MANITOBA PUBLIC UTILITIES BOARD

Re: MANITOBA HYDRO

2017/18 and 2018/19

GENERAL RATE APPLICATION

PUBLIC HEARING

Before Board Panel:

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

HELD AT:

Public Utilities Board

400, 330 Portage Avenue

Winnipeg, Manitoba

December 4, 2017

Pages 1 to 309

APPEARANCES

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

LIST OF APPEARANCES (cont'd)

Christian Monnin	)General Service
	)Small, General
	)Service Medium
	)Customer Classes

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

THE CHAIRPERSON: Good morning everyone. Welcome and thank you for your attention as I call this public hearing to order. Today is the first day of the oral evidentiary public hearing for the General Rate Application filed by Manitoba Hydro.

During this hearing, the Public Utilities Board will hear the evidence for Manitoba Hydro, witnesses, Intervenor expert witnesses, and independent expert consultants all related to issues that arise as a result of Manitoba Hydro's rate increase request of this Board.

My name is Robert Gabor, and I am the chair of the Public Utilities Board; with me on this hearing, are vice-chair Marilyn Kapitany, Board member Shawn McCutcheon; to my left, Dr. Hugh Grant; Board member Sharon McKay, and Board member Larry Ring, QC.

I want to take this opportunity to publicly thank my colleagues on this hearing panel for their dedication and service to date as what will be required in the weeks and months ahead. The panel has met to consider the prehearing conference and the status of Intervenor applications and budgets; Manitoba Hydro's interim rate request; Manitoba

Hydro's process motion to deal with confidential information; a number of motions under Rule 13 of the Board's rules of practice and procedure regarding confidentiality; process requests of the parties, including scheduling and review of the application; and evidence filed by all parties.

The Board will be assisted during this hearing by associate Board secretary Kurt Simonsen, judicial hearing officer Diana Villegas, and judicial hearing assistant Kristen Schubert, Digi-Tran through Cheryl Lavigne will provide the daily transcripts, which will be posted on the Board's website, together with the exhibits introduced into evidence.

I will call on Board counsel shortly to introduce the Board advisors. At this time, I'd like to acknowledge that the Treaty 1 lands on which we now gather for this hearing and the Treaty 2, 3, 4 and 5 lands, included in Manitoba Hydro's service territories are the traditional territories of the Anishinaabe Cree, Oji-Cree, Dakota and Dene peoples, as well as the homeland of the Metis Nation.

Included in Manitoba Hydro's General Rate Application are requests for Public Utilities Board approval of three (3) separate rate increases that apply to all components of the rates for all customer classes. First, the August 1st, 2016 rate increase of 3.36 percent, which was approved in Order 59/16 on an interim basis for all customer classes. This rate exists as an interim rate which Manitoba Hydro requests be approved as a final rate in this General Rate Application. The Board has the discretion to confirm the rate or vary it up or down.

Second, Manitoba Hydro requests that a 7.9 percent interim rate increase for all customer classes effective August 1st, 2017. In Board Order 80-17 the majority of this hearing panel approved on an interim basis a 3.36 percent rate increase for all customer classes effective August 1st, 2017.

The additional revenue is to flow into the previously established Bipole III deferral account to be used to fund some of the additional costs that will be incurred when Bipole III comes into service projected to be July 2018.

As with the August 1st, 2016, interim rate, the final amount of this more recent interim rate increase may be confirmed or varied up or down as a result of the Board's determinations in this General Rate Application.

That leads to Manitoba Hydro's third rate increase -- rate request in the General Rate

Application for a further 7.9 percent increase to all components of rates to every customer class to be effective April 1st, 2018.

This oral public hearing will be conducted in accordance with the provisions of the Crown Corporations Governance and Accountability Act, the Public Utilities Board Act, and the Board's rules of practice and procedure. It is pursuant to the legislation that the Board's mandate is to set just and reasonable rates that are in the public interest.

The Board has, quote,

> "two concerns when dealing with a rate application: The interests of the Utility's ratepayers and the financial health of the Utility, together and in the broadest interpretation, these interest represent the general public interest," closed quote,

as set out by the Manitoba Court of Appeal.

In setting just and reasonable rates, this hearing panel only considers the totality of the evidence that is adduced on the record of this proceeding, which includes the written and oral evidence by the applicant, Intervenors and independent expert consultants, as well as evidentiary presentation -- presentations made by members of the public and the submissions for Manitoba Hydro and all the approved Intervenors.

The record of this proceeding is mirrored on the Board's website already includes written pre-filed evidence for Manitoba Hydro, written responses by Manitoba Hydro to minimum filing requirements, written responses by Manitoba Hydro to Information Requests, Intervenors' expert evidence and responses to Information Requests, independent expert consultants' evidence and responses to Information Requests, with more still to come. Manitoba Hydro's rebuttal evidence with more still to come. Board Orders made to date on proceedings involving this General Rate Application, including the two (2) requests for interim rates.

Parties are aware that as a result of its deliberations on the evidence following closing submissions, the Board may accept, reject or vary any of the relief sought by Manitoba Hydro in this General Rate Application.

The Board recognizes the diverse customer groups represented by the approved

Intervenors and the Board is also mindful of the significant and complex issues before it. Please be reminded that you are to assist the Board in its understanding of those issues. Please also be reminded that as has been stressed since the outset of this hearing process duplication is to be avoided and cost-effectiveness is to be employed through a cooperative approach. We ask that all questions and answers be as concise as possible and on point. If required, I will interrupt and the Board is prepared to institute time limitations in order to move the hearing forward in an orderly manner to complete the hearing on schedule.

The Manitoba ombudsman has issued privacy guidelines for administrative tribunals. The Public Utilities Board is mindful of its obligations under those guidelines. Its decisions in respect of the application being considered will be sensitive to the guidelines. Personal information will not be disclosed unless it is appropriate and necessary to do so. However, the Board advises participants that these proceedings are public and that as a result, personal information protections are reduced.

While Board counsel will outline additional procedural aspects of this hearing, you are requested to either turn off your cell phones while in the hearing room, or at least turn off the ringer and sound so as not to disrupt proceedings.

In an effort to accommodate requests for fewer hearing days during the week, the Board intends to be available to sit from 9:00 a.m. until 5:30 p.m. on most hearing days. Times and days may be extended, if necessary, in order to keep the schedule but we hope this is not required. In a date -- in addition to breaking for lunch, there will also be brief recesses midmorning and midafternoon.

As indicated at the prehearing conference, these proceedings are now being live streamed through a link on the Board's website. There are two (2) cameras in this room activated during proceedings. To assist those watching the live streaming of the proceedings or following along on the daily transcripts, the use of acronyms is discouraged.

At this time I will call on Board counsel Dayna Steinfeld to provide opening remarks and introductions, as well as outline the procedures to be followed today and for the hearing days ahead. I will call on Board counsel each morning at the outset of the day's session to outline the schedule for that day. Ms. Steinfeld...?

OPENING COMMENTS BY BOARD COUNSEL:

MS. DAYNA STEINFELD: Thank you and good morning, Board Chair, Board vice-chair Kapitany, Board members, Mckay, Ring, McCutcheon and Dr. Grant. And good morning to all counsel, and parties.

This General Rate Application by Manitoba Hydro appears to have attracted unprecedented interest among its ratepayers as in evident through the new Intervenors in this proceeding, and the number of comments provided by the public to the Board through its website.

Good morning to all those members of the public who are viewing the proceedings both in -- in person and on the live stream.

For the record, my name is Dayna Steinfeld and together with my colleague Bob Peters, we are legal counsel to the Public Utilities Board for this Manitoba Hydro General Rate Application. Also assisting the Board in this General Rate Application are Brady Ryall and David Bonin of Ryall Engineering Limited, the Board's engineering advisor and Roger Cathcart and Curtis Batten of the Board's accounting advisor Cathcart Advisors Inc.

I would like to welcome Curtis to the hearing room. We are happy to have him as part of the

Board's advisory team.

In addition to the three (3) rate increases to all components of the rates for all customer classes detailed by the Board Chair in his opening remarks, the Board has also been asked by Manitoba Hydro to approve light-emitting diode rates for the area and roadway lighting class; remove festive lighting and Christmas lighting from the area and roadway lighting tariff; approve surplus energy program rates and terms and conditions; approve curtailable rates, programs, orders; approve rates for the diesel zone communities provided prerequisites have been met; endorse Manitoba Hydro's proposed treatment of the costs for the Conawapa generating station; as well as endorse Manitoba Hydro's proposed treatment of depreciation expense and operating and maintenance expense.

Through the witness panels to be called by Manitoba Hydro, as well as the Intervenors and independent expert consultants, the Board will hear oral evidence on issues related to Manitoba Hydro's requests of the Board.

In an effort to set out the proposed hearing process, including the timing of the various witness panels, we have circulated electronically a hearing schedule, and an outline of procedures that maps out the proposed order of matters to come before the Board in this General Rate Application. There are hard copies of these documents available here today as well. Both the Hearing schedule and outline of procedures are subject to change at the Board's direction.

To briefly review the hearing schedule now, the hearing commences this morning with opening comments by all parties. We note that while counsel to the independent expert consultants are in the hearing room, they have not requested the opportunity to make opening comments; should that change, we expect they'll make the appropriate quest -- request of the Board.

Following opening comments, we will have direct and cross-examination of Manitoba Hydro's first witness panel, the executive overview panel.

On Wednesday, December 6th, the Board will hear direct evidence from Manitoba Hydro's revenue requirement witness panel followed by cross-examination by all parties.

Manitoba Hydro's third witness panel, the cost of service and rate design panel, is scheduled to commence testimony on December 20th, with cross-examination beginning that day, and continuing into the January dates when the hearing resumes following the holiday break.

Manitoba Hydro's fourth witness panel, the major capital projects panel, will begin giving testimony on January 18th, 2018.

The Board will also hear from Intervenor witnesses beginning on scheduled dates in January 2018, with some Intervenor witnesses giving testimony prior to the Manitoba Hydro major capital projects panel and the remaining Intervenor witness testimony is scheduled for after that fourth panel.

There will also be evidence in this hearing from independent expert consultants retained by the Board to give independent evidence on particular issues as set out in the scopes of work posted on the Board's website. Some of the independent expert consultants were provided with and reviewed confidential information in preparing their reports. The schedule includes time for in-camera sessions before the Board which will be confidential and closed any party or person not granted access to the confidential information in question.

We remind counsel at this time that cross-examination should not be used in an attempt to elicit responses that contain confidential information.

The hearing schedule also includes time for oral public presentations on January 5th and February 1st, 2018. These presentations will be treated as evidence in the proceeding. All those giving an oral present -- presentation will be asked to swear or affirm and will be subject to questions from the Board and parties.

We note that counsel invite questions from the panel at any time. For the efficiency of these proceedings, counsel will also accept direction from the panel to move on if a point is being belaboured. We expect that each hearing day will commence with a brief overview of the outline of proceedings for the day. Party and counsel are asked to note the times allotted to their participation each day, and to adhere to the time limits set in the schedule.

