  
4 design objectives that may or may not lead me to vary  
5 from unity.

6 THE CHAIRPERSON: Thanks. I've got a  
7 few questions, Mr. Bowman.

8 You just -- you just mentioned  
9 Newfoundland. I don't know the situation in  
10 Newfoundland. If the industrials are set at 100  
11 percent in Newfoundland, are the other classes set as  
12 well?

13 MR. PATRICK BOWMAN: Newfoundland is -  
14 - I'll -- I'll give -- if the long answer helps --

15 THE CHAIRPERSON: Depends how long the  
16 answer is.

17 MR. PATRICK BOWMAN: Well, you know,  
18 most of Newfoundland customers are served by -- by the  
19 private sector, Newfoundland Power, the Fortis  
20 company. I'm talking about Newfoundland Hydro, who  
21 serves the industrial customers plus some rural areas  
22 and sells most of its power at a wholesale level.

23 THE CHAIRPERSON: Okay.

24 MR. PATRICK BOWMAN: And in the old  
25 days, that was a Government department, the -- the

1 energy division.

2                   When they set that -- that service up  
3 as -- as Newfoundland Hydro, originally, there was  
4 this -- this rural deficit. They said, Well, Fortis  
5 charges this price in St. John's. We'll charge the  
6 rurals, the small customers we serve, the same price  
7 as St. John's. And there was a deficit there for they  
8 were underpaying. And that deficit was effectively  
9 paid by -- by everybody else in Newfoundland Hydro.  
10 First the Government and eventually the industrials.

11                   Then by policy, they said, No more  
12 subsidy. You can levelize rates. Do uniform rates.  
13 But it's shared only among the small customers. The  
14 industrials are -- are out. They are paying their  
15 costs.

16                   And there's a law that says, you know,  
17 in their language, it says, the industrials shall no  
18 longer pay the rural deficit.

19                   THE CHAIRPERSON:    Okay.

20                   MR. PATRICK BOWMAN:    In Newfoundland  
21 speak, that means 100 percent. Ever since then,  
22 they've set the industrials at 100 percent.

23                   THE CHAIRPERSON:    So during your  
24 presentation, you said if 3.6 percent is overpaid in  
25 relation to the interim, we can do three (3) things.

1                   Now, the Board has indicated previously  
2 that it views interims appropriate for emergency  
3 matters. It has granted interims in other occasions,  
4 but is reluctant to do so.

5                   It grants interims with the idea that  
6 there's going to be a subsequent General Rate  
7 Application. The information -- the evidence that was  
8 put forward for the interim will be reviewed and, if  
9 necessary, the decision will be amended.

10                   In -- in the last interim, we faced --  
11 Manitoba Hydro faced a drought. Certainly, met the  
12 expectation of interim.

13                   The Board, I would submit, moved  
14 expeditiously and, in about four (4) weeks, received  
15 an application, went through the whole process. The  
16 role of the Interveners was extremely limited.

17                   Did you -- did you do any analysis to  
18 say if the 3.6 percent was overpaid? It seems that it  
19 was just accepted. And moving forward, comments of,  
20 Well, you can do certain things.

21                   But I'm wondering if you did any  
22 analysis or, during this Hearing, you heard any  
23 analysis as to whether the interim rate of 3.6 percent  
24 was -- was overpaid, given the evidence following the  
25 drought?

1 MR. PATRICK BOWMAN: I'll give two (2)  
2 comments to that, Mr. Chair.

3 The first comment is I accept your  
4 summary about the Herculean efforts people went  
5 through to get that rate increase in place and the  
6 process.

7 My recollection of the evidence in that  
8 proceeding -- and I did track it closely -- was that  
9 there was a case being made about the drought and the  
10 drought had certain costs. There was also a case  
11 being made about the major projects coming in and they  
12 were bundled in coming up with the three-point-six  
13 (3.6). And I was always somewhat uncomfortable about  
14 the major projects being the basis for an expeditious  
15 rate increase.

16 And I think that -- probably the  
17 drought aspect of that, which was needing to borrow a  
18 bunch of money, was -- was justified. The cost goes  
19 on and it's appropriate. And I think at the end of  
20 that Hearing, MIPUG recommended that the Board adopt  
21 an interim increase to pay the interest on the extra  
22 money borrowed from the drought. And then we'll get  
23 around to solving it.

24 Instead, the increase was somewhat  
25 higher. We all recognize that. And now we are where

1 we are.

2                   Probably not the smartest move, but  
3 I'll harken back to the depreciation panel where we  
4 talked about whole life and remaining life. It's like  
5 on a whole life basis, 3.6 percent was probably too  
6 much and it means we have a variance and we can think  
7 about how to deal with that variance.

8                   But I approach this more from remaining  
9 life. We are where we are. We're moving forward.  
10 What do we need for rates to get to the targets we  
11 need to get to?

12                   And so -- and I think that's just the  
13 practical side of, like -- I can't imagine what would  
14 be involved in cheque refunds to people or credits on  
15 their bills. I don't think that would be easily done.

16                   If the Board were to say, We'll give a  
17 minus 1 percent rider for two (2) years to, sort of,  
18 give you back some of what you paid, then I think all  
19 that does is -- is put us in a more difficult position  
20 to meet the Bill 36 targets. And -- and we're going  
21 to face that challenge in the future.

22                   So it's a bit of a catch 22. Having  
23 done it, pragmatically, interim rates in Manitoba -- I  
24 hate to say it -- are -- are within spitting distance  
25 of a final rate.



1 THE CHAIRPERSON: Okay. Second  
2 question, in relation to Bill 36, under the formula,  
3 you mentioned it's the lower 5 percent in CPI.

4 If -- if, going forward, CPI is less  
5 than 2 percent, what's the implication for the formula  
6 and the targets and meeting the targets?

7 MR. PATRICK BOWMAN: That's a good  
8 question. My understanding of the formula is that it  
9 is -- it is not adjustable by -- by direction or  
10 regulation or in council.

11 Again, I'm not a lawyer, but that is my  
12 understanding. So that would -- that would govern the  
13 rate increase.

14 I think you also have to look at the  
15 context. I think, you know, if inflation is below 2  
16 percent, I think -- you know -- I'm not a macro  
17 economist, but I think it's possible that one would  
18 see a different economic climate at that time. The  
19 interest rates at which Hydro would be borrowing would  
20 probably be lower. There may be some naturally self-  
21 correcting features in that. I don't know what it  
22 would do to exports and imports or to risk of drought.

23 But -- but I think those things aren't  
24 necessarily independent. And so, I think we'd have to  
25 get into that situation to really know.

1 THE CHAIRPERSON: Third and last  
2 question, how should we -- how should we view retained  
3 earnings?

4 MR. PATRICK BOWMAN: Very good  
5 question. I will start with the line to say that I  
6 think everyone recognizes retained earnings are not  
7 cash.

8 Retained earnings are a balance sheet  
9 representation of the difference between the debt that  
10 Hydro has and the values at which it represents its  
11 assets and -- and I use the val -- the word "value"  
12 there cautiously, 'cause it's a very accounting value,  
13 rather than the value -- I'd be used to thinking about  
14 things as an economist.

15 So, mathematically, I have trouble  
16 putting a lot of -- a lot of weight on -- on retained  
17 earnings as -- as -- as being sort of the -- the --  
18 the Holy Grail of -- of your -- reserves or of -- of  
19 measuring as a target.

20 Having said that, I think we can look  
21 to both Hydro's net income and its cash flow, over  
22 time, as indicating effectively, the financial  
23 strength.

24 But for Bill 36, I think the forecast  
25 that could be made of -- of cash flow and net income,

1 going forward, would allow us to determine if rates  
2 were at a high enough level to avoid rate instability  
3 and I think that is probably the best way that one  
4 would think about whether Hydro has enough reserves,  
5 and I use the -- the -- the air quotes around the  
6 words "reserves" because retained earnings may be a  
7 useful way to measure it, but I don't think the number  
8 has any magic.

9                   You know, my -- my -- my dream for the  
10 uncertainty analysis tool, outside of Bill 36, was  
11 that we would -- we would be able to run those future  
12 scenarios with a rate response built in, and you'd put  
13 a rule on rate response, you'd say, well, we're going  
14 to assume 2 percent increases.

15                   We're going to say we really don't want  
16 to go above 3 and we'll put in some conditions, about  
17 when we need to go above 3, and, then, you run  
18 probabilistic model 20 years in the future, with all  
19 different conditions, and it's deciding the rate  
20 increases, and, if it says, well, based on the things  
21 we expect, 2 percent today and 2 percent in the  
22 future, with an ability to go to 3, if you need to,  
23 gives you a 99 percent chance of never breaking the  
24 model, then, you can have some confidence. Your 2  
25 percent was enough. We've got a robust system.

1                   Whereas, if it says, no, no, there's a  
2 50/50 chance that 3 won't be enough and we'll have a 7  
3 some year, and you'll say, well, geez, maybe I want to  
4 build up reserves, again, with air quotes, not  
5 necessarily dollars, not -- not balance sheets, but we  
6 want to build up reserve, pay down debt, whatever it  
7 is, the mixture, so that -- so that Hydro has more net  
8 income, more cash flow on a normal basis and,  
9 therefore, it can absorb those -- those risks.

10                   But that -- that was the hope out of re  
11 -- the un -- the uncertainty analysis, you know, it --  
12 it -- it can't play all of those rules, going forward,  
13 any more, under Bill 36, but -- but, hopefully, it can  
14 play some of those rules and, certainly, be  
15 informative to this Board about the decisions it's  
16 making.

17                   THE CHAIRPERSON:    Thank you very much,  
18 Mr. Bowman. We'll take the morning break and return  
19 in 15 minutes. Thank you.

20  
21 --- Upon recessing at 10:38 a.m.

22 --- Upon resuming at 10:55 a.m.

23

24                   THE CHAIRPERSON:    Good morning again.  
25 Dr. Williams...?

1 CROSS-EXAMINATION BY DR. BYRON WILLIAMS:

2 DR. BYRON WILLIAMS: Good morning, Mr.  
3 Chair and members of the Panel. Day what? Day 19?  
4 I'm not even sure.

5 So Mr. Bowman and I have the much-  
6 desired last day just before lunch slot, and I have to  
7 confess I'm struggling a little bit. The image of an  
8 anaconda on a road swallowing I'm assuming a wild pig  
9 is -- is -- I'm not going there in cross-examination,  
10 but I am a little disturbed by it, Mr. Bowman.

11 THE CHAIRPERSON: Dr. Williams, the  
12 only thing I would suggest is the only thing worse  
13 than being the last one before lunch is the last one  
14 before the weekend.

15 MR. SVEN HOMBACH: Mr. Chair, that  
16 responsibility and heavy burden had not escaped me.

17 THE CHAIRPERSON: And I -- I would  
18 just note that my wife has sent me the list of items I  
19 need to buy on the way out. So it's all yours, Dr.  
20 Williams.

21 DR. BYRON WILLIAMS: Okay. Well, good  
22 luck, Mr. Hombach.

23

24 CONTINUED BY DR. BYRON WILLIAMS:

25 DR. BYRON WILLIAMS: We do have an --

1 an exhibit as aids to cross-examination, and it's got  
2 four (4) documents there. Number 1 is an excerpt of a  
3 PUB Order; numbers 2 and 3 are excerpts from prior  
4 evidence filed by Mr. Bowman during a previous GRA;  
5 number 4 is an excerpt from a manual on cost  
6 allocation.

7                   And I want to be clear that we're not  
8 presenting this for its truth, but simply as an aid to  
9 cross-examination. My Friend M. Hacaault may have some  
10 comments on that, but we just want to be clear that  
11 document in par -- particular is as a conceptual aid  
12 to cross and not being presented for its truth.

13                   THE CHAIRPERSON: Okay. Understood.

14                   MR. ANTOINE HACAULT: That's an  
15 acceptable way to proceed. I would just note that  
16 it's an interesting text wrote -- written by three (3)  
17 experts who have previously testified here.

18                   Mr. Markus (phonetic) presented  
19 evidence in 1990 PUB on behalf of environmentalists; Jim  
20 Lazar testified in the 2005 PUB on behalf of Green  
21 Action on cost of service; Mr. Chernick who presented  
22 on behalf of Green Action in at least the 2008 GRA,  
23 the 2014 NFAT hearing, and the 2016 cost-of-service  
24 hearing.

25                   And I note with interest that in this

1 text, there are comments with respect to the PUB  
2 decisions, one of which is, "This approach is  
3 inequitable and fails to reflect cause/causality,"  
4 referring to the PUB decision 2016.

5                   So Mr. Williams could have called one  
6 (1) of those authors to testify again in Manitoba, and  
7 we'll allow the cross-examination to proceed with the  
8 aids of cross-examination with that background. Thank  
9 you.

10                   DR. BYRON WILLIAMS:    And I do  
11 appreciate My Learned Friend's editorial comments.

12

13 CONTINUED BY DR. BYRON WILLIAMS:

14                   DR. BYRON WILLIAMS:    Mr. Bowman, I'm  
15 going to ask you to help me and start out with tab 3  
16 of the Consumer Coalition Exhibit 28. And you'll  
17 recognize -- just one (1) second, please. And are we  
18 at section 3 of that? One (1) second, please.

19                   MR. SVEN HOMBACH:    Mr. Williams, I  
20 don't think this has been marked as an exhibit yet.  
21 Perhaps we could do that briefly.

22                   THE CHAIRPERSON:    Sorry, was it not  
23 marked as Exhibit 6? No?

24                   DR. BYRON WILLIAMS:    Oh, this is --  
25 this is -- I'm referring to -- my apologies --

1 Consumer Coalition tab -- Exhibit 28, tab 3. And if  
2 we could scroll one (1) -- one (1) more page, please,  
3 Ms. Schubert. Yes. Thank you.

4

5 CONTINUED BY DR. BYRON WILLIAMS:

6 DR. BYRON WILLIAMS: And first of all,  
7 Mr. Bowman, you -- you recognize this document being  
8 an excerpt from your -- your evidence from the  
9 2017/'18 2018/'19 General Rate Application, sir?

10 MR. PATRICK BOWMAN: Yes.

11 DR. BYRON WILLIAMS: And we'll back  
12 away from it for just a minute, sir.

13 It would be accurate to suggest that  
14 over the last twenty-five (25) years and through your  
15 work as an analyst and independent witness, you have  
16 extensive experience with the circumstances of large  
17 industrial customers who are served by hydroelectric  
18 utilities in the provinces of Manitoba, Newfoundland,  
19 and British Columbia, agreed?

20 MR. PATRICK BOWMAN: Generally agreed.  
21 I've -- I've only worked with the BC industrial group  
22 probably since about 2015, but I've been involved in  
23 Newfoundland since about 2000 and -- and Manitoba my  
24 entire career.

25 DR. BYRON WILLIAMS: And, Mr. Bowman,



1 thank you for that. Since 1998, you've been retained  
2 by the Manitoba Industrial Power Users Group, or  
3 MIPUG, as an analyst or independent witness in  
4 regulatory proceedings related to Manitoba Hydro  
5 before the Public Utilities Board, agreed?

6 MR. PATRICK BOWMAN: That's correct.

7 DR. BYRON WILLIAMS: And your  
8 retainer, sir -- excuse me -- from MIPUG in this  
9 proceeding was to review Manitoba Hydro's Application  
10 with a view to normal regulatory principles for  
11 electric utility rate setting in determining just and  
12 reasonable rates. Agreed?

13 MR. PATRICK BOWMAN: Yes.

14 DR. BYRON WILLIAMS: And if we turn  
15 our attention to Consumer Coalition-28, tab 3, those  
16 principles of rate regulation enunciated in your  
17 October 2017 evidence represent your views on the  
18 regulatory and rate-making principles appropriate to  
19 Manitoba Hydro as a Crown-owned and hydroelectric  
20 generating-dominated utility under the framework that  
21 existed in 2017. Agreed?

22 MR. PATRICK BOWMAN: Yes. I'll -- I  
23 will only note that, you know, these -- this isn't all  
24 of the principles. This is those that were  
25 particularly relevant to the evidence and the issues

1 raised at that time, but -- but yes.

2 DR. BYRON WILLIAMS: Okay. And the  
3 principles you apply here, sir, at a high level are  
4 particularly relevant for monopolies such as Manitoba  
5 Hydro regulated on the basis of cost to serve  
6 customers, agreed?

7 MR. PATRICK BOWMAN: Correct.

8 DR. BYRON WILLIAMS: And as we sit  
9 here today, sir, on June 9th, 2023, the regulatory  
10 framework in place back in 2017 is the regulatory  
11 framework to your knowledge still in place in  
12 Manitoba, agreed?

13 MR. PATRICK BOWMAN: With the footnote  
14 that I am -- I am not a lawyer, yes, I agree.

15 DR. BYRON WILLIAMS: You say that  
16 you're not a lawyer so gleefully, Mr. Bowman, and I  
17 think that's a shared sentiment among many, including  
18 some of the lawyers in this room, sir.

19 Mr. Bowman, I'm going to turn to page  
20 3.8 of your evidence, page 3.8 of Principles of Rate  
21 Regulation in this same document. And that's fine.  
22 If we can just keep focussed on that graph for a  
23 minute.

24 Mr. Bowman, if you have it with you --  
25 you don't -- we don't need to turn anyone else there,

1 but if you flip back a page, you'll agree that, at the  
2 time you prepared this review of Principles of Rate  
3 Regulation, it was your view that a component of the  
4 rate-setting regulatory framework for utilities like  
5 Hydro was a determination of an appropriate level of  
6 reserves for rate setting to absorb adverse events  
7 such as drought, agreed?

8 MR. PATRICK BOWMAN: Yes, and I -- I  
9 note that I put the reserves in quotes even back then.

10 DR. BYRON WILLIAMS: And given your  
11 experience, whether in Manitoba, Newfoundland, or --  
12 or British Columbia with hydro-reliant utilities, you  
13 understand, sir, that the financial risks associated  
14 with the degree of water flow variability inherent in  
15 the system are substantial?

16 MR. PATRICK BOWMAN: Yes. Maybe I  
17 will add in any given year, yes. Over time, no.  
18 These are sort of -- it's -- it's a mean reverting  
19 feature.

20 DR. BYRON WILLIAMS: We are going to  
21 get to the reversion and the mean, sir, so thank you.

22 And water variability inherent in  
23 hydroelectric systems on a year-over-year basis can  
24 drive large swings in financial returns, again, year  
25 over year.

1 MR. PATRICK BOWMAN: Yes.

2 DR. BYRON WILLIAMS: And, Ms.

3 Schubert, scroll up on the page just for a second so  
4 we can see the label.

5 Mr. Bowman, what we have here, again  
6 from 2017, is a depiction of historical water supply  
7 system inflows for a period of over one hundred (100)  
8 years related to Manitoba Hydro. Agreed?

9 And, Ms. Schubert, if you can just  
10 scroll down the page now, we can see -- that's  
11 perfect. Thank you.

12 MR. PATRICK BOWMAN: Yes.

13 DR. BYRON WILLIAMS: And if we orient  
14 ourselves on this table, Mr. Bowman, you'll agree that  
15 that -- that 100 percent with the red line going  
16 across that figure is a depiction of what you were  
17 talking about, that reversion to the mean, the -- the  
18 average demarked as 100 percent on this as a base line  
19 on this -- on this figure. Agreed?

20 MR. PATRICK BOWMAN: Yes.

21 DR. BYRON WILLIAMS: And if we want to  
22 look at the low range for a second, sir, on or about  
23 1939 or 1940, we can see that variability reflected in  
24 system inflows that were less than 50 percent of the  
25 long-term average, agreed?

1 MR. PATRICK BOWMAN: Yes.

2 DR. BYRON WILLIAMS: And over to the  
3 right, around 2006, 2007, subject to check, Mr.  
4 Bowman, you'll see the other end of that range with  
5 system inflows being at a historic high and over --  
6 over 50 percent above the long-term average.

7 MR. PATRICK BOWMAN: Yes.

8 DR. BYRON WILLIAMS: And, Mr. Bowman,  
9 if we take that high mark in the 2000s and move just a  
10 few years to the left, you'll see the drought of  
11 2003/'04, sir, agreed?

12 MR. PATRICK BOWMAN: Yes.

13 DR. BYRON WILLIAMS: And if we look at  
14 that drought of '03/'04, again, as compared to the  
15 long-term average, it was less than 75 percent of the  
16 long-term average, sir.

17 MR. PATRICK BOWMAN: That's what this  
18 shows.

19 DR. BYRON WILLIAMS: Yes. And so in  
20 just the space of three (3) or four (4) years, sir, in  
21 that -- in terms of inherent variability in system  
22 inflows, we went from less than 75 percent of the  
23 average -- 'we' being Manitoba Hydro and the -- the  
24 consumers who rely upon it -- to a high of well over  
25 50 percent above the average. Agreed?

1 MR. PATRICK BOWMAN: Yes.

2 DR. BYRON WILLIAMS: And, sir again,  
3 one (1) of the key points that you made at the onset,  
4 but it's worth reminding everyone, is that your  
5 observations about the long-term trends in terms of  
6 water flow related to Manitoba Hydro is that they are  
7 mean reverting. Agreed?

8 MR. PATRICK BOWMAN: Generally, yes.  
9 You know, obviously people talk about whether is a  
10 long-term trend and whether the -- the mean of the  
11 last thousand years will be the mean of the next  
12 hundred years or -- or some -- you know, climate  
13 change and those type of matters.

14 But -- but generally, yes, this is a --  
15 this is a -- a variable that -- that moves up and  
16 down. It's not -- it's not like some of the other  
17 things we might see like export prices where you --  
18 you don't rely on them moving up or down and -- and  
19 coming back to the average. They're -- if they move  
20 up, that may be the -- the last time you ever see that  
21 -- that price. That's not the case with water.

22 DR. BYRON WILLIAMS: And despite that  
23 mean-reverting tendency, we can still be subject to  
24 very wild swings just within a few years, sir.

25 MR. PATRICK BOWMAN: Right.

1 DR. BYRON WILLIAMS: Thank you. If we  
2 can go to MIPUG-6, Mr. Bowman's evidence, section 2.1  
3 which is page 4. I think the PDF page is 6. Thank  
4 you, Ms. Schubert.

5 And, Mr. Bowman, our clients and  
6 certainly their legal counsel expressed their  
7 appreciation for your important historical context  
8 here, as well as earlier this morning.

9 Here, you're -- at a high level you're  
10 examining the -- the regulatory background history  
11 leading up to the -- the General Rate Application that  
12 is before the Public Utilities Board today.

13 MR. PATRICK BOWMAN: Yes.

14 DR. BYRON WILLIAMS: And we'll come to  
15 that first dash in just a second, sir, but going back  
16 to that twenty-five (25) year history you have with  
17 Manitoba Hydro as an analyst or independent expert,  
18 over that time you have observed the financial impacts  
19 on Manitoba Hydro from large variations in water flow  
20 including but not limited to the '03/'04 drought and  
21 the 2021/'22 drought, agreed?

22 That's something you've observed?

23 MR. PATRICK BOWMAN: Yes.

24 DR. BYRON WILLIAMS: And, sir, over  
25 those same twenty-five (25) years, you have wit --

1 witnessed the opening up of the very significant  
2 export opportunities that arose from the fundamental  
3 restructuring -- restructuring of the US marketplace  
4 flowing from Order 888 of the Federal Regulatory  
5 Energy Commission in 1996, agreed?

6 MR. PATRICK BOWMAN: Yes. Some of the  
7 -- some of the changes predate my original  
8 involvement. I believe there were changes to the  
9 Manitoba Hydro Act in maybe '97 which gave it clearer  
10 authority to participate in -- in wholesale markets.  
11 I -- I wasn't around for those.

12 And -- but after the -- you know, I  
13 think there's an understanding among the -- the people  
14 I work with who -- who've done this longer than me  
15 that sort of after the '96 GRA, there was a bit of a  
16 sea change and -- and layers of -- waves of changes  
17 that -- that occurred for Hydro that -- that just  
18 increasingly offered it opportunities to participate  
19 in wholesale markets that have just -- that -- that  
20 changed things significantly, and -- and changes since  
21 then that -- you know, what we used to call the -- the  
22 Midwest power pool becoming MISO and -- and the  
23 opportunity to transact in different markets, those --  
24 those were sort of incremental over many years.

25 DR. BYRON WILLIAMS: And those



1 opportunities -- opportunities arose both in terms of  
2 selling into the marketplace, I'll suggest to you, but  
3 also in terms of importing from the marketplace in  
4 order to enhance the reliability of Manitoba Hydro.

5                   Would that be fair?

6                   MR. PATRICK BOWMAN:     Right, and they  
7 occurred in conjunction with asset development in  
8 terms of -- of cross-border transmission.  Again, I --  
9 I think the big North Dakota line was just coming into  
10 service, if I remember correctly, as I was starting  
11 this.  And of course MMTP changed -- changed things  
12 dramatically.

13                   I -- I might be a lone voice on this at  
14 this point, but my -- when I explain to people what --  
15 what NFAT was about, it was about MMTP.  We -- we had  
16 to build a generating station to get it, but really  
17 the thing that fundamentally changed the system was --  
18 was that like doubling of -- of important capacity  
19 with the US.

20                   DR. BYRON WILLIAMS:     And of course,  
21 sir, you've referenced the NFAT and elements of it  
22 that were approved out of the government decisions  
23 flowing, or Lieutenant Governor In Council decisions  
24 flowing from it were Keeyask, the Manitoba-Minnesota  
25 transmission line, and the power sale to Minnesota

1 Power, agreed?

2 MR. PATRICK BOWMAN: Right.

3 DR. BYRON WILLIAMS: And the point  
4 you're making about the Manitoba-Minnesota  
5 transmission line, I'll suggest, is that it not only  
6 offered firm prime-time opportunities to sell into the  
7 US marketplace, it also essentially doubled the firm  
8 transmission import capability of Manitoba Hydro,  
9 thereby dramatically increasing reliability since it  
10 came into place.

11 MR. PATRICK BOWMAN: Reliability,  
12 ability to use the system, arbitrage, it -- it changed  
13 -- it changed things pretty -- I would submit pretty -  
14 - pretty dramatically for the way Hydro could  
15 participate in -- in the markets.

16 DR. BYRON WILLIAMS: Mr. Bowman -- and  
17 I don't want to tread too much on your conversation  
18 with the Board this morning, but I am going to a  
19 little bit for -- for a number of reasons.

20 But you recall you've been viewing or  
21 listening to a lot of this hearing, and you -- and you  
22 did have a chance to observe the examinations of both  
23 Mr. Rainkie and Mr. Colaiacovo, sir?

24 MR. PATRICK BOWMAN: Yes.

25 DR. BYRON WILLIAMS: And you recall

1 questions from Panel members of both Mr. Rainkie and  
2 Mr. Colaiacovo discussion -- discussing options in the  
3 rate-setting context for an evidence-based  
4 consideration of financial targets?

5 MR. PATRICK BOWMAN: Yes.

6 DR. BYRON WILLIAMS: And in the first  
7 arrow under section 2.1 of your pre-filed written  
8 evidence relating to the 2012/'13 2013/'14 GRA, you  
9 remind your readers that in that decision, the Public  
10 Utilities Board directed a quantitative, probabilistic  
11 review of risks in support of financial targets.

12 Agreed, sir?

13 MR. PATRICK BOWMAN: Yes.

14 DR. BYRON WILLIAMS: And we're going  
15 to come to this in a couple of minutes, so don't  
16 anticipate me too much, Mr. Bowman, if you will.

17 But it is your view, based on your  
18 review of regulatory history since 2014, that there  
19 has been a long-standing but incomplete attempt by the  
20 Public Utilities Board to establish probabilistic risk  
21 assessment for the purposes of guiding financial  
22 targets and rate increases. Agreed?

23 MR. PATRICK BOWMAN: Yes.

24 DR. BYRON WILLIAMS: And in your view,  
25 one (1) of the material omissions, sir, in the current

1 General Rate Application is a comprehensive risk-  
2 related probabilistic tool assessment for financial  
3 targets and other reasons, agreed?

4 MR. PATRICK BOWMAN: Yes.

5 DR. BYRON WILLIAMS: I'm going to ask  
6 you to turn with my avid readers and viewers, Mr.  
7 Bowman, to Consumer Coalition-28, tab 2, all two (2)  
8 of my avid readers.

9 In that, of course, sir, you do cite in  
10 -- in your evidence, but that is your -- excuse me,  
11 Ms. Schubert, Tab 2, the uncertainty analysis. And if  
12 you could go to the first page of -- the next page of  
13 that document. Thank you.

14 And, Mr. Bowman, without belabouring  
15 the -- the length of this paper, it was your view when  
16 you wrote this analysis back in 2017 that the  
17 uncertainty analysis differed from prior Hydro efforts  
18 to assess risks, first of all, in that it looked at  
19 multiple overlapping risks, agreed, sir?

20 MR. PATRICK BOWMAN: Correct.

21 DR. BYRON WILLIAMS: And at the time  
22 you wrote your -- your opinion, sir, the top -- the  
23 three (3) most variable risks faced by Manitoba Hydro  
24 I'll suggest to you were export prices, water flows,  
25 and interest rates. Agreed?

1 MR. PATRICK BOWMAN: Yes, where I'll  
2 just say some of those are also proxies for other  
3 things. Like, export prices relate to import prices,  
4 too, and -- and to gas, for example.

5 So, yes, those are the overarching  
6 variables.

7 DR. BYRON WILLIAMS: So, at the time,  
8 those were the three (3) overarching variables, taking  
9 the caveat that, in terms of export prices, that was a  
10 reflection of import prices, as well as gas in that  
11 uncertainty. Agreed, sir?

12 MR. PATRICK BOWMAN: Yes.

13 DR. BYRON WILLIAMS: And is it your  
14 understanding today, sir, that export prices, water  
15 flows, and interest rates, as we've defined them,  
16 remain among the most variable risks experienced by  
17 Manitoba Hydro?

18 MR. PATRICK BOWMAN: I -- I think  
19 that's true. I think part of the reason though why  
20 this uncertainty analysis was so helpful was to help  
21 the Board, in particular, understand the evolution of  
22 those risks, and I'll -- I'll give two (2) examples if  
23 I can quickly.

24 Interest rate risk is obviously high,  
25 but interest rate risk in 20 -- because Hydro has a

1 lot of debt, of course. Interest rate risk in 2023 is  
2 nowhere near what it was in 2013 because we weren't  
3 entering a decade where we were going to be borrowing  
4 \$3 1/2 billion a year.

5                   So, if you modelled a plus 1 percent  
6 interest rate or a plus minus -- minus 1 percent  
7 interest rate scenario in -- in 2013 or '15, you would  
8 come with -- come up with numbers that were sort of  
9 off the charts.

10                   If you do that same thing today, that  
11 cone is probably significantly narrowed, and it would  
12 be very interesting to see.

13                   Similarly, water flows in -- you took  
14 me to some earlier graphs about -- about water flow  
15 variability, but there was a time in, I'll say, you  
16 know, 2008 or so, 2009 where -- or 2007 probably where  
17 export prices were very, very high, and -- and Hydro  
18 had built in very high export prices into its IFF.

19                   So, it was effectively banking on  
20 receiving a lot of revenue from -- from exporting  
21 power but, of course, that was highly dependent on  
22 water flows, and -- and the entire IFF effectively  
23 required that.

24                   That meant that, when you run the cost  
25 of a drought, the cost of a drought is very, very

1 significant because you lose the revenue or you -- gas  
2 is high, you have to replace it with gas.

3                   And so, if you were to run the -- the  
4 drought risk at that time you'd come up with a very  
5 high number. I think, at one point, we were talking  
6 five (5) year droughts being \$3 1/2 billion. Now,  
7 we're -- we're at 1. And that's -- that's, again,  
8 because those risks evolve over time.

9                   So, we had -- they're -- they're large,  
10 but I don't think interest rate risk today are  
11 anywhere near what they were when we started NFAT.  
12 And I don't think drought risks are anywhere near what  
13 they were in -- in 2000 -- I'm going to 2007. And I  
14 think it was before the -- the financial crisis, but -  
15 - but, yeah.

16                   So, I think that -- that's something  
17 that -- the sort of benefits of this type of --

18                   DR. BYRON WILLIAMS: Thank you. And I  
19 am going to take you to one (1) illustrative figure.  
20 But just to move things along just a little quicker --  
21 and -- and -- but that was a very helpful answer, so  
22 I'm not complaining any -- any bit.

23                   But two (2) other advantages of this  
24 type of analysis is that -- one is that it -- I'll  
25 suggest to you it allows you to in -- look at not just

1 a single given scenario, but a combination of future  
2 scenarios. And the second is that it generally allows  
3 you to look at scenarios in their entirety rather than  
4 a single effect?

5 MR. PATRICK BOWMAN: Correct.

6 DR. BYRON WILLIAMS: Your one (1)  
7 criticism -- material criticism, at least at the time,  
8 sir, was that this scenario as it was its immature  
9 stage in 2016 or so did not provide a mechanism for  
10 rates -- rate response.

11 Is that fair, sir?

12 MR. PATRICK BOWMAN: Correct.

13 DR. BYRON WILLIAMS: And we're going  
14 to go, just to illustrate it -- and I -- I hate -- so,  
15 page C(3), Figure C(1). And M. Hacaault is far better  
16 than me talking about boxes and whiskers. I'm not  
17 going to -- not going to try that. That's his  
18 particular genius.

19 But, Mr. -- Mr. Bowman, what you're  
20 presenting here is an output from the uncertainty  
21 analysis, looking at the range in terms of annual net  
22 income variability from projections that considered  
23 over a hundred flow -- flow sequences, as well as  
24 reference export prices, low reference and high, as  
25 well as three (3) interest rate projections.



1 Agreed, sir?

2 MR. PATRICK BOWMAN: Yes.

3 DR. BYRON WILLIAMS: And for the  
4 fiscal years starting in -- in 2020, I believe, on the  
5 left, and moving out to 2038, on the right, the  
6 analysis presents a range of potential outcomes around  
7 the -- the median, M-E-D-I-A-N. Agreed?

8 MR. PATRICK BOWMAN: Yes.

9 DR. BYRON WILLIAMS: And there's  
10 simply two (2) -- two (2) types of box and whisker  
11 graphs because there's an update in there, as well as  
12 the original. Agreed?

13 MR. PATRICK BOWMAN: It's -- it's not  
14 just an update. It's a different rate scenario.

15 DR. BYRON WILLIAMS: Rate scenario, as  
16 well.

17 MR. PATRICK BOWMAN: And -- and this  
18 was specifically used to test the idea. At that time,  
19 Hydro was proposing a forecast based on the dark green  
20 rate scenario as being needed to manage risk.

21 And, in my submission, this one (1)  
22 graph popped that bubble in its entirety because, if  
23 you followed their rate scenario, Hydro was heading to  
24 a level where, even if you look in 2024, which would  
25 have been their -- their worse risk year, and you look

1 at the very bottom, which meant they'd be in the  
2 middle of a drought and -- and the worst conditions,  
3 like, the worst combination of conditions, and they  
4 would still have a positive net income, which we -- we  
5 use to submit that it basically violated the idea --  
6 entire idea of a -- of a power cost utility, is that  
7 you don't need rates so high that you're still making  
8 money in a drought.

9 That -- that's what a private sector  
10 utility might do, or private investors. That's not  
11 what Manitoba Hydro needs to do.

12 DR. BYRON WILLIAMS: Thank you. Thank  
13 you very much. Now, sir, the last thing on this, I'll  
14 ask you to -- to agree or disagree, would it be fair  
15 to suggest that the farther out in time one moves to  
16 the right in terms of the fiscal years, the larger the  
17 range net income variability, sir, as a general  
18 statement?

19 MR. PATRICK BOWMAN: It's -- it's true  
20 as a general statement, but it's particularly true in  
21 these graphs because they didn't have rate response.  
22 These assumed that we would just sort of go along with  
23 the rates we set in the beginning for the next -- next  
24 twenty (20) years I think this was, and -- and just  
25 sort of fumble through it.

1                   If you added rate response, you would  
2 see those cones be entirely different and narrowed.

3                   DR. BYRON WILLIAMS:    Okay.  Thank you.  
4 I'm going to ask to turn to MIPUG-6 now, page 1 of  
5 your written evidence, Mr. Bowman, and to  
6 recommendation 1, so the one (1) page previous,  
7 please.