As a final note on scheduling, we bring the Board's attention to the fact that Intervenors have indicated that they are prepared to organize the order of their cross-examination to promote the efficiency of these proceedings. The daily outline of proceedings may therefore be amended at the Board's direction to accommodate such requests from Intervenor counsel.

We also want to briefly cover the exhibit list, Mr. Chair and Board members. The Board circulated a draft exhibit list last week that all parties have approved, at least to that date, and that will be used to keep a record of these proceedings. The exhibit list contains reference to the application and evidence by Manitoba Hydro, the evidence by Intervenors and independent expert consultants, Information Requests of the witnesses, the procedural order and the public notices by the Board, as well as correspondence to and from the Board.

Parties seeking to file exhibits are asked to provide a PDF by email to Ms. Schubert as soon as possible, and before the exhibit is introduced preferably before the start of the hearing day. Parties are to propose exhibit numbers for their own exhibits.

We understand the Board will endeavour to post the exhibits on its website, together with the transcripts on a timely basis. And as a reminder to counsel and for counsel to please remind their witnesses, the transcript is much easier to follow if the witness is giving PowerPoint presentations continuously indicate which slide number of the exhibit they are referring to.

Likewise, when asking questions, counsel should reference the document and page numbers for the benefit of those following via the transcript. We thank counsel representing Manitoba Hydro, the Intervenors and independent expert consultants for their cooperation and assistance in organizing the procedural matters for this hearing.

We extend a special welcome to the Manitoba Hydro witnesses who are appearing for the first time, as well as Intervenor and independent expert consultant counsel and witnesses who are appearing for the first time.

As with those who have appeared or testified previously before the Board, we look forward to working together to assist the Board in this General Rate Application.

In conclusion, and subject to any questions the Board Chair or panel members may have of us at -- at this time, we suggest the Board call on parties for their opening remarks, beginning with counsel for Manitoba Hydro. Following Manitoba Hydro's counsel's opening comments, we suggest the Board hear opening comments by all counsel for the

Intervenors.

After lunch, the Board can expect to hear from Manitoba Hydro's executive overview panel, followed by cross-examination of that witness panel by Board counsel. Thank you, Mr. Chair.

THE CHAIRPERSON: Thank you, Ms. Steinfeld. Ms. Ramage, the floor is yours.

OPENING COMMENTS BY MANITOBA HYDRO:

MS. PATTI RAMAGE: Good Morning, Mr. Chair and Madam Vice-Chair, Board member Grant, Board member McCutcheon, Board member McKay and Board member Ring. My name is Patti Ramage. And I'm here as legal counsel to Manitoba Hydro, along with Odette Fernandes, who is seated directly behind me, and together with a number of Manitoba Hydro's legal counsel, we will be representing Manitoba Hydro in this -- what has become a multi-layered process.

With me here today, to my immediate right, is Mr. Kelvin Shepherd, Manitoba Hydro's president and chief executive officer. And we also have to his right Manitoba Hydro's vice-president chief finance and strategy officer Jamie McCallum. In our back row today we have Mr. Greg Barnlund, to my far right, director of rates and regulatory affairs;

Ms. Liz Carriere, manager of strategic and financial planning; and Ms. Shannon Gregorashuk, manager of regulatory services.

Manitoba Hydro is seeking from the Public Utilities Board approval of a 7.9 percent rate increase to be -- to be effective April 1st, 2018, along with final of -- approval of previous interim rate increases.

We acknowledge that a 7.9 percent increase is an exceptional rate increase in the province of Manitoba. It needs to be an exceptional rate increase because we are dealing with exceptional circumstances. These are challenging times at Manitoba Hydro. Rate increases are never welcomed, we know that. We are acutely aware that a 7.9 percent increase is larger than any previous increase sought from the Public Utilities Board by Manitoba Hydro. We cannot emphasize enough that we do not take this request lightly, but at the same time, we cannot avoid or defer coming to terms with the realities of Manitoba Hydro's financial situation today and its future outlook. If we do that, we are only going to make matters worse.

Can we change the slide? The problem is at today's interest -- at today's rates, Manitoba

Hydro does not have enough cash coming in each day to pay our operating costs and to pay the interest we owe, let alone manage the business risks that must reasonably be anticipated to arise.

At Manitoba Hydro we often talk about managing our risks; that means that we can weather a drought and like any business, particularly a highly leveraged business, that we can cope with the rise in interest rates. We need to be able to get through those type of events and still be able to pay our creditors, to pay our employees and to still renew and maintain our aging system so that we can continue to provide safe and reliable service.

The stark reality is that even with extended average high water conditions, Manitoba Hydro has been borrowing money just to meet current obligations, never mind the costs and the interest expense associated with our major projects. We have been extraordinarily lucky. This is the longest period of above average water conditions on record. We've had fourteen (14) consecutive good years. The previous record was five (5).

Interest rates have, until recently, steadily marched downwards and sit at levels not seen since the Great Depression. This will not go on forever. And when it ends, absent a plan to address our financial challenges which starts with the requested 7.9 percent rate increase, we will be in trouble. We need a plan. A plan that is grounded in financial reality. Hope is not that plan. It's critically important that we, all of us, we get this right, because if we don't rate increases will be higher in the future, and will result in even greater overall increases to customers' bills. This is the reality we're facing.

We don't want to be back here twelve (12) months from now saying, we need another rate increase only this time we're not asking for 7.9 percent, we're asking for more. We don't want to go there. This process is the opportunity to get this right. We need to get on the right rate trajectory now.

Everyone understands that in life when you borrow money you have to repay it. This applies whether you're borrowing money to buy a new home, to run a small business, or whether you're a Crown Corporation running an electric utility. Borrowing money also requires you pay interest. Take for example a credit card. If you only make the minimum payment the debt is going to be around for a very long time. Each time you use that card, you accumulate more debt and even more of your income gets eaten up by interest expense. It's a vicious cycle. And if you told -- don't take steps to deal with the debt, the payments become so large that all of your income goes to service that debt, and you have to borrow on another account just to make that credit card's minimum monthly payment.

To stop the cycle, you have to get the debt under control. You need to reduce your expenses. You need to increase your cash flow. You might make changes to your lifestyle, you might cut costs. You might look for ways to increase your income, and we are doing all those things at Manitoba Hydro. Manitoba Hydro's already taken steps this year to reduce its workforce by nearly 15 percent. This includes a reduction in the number of vice-presidents by 30 percent and over the next short while, the elimination of eight hundred (800) full-time positions.

We would not presume to come to this Board with this rate ask without having taken these steps. Unfortunately, these and other cost control measures are not enough to provide Manitoba Hydro sufficient revenue to meet its obligations and manage its risks. We're not going to be able to grow our way out of this predicament. Our domestic load forecast is down, as is our export revenue forecast. We have no choice but to look to the only other tool we have in our toolbox and that is rate increases.

It's fair to ask: How exactly is debt affecting Manitoba Hydro? We're going to be dealing with this in detail but I'll give you a taste. The evidence demonstrates that presently for every dollar Manitoba Hydro collects from Manitoba ratepayers $0.40 goes to service the debt. I can tell you that $0.40 is going up and it's going up soon. It does not include the interest associated with our major capital projects, that means, the interest we're paying today on Bipole III capital spending is not in the $0.40. When Bipole III comes in around nine (9) months from now, it adds $205 million, 205 million, to Manitoba Hydro's interest expense annually; that's a real expense, and it has to be paid with real dollars. Change the slide. Thank you.

By 2024 all the major projects will be complete. How do we look then? That is going to depend on the rate decision you make now. If we don't take corrective action and we continue with the old financial plan with its 3.95 percent rate trajectory, by 2024 $0.63 of every dollar collected from Manitoba ratepayers will be needed to service Manitoba Hydro's debt.

However, there is an opportunity to change that by following the plan laid out in this application, that amount drops dramatically from -- to $0.45 of every do -- excuse me, $0.45 of every dollar. From $0.63 to $0.45, that's a big difference. $0.45 is still a lot, but it's a lot less than $0.63.

Manitoba Hydro's provided a trend -- tremendous amount of information to substantiate the -- substantiate the need for this rate increase. You can approach your task with a view that the issue is either complex or straightforward. Complex means immersing yourself in 32,000 pages of materials that have been filed to date. Complex means trying to understand and remember every detail. I don't believe it's humanly possible. I don't believe it's necessary.

The key issue is straightforward: Does Manitoba Hydro have enough revenue to operate the business, manage its risks and pay its finance expense. Absent a 7.9 percent rate increase, the answer is clearly no. You don't need to 32,000 pages to answer the key question. In my experience, the hearing process typically focuses on a number of key IRs, not the voluminous record that's created by the discovery process.

In an effort to assist the panel, we have put together of Manitoba Hydro ten (10) IRs and these ten (10) IRs we believe in com -- combination with our rebuttal evidence will put you in good stead to understand and assess the evidence presented to you and we'll distribute these when I'm complete.

Manitoba Hydro respects the fact that Intervenors to this process represent individuals and groups that have mandates that are very important to their members. However, as much as we respect these groups, we must remember that they are advocating for a result that is consistent with the interests of their members. Those mandates should not be confused with that of the Public Utilities Board, to balance the interest of ratepayers with the fiscal health of the Utility.

In doing so, the PUB facilitates Manitoba Hydro's continued ability to deliver safe and reliable electricity to Manitobans. When listening to the opening comments this morning and the evidence throughout the hearing, I suggest you keep the following questions top of mind. First, will adopting the perspective being advocated by this Intervenor serve to provide the Utility with enough cash to operate the business, manage its risks, and pay its finance expense?

Now, it's wise to ask this question both if everything goes exactly to the plan that's been laid out for you, but also if some things disappoint, because it's been shown to happen. Take -- taking those kind of perspectives is how we promote rate stability and avoid rate shock.

Also ask yourself: Does the evidence or issue raised by this Intervenor, materially affect the test years, the years immediately following the test years, or are you being asked to address an issue that is a decade or more into the future? Does it need to be decided today? Is it material?

This rate application is for August 1st, 2017 and April 1st, 2018 rates. We will be back to you and you can address some of those future issues when they impact the test years under consideration. We already have a lot on our plates. Let's not exhaust ourselves debating what the world will look like seven (7) to ten (10) years from when so much can't be known, particularly given, you know, we will be back to see you multiple times before then.

Another question to keep top of mind: Who benefits from addressing the issue, as is being suggested? Does this appropriately balance the interest of ratepayers and the need for a healthy Utility?

Lastly, is the information being presented on a consistent basis? A comparison is only valid if it's an apples-to-apples comparison. Are the -- the assumptions being used valid? Do they reflect ta -- today's world or a healthy unview (sic) of the past. The fact is, you can engineer any results you want if you change the assumptions.

I urge you to listen very carefully to the Intervenors; that's not something you usually hear from a lawyer, usually I want you listening to me. But in this case, I want you listening to the Intervenors and carefully, because almost without exception, the result of their evidence, the result of their analysis, their proposals, the result is to shift the burden of our debt on to ratepayers in the future. That's not only unfair, it's shortsighted and it does not achieve the objectives of this Board.

Today's ratepayer is not paying their full share. Shifting the burden does not achieve stability and it provides higher, not lower rates in the long run. Through this GRA Manitoba Hydro has and will continue to demonstrate that a 7.9 percent rate increase fairly shares the burden between today's ratepayers and those of the future.