8                   And, sir, we don't need to go back to  
9 those general principles of rate regulation unless you  
10 want to go there.  But, it would be fair to say that  
11 consistent with your understanding of the currently  
12 existing ratemaking framework appropriate to Manitoba  
13 Hydro, one (1) of the roles of the Public Utilities  
14 Board is to make determinations on whether the costs  
15 of hydro are reasonable and recoverable from  
16 ratepayers.

17                   Do you need a reference for that, Mr.  
18 Bowman?

19                   MR. PATRICK BOWMAN:    I'd be fine with  
20 a reference.  I -- I generally agree.  I -- I probably  
21 wrote the statement.  I would caveat it with two (2)  
22 things.  You said under the existing regulatory  
23 regime.  Of course, existing may go to the question as  
24 to whether an Act that exists but doesn't take effect  
25 yet is existing.  I'm going to put that aside.

1                   But the other is, you know, whether you  
2 should recover from ratepayers. Yes, subject to what  
3 -- what else does Hydro do with it is always -- like,  
4 you know, if -- if the Board said, Dear Hydro, you --  
5 you built a head office building, and we're not going  
6 to recover the costs, but we are still going to look  
7 at your balance sheet and see how much debt and equity  
8 you have, and we're going regulate you on that basis,  
9 having -- you effectively allowed them to recover the  
10 costs. Right?

11                   So it's that -- that constraint. But  
12 subject to those two (2) comments that --

13                   DR. BYRON WILLIAMS: Fair enough.

14                   MR. PATRICK BOWMAN: -- I accept.

15                   DR. BYRON WILLIAMS: And you also  
16 would agree that an important part of the rate-setting  
17 exercise involves a consideration of an appropriate  
18 level of reserves for rate setting?

19                   MR. PATRICK BOWMAN: Yes.

20                   DR. BYRON WILLIAMS: So Mr. Bowman, in  
21 terms of recommendation 1, without seeking great  
22 elaboration, you're concluding, at that point in time,  
23 that the proposed rate increases are justified based  
24 on the financial projections presented. Agreed?

25                   MR. PATRICK BOWMAN: That's what it

1 says there. When I had to summarize it down, that's  
2 what I put.

3 But I think if you go to the text  
4 leading up to it, you'll see that it -- it is also  
5 structured based on the -- the impact of -- of Bill  
6 36.

7 DR. BYRON WILLIAMS: Yes. And we'll  
8 come to that, sir.

9 Just to be clear, in terms of Manitoba  
10 Hydro's export market price forecast and marketing  
11 strategies, those were beyond the scope of your --  
12 your submission and your analysis, sir?

13 MR. PATRICK BOWMAN: Generally, yes.

14 DR. BYRON WILLIAMS: And is it fair to  
15 suggest that in preparing your written evidence, you  
16 worked on the assumption that Manitoba Hydro's load  
17 forecast was reasonably reliable?

18 MR. PATRICK BOWMAN: Yes.

19 DR. BYRON WILLIAMS: And sir, of  
20 course, you're aware that in Hydro's current resource  
21 planning assumptions and analysis, there are some  
22 additional thermal resources being added in the last  
23 2030s. Agreed?

24 MR. PATRICK BOWMAN: Yes. As a matter  
25 of fact, they're probably the main defining feature

1 about why you need the rate increase levels that are  
2 here in order to reach the 70/30 ratio.

3 DR. BYRON WILLIAMS: And sir, you did  
4 not form an opinion on whether, in today's political  
5 and market climate, whether it was reasonable to build  
6 in an expectation of adding thermal resources in the  
7 late 2030s, early 2040s. Agreed?

8 MR. PATRICK BOWMAN: Not specifically.  
9 My opinion focussed on the fact that if these  
10 resources are needed and if they're such a major  
11 driver of why we need the path to get to 70/30, and --  
12 and these resources are needed even with the  
13 assumption of major demand response and -- and other  
14 capacity signals, then we'd better get on with sending  
15 those capacity signals and build that into cost of  
16 service and rate design.

17 DR. BYRON WILLIAMS: And you just  
18 assumed the reliability of that -- that forecast out  
19 into the future, sir?

20 MR. PATRICK BOWMAN: I understood that  
21 assessing whether Hydro's resource plan was  
22 reasonable, was out of scope. So it was -- it was to  
23 be accepted.

24 DR. BYRON WILLIAMS: And sir, in  
25 preparing your written evidence, you also assumed that

1 the level of DSM in Manitoba Hydro's forecast was  
2 reasonable. Agreed?

3 MR. PATRICK BOWMAN: I accept the  
4 level of DSM they had there. I -- I didn't understand  
5 variability and level of DSM to be a matter within  
6 scope.

7 DR. BYRON WILLIAMS: And --

8 MR. PATRICK BOWMAN: I would consider  
9 that part of the IRP. That's -- one would test --

10 DR. BYRON WILLIAMS: IRP, integrated  
11 resource --

12 MR. PATRICK BOWMAN: -- as part of the  
13 Integrated Resource Plan.

14 DR. BYRON WILLIAMS: And I didn't mean  
15 to interrupt you. I apologize, sir.

16 And sir, would it be fair to say that  
17 the depreciation expense underlying Manitoba Hydro's  
18 amended financial forecast scenario is based upon  
19 Hydro's preferred equal life group or ELG methodology,  
20 sir?

21 MR. PATRICK BOWMAN: It is. With the  
22 -- with an extensive phase-in. But it is.

23 DR. BYRON WILLIAMS: And you do not  
24 endorse the ELG methodology, sir?

25 MR. PATRICK BOWMAN: Not for Manitoba

1 Hydro, I do not.

2 DR. BYRON WILLIAMS: And it's your  
3 view that there's at least a \$15 million a year  
4 difference to net income over time between the ELG  
5 methodology and alliances ALG IFRS compliant  
6 procedures, sir?

7 MR. PATRICK BOWMAN: Generally, yes.  
8 I'd encourage you to review the -- the full context of  
9 Monday's discussion around that, but...

10 DR. BYRON WILLIAMS: And sir, it's  
11 fair to say that operating and maintenance spending  
12 was not the primary focus in your review of the rate  
13 Application?

14 MR. PATRICK BOWMAN: That's correct.

15 DR. BYRON WILLIAMS: And indeed, the  
16 scope of your retainer did not -- did not include  
17 reviewing O&M forecast, sir?

18 MR. PATRICK BOWMAN: Correct.

19 DR. BYRON WILLIAMS: And the scope of  
20 your retainer, sir, did not involve reviewing normal  
21 capital forecast?

22 MR. PATRICK BOWMAN: That's correct.

23 DR. BYRON WILLIAMS: And sir, your  
24 written opinion does not address the reasonableness of  
25 the mix between floating and fixed debt in Manitoba



1 Hydro's management of interest rate expenses. Agreed?

2 MR. PATRICK BOWMAN: Not specifically,  
3 no.

4 DR. BYRON WILLIAMS: Mr. Bowman, I --  
5 I want to turn now to the financial target that  
6 underlies this recommendation 1.

7 And to make it clear, I'm -- I'm not  
8 seeking a legal opinion, sir. But I -- I merely want  
9 to get and make sure our clients understand the basis  
10 for your understanding of the regulatory framework  
11 applicable to rate setting for test years as it  
12 relates to financial targets. Okay, sir?

13 MR. PATRICK BOWMAN: I'm with you.

14 DR. BYRON WILLIAMS: And sir, to the  
15 extent that I make reference to the Bill 36 regulatory  
16 framework, you would understand that framework to be a  
17 framework that becomes operative after April 1st,  
18 2025, which caps rate increases at inflation or 5  
19 percent, whichever is less, which sets financial  
20 targets for the achievement of debt-to-capitalization  
21 rates of 80/20 and which sets financial targets for  
22 the achievement of debt-to-capitalization rates of  
23 75/25 for March 31st, 2040. Agreed?

24 MR. PATRICK BOWMAN: Isn't it 70/30?

25 DR. BYRON WILLIAMS: Seventy-five (75)

1 twenty-five (25), if I misspoke. Seventy (70) thirty  
2 (30), I'm sorry. It was just wishful thinking on my  
3 part, Mr. Bowman.

4 With the -- if I amend my question to  
5 say 70/30 for March 31st, 2040, does -- is that the  
6 regulatory framework for Bill 36, you understand it to  
7 be, sir?

8 MR. PATRICK BOWMAN: Yes.

9 DR. BYRON WILLIAMS: And sir, it is  
10 fair to say and suggest, your understanding of the  
11 Bill 36 regulatory framework is that the rate -- rate  
12 cap takes precedence over the financial targets?

13 MR. PATRICK BOWMAN: Yes.

14 DR. BYRON WILLIAMS: And sir, if you  
15 turn your mind to Manitoba Hydro's revised filing of  
16 December 9th, 2022, it's your understanding that it  
17 was based upon an expectation of compliance with both  
18 the rate cap and the debt/equity targets underlying  
19 the Bill 36 regulatory framework. Agreed?

20 MR. PATRICK BOWMAN: Yes.

21 DR. BYRON WILLIAMS: In essence, sir,  
22 you understood Hydro's 2 percent rate scenario as an  
23 effort to comply and meet the Bill 36 financial  
24 targets. Agreed?

25 MR. PATRICK BOWMAN: Yes, I -- I only

1 caveat that because the 80 percent target by March  
2 31st, 2025, has effectively no relevant value if  
3 you're also aiming to meet the 70 percent by 2040. We  
4 -- we blow past the first one because that's the path  
5 Hydro projected it needs to be on to meet the second  
6 one.

7                   So, you know, are we meeting those  
8 targets, no, I think we're probably far exceeding the  
9 first one.

10                   DR. BYRON WILLIAMS:    And just so I  
11 have your thoughtful point, sir.

12                   What -- what you're suggesting is that  
13 the heart of that 2 percent rate path, in terms of  
14 financial targets, is the 70/30 target. Agreed?

15                   MR. PATRICK BOWMAN:    Yes.

16                   DR. BYRON WILLIAMS:    And sir, your  
17 recommendation 1, which is before us, was heavily  
18 defined by Bill 36. Agreed?

19                   MR. PATRICK BOWMAN:    Yes.

20                   DR. BYRON WILLIAMS:    And it would be  
21 fair to suggest that the financial targets underlying  
22 your recommendation 1 are the Bill 36 financial  
23 targets and, in particular, the 70/30 out to March  
24 31st, 2040. Agreed?

25                   MR. PATRICK BOWMAN:    Yes.

1 DR. BYRON WILLIAMS: In essence, the  
2 financial target, sir, that you adopt for the purposes  
3 of recommendation 1 are the Bill 36 financial targets.  
4 Agreed?

5 MR. PATRICK BOWMAN: I don't think I'd  
6 use the word 'adopt'. It's a scenario that projects  
7 to achieve that -- that financial target in that time  
8 frame, given that the resource plan and other topics  
9 are out of scope for review.

10 And that your -- you said the rate cap.  
11 It's not just the rate cap. It's the rate cap and the  
12 expectation that rates will be stable on that path --  
13 that -- that's where it leads you. I -- I -- I don't  
14 want to suggest advocacy. It's -- I understand it's a  
15 requirement.

16 DR. BYRON WILLIAMS: Thank you, sir,  
17 and I apologize for the word "adopt" in terms of the  
18 target, that was misworded, and thank you for catching  
19 that.

20 Mr. Bowman, can we turn to your  
21 PowerPoint Slide 6, the "Am I in the Wrong Hearing"  
22 slide, sir.

23 Sir, if -- if I could try to capture  
24 the sentiment expressed at the bottom of this slide,  
25 without making any -- this is an -- and suggesting

1 that this is purely an analytical judgment, your view  
2 of the -- the outcome of Bill 36, in terms of the  
3 interplay between the rate cap and the financial  
4 targets, is that the delicately financial model for  
5 determining just and reasonable rates that has  
6 historically existed has been turned on its head.

7 Is that -- that right, sir?

8 MR. PATRICK BOWMAN: Yes.

9 DR. BYRON WILLIAMS: And, so, sir, in  
10 making Recommendation 1, and, if we could go back  
11 there for a moment, Ms. Schubert.

12 Your conundrum, if I could be so bold,  
13 was whether to use the approach -- the directional  
14 approach to financial targets and rate setting under  
15 the existing legislative framework or whether to apply  
16 the approach to financial targets and rate setting  
17 imposed after March 31, 2025, by Bill 36.

18 That was your dilemma, sir?

19 MR. PATRICK BOWMAN: I didn't view it  
20 as a dilemma at all, Mr. Williams. I understood it  
21 was a requirement.

22 I'm -- I'm -- I -- I absolutely could  
23 be wrong in that and that -- I know the transition  
24 provision -- I've been involved in helping to draft  
25 some Acts, and I know transition provisions aren't

1 always the piece that's given the most attention,  
2 'cause they're temporary.

3 I -- I -- I don't think the transition  
4 provision is entirely clear about how we would need to  
5 do things, but, to the extent I would read it in plain  
6 language, I understood a requirement.

7 If -- and -- and -- and tr -- true of  
8 anything else, it's passed, it's a law, a future  
9 government could change it, sure. The Minister might  
10 issue some Directives under it, sure, but I - I don't  
11 know that we ever design our -- our -- I don't think  
12 anybody would design a credible financial forecast  
13 that did not build in the law of the land as they  
14 understand it will apply at the time they're making  
15 the financial forecast for.

16 DR. BYRON WILLIAMS: And, of course,  
17 sir, the -- the rate application in question is for  
18 the 2021/'22 through '24/'25 years. Agreed?

19 MR. PATRICK BOWMAN: Correct.

20 DR. BYRON WILLIAMS: And, sir, absent  
21 your under -- your conclusion that you were bound by  
22 the targets outlined in Bill 36, particularly, the  
23 70/30 target, from a financial target reason and --  
24 and perspective, you would see no basis for a -- a 2  
25 percent rate increase, if we were under the ex -- if

1 you were applying, instead, the approach under the  
2 existing regulatory framework?

3 MR. PATRICK BOWMAN: I -- I -- I think  
4 that's fair, Mr. Williams, but I do want to caution.  
5 I didn't approach the hearing from that perspective.  
6 I didn't ask interrogatories from that perspective. I  
7 didn't ask scenarios from that perspective.

8 I think, if -- but for Bill 36, there  
9 would have been some different testing that we would  
10 have done and some different considerations. I think  
11 we've -- I would have been more concerned by the lack  
12 of the uncertainty analysis.

13 I also -- having the IRP out of scope  
14 was -- was -- was quite important to this. I -- I --  
15 I think there would have been a real question as to  
16 whether we really want to, you know, be driving rates  
17 up today to pay for the turbines that exist -- again,  
18 the natural gas turbines that existed in the late  
19 '30s, and I'm not even sure we're going to be able to  
20 build.

21 There's a whole bunch of -- of things  
22 that we would have liked to -- I would have liked to  
23 kick the tires on, but right -- right from the outset,  
24 I understood the context was those things didn't  
25 matter, and -- and I would say, you know, you -- you -

1 - you mentioned 75/25 as wishful thinking. I wouldn't  
2 wish for 25 either. I don't think the case has been  
3 made for achieving 25. This Board has accept (sic)  
4 heading towards 25 by a particular date, within annual  
5 discretion, as we set rates.

6 All right. That's what a target used  
7 to mean, not "thou shalt" and it -- so I -- I -- I  
8 think that's the level of testing that would need to  
9 be done to really come up with it. In the absence of  
10 that, just given the record here, I -- I don't think  
11 the case has been made for the next two -- rate -- 2  
12 percent rate increases.

13 DR. BYRON WILLIAMS: Thank you and  
14 thank you for your kind admonition about 75/20 -- 25,  
15 as well. That's well taken.

16 Now, Mr. Bowman, in the regulatory  
17 context, would you understand the term "arbitrary" to  
18 describe a decision which results from the exercise of  
19 judgment, without consideration of the relevant  
20 factual context? If you feel able to answer it. If  
21 you don't, sir, that's fine.

22 MR. PATRICK BOWMAN: I'm always a  
23 little bit cautious about generalized definitions but  
24 it sounds credible enough to -- if we can work on that  
25 basis.



1 DR. BYRON WILLIAMS: That's high  
2 praise from you, Mr. Bowman. I'll take it.

3 I want to turn to the response of the  
4 Manitoba Industrial Power Users' Group to Public  
5 Utilities Board Information Request 1-5, the last  
6 paragraph.

7 MR. PATRICK BOWMAN: Yes, I'm there.

8 DR. BYRON WILLIAMS: Okay. And, Mr.  
9 Bowman, focussing on the existing regulatory  
10 framework, leaving aside, for a moment, the post-April  
11 1, 2025 Bill 36 world, it's been your long-held view  
12 that the uncertainty analysis, including provision for  
13 rate responses, could be an important tool to help  
14 guide the setting of financial targets. Agreed?

15 MR. PATRICK BOWMAN: Yes.

16 DR. BYRON WILLIAMS: Indeed, it's your  
17 view that the uncertainty analysis would be highly  
18 superior to the approach enshrined in the Bill 36  
19 financial targets. Agreed?

20 MR. PATRICK BOWMAN: I -- I want to be  
21 careful about comparing an analysis to a -- a  
22 conclusion. I think, absent Bill 36, you know, we  
23 talk a lot about targets, but I would suggest to this  
24 Board, and I have suggested over the years, that, even  
25 the targets, need to be framed from the perspective of

1 what are you are trying to achieve.

2                   And my submission, what we're trying to  
3 achieve is the ability to have a stable and  
4 predictable rate regime and the lowest rates  
5 reasonably consistent with the ability to have a  
6 stable and consistent predictable rate regime.

7                   The un -- uncertainty analysis tool is  
8 the best way to test whether you have a regime that  
9 could have a stable and predictable rate regime, and,  
10 therefore, to test various levels of reserve as to  
11 whether they lead to a high likelihood of achieving  
12 that outcome.

13                   So, like reserves is like, you know,  
14 target's like third. First, what are we trying to  
15 achieve. Second is we're measuring it. Third is what  
16 do we need to get there?

17                   DR. BYRON WILLIAMS: And, if -- if  
18 you're not prepared to go with me on this, sir, I get  
19 it totally.