Now, at the beginning of my comments I indicated that we were very aware that this rate increase is not welcomed. On Friday I got to see the feedback the PUB has been seeing on its website. The calls to cut cost, to cut staff, to send a message, to refuse the rate increase. None of that was unexpected.

But what struck me was that one (1) individual, consumer number 1273, strong -- that -- that individual strongly opposed the rate increase but said, and I quote,

> "If it does go ahead, I would greatly appreciate it being posted in great detail as to why this large amount increase has taken place and where the extra funds are going towards."

It struck me, I think because of a recent experience, when I went to the last Bomber game I was late. The seniors who sit by us asked where I was and I replied work. When they asked where do you work that you work so late on a Friday night, Manitoba Hydro. And they said, you're not the one raising our rates, are you? Well, no, not just me but, yes, I'm working on the rate increase.

Things got cool, and it wasn't because we were sitting outside on a November evening in Winnipeg. These people clearly shared the views of the people who have posted on your website. At half time we talked. I explained the challenges in building these major projects and how they are costing more than anyone had imagined. That Manitoba Hydro was not alone. How others building similar sized projects had run into similar sized problems; that all over North America rates are going up faster than inflation as utilities deal with aging infrastructure and rising costs.

I explained why a 20 year plan doesn't work. How our Manitoba load is not going to be what we thought it was just a few years ago. I explained how we can count on the export market like we used to. And I also explained the staff reductions we've undertaken. Finally, I explained the risks of not taking corrective action.

And when we were done, I wouldn't say they were happy, but I would say they had a better appreciation of the problem and why it needs to be addressed. And I would also say they did not want to risk higher rates later. Consumer number 1273 deserves that same explanation and this process can accomplish that.

And that brings to -- me to my last point, bill affordability. Manitoba Hydro is acutely aware that this rate increase will have serious impacts on its ratepayers who experience energy poverty, including many of our indigenous customers. Poverty, in particular, to this process, energy poverty is an issue that requires many parties working together to find meaningful solutions.

Parties critical to this discussion are not, however, all in this room. We view the recent announcement of the province of Manitoba regarding the development of a new poverty reduction strategy, a significant and positive. If the experts who developed that poverty strategy identify a fitting role for Manitoba Hydro, I am confident the Corporation will do what it can.

But the fact remains, we are not going to be -- not going to be able to meaningfully address energy poverty or poverty in general in this process. Today's reality is we have a choice. A choice between rate increases now or even larger rate increases in the future. And while it seems so tempting and so easy, the worst thing we can do is ignore or defer action to address the issues facing Manitoba Hydro and its ratepayers. That is why we need to get this right.

Thank you for listening to me this morning. Mr. Shepherd and Mr. McCallum are, of course, here and after we hear the Intervenors' opening comments, they will make their presentation and be available for questions.

And we would be happy to distribute this now or at the next break, the ten (10) IRs we're suggesting the Board review.

THE CHAIRPERSON: Ms. Ramage, Vice-Chair Kapitany has a question of you.

THE VICE-CHAIRPERSON: Yeah, I have -- I actually have two (2) questions for you, Ms. Ramage. The first one is: I believe you said that we're here to talk about a rate for August 1st, '17 and April 1st, '18, but there's also a rate from August 1st, '16, that also needs to be finalized.

And so I just wanted your comment on why you hadn't mentioned that rate?

MS. PATTI RAMAGE: Mostly in the

interests of time. I was trying to encompass the -- capture that rate by the previous interim rates, I -- I referenced, as opposed to setting them all out, simply because, Board counsel had already run through all the detail of the rate increase, and I was focusing on what I would view as -- as the significant -- what we haven't covered in any proceeding in the past.

THE VICE-CHAIRPERSON: So I take it from that then that you will be addressing the finalization of that rate as well?

MS. PATTI RAMAGE: Yes, throughout the hearing.

THE VICE-CHAIRPERSON: Okay, thank you. And my second question is: You said in your statement that you were borrowing to meet current obligations. When you say that, are you speaking of a payment of debt for your capital projects, or is it something beyond that?

MS. PATTI RAMAGE: What I am speaking to is the fact that we are borrowing today -- that when we are borrowing, we do not have sufficient funds to pay for our current operating expenses, let alone our -- our capital projects. Our capital projects can't be recovered today under accounting rules, but we don't have the sufficient funds, and I think Mr. McCallum will be able to explain that in far greater detail than I will.

THE VICE-CHAIRPERSON: Thank you.

THE CHAIRPERSON: Ms. Ramage, I think we'll have the materials distributed at the break. Just -- let's do it at the break because we're not going to look at them before.

Okay, we will proceed with Intervenors and we'll start -- I have them on my list with the Assembly of Manitoba Chiefs. I don't know who will be speaking on behalf of them.

OPENING COMMENTS BY ASSEMBLY OF MANITOBA CHIEFS:

MR. SENWUNG LUK: Good morning, Chair. This is -- my name is Senwung Luk and good morning panelists. Thank you for -- thank you for having us here today. My name is Senwung Luk and together with my cocounsel, Corey Shefman, we represent the Assembly of Manitoba Chiefs.

The Assembly of Manitoba Chiefs is an umbrella organization representing the interests of sixty-two (62) of sixty-three (63) of Manitoba's first Nations. And I would like to thank the Chair for his acknowledgement of our presence today on Treaty 1 lands, on the territories of the Anishinaabe, the Cree, the Dakota Peoples and on -- on the homeland of the Metis nation.

I hope that our conversation here and the deliberations of the Board will honour the spirit of Treaty 1 and all the treaties that cover the land and waters on what we now call Manitoba. And I make reference to the treaties because the issues that the AMC will bring before the Board here go back to that treaty relationship. As the great Manitoban Chief Justice of Canada Brian Dickson said in the Sparrow case,

> "There can be no doubt that over the years the rights of the Indians were often honoured in the breach. We cannot recount with much pride the treatment accorded to native people of this country."

That the treaties have not been lived up to speaks for itself through the evidence that the AMC intends to bring before the Board. You will hear that poverty hits First Nations communities hard, much harder than a non-indigenous communities. You will hear, for instance, that 96 percent of First Nation reserves have median incomes that are below the poverty line in Manitoba. You will hear that 76 percent of children on First Nations reserves live in poverty, which is the highest rate in Canada.

Unfortunately, the sad litany of statistics do not end there. You will also hear evidence about the condition of the homes on -- many homes on First Nations reserves. You will hear, for instance, that 44.2 percent of First Nations people lived in housing in need of major repairs. On reserve housing has many problems with their construction, problems that most Manitobans would find difficult imagining.

For instance, the ground beneath the home built by the Department of Indian Affairs may never have been proper -- properly levels, leading to subsidence of the soil. This may lead for instance, in windows and doors in the home developing cracks between the window and door and the frame which, in turn, leads to heat leaking out. You will, therefore, not be surprised to learn that electrical consumption is much higher per square foot on reserve when compared to off reserve homes.

We recognize that many of these problems are large and systemic. The rate increase before the Board here cannot on its own -- I'm sorry, the rate case before the Board here cannot on its own solve these problems.

But, if the Board approves the rate case as put forward by Hydro, it can certainly make these problems worse. A rate increase to electricity, especially of the magnitude that is being proposed here, will impact the poor more than the wealthy. Because so many people who live in First Nations communities in the province are in poverty, the rate increase will hit them disproportionately hard.

The Board will hear that this hardship will mean much more for people on reserve than simply having to forgo a luxury or two, for First Nations people living on reserve, this increase can mean the difference between being able to pay their Hydro bill or not. What's more is that people who live in First Nation communities also consume higher amounts of electricity because of the substandard condition of their homes. A rate increase will, therefore, have an even more substantial impact then on First Nations -- on First Nations people living on reserve even greater -- even more disproportionately than for people living off reserve.

Now, we do not expect to be taking positions on Manitoba Hydro's revenue requirement. We have no desire to duplicate the work that our fellow Intervenors are ably doing. However, after deciding on Manitoba Hydro's revenue requirement, the Board will be called upon to decide how that revenue requirement will be visited upon ratepayers. The Assembly of Manitoba Chiefs intends on calling on evidence showing the disproportionate impacts of these rate increases on poor people, and on First Nations communities specifically.

We'll be calling evidence from Mr. Phil Raphais, our expert witness, that will consist of practical, pragmatic approaches that the Board can adopt to alleviate the impact of these -- of these rate increases through rate relief of various kinds. We'll call evidence showing that it's technically feasible to implement a reduced rate targeted at First Nations people living on Reserve.

We will submit that such a targeted form of rate relief is appropriate given the tas -- given that the task of bringing on Reserve housing up to standards that other Canadians would expect is an unfinished project. And since we're not there yet, since that is still a work in progress, it's important to cushion on Reserve ratepayers from the impacts of those rate increases.

I'll close here by alluding again to the treaty relationship between Manitoba and First -- and the First Nations in this province. Every day, with every decision that a Canadian institution makes, there is an opportunity to make that treaty relationship better and stronger. As the Truth and Reconciliation Commission has pointed out, the journey of reconciliation between indigenous people and other Canadians is a job for every Canadian and for every Canadian institution, each in their own situation.

The Assembly of Manitoba Chiefs will structure our intervention to contribute practical ideas for how the decision on the rate case, this rate case before the Board here, can be an opportunity to move further along on that journey of reconciliation. Thank you.

THE CHAIRPERSON: Thank you, sir.

The next Intervenor is the Business Council of Manitoba and Mr. Williams. I -- I just point out for everyone in the room, we have two (2) counsel named Williams in the hearing, Kevin Williams and Byron Williams. And since Dr. Williams is a doctor, we'll distinguish between them that way. So, Mr. Williams...?

MR. KEVIN WILLIAMS: Thank you.

THE CHAIRPERSON: Please start.

OPENING COMMENTS BY BUSINESS COUNCIL OF MANITOBA:

MR. KEVIN WILLIAMS: Good morning, Board Chair Gabor, Vice Chair Kapitany, and Board members Grant, McCutcheon, McKay, and Ring. I'm Kevin Williams, not the doctor, and I'm here on behalf of the Business Council of Manitoba. To my immediate right I have Doug Finkbeiner, also of our firm.

The Business Council of Manitoba is a not-for-profit organization comprised of eighty-four (84) CEOs from a cross-section of businesses located in ber -- both urban and rural Manitoba. Almost all of the corporation's are headquartered in Manitoba. The Business Council's primary purpose is to research and advocate positions on selected issues that have -- that bear directly on the future health of Manitoba and Manitoba society.

The CEOs of the organization are committed to Manitoba, Manitoba's economic growth, and community involvement. The Business Council of Manitoba sees this general light -- rate application as just such an issue, because from the Business Council of Manitoba's perspective the financial stability of the province generally, and Manitoba

Hydro in particular in the midterm and long-term, is key.

The Business Council of Manitoba's position in respect of this General Rate Application is it is the -- is -- is that it is the Public Utilities Board that is vested with the -- the authority to determine the appropriate rate increase in respect of this application. The Business Council of Manitoba's position is that to the extent that rate increases will assist in placing Manitoba Hydro on a solid independent financial footing, the Business Council of Manitoba is supportive of such an increase.