20                   But, based upon your consideration of  
21 the dialogue, whether it's Mr. Rainkie or Mr.  
22 Colaiacovo or yourself, there's been a strong theme,  
23 I'll suggest to you, of rigorous evidence-based  
24 probablistically-driven analysis to get to those  
25 outcomes that you've just been talking about, sir,

1 rather than arbitrarily setting targets.

2 MR. PATRICK BOWMAN: I think -- I -- I  
3 don't know about a theme, but I think any -- any  
4 experts who appear before this Board would tell them  
5 that you need -- you -- you need credible evidence to  
6 digest unreasonable rates and to assess the  
7 alternatives.

8 DR. BYRON WILLIAMS: Fair enough. Mr.  
9 Chair, could you remind me of how much time I have  
10 left?

11 MR. CHAIRPERSON: If you wanted to go  
12 right through, you have till 12:30. If you wanted to  
13 break, I leave it to you.

14 DR. BYRON WILLIAMS: I think I'm  
15 confident, knowing that, I have that much time that we  
16 will -- I will complete within my allotted time.

17 So, what I'm going to suggest is, at  
18 twelve o'clock, we see how the Board's feeling and, if  
19 -- but I'm -- I'm kind -- I'm prepared to -- to keep  
20 going, I think, if that's helpful to the Board

21 THE CHAIRPERSON: Yeah. You know, we  
22 can look at it at 12:00 and see where -- where you  
23 are, Mr. Williams.

24 What I don't want to do is impose a  
25 break in an inconvenient place, so I leave it to you.

1 DR. BYRON WILLIAMS: Thank you.

2

3 CONTINUED BY DR. BYRON WILLIAMS:

4 DR. BYRON WILLIAMS: Mr. Bowman, I  
5 don't think we need to turn there, but you will recall  
6 that My Friend -- My Learned Friend M. Hacault  
7 introduced an exhibit, MIPUG-17, which presented the  
8 results of the BC Hydro fully allocated Costs of  
9 Service study, sir?

10 MR. PATRICK BOWMAN: Yes.

11 DR. BYRON WILLIAMS: And perhaps I --  
12 I have too much confidence in your recollection of  
13 that information, sir.

14 But subject to check, would it be fair  
15 to suggest that the allocation of transmission costs  
16 for BC Hydro is undertaken using a 4CP -- C -- the  
17 letter 'C', the letter 'P' -- coincident peak --  
18 demand including losses, sir?

19 MR. PATRICK BOWMAN: I -- I can't  
20 affirm that it's correct, but it would be completely  
21 unsurprising because BC has a system that is more  
22 balanced across the years. It doesn't have the  
23 heating load like us.

24 DR. BYRON WILLIAMS: Sir, I can refer  
25 you to page 8 of 17.

1 THE CHAIRPERSON: Sorry. Sorry, just  
2 hold for a sec.

3 Can you repeat what you just said, Mr.  
4 Bowman? I had trouble hearing it.

5 MR. PATRICK BOWMAN: In -- in  
6 Manitoba, we do Cost of Service studies on the basis  
7 of our load, which has a high winter peak that drives  
8 our investment. So we focus on the winter peak.

9 It wouldn't surprise me that in BC,  
10 where they don't have the same acute winter peak, that  
11 they look to a more balanced mix of -- of peaks.

12 I do know -- I worked with the interior  
13 of BC -- and even there, where winter conditions can  
14 be quite high, air conditioning peaks are as high as -  
15 - as heating. And so, they -- they do look to summer  
16 and winter peaks in terms of allocating costs.

17 Our summer peak is nothing like our  
18 winter peak.

19 THE CHAIRPERSON: Thank you.

20

21 CONTINUED BY DR. BYRON WILLIAMS:

22 DR. BYRON WILLIAMS: Just trying to  
23 get the right page for you, Mr. Bowman. I apologize.

24 MR. PATRICK BOWMAN: I'm -- I'm  
25 prepared to take it subject to check, if that --

1 DR. BYRON WILLIAMS: Okay. If that  
2 helps. You can -- but M. Hacault, you can check.  
3 It's page 8 of 17. Thank you.

4 MR. PATRICK BOWMAN: The challenge,  
5 Mr. Williams, is seeing 4CP doesn't tell me whether it  
6 is spring, summer, winter, fall or whether it is  
7 December, January, February, March.

8 It tells me that it uses four (4) data  
9 points. I'm just not sure which data points.

10 DR. BYRON WILLIAMS: And so, if I  
11 suggested to you it's four (4) season, you're not in a  
12 position to accept or deny that then, sir?

13 MR. PATRICK BOWMAN: No, but I -- I  
14 wouldn't find it -- I wouldn't find it surprising.

15 DR. BYRON WILLIAMS: Okay. Mr.  
16 Bowman, in terms of PCOSS24, is it -- would it be  
17 accurate to suggest, subject to check, that the system  
18 load factor is used to classify certain generation and  
19 transmission costs that have both energy and demand  
20 elements, sir?

21 MR. PATRICK BOWMAN: It's used to  
22 classify all generation costs other than wind. Yeah.  
23 And they do have energy and demand elements. Yes.

24 DR. BYRON WILLIAMS: And the system  
25 load factor, sir, is derived on the basis of a -- the

1 average of eight (8) years of historic domestic load  
2 factors. Agreed? Subject to check.

3 MR. PATRICK BOWMAN: Yes. Quite  
4 historic at this point. The load -- the load data is  
5 still being updated.

6 DR. BYRON WILLIAMS: Earlier today,  
7 Mr. Bowman, you'll recall -- you'll recall that we  
8 discussed the water flow variability inherent in  
9 Hydro's system. Do you recall that, sir?

10 MR. PATRICK BOWMAN: Yes.

11 DR. BYRON WILLIAMS: And, of course,  
12 we looked at the extreme example of the '03/'04  
13 drought where water flows were less than 75 percent of  
14 long-term average, closely juxtaposed with the year in  
15 which system inflows were more than 50 percent above  
16 the long-term average. Do you recall that?

17 MR. PATRICK BOWMAN: Yes.

18 DR. BYRON WILLIAMS: And sir, in the  
19 context of the uncertainty analysis, you remember  
20 discussing how export prices and water flows are among  
21 the top variable risks faced by Manitoba Hydro,  
22 excepting the caveat of how you defined export prices?

23 MR. PATRICK BOWMAN: Yes.

24 DR. BYRON WILLIAMS: And without  
25 inviting a speech -- although you can do one if you

1 wish, sir -- you were alive to the reality that  
2 further Costs of Service study analysis may show  
3 different results owing to that inherent variability  
4 in water flows?

5 MR. PATRICK BOWMAN: Yes. Although a  
6 -- you know, the 'P' in PCOSS is perspective. It's  
7 forward looking and it includes the -- the range of  
8 expected conditions. I hope that wasn't a speech.

9 DR. BYRON WILLIAMS: No, it was very  
10 helpful. And sir, all your speeches so far have been  
11 as well. So I want to be careful.

12 I want to talk about normalization as a  
13 mechanism to -- recognizing we're still trying to use  
14 net export revenue as an offset to allocate costs, but  
15 based on some reflection of reverting to the mean --  
16 both in terms of system inflows and reservoir levels,  
17 sir.

18 So conceptually, you understand what  
19 I'm trying to do, sir?

20 MR. PATRICK BOWMAN: I think so.

21 DR. BYRON WILLIAMS: I want to discuss  
22 the concept of variation -- or normalization of water  
23 flows, recognizing the spirit and intent of Order  
24 164/16. Okay?

25 MR. PATRICK BOWMAN: Okay.



1 DR. BYRON WILLIAMS: And in your  
2 evidence, sir -- I can take you there if you like --  
3 but conceptually, you would agree that the PCOSS  
4 scenarios could be normalized for water flows.  
5 Agreed? So -- and sir, you understand?

6 MR. PATRICK BOWMAN: I do. I just  
7 want to caution, again, the flows versus starting  
8 reservoirs issue.

9 I think the PCOSS scenarios are  
10 normalized for water flows. They're not necessarily  
11 normalized for starting reservoir conditions.

12 DR. BYRON WILLIAMS: Yeah. Exactly.  
13 And sir, assuming one wanted to normalize for system  
14 inflows and for water levels to -- to try and  
15 normalize that inherent volatility, I wonder, as an  
16 independent expert, if you could offer some  
17 preliminary thoughts on considerations you might  
18 recommend in terms of a principled approach to  
19 normalizing system water flows, inflows, as well as  
20 reservoir levels for the purpose of PCOSS analysis.

21 MR. PATRICK BOWMAN: Well, as I noted,  
22 flows are already normalized. As far as, you know,  
23 the -- the range of expected projections. Inflows.

24 The water levels could be normalized if  
25 that was an objective that one set out to do. And I

1 think that was done. I was just trying to find the  
2 reference.

3 It is -- it was in my presentation  
4 though. Double-checking here. It's PUB Response  
5 Round 1 141A and also Coalition Response Round 1 155A,  
6 which takes the reservoir levels at the start and --  
7 and moves them to an average level.

8 The result of those RCCs are shown in -  
9 - Ms. Schubert, if you have the presentation -- we --  
10 I used it as a cross-check, as a matter of fact.

11 DR. BYRON WILLIAMS: You're talking  
12 about the 94.8 percent figure, sir?

13 MR. PATRICK BOWMAN: I don't -- I  
14 don't focus on outcomes, Mr. Williams. I'm trying to  
15 focus on method.

16 DR. BYRON WILLIAMS: I'm trying to cue  
17 your memory, sir.

18 MR. PATRICK BOWMAN: It is on slide  
19 16. And you'll see PCOSS24's revenue cost coverage  
20 ratios are reported there on the left, and the -- the  
21 normalized starting reservoir levels are -- are  
22 reported on the right.

23 DR. BYRON WILLIAMS: Sir, that  
24 analysis -- would it be fair to say that the twenty-  
25 four (24), twenty-five (25) year is projected to start

1 at a higher than normal reservoir level? Wasn't that  
2 the evidence of Manitoba Hydro?

3 MR. PATRICK BOWMAN: That is not my  
4 understanding, Mr. Williams.

5 DR. BYRON WILLIAMS: Okay.

6 MR. PATRICK BOWMAN: My -- my  
7 understanding was that question was asked about  
8 starting with normal water levels.

9 We can go to the question. I think  
10 that might be the -- the most helpful place to confirm  
11 it.

12 But the question was asking for normal  
13 water levels and Hydro said, Here's the best way I can  
14 model that. And they gave that response.

15 DR. BYRON WILLIAMS: So I don't have  
16 the reference, so we'll -- we'll leave that your  
17 understanding and then we'll check the record.

18 Sir, in discussing the net -- I just  
19 want to take you to slide 15 of Ms. Derksen's  
20 PowerPoint from yesterday just for a second, sir.

21 MR. PATRICK BOWMAN: Before we do  
22 that, is it possible to go to that slide?

23 DR. BYRON WILLIAMS: Absolutely.

24 MR. PATRICK BOWMAN: I just wanted to  
25 say when I -- when I prepared this, the results are

1 accurately reported there. I didn't know that there  
2 would be as much focus on, sort of, the precise  
3 definition. And I wrote the words, 'Adjusted to  
4 '24/'25 net export revenue.' I'm not sure those are  
5 the -- in fact, the precise definition of that  
6 scenario.

7 I'd encourage the Board to go to the  
8 reference IRs and see exactly what was modelled. It's  
9 not about NER. It's about reservoir levels.

10 But at the time, I thought that was  
11 precise enough. But it may be that we're into a range  
12 where more precision is needed.

13 DR. BYRON WILLIAMS: Thank you. And  
14 no, Mr. Bowman, your -- as always, your candour and  
15 your thoughtfulness is appreciated.

16 Mr. Bowman, just -- I don't want to get  
17 into details on this scenario. But you see that the -  
18 - the analysis on slide 15 is flowing from an  
19 Information Request Manitoba Hydro -- Consumer  
20 Coalition/Manitoba Hydro 1-155, sir. Agreed?

21 MR. PATRICK BOWMAN: Yes.

22 DR. BYRON WILLIAMS: And sir, you  
23 know, you can certainly -- we can take you to question  
24 'B' or not in just a second.

25 But you understand that this analysis,

1 sir, is simply a replication of PCOSS24, but at a -- a  
2 different level of net export revenue. It's simply  
3 putting in the same analysis from PCOSS24 into a  
4 different level of net export revenue.

5 Do you understand that, sir?

6 MR. PATRICK BOWMAN: Yes, I understand  
7 the level of net export revenue is in no way credible  
8 for what might occur in that year. But I understand  
9 that's what this has done is -- is Ms. Derksen has  
10 requested a -- a run with a set of numbers.

11 DR. BYRON WILLIAMS: Well -- and in  
12 fact, sir, what she was trying to aim for was the  
13 '28/'29 year and -- and this -- the number that comes  
14 out of this is very analogous to -- to the '28/'29  
15 year. Agreed?

16 MR. PATRICK BOWMAN: No. It may be  
17 analogous for that one (1) variable but, Mr. Williams,  
18 I had pulled up the numbers from PCOSS21 last night  
19 and I wanted to check the -- the breakdown of rates.  
20 And it was -- my slide 24 had been breaking out  
21 distribution versus generation.

22 I'll just -- just for the record, I'll  
23 let you know, PCOSS21, there was \$292 million of  
24 distribution allocated to Residentials, two-nine-two  
25 (292).

1                   In PCOSS24, it's three-seven-eight  
2 (378). A lot of other things change in the underlying  
3 conditions. Cherry picking one item, like -- like,  
4 net export revenues and saying 2028 will look like  
5 this is not the way this works.

6                   And distribution is a very significant  
7 factor for the --

8                   DR. BYRON WILLIAMS:     Just so I -- you  
9 understand, sir, this is a re-input of PCOSS24.  
10 Including, sir, I'll suggest to you, using the net  
11 export revenue offsets in exactly the same manner as  
12 in -- directed by the PUB in Order 164/16.

13                   Would that be your understanding, sir?

14                   MR. PATRICK BOWMAN:     Perhaps I'll use  
15 the term 'mathematically', as it was used yesterday.

16                   But I will tell you that, as a credible  
17 scenario of '24, this is not it. The green bars have  
18 no relation to what one might have as export revenues  
19 in '24.

20                   As a credible scenario for '28, this is  
21 not it. It doesn't deal with any of the underlying  
22 changes, which, as much as people will assert,  
23 stability and self-correcting does not happen.

24                   Even in '21 to '24, which is a period  
25 where it was asserted that we were spending all our

1 money on generation and not doing much on  
2 distribution, distribution cost Residentials went up  
3 \$80 million.

4 DR. BYRON WILLIAMS: And sir, you  
5 understand that Ms. Derksen, in these scenarios, is  
6 simply asking to run the same PCOSS24 analysis  
7 including the offsets, in exactly the same way as  
8 imagined in Order 164/16, sir?

9 MR. PATRICK BOWMAN: Ms. Derksen likes  
10 to run a lot of scenarios. I accept that.

11 DR. BYRON WILLIAMS: And in using the  
12 offsets in the way intended by Order 164/16, sir?

13 MR. PATRICK BOWMAN: Yes. Using a mix  
14 match of offsets -- I believe pineapples may have been  
15 Mr. Colaiacovo's term -- but using a mix of offsets  
16 that do not exist in the same year.

17 DR. BYRON WILLIAMS: Thank you, sir.  
18 Now, sir, in terms of the discussion of net export  
19 revenues, you used the term 'approved offset approach'  
20 when, in essence -- which, in essence, treats export  
21 revenues as a reduction in allocated costs. Agreed?

22 MR. PATRICK BOWMAN: Yes.

23 DR. BYRON WILLIAMS: And you rely on  
24 the 1992 NARUC, N-A-R-U-C, Cost Allocation Manual, in  
25 support of the off-set approach. Agreed?

1 MR. PATRICK BOWMAN: I make reference  
2 to it. It's been raised many times before this Board,  
3 in supporting the off-set approach --

4 DR. BYRON WILLIAMS: Okay.

5 MR. PATRICK BOWMAN: -- but I think  
6 the key is that it's approved, because this Board  
7 considered the issue at length and came up with that  
8 decision over two (2) hearings.

9 DR. BYRON WILLIAMS: And, sir, in  
10 terms of the concept of the off -- off-set approach,  
11 let's -- let's assume that that continues into the  
12 future. Okay? You'll work with me on that?

13 MR. PATRICK BOWMAN: Yes.

14 DR. BYRON WILLIAMS: When we think of  
15 that NARUC Electricity Manual, it hasn't been updated  
16 since 1992. Would that be fair, sir?

17 MR. PATRICK BOWMAN: Yes.

18 DR. BYRON WILLIAMS: And, since 1992,  
19 there has been the fundamental restructuring of the  
20 industry by FERC, beginning in 1996. Agreed?

21 MR. PATRICK BOWMAN: Yes.

22 DR. BYRON WILLIAMS: And there have  
23 been dramatic changes in the relative costs of  
24 technologies and fuels? I can give you examples, if  
25 that would help you.



1 MR. PATRICK BOWMAN: I -- I -- I  
2 accept examples. I'm just trying to, you know -- the  
3 manual wouldn't have been updated for those things,  
4 because those things took generation effectively out  
5 of cost of service regulation and put them into a  
6 market context.

7 So, people wouldn't be running Cost of  
8 Service studies for generation at all, in -- in -- in  
9 terms of those changes you're talking about. I don't  
10 think someone updated the manual to say, you don't  
11 need it any more.

12 DR. BYRON WILLIAMS: And some of those  
13 dramatic changes, sir, were massive declines in the  
14 price of variable renewal resources, like wind and  
15 solar?

16 MR. PATRICK BOWMAN: That is a very --  
17 yes, that is an important recent evolution.

18 DR. BYRON WILLIAMS: And, of course,  
19 those variable resources put tremendous pressures on  
20 the transition -- transmission system, for example,  
21 sir, in a way very different from -- from 1992?

22 MR. PATRICK BOWMAN: Yes.

23 DR. BYRON WILLIAMS: And among the  
24 dramatic shifts in -- since 1992 would be fundamental  
25 reconsiderations of the role of coal, in terms of

1 generating power, sir?

2 MR. PATRICK BOWMAN: Yes.

3 DR. BYRON WILLIAMS: And there would  
4 be, of course, sir, a much greater focus on energy  
5 efficiency. Agreed?

6 MR. PATRICK BOWMAN: Yes.

7 DR. BYRON WILLIAMS: And a recognition  
8 of the increased potential, since 1992, for renewable  
9 distributed energy. Agreed?