To the extent that Manitoba Hydro can be perceived by others, and in particular the -- the credit rating agencies as being self-supporting, we all as Manitobans are better off. Accordingly, to the extent that the rate increase can assist Manitoba Hydro as being viewed as self-supporting by the credit rating agencies, the Business Council of Manitoba would support such a rate increase.

We are not here to advocate that the increase being requested by Manitoba Hydro is the appropriate rate increase. That is for you to decide. Our intention in respect of the proceeding is to -- is to provide our position by way of a presenter panel consisting of Business Council of Manitoba members. Our goal in this process is to simply advocate the ramifications to all Manitobas -- all Manitobans of the potential impact of a downgrade of the credit rating -- rating of the province and Manitoba Hydro in particular; or the effect of a general rate increase -- interest rate increase in the capital markets, and the effect those events would have on the financial stability of Manitoba Hydro and how Manitoba Hydro's financial stability could impact on all Manitobans generally.

So subject to any questions, those are my comments.

THE CHAIRPERSON: Thank you, Mr. Williams. Dr. Williams.

OPENING COMMENTS BY CONSUMERS COALITION:

DR. BYRON WILLIAMS: Thank you. We're just waiting for our PowerPoint to come up. I'll indicate that it's with great pleasure that I appear on behalf of our clients, Winnipeg Harvest and CAC (Manitoba). And just by way of background, Winnipeg Harvest, as this Board will be well aware, serves over sixty thousand (60,000) Manitobans a month who require food bank assistance, linked to fifty (50) communities throughout Manitoba, and partnering with four hundred (400) agencies.

CAC (Manitoba) has been before this Board, like our friends from MIPUG, right from the start when it comes to Manitoba Hydro. And some members of this Board will recall that at the NFAT hearing, our clients were not supportive of Manitoba Hydro's decision to go ahead with Keeyask.

But this hearing isn't about revisiting past decisions. It's not about decisions -- making decisions based on ideology. It is about taking a hard low -- hard-nosed look at the evidence today and how it reflects a non-share corporation, like Manitoba Hydro, which is capital-intensive and which is in a period of extensive and intensive capital investment.

And it's curious and interesting that -- that neither Manitoba Hydro or the Business Council of Manitoba in their discussion of adverse scenarios ever mentioned the bond markets, and the reaction of the bond markets, for example, to the Board's interim decision in August, which maintained and even reduced the spread between long Canada bonds and -- and Manitoba bonds. So as we go forward we will hear many doomsday scenarios for Manitoba Hydro. Our client urge this Board, as we know it will, to keep its eyes on the empirical evidence of how the markets are actually reacting.

The statutory context we will cover in the next three (3) or four (4) slides, but it is the word "necessity" and "necessary" that I wish to underscore, whether that is found in section 39(1)(a) of the Manitoba Hydro Act speaking to necessary operating expenses; whether that is found in section 25(4)(5) of the Crown Corporations Act speaking to any other reserves that are necessary; whether it is in the test for just and reasonable rates expressed at a high level in section 77 of the PUB Act, but more int -- more intimately in -- in terms of this Board's own decision Board Order 5/12.

We're again on the second bullet. We see those words "necessity," "necessary," ensuring that actual and projected costs are necessary and prudent. And if the Board takes the time, for example, to look at the $4.5 million series of PowerPoint slides prepared by Boston Consulting Group they'll see a lot of discussion of feasible. Feasible. Major rate increases are feasible.

You will not see that word "necessary." And that word "necessary" matters. The onus in this hearing is on Manitoba Hydro to justify this radical departure from past practice to justify this radical violation of the principles of intergenerational equity. That's their obligation. It has that onus.

We were certainly pleased to hear Manitoba Hydro refer to the over two thousand three hundred (2,300) Manitobans who've already written into the Public Utilities Board, and our clients wish to thank those consumers for sharing their voices. And on the next couple of slides, you'll see some of those stories. Senior citizens in rural Manitoba making hard choices and quite concerned about the increase of 7.9 percent times two (2) being sought by Manitoba Hydro.

New homeowners who invested in this province in their homes with an expectation of reasonable stable rate increases, not rate shock level increases. Again, seniors in rural Manitoba concerned as well as in bullet -- the second bullet on slide 12. You'll see, as well, a concern by those who are worried about the impacts of rate shock level increases, not just for one (1) year or two (2) years, but projected out six (6) years by Manitoba Hydro. What impact will that have on the Manitoba economy? Again, our clients thank these consumers for sharing their voices.

Ultimately, and we've heard that word a couple times today. We've heard the word "balance." The balance between ratepayers and between the health of the industry -- of -- of the Crown monopoly, and our clients acknowledge that that is the challenge for this Board. Their submission will be that if you look carefully at the Manitoba Hydro application, it is profoundly unbalanced and biased against today's ratepayers.

You won't find in the application a reference to consumers' cost of capital, that giant sucking sound of 7.9 percent rate increases upon 7.9 percent rate increases, and what that does to Manitoba consumers. You will not find that in Manitoba Hydro's rate application.

In terms of the five (5) elements of the statutory -- or of the Board's outline of tests in terms of just and reasonable rates, I want to start with forecasting on behalf of our clients. On slide 15 we've set out the key forecasting issues for clients, and we note the reality that Manitoba Hydro has not a very strong reputation when it comes to forecasting, certainly in terms of the export markets, and certainly in terms of capital projects. It's a Corporation that has a history of being so wrong for so long.

And our clients were concerned because our clients were certainly hoping for a fresh start with the new Manitoba Hydro board, with the new Manitoba Hydro lit -- literature, but the evidence of this hearing will show a finding by the independent expert Daymark of a current bias with regard to Manitoba Hydro's assessment of the export revenue forecast.

A corporation which has the onus of proving its case, a corporation which already has a tainted history of credibility when it comes to forecasting, and a damning finding by Daymark of a current bias as well. One (1), which by the way, bias -- biases the revenue forecasts down.

An unanswered question in this proceeding, but important evidence raised by Dr. Yatchew, another independent expert, is did -- did had Hydro get it right? Are rate shock level increases after rate shock level increases, are they going to do more to demand -- to reduce demand in the Manitoba economy than Hydro projects? If so, thereby undermining another aspect of its rate application.

Evidence that has yet to be filed relates to capital costs, and we'll certainly simply note the fact that it is an open question of whether Hydro's current estimates of capital costs are reasonable, or whether they're biased. And we have no indication yet whether they're biased upwards or downwards.

For the first time in the many years that I've been appearing before this Board, our client -- clients raise the question: Is the twenty (20) year in -- in -- IFF, integrated financial forecast, analytically coherent? Historically, our clients have taken serious issue with the inputs into Manitoba Hydro's twenty (20) year IFF, but never have they questioned the analytical coherence of it.

This is an application driven by a desire to impose rate shock. Six (6) years they're forecasting for the avowed purpose of avoiding rate shock, a tautology if my client has ever seen one (1). And in the middle figure on slide 19, you will see some certain Information Request responses of Manitoba Hydro. And a critical question is: What happens after the new Jerusalem is reached? After successive years of 7.9 rate increases?

There's a shocking about-face in the Manitoba Hydro integrated financial forecasts started about 2526. And if you work through those Information

Requests, you'll see around 2030 some very weird behaviour in that integrated financial forecast. So our clients asked the question, recognizing that this is a corporation with long-lived capital assets. What are the implications of an analytically incoherent twenty (20) year integrated financial forecast?

In terms of the prudent and necessary expenditures, right off the bat our client asked the question about day-to-day capital, sustaining capital. There has been damning findings in this evidence by the witnesses retained by the coalition METSCO, by Manitoba Hydro's own expert UMS, and even from the observations of Boston Consulting Group that Manitoba Hydro's expenditures on sustaining capital are not sufficiently optimized.

So there are important questions going forward in terms of what -- what are the implications for the rate application. And our client has seen no substantive effort by Manitoba Hydro to rebut the findings of UMS in that regard. Ultimately our clients ask: Are we getting the cost estimates, the prudence management of its portfolio of day-to-day capital that we would expect from a mature utility like Manitoba Hydro?

And at the bottom of slide 22, we note

the lengthy delay. Our client and this Board have been asking Manitoba Hydro to get its sustaining capital expenditures in order since about 2008. Given that lengthy delay in bringing prudence and reasonableness and efficiency to the optimization process, what tools does this Regulator need to do to incent Manitoba Hydro to move more quickly and more effectively on that path? A question begged by the very case theory of Manitoba Hydro's is can -- can Manitoba Hydro demonstrate that its management of large capital projects in terms of cost and risk has been prudent and reasonable. And certainly we await with interest the evidence of MGF in this regard.

Another issue unanswered in the opening statement of Manitoba Hydro, and in our view in its rebuttal evidence is what it's -- the Boston Consulting Group identified as poor performance against benchmarks. Does Manitoba Hydro take issue with Boston Consulting Group's finding of poor performance against benchmarks as alleged by BCG in 2016? What opportunities do they present for better value through better management going forward?

In terms of the nine hundred (900) equivalent full-time position layoffs, our clients will be exploring the implications, if any, of that on needed steps such as the development of competent sustainable capital processes.

I've already spoken of the delayed response to saving opportunities with regard to sustainable capital expenditures. I'll note as well our clients will be pursuing the delay in rural office consolidation, which dates back to 2006. We'll leave the issue of reliance on interim rates for -- for today, but that's something that our client will be pursuing in terms of proactive positive steps going forward to wean this Corporation off of its reliance on -- on interim rates.

Before we turn to the overall health of the Corporation, our client does want to go back to the external con -- consultants retained by Manitoba Hydro. As -- as identified by the independent expert Daymark, there certainly was a failure by Manitoba Hydro to seek input assumptions, and that -- that it -- it purchase -- of the export market forecast that it purchases, and that's concerning to our client.

And our client is also looking for what exactly -- what value did this Corporation get from its $4.5 million expenditure on Boston Consulting Group. Was there something more than PowerPoint slides? And has Manitoba Hydro prepared a critical analysis of that report?

In terms of the overall health of the Corporation, our client will ask: Did Manitoba Hydro's analysis in support of 75/25 in '27, that is what drives this application, did it effectively ignore the opportunity cost for Manitoba consumers, including residential customers, governments, business and industry? Is it, as we suggest, a violation of the principles of intergenerational equity?

Equally important, we -- our clients ask whether Hydro in its single minded pursuit of 75/25 in '27 has neglected to consider other tools that might give confidence to the financial markets while better balancing the interest of ratepayers and the Crown monopoly. And the Board will be aware that the Coalition's independent expert, retained with MIPUG, of Morrison Park Associates has explored how other relatively analogous non-share corporations such as the Tennessee Valley Authority and Bonneville Power give confidence to the financial markets in manners different from what is pursued single-mindedly by Manitoba Hydro.

In terms of targets we'll only direct you to the last paragraph on this page. You'll hear a lot of talk about debt equity in this hearing. One

(1) question that we all must ask yourself is: Does the term "equity" as it is employed in the private market differ from how it's used in the context of Manitoba Hydro? In our client's submission it does, and that is a very real and important difference.