10 MR. PATRICK BOWMAN: Yes.

11 DR. BYRON WILLIAMS: And, of course,  
12 that renewal distributed energy, sir, has the  
13 potential to put significant pressure on -- on  
14 systems, including trans -- transmission, sir.

15 MR. PATRICK BOWMAN: I guess the --  
16 most times that I'm dealing with renewable distributed  
17 generation, as it relates to cost of service and rate  
18 design, it's really about distribution systems. It's  
19 people installing solar on the roof and that sort of  
20 thing.

21 Transmission is, obviously, a bit  
22 trickier, you know, you don't -- transmission sizing  
23 is very important. Distribution is mostly about the  
24 presence of the asset. So, if you want to install a -  
25 - a wind farm or -- or -- or solar panels or something

1 on a -- on a transmission system, you have to app --  
2 you know, apply for that transmission to be connected.  
3 You have to incur the costs of it. They have to  
4 determine what the incremental costs are versus what  
5 the system benefits.

6                   It's a -- it's a very complicated  
7 system, but, in -- in general, the distributed  
8 resource pays for that. It's -- it's distribution  
9 where you really run into the issues, where anybody  
10 can put a solar panel on their house and change the  
11 way that they use and drive costs on the system, but  
12 they won't see that on their bill, unless -- unless  
13 there's action taken on it on rate design.

14                   DR. BYRON WILLIAMS: Okay. And, sir,  
15 another of the fundamental shifts since 1992 has been  
16 the potential for electrification of end uses that  
17 currently run on fossil fuels, sir.

18                   MR. PATRICK BOWMAN: Yeah. I -- I --  
19 I -- well, it's incurring. I -- I -- I won't say it  
20 wasn't occurring in '92. I think there was,  
21 certainly, a lot of electrification going on through  
22 many decades leading up to '92.

23                   DR. BYRON WILLIAMS: And, sir,  
24 accepting, as we have, that the off-set principle  
25 continues to be accepted by the Public Utilities

1 Board, you would agree that there are different  
2 approaches by which the off-set might be allocated?

3 MR. PATRICK BOWMAN: It's possible in  
4 the mechanics there is, but, fundamentally, I don't  
5 see an outcome where somebody says, you know, we build  
6 Keeyask and incur the costs, we have these revenues,  
7 but we're not going to use the revenues to pay the  
8 Keeyask costs. We're going to slosh them into some  
9 other part of the study.

10 I -- I don't -- I don't -- I don't see  
11 a credible path to that, from the principles this  
12 Board has adopted. It -- it may be that it's credited  
13 to different amounts, to demand or energy or to the  
14 generation system in -- in different ways, but I'm --  
15 I'm pretty sure there's fairly universal agreement  
16 that the export revenues are a key part of paying for  
17 the asset investment that we made.

18 DR. BYRON WILLIAMS: Right. And, so,  
19 what we're talking about, sir, in term -- in terms of  
20 that, apart from the concept you're talking about, is  
21 within the generation and system -- and -- and  
22 transmission system, it's conceptually clear that  
23 there could be different ways to allocate that off-set  
24 within that system, other than the current approach  
25 adopted by the Board. Would that be fair?

1 MR. PATRICK BOWMAN: I think that's  
2 fair. It would -- it would still be in the generation  
3 and transmission system. It's just -- it's just in  
4 what parts of it. I -- I -- I think it's possible you  
5 could -- could come up with some different ways, and  
6 I'm not sure any leap to the top of my head, other  
7 than what's done, but I -- I could imagine someone  
8 coming up with something that had some -- some  
9 promise.

10 DR. BYRON WILLIAMS: And, sir, in --  
11 in terms of that concept -- in terms of the concept of  
12 how we look at off-set approaches, is it your view  
13 that the -- the approach currently adopted by the  
14 Public Utilities Board is the only one that you're  
15 aware of?

16 MR. PATRICK BOWMAN: No. I -- if you  
17 asked me to come up with a sort of second best option,  
18 you know, possibly, on debate, the best option, it's  
19 looking at the facts, you have something like the  
20 evolution of the -- of the exports that are occurring  
21 and less and less of them are firmed back by capacity.

22 So, the export revenue you're getting  
23 is for -- is for energy. I -- I could imagine saying  
24 we take that exports and allocate a lot more of it  
25 against the energy output of Keeyask and a lot less of

1 it against the capacity output of Keeyask, as an  
2 example, because Keeyask capacity -- that's needed to  
3 meet all these growing loads, as people electrify and  
4 do things. The energy's still surplus. So, we credit  
5 the exports against energy. That -- that -- I -- I --  
6 I could imagine a -- a credible debate on that option.

7 DR. BYRON WILLIAMS: Okay. Thank you,  
8 sir. Sir, I want to switch gears, and I think, Mr.  
9 Chair, I can take you home, and I'm going to invite an  
10 extended commentary from Mr. Bowman, on this one,  
11 unless he declines.

12 But, Mr. Bowman, you will recall a  
13 discussion in Manitoba, in the late 2000s, regarding  
14 the possibility of a new tariff for energy-intensive  
15 industrial load.

16 Do you recall that at a high level,  
17 sir?

18 MR. PATRICK BOWMAN: Yes.

19 DR. BYRON WILLIAMS: And, of course,  
20 you're aware, in -- in this proceeding, and I don't  
21 think I need to take you there, but there's an -- an  
22 Order in Council relating -- that's been presented by  
23 PUB counsel to Manitoba Hydro or -- or shared --  
24 discussed with them, discussing the implications of  
25 potential crypto currency operations in Manitoba.

1 Do you recall that, sir?

2 MR. PATRICK BOWMAN: Yes.

3 DR. BYRON WILLIAMS: And, again, at a  
4 very high level, sir, you're aware that by virtue of  
5 the Order in Council, Hydro was directed to suspend  
6 processing of requests of persons intended to engage  
7 in crypt -- in crypto currency operations, sir?

8 MR. PATRICK BOWMAN: Yes.

9 DR. BYRON WILLIAMS: And it was  
10 directed to engage with the PUB on regulatory  
11 perspectives, if any, on appropriate mechanisms to  
12 address the anticipated demand for electricity from  
13 persons intending to engage in crypto currency  
14 operations, sir?

15 MR. PATRICK BOWMAN: Yes.

16 DR. BYRON WILLIAMS: Sir, just at a  
17 high level, I'm wondering if I could invite you to  
18 discuss, generally, the regulatory considerations, in  
19 terms of energy-intensive uses, such as crypto  
20 currency, and the need to be mindful, both of the  
21 implications for the particular industry, as well as,  
22 more broadly, to existing and potential future  
23 Manitoba consumers, including industrial load.

24 MR. PATRICK BOWMAN: I'll -- I'll try  
25 to keep this short. In general, electricity

1 regulation tends to not distinguish customers based on  
2 end use or what they're using the energy for. It's --  
3 it's about the pricing of power to the meter. It's  
4 not about what they use it for. It's not -- they're  
5 not a social or moral judgment or anything of that  
6 nature.

7                   But a lot of people who've been in this  
8 industry look at the crypto currency and say, There's  
9 something a little bit different about this. And if -  
10 - if I had to boil it down to a nutshell, the -- and  
11 again, this a fast-evolving industry, so a lot of  
12 people are dealing with the facts of, as they  
13 understand it a year or two (2) ago, it may not  
14 reflect what it was last week, right?

15                   But these are potentially large  
16 consumers of power, but they're large consumers of  
17 power who are, you know, in some cases, you know,  
18 moving in, hooking up a transmission line to a place  
19 that has a tonne of computer servers mounted in a  
20 shipping container and -- and using large -- large  
21 amounts of energy.

22                   I will say, from a rate-design  
23 perspective, from a cost-allocation perspective,  
24 there's absolutely nothing wrong with that so long as  
25 we understand that that load is a little bit different



1 than the types of load we have when we're talking  
2 about industrial customers here.

3                   If that customer wants to buy surplus  
4 energy, and at any given day they'll pay us the same  
5 as what the export price would pay us, that's fine.  
6 No -- no skin off our nose. We're -- we're a net  
7 wash.

8                   You know, maybe other people would  
9 decide we want some other provision, but I would  
10 generally say let's, you know, avoid judging the end  
11 use. But I think, as a -- as an industry, it's very  
12 different than a bricks-and-mortar commitment.

13                   I know -- I know Ms. Derksen made a  
14 comment about -- about industrial loads shrinking, and  
15 who bears the risk of that. Well, the mines we're  
16 talking about that have dropped off are mines who were  
17 developed in the 1920s in one case and the 1960s in  
18 another case and where the anchors for developing  
19 Kesley and getting the Nelson River developments done.

20                   These are not people who showed up one  
21 day, demanded you design your system for them, and  
22 potentially picked up shop the next day and left. You  
23 know, even -- even our most energy-intensive customers  
24 who are sitting here telling you power matters, and in  
25 the extreme we could be mobile -- Chemtrade as an

1 example.

2 Chemtrade was built in Brandon as  
3 Hooker Chemicals in I think the 1960s. They're still  
4 here and they've only expanded.

5 So if that customer comes to you and  
6 says, I want you to sell me firm power, and I want you  
7 to build that into your planning, and I want you to  
8 build the system that way, the quid pro quo is they're  
9 going to be there to use that system pretty much.  
10 They're -- they're darned reliable.

11 And -- and in the mines, they're  
12 probably headed for an upswing at some point if  
13 critical minerals take off the way people are talking  
14 about.

15 That's very different than somebody who  
16 walks in with a shipping container and says, I want to  
17 hook up 50 megawatts to a container, and I could be  
18 gone next week if -- if not.

19 I think for that type of load, if there  
20 isn't that type of long-term commitment, you say,  
21 well, fine, as long as you're paying me what I could  
22 have got for the export market and I'm not running gas  
23 turbines to supply you; and if I'm in a drought, I'm  
24 cutting you off 'cause -- or I'm charging you what the  
25 import markets were going to charge me, then -- then

1 you've probably got an -- an economic rate regime.

2 Or you tell them, sign a contract that  
3 guarantees me you'll be a firm load for a long enough  
4 period that I can plan for you as a firm load, you  
5 know.

6 And it's not because you're making a  
7 moral judgment. It's -- I'm -- I'm trying to view  
8 this just through an economic lens, and I think  
9 implicit in a lot of the cost of service, whatever, is  
10 that, when we talk about firm loads, we -- we rely on  
11 them being here. And I think that's the nature where  
12 this -- this load could be different.

13 So that -- if I was to get -- get to  
14 the nub of it, not -- not moralizing but -- but  
15 instead just focussing on -- on the sort of rate  
16 design, it's -- they -- they challenge the system  
17 because our norms of assuming people who are -- want  
18 firm power are going to be around, they -- they break  
19 that.

20 DR. BYRON WILLIAMS: And just finally,  
21 sir, mechanistically, can -- the concept you've talked  
22 about, is that a tariff item or a -- a contract item?  
23 And if that's too -- like I'm just trying to think of  
24 the arrangement that -- that you were thinking of.

25 How do you conceive of that?

1 MR. PATRICK BOWMAN: Well, I think  
2 it's -- I think it starts probably with a legislative  
3 item. You know, right now, whether written that way  
4 or not, people would -- would understand a utility to  
5 have an obligation to serve.

6 A customer comes along and says, I want  
7 power, it's your job to figure out how to get it to  
8 him. It's part of your franchise. You get the right  
9 to be the only supplier, but you have to supply,  
10 right? That -- that's the nut of that -- that -- this  
11 form of industrial organization to use that term.

12 What you would need is some form of  
13 exemption from that that says, no, no. If there's a  
14 customer that for some reason we're not sure that they  
15 are committing to firm power, you can be allowed to  
16 jump on the surplus energy program.

17 Pay -- you know, you pay to connect,  
18 you -- you get the -- the surplus rates. You don't  
19 get a guarantee of supply unless -- unless you want to  
20 be a firm power customer, in which case we need some  
21 sort of contractual term that -- that does obligate  
22 you over a period of time.

23 I don't think we need to chase -- you  
24 know, I don't think we need to chase Valet (phonetic)  
25 for a contract -- not -- not a client of mine, but as

1 an example for a long-term contractual commitment.

2 They developed Thompson in the '60s. Like they're --  
3 they're here.

4 But I think with somebody whose --  
5 whose entire operation is in a shipping container, you  
6 might -- you might want to figure out the right way to  
7 have security and long-term commitments.

8 And I will say that this is an active  
9 topic, particularly in -- in Labrador right now, who  
10 has rates much lower than us, but not a lot of firm  
11 capacity to deliver it. And -- and they're sort of  
12 headed down the same road, that we're talking about  
13 non-firm rates equivalent to what you'd get from the  
14 export market.

15 DR. BYRON WILLIAMS: Thank you. And,  
16 Mr. Chair, we'll review our notes, but I think those  
17 are our questions. Thank you.

18 THE CHAIRPERSON: Thank you very much.  
19 We'll -- we'll break for lunch and reconvene at 1:15.  
20 Thank you.

21

22 --- Upon recessing at 12:16 p.m.

23 --- Upon resuming at 1:24 p.m.

24

25 THE CHAIRPERSON: Mr. Hombach...?

1 MR. SVEN HOMBACH: Thank you, Mr.  
2 Chair. I seem to be the last person on the microphone  
3 in the evidentiary portion of the Hearing. Being --  
4 being Board counsel is a heavy burden, I'll try to  
5 carry it with dignity.

6

7 CROSS-EXAMINATION BY MR. SVEN HOMBACH:

8 MR. SVEN HOMBACH: So, good afternoon,  
9 Mr. Bowman. You made an interesting comment this  
10 morning. I believe you -- you gave a quote that said:

11 "The law of the land must be built  
12 into financial projections."

13 Do you recall that statement?

14 MR. PATRICK BOWMAN: Generally, yes.  
15 It was a long time ago.

16 MR. SVEN HOMBACH: I also only have a  
17 general recollection of it. But I wanted to look  
18 beyond Bill 36 for just a moment and give another  
19 hypothetical.

20 So, you're basically saying the Board  
21 should look to legislation or regulation that is in  
22 place and accept it as a given?

23 MR. PATRICK BOWMAN: I -- I think  
24 that's fair. I think -- you know, I'm not giving  
25 legal advice. I'm looking at financial forecasts.

1 But I -- I don't know how a financial forecast could  
2 ignore the most likely scenario. And I would think  
3 the most likely scenario should be consistent with the  
4 legislative regime that would apply at that point in  
5 time.

6 MR. SVEN HOMBACH: So, as far as  
7 you're concerned, something like Bill 36 is no  
8 different than, let's say, a change to Lake Winnipeg  
9 regulation where the lake level range gets changed and  
10 the Board has to take that into account?

11 MR. PATRICK BOWMAN: Right. And even  
12 in the -- even if somebody was to say Lake Winnipeg's  
13 licence as of 2027 will narrow the range to 5 feet  
14 instead of 9, I would think Hydro's financial forecast  
15 for 2028 should show a 5-foot range.

16 Like, you know, it seems to me, even if  
17 they say it doesn't take effect today, it -- it does  
18 take effect to the period you're trying to forecast  
19 for.

20 MR. SVEN HOMBACH: On page 10 of your  
21 presentation, if we could put that up, you made the  
22 comment that, if the Bill 36 regime does not apply,  
23 then there would be no basis for the 2 percent rate  
24 increase.

25 And could you please just confirm that

1 your view is that, without Bill 36, there would be no  
2 need for a 70/30 debt-to-capitalization ratio?

3 MR. PATRICK BOWMAN: I have never seen  
4 any analytical argument as to why Hydro would need to  
5 achieve a 70/30 ratio to -- to achieve the type of  
6 objectives that are discussed before this Board. I'm  
7 not saying it's not possible, but I -- I have never --  
8 never seen that.

9 And I've been sceptical that even the  
10 75/25 we were supposedly heading towards was -- was  
11 actually needed to achieve rate stability.

12 MR. SVEN HOMBACH: But is it your  
13 understanding that Manitoba Hydro itself has had a  
14 longstanding goal of 75/25?

15 MR. PATRICK BOWMAN: Manitoba Hydro's  
16 had a goal of 75/25, yes, a long time. I think it was  
17 -- I put in -- some of that in my evidence. After  
18 Limestone came in there was an interim goal of getting  
19 to 85/15. And then times got good and people changed  
20 that to 75/25.

21 But the date at which it is achieved  
22 has been changed probably more times than -- than I  
23 can remember, but it's been changed often in terms of  
24 whether you put it further into the future versus  
25 closer, which is why I was saying it's -- it's more



1 about directionality. It's more about communicating  
2 that -- that we're heading in this direction. We're  
3 not being -- we're not ignoring progress towards  
4 something, but we're recognizing a lot of things can  
5 happen between now and then.

6 MR. SVEN HOMBACH: Would it be fair  
7 then, Mr. Bowman, to say that your recommendation is  
8 based primarily on a perceived need for gradualism and  
9 stability?

10 MR. PATRICK BOWMAN: It's not a  
11 relevant consideration. I think primarily, you know,  
12 the recommendation balance is -- and when we say  
13 "recommendation," presumably, you mean the  
14 recommendation of the overall rate increase.

15 But the recommendation balances a  
16 number of factors. But stability and predictability  
17 are, in -- in my submission, probably the -- the top  
18 priority for this Board, or ought to be the top  
19 priority this -- for this Board.

20 And -- and I wouldn't think -- just  
21 because Bill 36 came in, I -- I don't think it -- it  
22 changes that. If anything, it's actually written in  
23 parts of -- of the Bill.

24 MR. SVEN HOMBACH: I'd like to explore  
25 this issue with you a bit further. And I'll refer you

1 to Manitoba Hydro Exhibit 42, page 12.

2 This is a chart from Manitoba Hydro's  
3 presentation of the Revenue Requirement Panel, and it  
4 shows the updated CPI index. Do you see that? Or the  
5 updated CPI projections.

6 MR. PATRICK BOWMAN: Yes.

7 MR. SVEN HOMBACH: Now, it's fair to  
8 say that the -- the lowest projected CPI in -- in this  
9 projection is 1.9 percent, and that's in 2028/'29?

10 MR. PATRICK BOWMAN: That's the lowest  
11 one that I see.

12 MR. SVEN HOMBACH: Now, Mr. Bowman, I  
13 had asked -- we had asked an Information Request to  
14 Manitoba Hydro on what a rate would be to get the  
15 Utility to 75/25 by the end of the projection.

16 And Manitoba Hydro came back and said  
17 that rate path would require rate increases of 1.59  
18 percent annually. Do you recall it?

19 MR. PATRICK BOWMAN: I don't recall it  
20 being precisely 1.59. I -- I -- it's not a number I  
21 would memorize. But I do recall there being a lower  
22 rate path.

23 MR. SVEN HOMBACH: But you'll accept  
24 it, subject to check?

25 MR. PATRICK BOWMAN: Yes.

1 MR. SVEN HOMBACH: Okay. We'd also  
2 asked Manitoba Hydro an -- an undertaking on what the  
3 rates going forward would have to be post-April 1,  
4 2025, if beyond that time period, Manitoba Hydro would  
5 have to meet 70/30.

6 And the response that came back was  
7 2.08 percent. Do you accept that, subject to check?

8 MR. PATRICK BOWMAN: Yes.

9 MR. SVEN HOMBACH: Now, you'll agree  
10 with me that 2.08 percent is less than the projected  
11 CPI in Manitoba Hydro Exhibit 42 until at least the  
12 2025/'26 test year?

13 MR. PATRICK BOWMAN: Based on the  
14 spring 2023 update, yes.

15 MR. SVEN HOMBACH: So, if Manitoba  
16 Hydro were to be in a position to meet the Bill 36  
17 target through future rate increases that are more or  
18 less in line with CPI, does that change your perceived  
19 need for a 2 percent rate increase in the test years?

20 MR. PATRICK BOWMAN: I think in -- in  
21 retrospect, either of the two (2) paths you set out  
22 would meet the same set of objectives I worked with.  
23 I didn't compare the remainder of the -- of the  
24 financial scenario for the -- the scenario you set  
25 out.

1                   And when I say "scenario you set out,"  
2 it's a lower rate increase for the two (2) test years  
3 followed by 2.08 for the remainder of the scenario.

4                   I -- I didn't compare what -- what that  
5 does to other parts of the financial forecast, and --  
6 and -- but at the level of which we're discussing it,  
7 I would think either of those two (2) paths would --  
8 would meet the same objectives that -- as I understand  
9 them for the -- for rate setting.

10                   MR. SVEN HOMBACH:    So, let's turn to  
11 the issue then of the interim rate.  And you'll recall  
12 that Vice-chair Kapitany asked you some questions  
13 about the interim rate earlier today?

14                   MR. PATRICK BOWMAN:    Yes.

15                   MR. SVEN HOMBACH:    As a visual aid,  
16 I'll refer you to Tab 4 of Manitoba Hydro's  
17 Application, page 7.  I took Manitoba Hydro's Revenue  
18 Requirement Panel through this chart, Mr. Bowman.  I  
19 don't know if you had an opportunity to -- to listen  
20 in on that evidence or to -- to see the chart.

21                   But would you agree with my  
22 understanding that the interim rate for the '22/'23  
23 test year raised an additional \$65 million?

24                   MR. PATRICK BOWMAN:    It -- on the  
25 forecast basis for -- for '22/'23 it shows 65.

1 MR. SVEN HOMBACH: And appreciating  
2 that Manitoba Hydro's final numbers are not in yet,  
3 it's your understanding that the projected net income  
4 for that year is 751 million?

5 MR. PATRICK BOWMAN: Yes.

6 MR. SVEN HOMBACH: And that's a record  
7 net income, in fact, is it not?

8 MR. PATRICK BOWMAN: Yes.

9 MR. SVEN HOMBACH: So, if you were to  
10 subtract the 65 million from the interim rate increase  
11 you'd still be left with about 685 million?

12 MR. PATRICK BOWMAN: I -- I take your  
13 math, yes.

14 MR. SVEN HOMBACH: And that would  
15 still be record net income?

16 MR. PATRICK BOWMAN: Yes.

17 MR. SVEN HOMBACH: So, would you --  
18 would it be your view that, in retrospect, given the  
19 amount of net income for that year, an interim rate  
20 was not needed for the test year at all?

21

22 (BRIEF PAUSE)

23

24 MR. SVEN HOMBACH: And I'm not trying  
25 to be unfair, Mr. Bowman. I'm trying to draw a

1 distinction between the interim rate being needed for  
2 the '22/'23 year as opposed to just being a pragmatic  
3 consideration as part of a rate path.

4 MR. PATRICK BOWMAN: I think, in  
5 retrospect, it was not needed. That's not to fault  
6 anyone who made a decision to implement it, but I --  
7 you know, my -- my house insurance last year wasn't  
8 needed either.

9 But it's still prudent to look forward  
10 across the range of possible scenarios and figure the  
11 financial path that best gives you appropriate degree  
12 of protection and -- and stability.

13 MR. SVEN HOMBACH: In -- in light of  
14 your house insurance comment, I wanted to refer you  
15 back to your own position in the interim rate.

16 It's my understanding that MIPUG had  
17 argued for a 2.5 percent rate increase, only in the  
18 interim proceeding, correct?

19 MR. PATRICK BOWMAN: I didn't re-  
20 view that. I -- you know, I -- I didn't produce  
21 evidence in that, although as I noted, I obviously did  
22 help the members consider the evidence. I -- I didn't  
23 re-review the recommendation, but it was lower than --  
24 than what was implemented.

25 MR. SVEN HOMBACH: And -- and I do

1 believe, Mr. Bowman, that MIPUG had recommended that  
2 of those 2.5 percent only 0.8 be recognized in revenue  
3 and 1.7 be deferred until the GRA?

4 MR. PATRICK BOWMAN: There -- there  
5 was a split. The key was attempting to push  
6 discipline in respect of interim rates. The interim  
7 rate that was brought before this Board had a -- you  
8 know, I'll -- I'll say it, a -- a relatively complete  
9 comprehensive set of justifications; many of which, in  
10 my submission, did not meet the test for an interim  
11 rate.

12 Drought may have. To the extent  
13 drought met the submission for an interim rate, it  
14 seemed to me the only part that was emergency or -- or  
15 required dealing with on a -- on a expeditious basis  
16 was ensuring that Hydro had the finances to pay for  
17 any interests on debt borrowed to finance that  
18 drought.

19 That part, I could see somebody getting  
20 over a hurdle, but that needed to be done on a -- on  
21 an expedited basis. I didn't see anything else in the  
22 remainder of the application that couldn't have waited  
23 for a -- a rate review.

24 MR. SVEN HOMBACH: I understand your  
25 position to be that the Board should be pragmatic

1 about the interim rate increase and just look at it as  
2 part of a rate path, Mr. Bowman, but I wanted to  
3 briefly touch on your recommendation number 4, and  
4 I'll get back into that provision in a bit more detail  
5 later.

6                   Is your recommendation basically  
7 predicated on using the money for something that would  
8 benefit ratepayers instead of refunding it?

9                   MR. PATRICK BOWMAN: I -- I would  
10 probably put it on the list of considerations. I  
11 don't think it would be a recommendation if we were  
12 facing a -- a second year of drought.

13                   So, I'm -- I'm not saying irrelevant,  
14 but fundamentally, the recommendation starts with the  
15 idea that in most of these situations if you don't  
16 need to defer something, you -- you don't defer it.

17                   If you need to defer it, the weakest  
18 argument for deferral is simply for rates smoothing.  
19 And if you have the opportunity to -- to clean that up  
20 at some point, it's probably better to -- to clean it  
21 up with revenues.

22                   Not -- not, again, not -- not out of  
23 Hydro's skin or something or not out of somewhere  
24 where someone would say this Board caused instability.  
25 It's to help promote stability. It's to ensure that



1 they did get cost recovery. The cash is in the bank.  
2 The revenues were collected. And -- and to clean up  
3 those aspects of the balance sheet when the  
4 opportunity provides.

5 MR. SVEN HOMBACH: Instead of using  
6 the money to remove an existing deferral account, in  
7 your view, would it be a feasible option to establish  
8 another deferral account for a portion of that  
9 revenue, as MIPUG recommended during the interim  
10 process?

11 MR. PATRICK BOWMAN: I hadn't thought  
12 about it. The rationale for that deferral account in  
13 the interim process was that -- well, we were being  
14 very cautious about suggesting that Hydro receive a  
15 large amount of revenue on a -- on a basis of an  
16 incomplete review.

17 That was balanced against the fact that  
18 stable and predictable rate increases were probably  
19 merited because we were headed to the in service of  
20 some of the biggest projects its ever taken on.

21 So, if you view those two (2) pieces of  
22 the recommendation -- the deferral was being put there  
23 effectively for customer's benefit, to have them have  
24 a more predictable transition to the rate levels we  
25 would have expected were needed once -- once Keeyask

1 was in service.

2                   So, I -- I think it was to improve rate  
3 stability and improve rate predictability, and -- and  
4 setting up some of that revenue that was received as a  
5 -- as a deferral if it improved. Rate stability and  
6 predictability, and -- and, you know, it's -- it's not  
7 out of the question, but -- but as I noted, I think  
8 more things on the balance sheet that are only there  
9 for rate smoothing is probably inferior to -- to  
10 cleaning up the balance sheet.

11                   MR. SVEN HOMBACH: Let's address then,  
12 your recommendation to not have two (2) increases  
13 within twelve (12) months of each other.

14                   And correct me if I'm wrong, Mr.  
15 Bowman, but your concern was that this would make it  
16 difficult for industry to budget?

17                   MR. PATRICK BOWMAN: In general, I am  
18 -- I've have -- been told by customers that they find  
19 it easier to plan their production cycles and budgets  
20 if they have, you know, notice of rate increases and  
21 if they generally don't come within the same twelve  
22 (12) month period.

23                   But, you know, that's often  
24 unavoidable. I -- I gave examples. I think there's  
25 been five (5) rate increases in the last twenty-five

1 (25) years that had two (2) within the last twelve  
2 (12) -- in the same twelve (12) month period, but if -  
3 - if it's possible, it's a -- it's a nice to have.  
4 I'd say not a need to have.

5 MR. SVEN HOMBACH: I three (3)  
6 questions for you on that issue and -- before we leave  
7 it. And -- and the first one is:

8 If the Board were to award both of  
9 those rate increases now, would that not alleviate the  
10 budgeting issue because it creates predictability for  
11 the next budget cycle?

12 MR. PATRICK BOWMAN: It would help.

13 MR. SVEN HOMBACH: The -- the second  
14 question is:

15 Would you agree, sir, that the only way  
16 to avoid having two (2) rate increases with -- in less  
17 than twelve (12) months of each other is to either  
18 skip a rate increase or to just perpetually move rate  
19 increases from April 1 to September 1?

20 MR. PATRICK BOWMAN: That would be the  
21 effect, yes.

22 MR. SVEN HOMBACH: Okay. Now, that  
23 takes me to the third question.

24 In -- in light of your evidence on Bill  
25 36 and the need to take Bill 36 into account, would

1 you think that it would be a good idea to skip a rate  
2 increase entirely?

3

4 (BRIEF PAUSE)

5

6 MR. PATRICK BOWMAN: Again, generally  
7 no. Opportunities may present themselves where you  
8 could, favourable variances. But -- but generally no.  
9 I think if you're doing a predictable set of increases  
10 and trying to achieve the spirit of the -- of the  
11 smooth path that I'll say is set out in the Act, you  
12 wouldn't generally skip one.

13 But I'm not sure -- and -- and maybe  
14 this is your next question. I did answer an IR on  
15 this, is I don't read the Act as saying the rate  
16 increase must come to effect April 1.

17 The -- the rate -- rate period of the  
18 effect April 1, I don't know that it's prescriptive  
19 about the date of the change. I -- well, again, that  
20 might be a --

21 MR. SVEN HOMBACH: I wasn't suggesting  
22 that, but you're not suggesting that the Board  
23 permanently move to September 1 rate increase?

24 MR. PATRICK BOWMAN: Well, I -- I  
25 think the Board will makes its decisions as time goes

1 on. The nice to have twelve (12) months might  
2 continue to mean that they're September 1 increases.  
3 If so, that's -- that's the outcome.

4 It's not a bad schedule, we'd get the  
5 hearing out of the way before summer.

6 MR. SVEN HOMBACH: Let's deal with  
7 your recommendation number 4 on that subject. And  
8 I'll refer you to Board Counsel Book of Documents  
9 Volume IV, page 329.

10 Mr. Bowman, I took Manitoba Hydro's  
11 Revenue Requirement Panel through this chart earlier.  
12 What you see on the screen in front of you is note 20  
13 from Manitoba Hydro's annual report. Okay.

14 MR. PATRICK BOWMAN: Yes.

15 MR. SVEN HOMBACH: And -- and I want  
16 you simply to confirm my understanding that the Board  
17 has previously approved the Conawapa deferral account?

18 MR. PATRICK BOWMAN: Yes.

19 MR. SVEN HOMBACH: And there's twenty-  
20 six (26) years of amortization period remaining as of  
21 the end of the '21/'22 year?

22 MR. PATRICK BOWMAN: Yeah, that's what  
23 this shows.

24 MR. SVEN HOMBACH: And could you  
25 please also confirm that the Board has not previously

1 approved the loss on retirement account.

2 MR. PATRICK BOWMAN: Yeah, I -- I did  
3 address this in my evidence a bit. My understanding,  
4 and I Hydro confirmed the Board hasn't -- you couldn't  
5 point a Board Order that approves it. I think there  
6 was a -- an exchange of -- of correspondence, but as -  
7 - as far as an Order that approves it, I -- I don't  
8 know that there's a -- an Order you can point to.

9 MR. SVEN HOMBACH: And, Mr. Bowman,  
10 when -- in your evidence you discussed the loss on  
11 disposal account and the asset removal account.

12 Could you please confirm that what  
13 you're referring to is just one (1) account, namely,  
14 what is shown here as the loss on retirement or  
15 disposal of assets account?

16

17 (BRIEF PAUSE)

18

19 MR. PATRICK BOWMAN: Mr. Hombach, I'm  
20 not sure -- I see the -- the names of the accounts.  
21 I'm not sure I'm -- I'm not sure I know them by the  
22 same names as these.

23 My understanding is there's two (2)  
24 portions -- I'll give the description. There's two  
25 (2) portions of transactions that are being deferred,

1 related to, for example, Selkirk at this point.

2                   One is the -- the loss on disposal of  
3 assets, meaning the -- the un-depreciated balance of -  
4 - of that plant at the time it closed. And the other  
5 is the -- the cleanup costs, I'll say, for lack of a  
6 better term.

7                   The loss on disposal I'm sure is in  
8 that loss on retirement account. The cleanup, I'm not  
9 sure. And the only reason I say that is because there  
10 -- there's sort of site remediation there. But that --  
11 that may be more related to, like, contaminated sites  
12 and not necessarily removal of assets.

13                   So I -- I think both of those  
14 components are in the account called loss on  
15 retirement. I -- I would -- in -- in tab 4, I  
16 believe, there's an attachment on the regulatory  
17 deferral accounts that -- that describe what's in each  
18 one. And I -- I would need to review that to confirm  
19 it's -- it's actually all in that same account.

20                   MR. SVEN HOMBACH:    So here's what I  
21 would suggest, so we can move on, Mr. Bowman.

22                   We'll accept that, subject to check,  
23 and perhaps you can give an undertaking to advise if  
24 your understanding is other than what you just stated.

25                   MR. PATRICK BOWMAN:    Is it -- I would

1 accept, subject to check, that the loss on retirement  
2 and disposal of assets account shown on the screen  
3 from Board book of documents comprises both the un-  
4 depreciated capital costs and the cleanup costs  
5 associated with the -- the Selkirk plan. And if not,  
6 I would advise otherwise. Is that...

7 MR. SVEN HOMBACH: Yes.

8

9 --- UNDERTAKING NO. 70: Mr. Bowman, subject to  
10 check, accept that the  
11 loss on retirement and  
12 disposal of assets account  
13 shown on the screen from  
14 Board book of documents  
15 comprises both the un-  
16 depreciated capital costs  
17 and the cleanup costs  
18 associated with the  
19 Selkirk plan. And if not,  
20 advise otherwise

21

22 CONTINUED BY MR. SVEN HOMBACH:

23 MR. SVEN HOMBACH: I take it you've  
24 had an opportunity to review the exchange of  
25 correspondence on your recommendation number 4?



1 MR. PATRICK BOWMAN: Generally. It  
2 was a while ago.

3 MR. SVEN HOMBACH: This won't be a  
4 memory test today and I won't be taking a lot of time  
5 with it.

6 But generally, Mr. Bowman, you're aware  
7 of the arguments that some parties had made for the  
8 need for regulatory certainty?

9 MR. PATRICK BOWMAN: Yes.

10 MR. SVEN HOMBACH: I wanted to take  
11 you to page 368 of the Board counsel book of  
12 documents.

13 So you see there are three (3) bullets  
14 on that page?

15 MR. PATRICK BOWMAN: M-hm. Yes.

16 MR. SVEN HOMBACH: And in the last  
17 sentence in the second bullet indicates that 43  
18 million of the balance in the loss on disposal  
19 regulatory deferral account relates to discontinued  
20 operations and 24 million relates to continuing  
21 operations of which 23 million is cost of removal?

22 MR. PATRICK BOWMAN: Yes, I see that.

23 MR. SVEN HOMBACH: So cost of removal,  
24 that -- that would be net salvage, correct?

25 MR. PATRICK BOWMAN: That would be the

1 -- the net -- the thing we were just talking about,  
2 yes.

3 MR. SVEN HOMBACH: In your view, would  
4 it be a feasible option for the Board to write off a  
5 portion of net income against only discontinued  
6 operations, namely, Selkirk?

7 MR. PATRICK BOWMAN: I got into  
8 trouble earlier with using terms in my colloquial  
9 economics speak that actually have an accounting  
10 meaning.

11 Is it -- is it a writeoff? I'm not  
12 sure if it's a writeoff. It's -- but a one (1) year  
13 amortization against rates in the year perhaps is more  
14 accurate. But I -- perhaps you can ask the question  
15 again. I just didn't want to get caught up on the  
16 terminology.