Our clients will ask, again driven by market realities: What are the bond markets saying? Given the realities of financial markets, and recognizing the practice of more analogous non-share capital corporations, did Hydro err in making the debt equity target the primary financial target to be taken into account when setting rates for the future? And certainly they will be exploring targets that better balance the interests of ratepayers and Hydro, provide greater clarity to ratepayers, Regulators, and the financial markets and that are more consistent with the realities of a capital-intensive utility benefiting from both a monopoly and government debt guarantee.

Our clients will pose a simple question on the left-hand side of slide 34. If the capital markets are focussed on other financial metrics with -- then why not make those metrics central to rates? Other questions on this slide I'll -- I'll debate at a -- a later time. And we'll slip over the slide relating to reserves, except for to note that our clients certainly will be exploring when it is appropriate to employ them, i.e., when we're dealing with issues relating to water flow and for what risk would it be unreasonable.

Ultimately, our clients will ask the question of whether Hydro has demonstrated that its forecasted results over the short, medium and long-term are outside the range of what we anticipate in the NFAT. Is there an evidentiary basis for a marked departure from modern past practice, and from the promises made by the utility in the -- in the NFAT process? What happens if Hydro's change in attitude by its board is not supported by the evidence and long -- long-established derogatory principles? What then? And our client will be presenting options to this Board in terms of -- of those issues.

I'm going to turn to slide 39, key public interest considerations. Others in this hearing will be asking this as well, but what are the implications of successive rate shock level increases on captive residential customers? How many additional Manitoba families run the risk of falling into energy poverty? Does the single-minded objective of 75/25 in '27 risk materially damaging economic growth and job prospects?

Recognizing the time, Mr. Chair and members of the panel, I'll try and move fairly quickly through rate design and cost of service and energy poverty. Focussing on the middle figure on slide 41, our clients will ask. recognizing the vulnerability of particular residential populations, how, if at all, should tools such as low income energy efficiency, bill assistance. and rate design be employed. And they will ask whether those -- those supports, if any, should be provided by all ratepayers, or a particular class.

Moving to slide 43, and Focussing on the second bullet, in the event that bill assistance programs are pursued, how can long-standing challenges with program participation and renewal, which can lead to a majority of low income persons actually paying more be addressed? And how can participation in all aspects of affordable energy programming be increased?

The overarching question our clients will ask is whether Hydro's application has been wrecked on the shoals of modern rate making principles, and whether there are opportunities to make the ratesetting process effective and transparent, more effective, more transparent for consumers.

Moving to slide 48, and recognizing the time, Mr. Chairman, Manitoba Hydro did ask for an outline of some of the positions of our clients. And I hasten to -- to note that our clients rely heavily on the oral hearing process to develop their positions. They rely heavily on focus groups and -- and consumer input, which is not yet completed. But what we are prepared to share with the Board now are some of our clients' preliminary positions as per the request of Manitoba Hydro.

Manitoba Hydro will try and focus this Board only on a year, or -- or out to ten (10) years. Our clients, recognizing the long-term capital-intensive nature of this Board -- of this utility, will focus on the short-term, the medium-term, and also as far out as twenty (20) years. They will take the position that Manitoba Hydro's application is unreasonable and that it would unreasonably impose rate shock on Manitoba consumers.

Directing your attention to the third bullet on slide 49, they will argue that the shape of proposed rate increases does not represent a fair distribution of burden for ratepayers over time, and that it imposes particular challenges on low income people, as well as Manitoba business.

Our clients will argue that Manitoba Hydro's single-minded focus on high risk capital-intensive megaprojects has distracted this Corporation from much of its necessary day-to-day activities, including optimizing the pacing and prioritization of its sustainable capital portfolio, developing an evidence-based consideration of appropriate financial targets for modern markets. And that -- as well as the range of tools by which a modern Regulator can signal to the capital markets its commis -- commitment to corporate health.

Our clients will certainly argue that Hydro's forecasts are unreliable, taking into account, certainly, the demonstrated bias in terms of the export market. And that, given the challenges the Corporation has in terms of forecasting there is a need for further examination of mechanisms to develop unbiased forecasts that this Board can rely upon. Our clients will argue that Manitoba Hydro has not demonstrated that its target of 75/25 in '27 is necessary, and that it certainly has not demonstrated that they are good or balanced towards ratepayers.

In terms of cost of service we'll -- we'll move over that slide as well is orderly --

orderly ratesetting process. Ultimately, our client will not be accepting Manitoba's -- not recommending Manitoba's recommendation of a 7.9 percent rate application for '17 and '18, and it will present alternatives in the course of this hearing.

Ultimately, Mr. Chair and members of the panel, our client feels strongly that the promises that were made during the NFAT process have been broken by Manitoba Hydro; that the theory of imposing rate shock to avoid rate shock is a fundamental change of perspective at Manitoba Hydro that has not been justified as necessary, and definitely that Manitoba Hydro has not met its onus of demonstrating that the proposed rate increases balance the interests of ratepayers and the financial health of the utility.

Thank you for this opportunity on behalf of our clients.

THE CHAIRPERSON: Thank you. Mr. Gange, would you rather proceed now or after the break?

MR. WILLIAM GANGE: Mr. Chair, thank you. I'm -- I'm ready to proceed right now, if -- if you're -- and -- and I suspect we were -- we were planning on breaking it at 10:25. I'm going to go past that. But I don't think that my presentation is more than ten (10) minutes.

THE CHAIRPERSON: Okay. Well, we'll proceed with your presentation now.

MR. WILLIAM GANGE: Thank you.

THE CHAIRPERSON: Thank you.

OPENING COMMENTS BY GAC:

MR. WILLIAM GANGE: Thank you, Mr. Chair. I -- and -- and thank you, Ms. Villegas, that we've got our opening statement, which I'll have entered into the -- to the record as GAC-14, Mr. Chair, at page 2 of the of the opening statement.

--- EXHIBIT NO. GAC-14: Opening statement of GAC

MR. WILLIAM GANGE: Just for your background, Mr. Chair, my name is Bill Gange. I will be representing Green Action Centre throughout this hearing. With me from time to time will be David Cordingley, who will be taking the mic from time to time. Most of the members of the the panel have met Professor Miller, with me to my right, who is -- is the coordinating member with the Green Action Centre.

The -- for background, Green Action Centre has taken part in hearings before this Board for a substantial period of time, and we've appeared not only before hearings with the Public Utilities Board regarding Manitoba Hydro, but from time to time with respect to Centra Gas.

We have represented the conservation aspects of the province. The Green Action Centre promotes greener living through environmental education, and encourages practical green solutions like composting and active transportation for homeowners, workplaces, schools, and communities. One (1) of the focuses of the Green Action Centre throughout its applications before this Board has been the question of sustainability, with emphasis on social justice meeting human needs now and in the future and the efficient use of our resources.

The -- the perspective from the Green Action Centre is that Manitoba Hydro is a -- an exceptionally valuable resource within our province. We understand that these are difficult times, partly arising out of decisions that were made arising out of the NFAT process. We recognize that Hy -- that the Hydro system provides a hugely valuable resource of relatively inexpensive, reliable, and renewable power, and that -- that the -- the anticipated load growth will increase Manitoba Hydro's costs.

But even with increases, those costs remain attractive compared to most utilities. We especially take note of the fact that Manitoba Hydro has enabled to Manitobans to lower their climate impacts and -- and although we do believe that there is much more to be done, and as an example of that is electrification of transportation.

The rising cost of power, the reality is that Manitoba's power is not affordable to all. We have in the past placed special emphasis on making certain that the most vulnerable of our population are protected as best we can from the effects of rising rates. A steep run of rate increases will reduce affordability, which is a recognized -- it's -- it's an inevitable part of this process. And, Diana, if you could put on the slide from the Assembly of Manitoba Chiefs this -- thank you very much, Diana. This chart, which comes from the Assembly of Manitoba Chiefs Second Round Interrogatories 23(a)(c), page 2 of 16.

And -- and, Mr. Simonsen, should I have that marked as -- it -- it already is a -- a part of the -- of the hearing record. But it shows dramatically the effect of the number of people that will be affected negatively by the various proposed or potential rates of -- of the increase from Hydro rates. Thank you, Diana.

As a result of that we -- the Green Action Centre has been promoting policies and practices that ensure power is more sustainably produced and used and able to meet the needs of all Manitobans. We are attempting through the evidence of Mr. Chernick to provide to the Board alternative rate structures that support both conservation and affordability.

And Mr. Chernick's evidence, when he appears which we expect to be in early January, will be dealing with rate design in an attempt to deal with a number of issues, both the -- the reality of the fact that many of our -- of our most vulnerable members of the population are captive to the electric space heating. So doctor -- or Mr. Chernick's rate design deals with both energy affordability and with the reality of all electric heating in this province.

At the interim rate hearing, we advised the Board that rate increases must be accompanied by an adequate strategy for addressing unaffordable energy burdens created or aggravated by the increase. And, in our view, just and reasonable rates must meet the utility's revenue requirement, but at the same time, must promote affordable bills for the most vulnerable lower income customers in order to provide equitable access to energy for basic needs.

We will be providing evidence with respect to equity, that -- that recovering costs, in our view and in the argument that we'll be making, must be proportional to usage. Equity involves charging rates that reflect marginal costs and lost opportunities. We understand that equity must protect the small customers from the costs of growth and must promote affordable bills. We urge the Public Utilities Board and the parties to focus attention on the multiple nuances of equity in determining what are, in fact, just and reasonable rates.

So, Mr. Chair, Green Action Centre comes -- one (1) of Dr. Williams's favourite phrases is that he comes often as an agnostic to these hearings. Green Action Centre, in this hearing, comes wanting to hear the evidence and to analyze it. We say that the -- the -- that we will be listening to Manitoba Hydro to demonstrate its argument that a shorter run of steeper rate hikes is better for customers than the longer run of less steep rate hikes. In other words, is greater short-term pain offset by long-term gain? And we pose the question:

Would rates stabilizing the lower level with the steeper increases than otherwise?

We also intend to bring evidence and to -- and to test evidence as to what measures are available to mitigate the impacts of rising rates on vulnerable customers. How effective are these measures, and how widely can they be deployed? We have in the past attempted to bring to the Board and to this whole process attempts to lower bills for income qualified or energy burdened customers.

I think it's fair to say, from the perspective of the Green Action Centre that our attempts to bring that -- those -- those issues to the attention of the Board and to be put into implementation have never been embraced wholeheartedly by Manitoba Hydro. And there have been various explanations as to why that has been. Some of them are legal concerns. Some of them are statutory concerns. Some of them are -- are issues of the difficulty of doing so.

And so the question that -- that rattles around inside our presentation is: Are Manitoba Hydro's concerns practical, political, or ideological, or simply the result of institutional inertia? And once again we will be bringing those processes to the Board through Mr. Chernick's evidence and -- and we hope that -- that those issues will be -- will be received and -- and considered by this Board.

We understand the -- the issues of climate change and we ask the question: How does Manitoba Hydro currently see its role in addressing climate change? What specific policies and activities support that role and should the promotion of electrified transportation be part of Manitoba Hydro's strategic planning for both climate and business reasons? And -- and finally, on most of the matters that are before you, our final positions will depend on our examination of the evidence.