17 MR. SVEN HOMBACH: Let's skip the  
18 terminology and use hopefully a neutral term 'offset'.

19 Would it be possible -- would it be  
20 feasible to offset only those costs?

21 MR. PATRICK BOWMAN: I wouldn't see  
22 why not.

23 MR. SVEN HOMBACH: Let's move on then  
24 to cost of service. And there has been extensive  
25 discussion with you this morning on normalization of

1 net export revenue. Do you recall?

2 MR. PATRICK BOWMAN: Oh yes.

3 MR. SVEN HOMBACH: And your view  
4 remains that the PCOSS should not be based on  
5 normalized net export revenue?

6 MR. PATRICK BOWMAN: I -- I think, in  
7 this case, the PCOSS doesn't need to be based on  
8 normalized net export revenue, but I'm -- I'm not  
9 ruling out that we can take some information from the  
10 case that does have normalized net export revenue and  
11 -- and confirm that it wouldn't suggest any problem  
12 with the path we're on where we'd use the regular  
13 PCOSS24.

14 MR. SVEN HOMBACH: We'll get back to  
15 your presentation in a minute. But as a visual aid,  
16 I'll ask Ms. Schubert to pull up Manitoba Hydro  
17 Exhibit 51. And go to page 12.

18 Am I understanding correct that under  
19 the current methodology, net export revenue is only  
20 offset against generation and transmission costs?

21 MR. PATRICK BOWMAN: Yes.

22 MR. SVEN HOMBACH: And that means the  
23 -- the proportionate impact on a class is based on  
24 what percentage of their total costs consist of  
25 generation and transmission?

1 MR. PATRICK BOWMAN: I guess it's a --  
2 it offsets the exact same percentage of what the class  
3 has allocated with respect to those assets.

4 So yes, the share that each class gets  
5 is 49 percent of what they would otherwise be  
6 allocated when the entire generation and transmission  
7 fleet is allocated to Manitoba customers.

8 MR. SVEN HOMBACH: So what that means,  
9 as shown on this visual aid, for the largest customer  
10 class, 48 percent of their total costs is offset by  
11 net export revenue; while, for Residential customers,  
12 it's only 35 percent?

13 MR. PATRICK BOWMAN: Right. The  
14 credit that -- export revenue doesn't have anything to  
15 do with the darker blue section called 'other', which  
16 is basically distribution. It doesn't have anything  
17 to do with that.

18 So the General Service Large customers  
19 or the -- the people who use -- use those parts of the  
20 system, get effectively hit with more Keeyask or hit  
21 with more -- more Limestone or hit with more  
22 Wuskwatim. And then, they also equivalently get more  
23 of the credit, so their export revenue is generated by  
24 those plants.

25 MR. SVEN HOMBACH: And what that

1 means, Mr. Bowman, is that -- that export revenue  
2 generally tends to work in favour of the General  
3 Service Large customer classes. Correct?

4 MR. PATRICK BOWMAN: Well, not if you  
5 took on the costs of building billions of dollars in  
6 assets for the purpose of securing that high net  
7 export revenue.

8 MR. SVEN HOMBACH: I take your point,  
9 but let's -- let's isolate those variables and focus  
10 only on the change in that export revenue.

11 With the assets in place, Mr. Bowman,  
12 there are two (2) factors there: The export prices,  
13 on the one hand, and the total amount of energy you  
14 can generate. Correct?

15 MR. PATRICK BOWMAN: Export prices and  
16 the total amount of energy you can generate and  
17 deliver to market of whichever form -- surplus or --  
18 or firm. But yes.

19 MR. SVEN HOMBACH: So all other things  
20 being equal, in a high water year, General Service  
21 Large customers will benefit?

22 MR. PATRICK BOWMAN: Mr. Hombach,  
23 PCOSSes are set on a prospective basis. If we end up  
24 having a high water year, we don't go back and re-run  
25 for the actual high water in the Cost of Service

1 study.

2 So on a prospective basis, looking  
3 forward, you -- you use the forecast of all of the  
4 waterflows.

5 MR. SVEN HOMBACH: So Mr. Bowman, this  
6 -- you might consider this to be a hypothetical. But  
7 if PCOSS24 had happened just after a drought year,  
8 would the numbers not look very different?

9 MR. PATRICK BOWMAN: Mr. Hombach, they  
10 -- they would not look very different. They would  
11 look somewhat different. And the reason they look  
12 somewhat different -- and perhaps this is where I -- I  
13 really hesitate to go to tables with numbers.

14 But when you -- for every time Hydro  
15 explains that the Cost of Service study is balanced  
16 and always balances to a hundred (100), the reason it  
17 balances to a hundred (100) is because Hydro forces it  
18 to balance by considering net income as a cost.

19 In the Cost of Service study, net  
20 income is -- is not a credit left over at the end. It  
21 is a cost that has to be generated from rates. That  
22 way, the revenues equal the costs.

23 If your exports are high, you have more  
24 exports, so you have more of that -- that part to  
25 credit, but you also have more net income, which again

1 in this odd world, which is a cost. So you have more  
2 net income as costs allocated to all the classes.

3 Net income allocated against -- against  
4 assets. And the vast majority of assets in the Cost  
5 of Service study is something like 90 percent, I  
6 believe we showed in an earlier exhibit, are  
7 generation and transmission assets.

8 So if you have a high water year, yes,  
9 you -- your net -- your -- your net export revenue  
10 number goes up, but so does your net income number,  
11 most of which goes against generation and  
12 transmission. It's just that small spillover to  
13 distribution that is the variable we're talking about.

14 MR. SVEN HOMBACH: So I'll take you  
15 back to your presentation in a moment, but for now I'd  
16 like to go to Ms. Derksen's report from yesterday and  
17 refer you to page 27 of that document.

18

19 (BRIEF PAUSE)

20

21 MR. SVEN HOMBACH: The -- the report.  
22 I'm -- I'm looking for Ms. Derksen's report, not the  
23 presentation. Thank you.

24 You were here yesterday when Ms.  
25 Derksen testified, were you not?

1 MR. PATRICK BOWMAN: Yes.

2 MR. SVEN HOMBACH: Okay. So you may  
3 recall I took Ms. Derksen to this document where she  
4 had contrasted PCOSS24 as filed with a scenario she  
5 had requested that was based on 60 percent of the  
6 actual 2023/'24 net export revenue.

7 Do you see that?

8 MR. PATRICK BOWMAN: Yes.

9 MR. SVEN HOMBACH: And I'd put the  
10 question to her as to whether she thought this was a  
11 reasonable proxy of normalized net export revenue.

12 And I have the same question of you.

13 MR. PATRICK BOWMAN: No, Mr. Hombach,  
14 I don't believe it's a reasonable proxy of net export  
15 revenue in -- in any of the years that we're talking  
16 about at issue. And I believe Mr. Gawne gave the same  
17 answer when asked.

18 It is -- for three (3) reasons. The  
19 first is that that is not the forecast. It's not even  
20 close to the normalized forecast.

21 The second reason is that, to the  
22 extent one could go looking through the future  
23 financial forecasts of Hydro and try to find a year  
24 where you get a net export revenue anywhere near that  
25 low, you're reaching to something like 2028 or 2029,



1 but it is completely ignoring all other changes going  
2 on in that period.

3                   And as I noted earlier in my -- my  
4 testimony, a lot of other things go on between two (2)  
5 years, including very significant growth in the  
6 distribution functions. So that's the second reason I  
7 don't think it's representative.

8                   And the third is, we have a PCOSS24  
9 which shows the rate adjustments that should be  
10 targeted over some reasonable period in this rate  
11 proceeding. If someone wanted to run scenarios that  
12 showed extremes, you know, this might be  
13 representative of a drought -- of an extreme drought  
14 year, for example, or...

15                   If you want to run scenarios that --  
16 that extremes, you could run scenarios like this, but  
17 if anything, I would think this undermines Ms.  
18 Derksen's points because it shows that the RCCs are  
19 actually quite stubborn, and that the costs that she's  
20 dealing with, even in the most extreme cases she could  
21 come up with for net export revenue are still at  
22 ninety-five point five (95.5).

23                   But that's confirmation that the  
24 ninety-four point four (94.4) is actually a pretty  
25 decent number to use for the purposes of establishing

1 a pathway to unity, a pathway to customers paying  
2 their own costs.

3                   So I -- I think there's -- I was  
4 surprised to see it in -- in her submission, and I --  
5 but I'm not -- I'm not troubled by the numbers. I --  
6 I think they're not meaningful for this -- this  
7 review. To the extent they might be meaningful, it's  
8 as a scenario and as a -- as an extreme scenario. If  
9 anything, they confirm the path that I recommend the  
10 Board be on.

11                   MR. SVEN HOMBACH:    So -- so your  
12 evidence is you can use it as a cross-check, but you  
13 would not want it to be based on normalization and use  
14 the actuals as a cross-check?

15                   MR. PATRICK BOWMAN:    I -- I did base  
16 it on normalization in the -- in the presentation this  
17 morning. I used not -- not 60 percent, which bears no  
18 relation to the numbers that are -- are relevant for  
19 the years we're talking about. I used a scenario, and  
20 --

21                   MR. SVEN HOMBACH:    It's page 16.

22                   MR. PATRICK BOWMAN:    -- Mr. Hacault is  
23 conveniently pointing me to page 48 in my evidence --  
24 I think, yes, it's page 16 in the presentation --  
25 where I cross-check PCOSS24 against a version that has

1 normalized starting reservoir levels -- yes, thank  
2 you, Ms. Schubert -- which again shows that -- that we  
3 -- we can't sit here and -- and hope to run enough  
4 scenarios on exports that we're finally going to find  
5 the one that says we don't need differential rate  
6 increases.

7 MR. SVEN HOMBACH: I wasn't suggesting  
8 that, Mr. Bowman, but -- but what I am suggesting is,  
9 if it's appropriate to use the actuals and use  
10 normalization as a cross-check, why is the reverse not  
11 equally appropriate?

12 MR. PATRICK BOWMAN: Sorry, I'm not  
13 sure I'm keeping up with the question. It might just  
14 be that it's after lunch.

15 MR. SVEN HOMBACH: If you consider it  
16 appropriate to use the -- the actuals and use weather  
17 normalization or net export revenue normalization as a  
18 cross-check, why would the opposite not be  
19 appropriate?

20 MR. PATRICK BOWMAN: Maybe I'm getting  
21 caught up on actuals. PCOSS24 is prospective. It's a  
22 forecast. It's not actuals. And -- and so if -- if  
23 you meant -- if you meant like an actual Cost of  
24 Service study, we -- we don't run those here. We talk  
25 about BC Hydro doing those, but we don't run those

1 here.

2                   But if -- if you mean why is it  
3 appropriate to use PCOSS24 and use the adjusted as a -  
4 - as a cross-check, it's because PCOSS24 reflects the  
5 forecast year and it's internally coherent. It's our  
6 best estimate.

7                   When we do adjustments to a Cost of  
8 Service study, it's -- I'll say it's a little bit  
9 cherry picked. It picks a certain number of items and  
10 say, Let's -- let's adjust for those, but it doesn't  
11 always get the full range of things that would apply  
12 in that situation.

13                   It's a -- I'll -- I'll say it's -- it's  
14 not a forecast prepared by the full -- full faith and  
15 confidence of Hydro's financial department. It's --  
16 it's a scenario that -- that's, you know, imposed in  
17 the Cost of Service model.

18                   And we don't have the offset of what --  
19 what else would go with that scenario. Would there be  
20 changes in, you know, any number of other things? So  
21 I -- I think it's appropriate as a cross-check.

22                   I think it's appropriate as  
23 confirmation that these RCC ratios are stubborn and  
24 that, without difference or rate increases, you're not  
25 going to solve them. But I -- I wouldn't consider the

1 right-hand one the one that I would say, you know, to  
2 use as the main one and the left hand as the -- the  
3 inferior cross-check.

4 But I -- I would suggest, Mr. Hombach,  
5 looking at this table, if -- if I -- if I lost that  
6 fight, I still don't think we would end up with much  
7 of a different rate proposal than -- than what I'm  
8 putting forward.

9 MR. SVEN HOMBACH: Let's move on to  
10 those areas of cost of service where you are  
11 recommending changes. And, Mr. Bowman, let's start  
12 with the issue of wind capacity.

13 Now, your suggestion is that there is  
14 actually a capacity component of wind energy at this  
15 point in time, right?

16 MR. PATRICK BOWMAN: Well, it's not my  
17 suggestion. It's -- it's part of -- it's integral to  
18 Hydro's planning. It's in the numbers, and -- and  
19 this Board has actually, if I recall correctly,  
20 acknowledged that in -- in findings and Orders.

21 MR. SVEN HOMBACH: Would it be more  
22 appropriate, if the Board were to incline to make such  
23 a change, to do this after the IRP has been reviewed?

24 MR. PATRICK BOWMAN: I could accept  
25 that.

1 MR. SVEN HOMBACH: Let's turn then to  
2 the issue of demand-side management, or DSM. And I  
3 had put that question to Manitoba Hydro's Rates and  
4 Cost of Service Panel.

5 Mr. Bowman, is it your understanding  
6 that Efficiency Manitoba currently does not have a  
7 capacity mandate at all?

8 MR. PATRICK BOWMAN: They don't have a  
9 mandate to pursue capacity, but of course their  
10 actions generate capacity benefits.

11 MR. SVEN HOMBACH: But they're  
12 incidental to the energy DSM?

13 MR. PATRICK BOWMAN: They're -- I  
14 suppose to a lawyer they're incidental to the mandate  
15 in the Act. To people who are analyzing the programs  
16 and the justification for the programs and the  
17 economics, they're (INDISCERNIBLE) to the numbers that  
18 -- that Efficiency Manitoba runs when it determines  
19 the programs it should pursue and to what extent.

20 So, no, I don't think they're  
21 incidental. I think they're -- they're embedded in  
22 the numbers that are used. As an example, you know,  
23 in behind the numbers that I'm allowed to see are a  
24 set of -- of marginal costs for energy and a set for  
25 capacity.

1                   The marginal costs for energy may have  
2 some seasonality associated with them -- again, I'm  
3 not -- not allowed to see that -- but the capacity  
4 numbers do have significant seasonality in them. Of  
5 course, they're based of course on winter peak.

6                   And if you look at Efficiency  
7 Manitoba's programs and their summary of their  
8 programs, even if Hydro's marginal costs are something  
9 like five and a half (5 1/2) cents or somewhere in  
10 that range, Efficiency Manitoba will say, Yeah, but  
11 our programs are worth seven (7) because we have a  
12 different load shape. We have a different pattern of  
13 benefits than Hydro's five and a half (5 1/2).

14                   And they compare their programs against  
15 that seven (7) cent because they're bringing more  
16 winter benefits and all that sort of stuff. So the --  
17 that -- that's the capacity feature of Efficiency  
18 Manitoba's economic justification.

19                   So, yeah, in the Act, it doesn't say,  
20 Go pursue capacity, but in the -- in the economics, to  
21 the extent they could pursue capacity, they are more  
22 easily able to show their programs across the hurdle  
23 of cost effectiveness.

24                   MR. SVEN HOMBACH:    Is it fair to say  
25 that, in your view, it's peak demand that drives

1 transmission and distribution investments?

2 MR. PATRICK BOWMAN: In -- in most  
3 cases. Yes. Now, remember, when I say that, most of  
4 Manitoba Hydro's transmission is actually class -- or  
5 functionalized as generation, which is not peak  
6 demand. It -- it's demand and energy.

7 We call that sort of generation  
8 integration function and -- and, but -- but, for --  
9 for network transmission, AC transmission, it -- it is  
10 peak demand that drives investment. Yes.

11 MR. SVEN HOMBACH: And, with  
12 Efficiency Manitoba not having a capacity or demand  
13 reduction mandate, there is no focus by that util --  
14 by that entity on reducing peak demand, specifically,  
15 is there?

16 MR. PATRICK BOWMAN: I -- I don't know  
17 that Efficiency Manitoba is pursuing any programs,  
18 specifically, to reduce transmission or -- or  
19 distribution peak demand. I -- I -- I certainly hope  
20 they're attentive to it because we -- we need it and  
21 we're going to need it more and more, as we go into  
22 the future.

23 MR. SVEN HOMBACH: But if, currently,  
24 those savings are ancillary to the DSM programming  
25 that's focussed on energy, is it cost/causal to



1 functionalize them as transmission and distribution  
2 costs?

3 MR. PATRICK BOWMAN: From an economic  
4 perspective, if nor -- normalized energy is 5 1/2  
5 cents and shaped energy, including peak savings, are 7  
6 cents and those are being taken into account, in the  
7 decisions being made at Efficiency Manitoba, then the  
8 difference between 5 1/2 and 7 is causing investment.

9 That -- yes, it's cost/causal in that -  
10 - in that perspective. But, again, I would even -- I  
11 would accept, similar to wind, that these are  
12 directional improvements that should be thought about  
13 over time.

14 I -- I -- I would hope Efficiency Man -  
15 - Manitoba comes back, the next time, with a focus on  
16 -- on the benefits they can bring to transmission and  
17 distribution, and I think that that will probably even  
18 evolve more over time. These are going to be  
19 significant, acute issues going into the future.

20 MR. SVEN HOMBACH: I'd like to get  
21 back to that comment, in a minute, but let's focus on  
22 one other issues, the coincident peak calculation.

23 And, Mr. Bowman, I'll refer you to the  
24 transcript from June 6th and I'll ask Ms. Schubert to  
25 turn to page 3,455, which is page 182 of the pdf.

1 MR. PATRICK BOWMAN: Okay.

2 MR. SVEN HOMBACH: And let's scroll  
3 down to the bottom half of that page, please.

4 Mr. Bowman, I asked Ms. Van Hussen, at  
5 Manitoba Hydro, on the rationale for the 50-hour peak  
6 calculation, and I don't know if you had a chance to  
7 listen in or review this evidence.

8 But she indicated that, among other  
9 things, there would be some classes, such as area and  
10 roadway lighting that might either be completely in or  
11 completely out, if you just focussed on a peak hour or  
12 a few peak hours.

13 And I wanted to give you an opportunity  
14 to comment on that rationale and whether that changes  
15 your recommendation.

16 MR. PATRICK BOWMAN: Well, it -- it --  
17 it's always been part of the rationale, and, so, it's  
18 -- when I developed the recommendation, I was  
19 attentive to it. It has been talked about before.

20 I didn't suggest we use one hour,  
21 although it wouldn't be out of the question. Some  
22 utilities do, but, even if we were to use one hour,  
23 Hydro's approach, which I accept, is that they use --  
24 is to use data from eight (8) years about peak, again,  
25 because things like temperature and that can change

1 over time and there's a bit of that normalization  
2 going on, when you're looking to actuals.

3 I would say, if I was the -- the --  
4 dealing with the street light class, if -- if we use  
5 something like eight (8) or ten (10) hours, as an  
6 example for a peak, six (6) hours, something in -- in  
7 that nature, to measure the peak in a given year, and  
8 we looked over eight (8) years, if the street lights -  
9 - if those peaks are happening during the day and the  
10 street lights aren't on, then I don't know why they're  
11 being allocated at peak costs.

12 The data will tell us whether that  
13 allocation is needed. We don't want to expand the  
14 data set in order to pick up a bunch of hours that are  
15 not peak, just so we can find a way to stick some  
16 costs to street lights.

17 If -- if they're not on during the peak  
18 hours, if the peaks are happening at 11:00 a.m. or --  
19 or -- or at noon, on cold days, and the street lights  
20 are off, then -- then we don't need to allocate peak  
21 costs to street lights. They're not contributing to  
22 the investment in -- in peak and, if that's averaged  
23 over eight (8) years, maybe four (4) will be on and  
24 four (4) will be off, in which case, they would get  
25 the allocation. If none of them are on over eight (8)

1 years, then, they don't need an allocation.

2 MR. SVEN HOMBACH: You've pre-empted  
3 my next question, Mr. Bowman. You -- you focus so  
4 much on gradualism and stability here.

5 Are -- are you suggesting that, whether  
6 somebody's in or out in any given year is just  
7 attenuated, if you take a eight-year average?

8 MR. PATRICK BOWMAN: It would be  
9 attenuated, if you take an eight-year average. Yeah,  
10 but -- but, again, I'm, like I said, -- I'm not -- I'm  
11 not saying ruthlessly one (1) hour. If you took some  
12 -- some small number of hours each year and, then,  
13 looked at those over eight (8) years, we still have a  
14 fairly -- fairly wide number of peaks we're looking at  
15 and it's -- it's interesting.

16 I was handed the -- the 1992 NARUC  
17 Manual, assuming that people would use it for cross.  
18 I -- I guess they didn't, but it -- it was interesting  
19 how it mentions the greater the number of hours used,  
20 the more the allocator will reflect energy  
21 requirements, which says it more eloquently than I --  
22 than I could.

23 But, as we expand that peak, what  
24 we're, effectively, doing is taking costs and we say  
25 that cost is driven by -- by -- by peak -- by demand,

1 and we're, effectively, turning it into an energy  
2 allocator by expanding out the number of hours.

3 MR. SVEN HOMBACH: So, let me fulfil  
4 my promise, then, and get back to your previous  
5 comment. You indicated that you are looking for these  
6 changes over time.

7 I wanted to ask you how you propose  
8 that the Board address these changes, specifically,  
9 whether you're suggesting a -- a Direction to -- or  
10 Directive to incorporate changes in the next PCOSS or  
11 if you if you're suggesting another Cost of Service  
12 hearing.

13 Have you given any thought to a  
14 mechanism with which this could be dealt?

15 MR. PATRICK BOWMAN: I -- I don't  
16 think there's any basis to have a new Cost of Service  
17 hearing here. I -- I think we've barely gotten into  
18 applying the old one.

19 If you look at the -- the revenue cost  
20 coverage ratios, I'm saying that, if I'd looked at  
21 those earlier in my career, if I had known how that  
22 would look, I would debate whether we should put the  
23 time into Cost of Service. It doesn't look like it's  
24 used very much for setting rates.

25 But -- no, I wouldn't say we -- we need

1 a new Cost of Service hearing. These are very minor  
2 tweaks. They are the kind of things that any utility  
3 takes on and each time it does bits of updates and --  
4 and I would suggest that the Board has -- has two (2)  
5 or three (3) options -- two (2) options that -- that  
6 strike me.

7                   One is -- well, I guess one -- one is  
8 to adopt them. One -- one is to indicate they'd like  
9 to see some more work on them and -- and -- and, in  
10 the meantime, there is, at least, a presumption of  
11 reasonableness that the Cost of Service study over-  
12 focusses on energy and under-focusses on demand, which  
13 might put a little asterisks on the results.

14                   And the other is I -- I -- I suppose  
15 they could say, no, we're putting these off until we  
16 have -- have a significant new Cost of Service review.  
17 That -- any of those are possible, but I would  
18 encourage the Board to at least recognize that, if  
19 Cost of Service is going to have meaning, it should be  
20 updated to reflect conditions as the system evolves  
21 and -- and demand is becoming a bigger deal. It needs  
22 to fit into rate design and it probably should be  
23 reflected more in cost of service.

24                   MR. SVEN HOMBACH: On that note, let's  
25 go back to page 18 of your presentation.

1                   You make the point, on that slide, that  
2 demand is critical to future utility planning and that  
3 it's of growing importance. I just wanted to confirm  
4 with you that you're not suggesting any specific  
5 changes to the PCOSS methodology at this point.

6                   MR. PATRICK BOWMAN: Well, I'm  
7 suggesting three (3) specific changes to the PCOSS  
8 methodology we just went through.

9                   Beyond that, I'm not suggesting a --  
10 any additional ones, but -- but I -- because it's so --  
11 -- so integral to the Cost of Service study, I'd -- I  
12 would not suggest throwing out the methods.

13                   But I -- I would say I -- I'm in a  
14 hearing next week, in New Brunswick, and -- and one of  
15 the matters that -- that was moved to the fall, not  
16 being dealt with, is seasonality in their Cost of  
17 Service study. In -- in New Brunswick, they have a  
18 very different cost profile.

19                   First, they have a peak allocator, like  
20 we do but, then, they have a very different cost  
21 profile for energy throughout the year. In summer,  
22 they got lots of options for energy. In winter,  
23 they're trying to heat, and they got terrible options  
24 for energy, and winter is very, very hard to serve.

25                   And, so, there's a -- and a number of

1 scenarios run about whether the PCOSS should have a  
2 different value for energy in the winter than in the  
3 summer, and that will be addressed now, it's -- it's  
4 been determined at a hearing, in the fall.

5 I -- I don't rule out the same  
6 considerations being relevant in Manitoba that a -- a  
7 certain degree of consideration of weighting winter  
8 energy higher than summer energy may be more  
9 appropriate in the -- in the fall, and, by winter  
10 energy, I'm -- I'm talking about like at very focussed  
11 periods.

12 So, either (a) we start talking more  
13 about capacity; and (b) we maybe start talking about -  
14 - more about the -- the energy related that drives  
15 those peaks. I'm not saying we have the evidence to  
16 do that today.

17 I don't know when we would get around  
18 to thinking about having a next cost of service  
19 review, but when we do, debating what is the -- what  
20 is the winter issue we really need to be prepared to  
21 deal with should be -- should be on the table. Is it  
22 -- is it one (1) hour, five (5) hours, or is it -- is  
23 it five hundred (500) hours through -- over the course  
24 of winter, three hundred (300) hours.

25 Either way, it's a whole different



1 situation than summer. And right now, we -- we assume  
2 that winter's the same as summer.

3 MR. SVEN HOMBACH: Let's move on to  
4 the issue of GSL rate design. And we'll start at page  
5 26 of your presentation.

6 You testified as to the -- the 90  
7 percent cap this morning. And I believe you used the  
8 word 'kneecap', that it would kneecap customers.

9 Do you recall it?

10 MR. PATRICK BOWMAN: Yes.

11 MR. SVEN HOMBACH: I'd taken Manitoba  
12 Hydro's Panel through your recommendation, as well.  
13 And if we could go back to the June 6th transcript and  
14 go to page 3,473, which is page 200 of the PDF.

15 I had asked Manitoba Hydro about this  
16 limit and the rationale for it. And -- and they  
17 confirmed that they were dipping their toes in the  
18 water I believe is the analogy that I'd used.

19 And I'd put the question to them as to  
20 whether it might be feasible to go from 90 percent to,  
21 let's say, 70 or 80 percent. Seventy-five or eighty  
22 is I think what I gave. They indicated that the  
23 Utility might be amenable to do that.

24 Mr. Bowman, if that were to happen,  
25 would that alleviate your concern or do -- do you see

1 it as an all-or-nothing deal?

2 MR. PATRICK BOWMAN: No, it -- it  
3 would sure help. It would -- it would help a lot. I  
4 think the -- the big thing is, even for very large  
5 customers price signals matter, but electricity price  
6 signals sometimes take a while to get built into  
7 operations.

8 And we looked at the planning numbers  
9 for Hydro, and -- and they do require some significant  
10 customer response to help manage peaks. This is one  
11 (1) of the ways to do it, and -- and customers could  
12 do a lot of different things to potentially use this.

13 It will go against -- it will go  
14 against everything in most industrial customers'  
15 nature to say I should be swinging my load. People  
16 who run industrial plants are trained to focus on de-  
17 bottlenecking and on efficiency, on getting the  
18 flattest load possible, getting as many units out  
19 through the course of the day in every hour of the  
20 system.

21 And so, if you want to put on an  
22 economic incentive and say, no, no, throw that out the  
23 window, now -- now we want you to respond to this  
24 price signal and shift something, you -- you are  
25 fighting a significant momentum, significant year --

1 years of training, and it'll take time and it'll take  
2 creativity.

3                   And I think -- I think you want to give  
4 the signal that there is real dollars on the table in  
5 order to get them thinking about how they could use  
6 it. And if you don't give the opportunity or -- or  
7 the -- the sign that there is really an -- you know,  
8 more than -- than, you know, pennies to be picked up  
9 through this, then I'm not sure you're going to get  
10 the response that -- that you're looking for, and --  
11 and you certainly won't get it in the near term.

12                   So, I think anything that can -- that  
13 can increase the -- the opportunities for savings is  
14 significant. And -- and I still think the uptake will  
15 probably be quite small for quite some time before  
16 people figure out how -- how to make use of it.

17                   So, I wouldn't -- I don't think you  
18 need to put on the brakes before you even get going.

19                   MR. SVEN HOMBACH: I'd like to now  
20 turn to the subject of the uncertainty analysis.

21                   THE CHAIRPERSON: Sorry, Mr. Hombach,  
22 if I can interrupt for a second. Do you have any idea  
23 how much longer you'll be?

24                   MR. SVEN HOMBACH: Between three (3)  
25 and four (4) minutes, possibly five (5). Let's round

1 it up.

2 THE CHAIRPERSON: Must be -- must be  
3 late in the afternoon. Ms. Fernandes, are you going  
4 to cross after? No cross, okay. You can have all of  
5 your five (5) minutes if you want. That's fine. I  
6 just didn't know if you were getting close to -- close  
7 to the end or...

8 MR. SVEN HOMBACH: My -- I -- I just  
9 have one (1) -- one (1) minor clean-up question --

10 THE CHAIRPERSON: Sure.

11 MR. SVEN HOMBACH: -- and one (1)  
12 brief question on the uncertainty analysis.

13

14 CONTINUED BY MR. SVEN HOMBACH:

15 MR. SVEN HOMBACH: Mr. Bowman, you --  
16 you recall that My Friend Dr. Williams took you  
17 through your previous evidence on the uncertainty  
18 analysis this morning?

19 MR. PATRICK BOWMAN: Yes.

20 MR. SVEN HOMBACH: I'll briefly refer  
21 you to the PUB/MIPUG Information Request that we had  
22 asked. And turn to Information Request number 5.  
23 Let's scroll to the bottom of that.

24 Mr. Bowman, we had asked you as to what  
25 the benefit of an uncertainty analysis would be in

1 light of the debt-to-capitalization target. And you -  
2 - you thought that an uncertainty analysis would --  
3 would still be useful, although, from your response,  
4 we couldn't quite make out specifically where you  
5 thought it would fit in.

6                   So, my question to you is -- is as  
7 follows: With the Board constrained between a debt to  
8 -- debt-to-capitalization target on one side and a  
9 rate cap on the other side, is there a narrowed band  
10 where the uncertainty analysis would not be as useful  
11 anymore?

12                   MR. PATRICK BOWMAN: Yes. It would  
13 not be as useful as it would have been if the Board  
14 could have used it for assessing financial targets and  
15 if the Board still had the -- the broad range of  
16 powers and discretions that it -- that it ought have.

17                   MR. SVEN HOMBACH: But you do still  
18 think that there's some utility to it, as indicated in  
19 the second paragraph on the second page of the IR?

20                   MR. PATRICK BOWMAN: Yes. And -- and  
21 I'll say, as a tool, there's two (2) reasons for it.  
22 One (1) is for the purposes of looking at rate  
23 changes, but I'd say the other is for the purposes of  
24 considering other things, like, Dr. Williams asked me  
25 this morning -- you know, he said, did -- did you look

1 at fixed versus floating rate debt. I -- I said, no,  
2 I haven't specifically looked at it.

3 But I would say, if you had an  
4 uncertainty analysis tool, you might be able to put  
5 into that model different assumptions about fixed and  
6 floating rate debt and see what it does to your -- to  
7 your outcomes.

8 I would not be surprised to learn that  
9 a treasury department in Hydro is keeping their  
10 floating rate debt and their -- their -- as low as --  
11 as low as possible because they're concerned about an  
12 interest rate risk.

13 But it's possible, if they looked at an  
14 uncertainty -- you know, they're worried about that  
15 bottom scenario, but that's possibly raising the costs  
16 overall. And -- and even if we were willing to live  
17 with a bit -- a bit of a -- of a different range of  
18 outcomes, we may be able to end up with a lower  
19 overall cost system.

20 That's the kind of thing you could test  
21 through an uncertainty analysis, but we -- we don't --  
22 because we don't have it, we -- we can't test it in  
23 that function. And it's -- it's a bit of the --  
24 without the tool that gives you the -- the colour and  
25 the flavour, you can get really focussed on -- on one

1 (1) line or one (1) drought or one (1) scenario.

2 MR. SVEN HOMBACH: Thank you, Mr.

3 Bowman. Let's end on an easy one. And I'll refer you  
4 to page 9 of your presentation.

5 You made a comment earlier, and correct  
6 me if I misheard, that growth pays for growth.

7 Do you recall that?

8 MR. PATRICK BOWMAN: Yes.

9 MR. SVEN HOMBACH: I just wanted you  
10 to confirm my understanding that the green line that  
11 we see on page 9 of your presentation already includes  
12 growth.

13 MR. PATRICK BOWMAN: Exactly. That  
14 was exactly my point, that if you were to -- we asked  
15 for this as an undertaking. If I were to have done  
16 the graph, that -- that checkered white and blue at  
17 the bottom would have been on the top, and it would  
18 have been considered acceptable in this period of time  
19 were it above the green line.

20 So, we for sure want to pay for the  
21 blue -- the -- the solid blue stuff, we -- the -- the  
22 thin blue line above the solid blue stuff, the purple,  
23 mauve checker above that, those are cash commitments  
24 that are required related to ongoing operations.  
25 Let's make sure we can fund those with cash. That --

1 that's good to have at normal water.

2                   The -- the bottom one, it would be  
3 stacked next. And if the line dipped below that, I  
4 think that would be understandable and acceptable in  
5 that period where you're absorbing the biggest capital  
6 project the Corporation's ever taken on.

7                   And the debt repayment above that,  
8 that's nothing but a nice to have in this decade. And  
9 debt repayment, I mean the pink stuff which is  
10 actually contributions to sinking fund here.

11                   MR. SVEN HOMBACH: Sorry, Mr. Bowman,  
12 I -- I think there might still be some confusion. So  
13 -- so, let -- let's break this down a little bit more.

14                   On this chart, the -- the dark blue is  
15 domestic demand versus sustaining capital? You need  
16 new glasses.

17                   MR. PATRICK BOWMAN: I'm running out  
18 of names to describe them. The -- the widest blue  
19 section, again, and for -- for the record, we're on  
20 slide 9 of the presentation from this morning.

21                   The widest blue bar is sustaining  
22 capital. Let's start with the green line is -- is  
23 cashflow from operations.

24                   MR. SVEN HOMBACH: Yeah.

25                   MR. PATRICK BOWMAN: So, the green



1 line shows cash is left over after we've paid the  
2 essential bills in the year: interest, operating,  
3 cloud computing investment, water rental, taxes. Cash  
4 left over, so now we can start to use that cash to pay  
5 for -- for capital investment.

6                   The widest blue section is the first,  
7 in -- in my submission, would be the first tier of the  
8 capital that one would -- would ensure that they could  
9 fund with cash, as well as the narrower wavy blue  
10 above it and the purple checkered above that.

11                   Those would be the most essential to  
12 fund with cash, and they would be the bottom three (3)  
13 in this graph if I were to have drawn it.

14                   Okay. And -- and at that level, you  
15 could compare the green line to those three (3) bars  
16 alone. And if the green line is funding those three  
17 (3) bars, you're -- you're doing pretty good for the  
18 period after you've just built your largest capital  
19 project.

20                   MR. SVEN HOMBACH: Right, so some new  
21 debt is acceptable to fund growth?

22                   MR. PATRICK BOWMAN: Some new debt is  
23 acceptable to fund the -- the growth, which is  
24 currently shown at the bottom of this chart. It's  
25 shown like first call and cash. I would consider that

1 one a later calls on cash. Exactly.

2 MR. SVEN HOMBACH: Thank you, Mr.

3 Bowman. Those are all my questions.

4 THE CHAIRPERSON: Thank you, Mr.

5 Hombach. Ms. Fernandes, no?

6 MS. ODETTE FERNANDES: No, I have no

7 questions, thank you.

8 THE CHAIRPERSON: I'll ask the panel

9 if they have any questions? No. Mr. Hacault, any

10 reexamination?

11 MR. ANTOINE HACAULT: No, Mr. Chair.

12 THE CHAIRPERSON: Thank you. This

13 concludes the evidentiary portion of the Application.

14 We will adjourn now and reconvene on Monday, June 19th

15 to receive the closing submission of Manitoba Hydro.

16 Enjoy the weekend. Catch up on your

17 sleep next week and we'll see you on -- on June 19th.

18 Thank you very much.

19

20 (PANEL STANDS DOWN)

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22 --- Upon adjourning at 2:28 p.m.

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Certified Correct,

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Wendy Woodworth, Ms.