That is the opening statement of Green Action Centre, Mr. Chair. Thank you.

THE CHAIRPERSON: Thank you, Mr. Gange. Dr. Williams...?

DR. BYRON WILLIAMS: I neglected, Mr. Chair, members of the panel, to intro -- to ask that our PowerPoint be exhib -- entered as CA -- Consumer Coalition Exhibit 31. And, more importantly, I neglected to note that our client Ms. DeSorcy is in the back row. She might want to wave or stand up, so I apologize to our client for that.

--- EXHIBIT NO. CC-31: Opening Statement of Consumers Coalition

THE CHAIRPERSON: Thank you. In -- in relation to your comment, I was going to comment on the issue of exhibits. When we come back, Ms. Ramage, I -- I guess we should get your presentation, plus the materials in as exhibits as well prior to starting your case.

MS. PATTI RAMAGE: Yeah, certainly. I believe Mr. Simonsen has already assigned some numbers, I think, and because he was ready for Mr. Shepherd and Mr. McCallum's. My presentation was -- would be Manitoba Hydro Exhibit 63. Mr. Shepherd and McCallum's presentation is to come, is 64. And then the IRs, in a nutshell, is 65.

THE CHAIRPERSON: Thank you, Ms. Ramage. Thank you. We'll break for fifteen (15) minutes. Thank you

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

THE CHAIRPERSON: Okay, if we could resume, M. Monnin.

OPENING COMMENTS BY GSS/GSM:

MR. CHRISTIAN MONNIN: Merci, thank you, Mr. Chair, panel members Grant, Kapitany, McCutcheon, McKay and Ring. Thank you very much for the opportunity to be here this morning.

My name is Christian Monnin -- Chris Monnin and I'm counsel for General Service Small, General Service Medium customer classes and also Keystone Agricultural Producers.

I intend to give you just a bit of a background of who comprises these Intervenors and an -- an overview of the issues of concern which they will bring forward throughout the hearing. The General Service Small customer class is comprised of nonresidential, predominantly small commercial customers using Utility owned transformation with demand not exceeding 200 kilowatts. The General Service Small customer class is divided into demand, and non-demand subclasses. In that regard, customers in the demand subclasses pay demand rate based on the peak demand each month, in addition to basic monthly charge and energy charge.

It's important to underscore that the demand and non-demand subclasses together account for 9.5 percent of Manitoba Hydro's customers and contribute 17.6 percent of Utility's total costs.

Regarding the General Service Medium class, this includes nonresidential, predominantly large commercial customers using Utility owned transformation with the billing demand exi -- exceeding 200 kilowatts. This customer class accounts for .3 percent of Hydro's customers and contributes 13.2 percent to Utility's total cost.

On the whole, the General Service Small and General Service Medium customer account -- accounts for over 30 percent of Hydro's annual revenue requirement. It's also respectfully submitted these customer classes account for a significant portion of the Manitoba's economic activity and employment.

Now, in PUB Order Number 70/17, General Service Small and General Service Medium were granted Intervenor status. In addition, Keystone Agriculture Producers were granted Intervenor status independently pursuant to Order 70/17. On September 7 -- 15th, 2017, the PUB granted the blending of the app -- of the intervention of Keystone Agricultural Producers and General Service Small and General Service Medium.

Keystone Agriculture Producers is Manitoba generals farm policy organization representing the interests of over 7,000 farm families and 23 commodity associations. Its mandate is to ensure a primary production of -- and Manitoba remains profitable, sustainable and globally competitive.

Keystone Agriculture Producers sought leave to intervene in order to assist the Board by providing with the perspective of the agriculture community and the impacts of Manitoba Hydro's proposed -- proposed rate increases will have.

In fear of being redundant, but for the benefit of the record, the makeup of the General Service Small and General Service Medium customer classes have represented stakeholders, namely, the Building Owners and Managers Association of Manitoba. The Members of this entity own, develop and manage the bulk of the commercial, institutional real estate in Manitoba.

The Canadian Manufacturers and Exporters Association of Manitoba division, the members of this entity represent businesses in the manufacture and exporting sectors. These sectors directly employ approximate 64,000 Manitobans. And rounding it out, we have the Manitoba Hotel Association which is a nonprofit organization comprised of the majority of hotels located throughout Manitoba.

General Service Small and General Service Medium and Keystone Agriculture Producer intervention submits that Hydro's current General Rate Application proceedings provides an opportunity to examine Manitoba Hydro's strategic and operational decisions to date and the Utility's financial projections going forward.

As has been well canvassed this morning, the overriding regulatory principle that ought to guide the Board in its deliberation, and when considering the proposed rate increase, is whether the rate appropriately considers the ratepayers and the fiscal health of the Utility.

Moreover, by virtue of Order-in-Council 92/17, the PUB has asked -- has been tasked, rather, with the additional duty of a careful examination of capital expenditures in the context of its rate approval function. Such an examination can be viewed as an expansion of the scope of the review compared to historic GRA proceedings in Manitoba.

At a very high level the key narratives of the General Service Small and General Service Medium and Keystone Agriculture Producers intervention are as follows:

The proposed rate increases cannot be

examined in isolation from assumptions regarding subsequent rate increase -- increases. It's important to keep in mind that the proposed rate increases result in a nearly 50 percent increase in the rates. The rate -- the proposed rate increases at the amount and the pace proposed are likely to have a significant impact on these Intervenors, both directly and indirectly. Indeed, the proposed rate increases and the pace proposed will have an impact on Manitoba's competitive advantage.

Another issue of concern to the interv -- to the Intervenors and, in particular, Keystone Agriculture Producers and the Canadian Manufacturers and Exporters Association is the anticipated carbon tax that we will be dealing with in Manitoba. As is well-known, the Pallister government announced on Friday, October 27th, 2017 its plan to introduce a flat $25 cut -- carbon tax. It's submitted that this must be kept in mind when considering the proposed rate increase, and whether the rate of appropriately considers the ratepayers.

The combined impact of the rate increase and the carbon tax will have further negative impact on these Intervenors and reduce the bottom lines.

On the issue of rate balancing or rate design, it's recognized that it's important that the revenue requirements of Manitoba Hydro are indeed met, however, it's equally important that rates should be cost based and that the cost burden of this revenue requirement be shared fairly among all customer classes.

On the issue of revenue cost coverage of the GSS and GSM Intervenors, in particular, their RCC, the revenue cost coverage, is outside the zone of reason -- reasonableness as set by Manitoba Hydro itself. Acknowledging that this is a departure from cost of service principles, therefore, consideration needs to be given to the rates for all customers and whether they need to be appropriately adjusted in the context of this General Rate Application.

On the issue of operating efficiencies and service quality, these Intervenors have the initial perspective that it remains unclear whether the measures taken by Manitoba Hydro are of a sufficient magnitude to assure that it is, indeed, operating at levels of productivity consistent with its peers. The size and the pace of the rate increase could be reduced.

On the issue of Keeyask it's not about

looking in the past, it's about looking forward. On the whole, the proposed rate increase are in account of Manitoba Hydro's insistence on proceeding with the Keeyask project, as is. And it's reversal of its long-held pos -- positions as seen in previous GRAS on the issue of timing to increase its equity thickness.

In particular, in regard to Keeyask these Intervenors submit that that -- have the position that it should not be that -- that it should -- position that it should not be discussed in the context of the GRA -- that the position of the Keeyask should not be discussed in the context of this GRA respectfully misses the mark.

Again, in the context of the Board considering whether their proposed rate application appropriately considers the ratepayers and the fiscal health of the Utility, the Board ought to include the impact of Keeyask in that consideration. Where this leads you remains to be your decision, but this may very well lead to revisiting the Keeyask analysis.

Overarching concern of these -- but -- of this -- Intervenors that the proposed increase and at the pace may very well drive away demand for the product that -- that Hydro is trying to deliver. Therefore, the pace of rate increases should be slowed and the strength and prudency of ongoing investment program should be further reviewed.

Ratepayers in the province of Manitoba will benefit both from a more gradual pace of rate increase and a full independent thorough review of options, costs, and indeed benefits related to Keeyask.

These intervenors will be calling evidence dealing with these issues and subsidiary issues. On most of these matters the final positions will depend on examination of the evidence, as the case progresses. These Intervenors have heard the Board loud and clear. You may not see me here every day, it doesn't mean that I'm not following this matter through the transcripts, but we know that when the interests of our Intervenors are not being addressed then I best be gone. However, I will be following, and I will be present when the issues relevant and pertinent to my Intervenors are being addressed.

Those are the submissions from the General Service Small, General Service Medium, Keystone Agriculture Producers Intervenors. Thank you very much.

THE CHAIRPERSON: Thank you. M.

Hacault...?

OPENING COMMENTS OF MIPUG:

MR. ANTOINE HACAULT: Merci. My name for the record is Antoine Hacault, counsel for Manitoba Industrial Power Users Group; that is a fairly long name. So hello to all counsel, all parties, and those listening online.

I'm not going to read the entire statement that's been provided to each of the members of the Board and we have extra copies for people. We brought a total of twenty (20); gave eight (8) copies to Mr. Simonsen. I believe it's entered as MIPUG-22.

--- EXHIBIT NO. MIPUG-22: Opening Comments by MIPUG

MR. ANTOINE HACAULT: I must admit having done these hearings for about a decade now that it almost seemed like I was dealing with a new corporation. A radical change of whatever I'd seen because I did my first hearing back in the '80s of how this Corporation dealt with hundred year assets, how it integrated these big bulky capital investments into the system, and some of the statements that were made by Manitoba Hydro, it's almost as if everybody that looked at this before, the Public Utility Board decisions that come every second year, all the experts, KPMG, Board counsel, experts, et cetera, everybody had unsound and unprincipled judgment. How can that be?

We intend to show that there is no reason to depart from what's been happening for the last couple of decades; that there's no need to panic but -- and we're making these submissions on behalf of large industrial companies; as set out in our paper it includes a number of fairly substantial companies that provide significant employment and a significant contribution towards the Manitoba economy. I'm not going to enumerate them on the record. They're in our presentation. What I do note, though, is that this application has generated renewed interest and we've had four (4) new members join.

Turning to page 2 of the paper. We emphatically disagree with Hydro's suggestion that this group of Intervenors has always had self-interest in mind. It's very important and I've mentioned it in previous hearings that we have stability and predictable rates. We've always been concerned with Manitoba Hydro's financial health and ability to withstand rate issues like interest rate issues, waterflow issues. So I've listed some of the main concerns, which we've repeated in each and every hearing.

Firstly, stability and predictability of rates over the long-term and short-term.

Secondly, ongoing transparent regulation of Manitoba Hydro's rates and major capital spending.

And thirdly, ensuring rates for all customer classes reflect the fair cost to serve the class. And we've just had a fairly extensive cost of service hearing on that.

Why do we take this view -- and we're not fighting Hydro. It's not us against them. We want a good sound well-run Utility. We make long-term contracts as industrial companies. We have to have predictability and stability in what happens. And when we did NFAT hearings, I spent over half a day looking at scenarios like Hydro is facing today. High capital costs with various experts and various key management people at Manitoba Hydro and how are you going to deal with that and still maintain below 4 percent increases?

And they fully explained it. We're not in a radically changed world, and I'll show you that in subse -- subsequent slides. I also dealt with in some of the hearings pacing and prioritization. So, you're going to hear some of that in our questioning and our presentation. That's all part of the Boston Consulting report also.

Pacing and prioritization of sustaining capital; that can have a pretty huge impact on what you need for cash flows.

Turning to page 3, we've heard many times - and I'm in the first full paragraph - that Manitoba Hydro has some of the lowest published rates. Well that may generally be true. Manitoba Hydro does not offer significant rate options for major industrial companies. The only we have -- only one we have, which has been capped, is a curtailable rate program. So we're going to be exploring some of that. That, in fact, was also raised by the Boston Consulting Group as something that should be addressed by Manitoba Hydro.

I'm not going to go through the next parts, I'm going to jump to page 5. The one (1) thing that we've seen, as I said, it's practically like being in front of a different corporation and a different approach because all of a sudden we're looking at a 10 year window on hundred year assets.

And for those who were part of the NFAT you'll recall that the recurring theme was, this is a 100 year asset, you can't limit yourself to a ten (10) year outlook or a short outlook because we've got Keeyask coming online in 2023. When does it start producing revenue; 2023.

When is Hydro seeking all these major increases; before Keeyask is even fully in service? They're asking for 8 percent increases each and every year -- 7.9 is almost the same -- before the wheels even start turning and revenue start being generated. And in previous hearings for those who take time to look at the previous PUB decisions, there was always talk about a decade of investments, followed by returns. And for somebody like me who's been around since when we had been talking about Limestone, we had the same type of discussion. Limestone was a big project. Said, we've got major capital investments, but they'll pay for themselves over the long run. They're inflation protected and they start coming to their own and being very beneficial for Manitobans after that decade.

So in the little item number (ii) on the slide that you have in front of you, our position in this hearing is that Hydro has substantial --

substantially changed its regulatory approach to rate setting during this period of capital investment. And it's shifted its outlook from a 50 to 100 year outlook to the IFF's integrated financial forecast of twenty (20) years down to ten (10) years. We've got to reach that 75/25.

Another thing that history will teach us and if we go to the next slide and I've taken some of the illustrations. You can see from that slide, and this is the equity ratio, that during major periods of capital investment. So, from 19 -- in the early 1980s, we did Grand Rapids, Kettle, Jenpeg, Long Spruce. Because you're adding such big capital assets, it brings down the ratio and the ratios were in the 3 to 5 percent. We did Limestone. Again, the ratios were down there.

But history has taught us, as you can see the upswings, once those big facilities come to their own, it's self-correcting but as a Crown Corporation backed by the province of Manitoban -- Manitoba, all Manitobans and as we found in NFAT, the best long-term solution is having these big capital projects. But you have to ease them in to current ratepayers. You can't rate shock payers.

I may be out of line by saying, but if

-- it was repeated a number of times by Mr. Rainke, Mr. Hacault, if you take a short-term view you'll never build these generations -- these big generators. Never build them. But it's the best long-term solution for Manitobans.

But you can't have it both ways. You can't come to the NFAT and say, Take a patient capital approach. This is how our Utility has been run for decades, and it's worked well for us and served Manitobans well. And then come at the next rate application and say, whoa, whoa, whoa, we're going to take a totally different view to what's happened for decades.

So that going to the bottom of the slide, number 5, it's important to remember that the NFAT filing rate scenarios were based on twenty (20) years to achieve this 75/25 ratio. But we also had a lot of discussions about alternative rate scenarios which smooth it -- that rate shock even more by lowering that expectation that we wouldn't have to reach that in the next twenty (20) years. And that led to a very considered decision based on a number of experts where the PUB recommended, and the Minister accepted, considering relaxing financial targets further than twenty (20) years to consider ratepayer impacts.

To page 8, please. Because I'm not going through each paragraph, doesn't mean I don't think they're important but I've got timelines to follow.

So if we look at the graph and say, well, we were testing a whole bunch of scenarios in NFAT. It's just a couple years ago. And we were testing what the cost to Manitobans would be based on various scenarios: Capital costs, interest rate swings, et cetera. Where were we going to be? And everybody had to be comfortable that the worst scenario was something we could live with because we couldn't live with the worst scenario. The one (1) thing we know for sure, you can't predict the future.

But where are we at? This is one (1) of the graphs that's produced and it's referenced on the source. So far we're below what we thought. That's the -- I don't know if you can see it on the screen, but the little red line, the red line is actuals. The red line is below the blue line which is pretty much what was recommended by the PUB as a plan. So what's the net cost to Hydro's domestic system of knowing where we were going, where are we at today? Where did we think we were going?

Sure it changes over time; that's forecasts. But it's not a dire and extreme new set of facts that we're facing. In fact, if we look -- that's Roman Numeral Number IV and NFAT's a couple years ago, we were reaching a low point of eight percent of equity during the twenty (20) year forecast.

By the next IFF, IFF-15 we got up to 12 -- 10 percent equity; not bad. Now, even with the 3.95 percent increases, not the 7.9 asked for, you get 12 percent; not bad. Now, part of what's happening and we'll get into it in a little bit more detail. I'm not a good financial guy, but I understand depreciation creates an expense on the books -- it's always amazing how accountants can do this -- which over the hundred years or so, the life of the assets, all the ratepayers will end up paying for that asset. Because that's an expense that goes into your financials, each and every year.

So I have a mortgage with a 25 year amortization; over 25 years, I would pay that mortgage. But I may be not understanding it correctly but we'll explore this. What Hydro is saying is, okay, well, you're going to be paying your annual depreciation so it's like your mortgage payments over the hundred years but, in addition, in the first five (5) years we want you to pay -- in addition to that depreciation, 25 percent of the costs in new assets; Bipole III and Keeyask. Upfront.

Well, we're going to challenge that on intergenerational equity. Why should people in addition to paying over the hundred years, as you'd be expected because it's used and useful over that time, have to upfront that much money that quickly, when we know that those assets will produce substantial revenue and benefits in the latter part of their years.

The other issue that's on -- on the next slide that's out in front of you is debt repayment. As you can see going back from the 1980s there's never really been a substantial and aggressive debt repayment. As and when we've been building our system, we've taken on some new debt, paid off some debt but, slowly, we've been increasing our debt, and there's never been an aggressive repayment. So that's another -- a new attitude, a new view of how things ought to be done at this Corporation, with which...

Go to page 12, please. Our view, generally, is that the methods used in Hydro's current financial forecast tend to overstate costs and understate revenues and we'll go through that in the hearing.

In the bullet under Roman Numeral III, policies with respect to overheads and depreciation are not consistent with PUB directions and we'll also want to test DSM spending as an integrated resource plan issue that causes a lot of issues.

Going to the next table, page 13. One of the first slides of Manitoba Hydro is that there wasn't enough there to handle the risks. We're going to be dealing with that. We've currently got about $2.7 billion of retained earnings. As you can see our biggest risk on this on the left-hand side with the update is a five (5) year drought. It's about 1.2 billion even if you add all the negative swings on domestic growth interest rates, we're still below what our retained earnings are so we can withstand that easily.

The last general issue that I want to address in my presentation is the impacts on the economy. This issue was raised by Boston Consulting Group with Manitoba Hydro. We've seen no evidence of -- I wouldn't say a thorough and serious analysis of what is going to happen with these huge rate increases.

Just a snapshot, the total amounts that are going to be collected -- and I'll get to this graph -- under a 7.9 versus 3.95 scenario over ten (10) years is $3.6 billion; that's $362 million a year roughly. To put it into perspective, the amount of tax collected for -- on Manitoba Corporation's tax is lower than that; 334 million. Payroll tax is 477 million. And the provincial sales tax which caused a big fuss with a 1 percent increase on how that was going to impact the economy is 2. -- 294 million.

So we're proposing a bigger impact on this economy than what the provincial sales tax increase was. And Boston Consulting, if you look at the graph, at the very bottom right-hand corner, they've got large industrial, that would be our group of customers, Hydro has been warned without any further studies being done, that there's a higher risk of shutdown and job losses in our sector.

The other untold story was the counsel for Manitoba Hydro said, Well, we're going to be paying a huge amount in interest. We will be paying, but there's about half a billion dollars a year of total government charges that will be paid out of these rates. Half a billion dollars a year. And you can see just the debt guarantee fee on these new projects, based on the slide, forms a substantial part.

For those who are listening, that guarantee fee, the government borrows the money at, say, about 3 percent and then it charges about 30 percent additional, a 1 percent charge on that borrowing to pass it on to Manitoba Hydro. And the debt guarantee fee on these new projects, you can see, will form substantial part of what comprises the interest payment.

Thank you very much and we look forward to providing further detail on our positions during the course of this hearing.

THE CHAIRPERSON: Thank you. Mr. Orle.

OPENING COMMENTS BY MKO:

MR. GEORGE ORLE: Good morning, Mr. Chairman, members of the panel. My name is George Orle. I represent Manitoba Keewatinowi Okimakanak in these proceedings. Grand Chief Sheila North was expected to come and to make an opening statement on behalf of MKO. She, unfortunately, is in Montreal and is unable to be here. With me is Kelvin Lynxleg, who is the Executive Director, who has brought some comments from Grand Chief Sheila North. And as part of our opening statement I would like permission to have Kelvin Lynxleg make that statement.

THE CHAIRPERSON: Certainly.

MS. KELVIN LYNXLEG: Good morning, everybody. Thank you. Grand Chief She -- Sheila North Wilson sends her regrets and thanks you for allowing us to make a brief statement.

Do you have lights in your home? Thank a First Nation. Are you able to warm your family and protect them from the elements. Thank a First Nation and its people. Thank them for the sacrifices they have made to their lands and resources, their way of life and access to traditional foods and activities. Manitoba Hydro projects impact the north and the land of the First Nations people that reside there, and will continue to impact them for generations to come.

Sorry. The First Nations people that MKO represents are among the poorest in Manitoba. It is these families that are going to be impacted negatively by the proposed rate hike. Our families are already impacted by exorbitant food and transportation costs. The proposed rate hikes will force our families to take even more food off their tables and clothes off their children's backs to pay for these increases.

Our families already pay for more services due to heating their homes in extreme -- in the extreme weather conditions and -- and substandard inadequate housing. The diesel communities also need to be taken into consideration in how much more it will cost them to run generators in the communities. These communities are already at a disadvantage with having to -- to rely on gene -- to rely on generators.

It is my sincere hope that the -- that the representatives who sit on this Board and who will ultimately make this decision will educate themselves on our shared history of our treaties, the call to reconciliation, and the declaration of the rights of indigenous people. You need to learn more about our people and our communities, and see what First Nations people deal with on a daily basis in order to be able to make your decision, so you can really understand how decisions you make regarding this rate hike will impact us.

Manitoba Hydro needs to be the one (1) to start making it responsive -- Manitoba Hydro needs to be the one (1) to start taking responsibility and the ownership and start making some sacrifices. It can't always be left up to our First Nations and our people to make all the sacrifices. Thank you very much.

MR. GEORGE ORLE: Thank you. Members of the panel, MKO represents more than sixty-five thousand (65,000) treaty First Nation citizens in northern Manitoba. It's a nonprofit advocacy -- advocacy organization governed by the elected chiefs of the thirty (30) sovereign First Nations in northern Manitoba.

In these hearings, MKO will focus its attention on the matters of rates and the impact on rates upon the citizens in the MKO First Nations, and on the facilities operated by the MKO First Nations. The citizens of the MKO First Nations are residential ratepayers and the First Nation governments are general service ratepayers. The three (3) diesel First Nations which pay electricity bills for the schools are also First Nation education rate customers.

All of the citizens of the MKO First Nations and the MKO First Nation government facilities receive electrical service solely from Manitoba Hydro. These proposed high rate increases will have a disproportionate impact on the residential and general ratepayers in the MKO First Nations. In fact, these may be described as critical and to the point where there may not be ratepayers able to pay any of electricity rates. That's not an exaggeration.

At the last hearing that we had, the number of ratepayers that were in arrears, the number of First Nations that were in arrears was an astounding member many times higher than those in other communities comparable in size and comparable in the locations. It's not a coincidence that they are unable to pay this. First Nations are much in the same category as senior citizens. They are on a fixed income. For almost all of these First Nations their income comes from the federal government. That amount is not consistent. That amount does not have any relationship to what the actual costs in the community are.

The fact that they cannot meet their obligations at the present time with the funding that is available to them will mean that that will become even a greater problem. There will be more disconnects. There will be people moving into houses with other families in order to be able to accomplish this. This will have an effect upon them that will be greater than any of the other problems faced by other ratepayers.

Since the hearings on NFAT in 2014, the needs for and alternatives to, it's been recognized that some form of relief is necessary to help those disproportionately affected by the high rates. And the rates that we were talking about at that time were half of what was being proposed at this time. Recommendations were made and accepted by the former government that funds paid to the government by Hydro will be reduced. They have not.

Plans were put into place to have income assistance programs in place. They have not occurred. We're still at the point of having discussions and asking for additional studies to be made. That is not appropriate, not given the magnitude of the rate increases that are being asked for.

This also is a matter of trust and there is a trust. The MKO First Nations took an active role in the in the NFAT hearings on the understanding that if rate increases were necessary, they would be looked at, they would be examined, they would be made appropriate. And that's what was done, and the rate increases approved at that time were substantially lower than was being done right now. And that NFAT hearing was not meant to be a short-term solution. It was meant to be a long-term solution.

Where is the trust? Where is the trust that MKO can have in ongoing proceedings where the amount of the rate appears to change on a cavalier attitude from year to year, that it goes from three-point-five (3.5), three-point-nine (3.9), to a number above that in the fours, and then all of a sudden on several months notice it jumps to 7.9 percent.

Where is the trust in the Public Utilities Board hearings? Where is the trust in the experts? The experts didn't come before the Board and get paid millions of dollars to give you a short-term solution that was going to work for two (2) years and did not take into account any of the factors now being brought before -- or brought before the Board by Hydro. And if they didn't take them into consideration, or if they did take them into consideration why is it that Hydro now comes up with a completely different set of scenarios that warrant a 7.9 percent increase?

The MKO First Nations want to be assured that the decisions that are made are based upon legitimate grounds, that they're not based upon changes in policy that are arbitrarily made, or that they're somehow ideologically motivated. Because that's not the basis of the arrangements that were made with the First Nation.

First Nations, the MKO First Nations, particularly the flood affected First Nations, made a pact. They provided land. They provided lifestyles. They took a loss in the ability to engage in their lifestyle in return for giving up to Manitoba Hydro the ability to build on their lands, to affect their rivers, their streams. And in that they were promised that this was going to be for the greater good of all of Manitoba, that they had faith that this resource which they were turning over to Manitoba Hydro would be managed properly and effectively.

In effect, they took on long-term pain because that's what it is long-term pain, but it was going to be for a long-term interest. What it's turned out to be is that MKO First Nations have accepted long-term pain. They have gotten short-term relief. Raising the rates in the way that they're being asked to be raised right now makes a mockery of all of the decisions made by First Nations that they would provide and help Manitoba Hydro and the citizens of Manitoba.

There been considerations made as to how they can have some of their problems alleviated, but beyond talking they go no further than that. It's a time for some concrete action. There has to be a very significant review of whether or not these requests are financially credible, and if they are, and they still result in a rate increase that's substantially higher than can be incurred by the First Nation, then there have to be immediate and practical effects put in.

They can be as simple as taking the calculation of the money that is paid to the provincial government which the First Nations do not get a benefit from. That amount can be calculated and placed back into the ratepayers -- the ratepayers of the First Nations who can be easily identified. There is no problem in identifying who these people are. And it can be paid either by way of a rebate, or it can be paid on the basis of a lowering of the rates for those people.

There are parts of the rates that include the mitigation damages to the First Nations. It's inconceivable that for years and years MKO has asked that the amount that they are receiving as mitigation not be clawed back from them in the rates. Again, that's an easily identifiable number. It can be paid back out again, either through a rebate or through a reduction in the rates.

That's a first step. It's something that's doable right now. It doesn't require another two (2) to three (3) years of studies, of discussions. There is an immediate need. There's a saying, Never let the best become the enemy of the good. The best would be a solution that the experts talk about here. We can do this here, we can do that. But that doesn't help the people on the ground right now.

What's needed is an amount that is calculable and put in. There's been talk in part of the proceedings that perhaps a modified or an actual reduction based upon what the cost of gas services, that that would be an appropriate measure to say that those First Nations that rely only upon electrical heat for maintaining their homes, that the rate that they be charged be the same rate that's charged to gas customers. That that's a way of ameliorating the fact that customers in Winnipeg and southern Manitoba can take this measure to help themselves.

Having various programs to effect energy conservation are good, but they don't take into effect the fact that if you take all of the same energy provisions in southern Manitoba and apply them to nor -- northern Manitoba, you're still going to end up using more energy in northern Manitoba. The number of hours of sunlight, the difference in the temperatures already pose a greater need for electricity than what's required in the south.

These are calculable numbers. It's a matter of deciding that it's a principal worthwhile enforcing, and to say that part of the rate-making process is the well-being of ratepayers, particularly ratepayers that have been disproportionately disadvantaged by the fact that these projects came into being. That is the twin hopes of MKO, that first of all you will take a very hard look at what justifies the increases that are being asked for.

And secondly, that regardless of the rate increase that you take action now, not three (3) years from now, or five (5) years from now to assist in these projects that are necessary to reduce the electric -- electrical -- electrical costs for the First Nations.

And I know that we talked about the financial well-being of the utility, as well as the financial well-being of the ratepayer, but it's not your job to take into account the financial well-being of the utility if the utility itself has not taken proper measures to look after itself. The job of

Manitoba Hydro is to operate itself effectively, and to operate itself in a way that doesn't cause it to become a burden upon the province if they haven't done that, is it appropriate for them to come to you and say, Under legislation, you're required to look after our well-being. You're required to make us financially sound.

Well, it's not your job to run their companies and if they run them into the ground and they can make their payments, then they have to deal with it. My clients, MKO First Nations, if they're unable to deal with their matters, they going into third-party management. They don't have a choice.

THE CHAIRPERSON: Mr. Orle, are you close to wrapping up?

MR. GEORGE ORLE: That was going to be my last statement. And I was just going to bring home with one (1) example from our last hearings about the effect that it has upon people, the effect that it has upon the economy, and the way that it reverberates through society. There is the example of the young woman in the First Nation who managed to work her way, and her education to be able to get off welfare and to go to work, become a productive member of the community, a productive member of the province.

The electrical rates which had been paid for by welfare were so high when she got off welfare, she could not afford to maintain a job and look after her family. She needed to go back on welfare, a loss of a productive individual in the province because of the fact that the rates were not rates that could be affordable.

Thank you, Mr. Chairman, members of the panel.

THE CHAIRPERSON: Thank you. Mr. Fergusson.

OPENING COMMENTS BY CITY OF WINNIPEG:

MR. DARYL FERGUSSON: Thank you, Mr. Chair and members of the Board, and fellow counsel. I'll be brief, in view of the introductory remarks that you've already had from various of the Intervenors and Manitoba Hydro. My name is Daryl Fergusson, and I am in-house counsel for the City of Winnipeg.

As you are aware, the city is the capital of the province of Manitoba. It's the largest municipality in Manitoba, and has a population of approximately seven hundred and ten thousand (710,000) residents. The City of Winnipeg's gross domestic product represents approximately 67 percent of the province of Manitoba's gross domestic product. So that the economic impacts of this rate hearing and the proposed rates of Manitoba Hydro are matters that the City of Winnipeg takes very seriously.

The city's concerns regarding the rate proposals are set out in the prefiling testimony of the city's economist Tyler Markowsky. And Mr. Markowsky brings somewhat of a unique perspective to the matter before you, in that prior to joining the city as its economist he was employed as an economist with Manitoba Hydro. And he is in a position to address a number of the issues raised by Manitoba Hydro, and in particular Manitoba Hydro's historical risk analysis of its financial picture.

It is the City of Winnipeg's position that Manitoba Hydro's rate increases requested in this application are not supported by the evidence that you will hear during the course of this hearing. The proposed rate increases create a significant cost increase both in terms of direct and indirect costs to the City of Winnipeg that in light of the city's own current financial circumstances are unsustainable.

Those cost increases would necessarily result in the city of those costs having to be passed on to cities and business -- residents and -- and businesses of the City of Winnipeg through one (1) or a combination of three (3) options: increased property taxes, increased user fees, or a reduction in services provided to Winnipeggers.

And, indeed, I expect that the evidence that you will hear over the course of the hearing are that all businesses in the Province of Manitoba, not just the City of Winnipeg -- service suppliers to the City of Winnipeg, will pass those costs on to their customers, their residents, be they other municipalities or be they private enterprises. And the impact will be an increase in the cost of living to Manitobans generally. And I don't think that there's any dispute about that by Manitoba Hydro.

In its submissions Manitoba Hydro this morning suggested to the Board that you can approach this in a complex manner or a straightforward manner. And by "complex," they ask you to in effect ignore the evidence of the various Intervenors because it's too voluminous, which in some respects begs the question as to why Intervenors are here at all in Manitoba Hydro's view. They ask you to accept their analysis without scrutiny by Intervenors, such as the City of Winnipeg.

That is -- that's not the process for you to follow. The process for you to follow is to consider all of the evidence put forward by all of the parties and make an informed decision based upon that evidence before you.

I want to speak briefly on -- on one (1) issue that Manitoba Hydro has raised and is the unfair burden shifted to ratepayers in the future unless this rate increase that they propose is adopted by the Board. Manitoba Hydro speaks of a -- a temporal intergenerational impact that will be negative. And the City of Winnipeg has two (2) comments in that regard.

First, and I believe the evidence that you will hear will support this, that that issue simply has not been studied. And you won't find evidence to support that conclusion that Manitoba Hydro has offered this morning. And secondly, future generations will not just bear costs of -- of Hydro rates today, but they will bear the fruits of those costs in the future, just as all of us here today have benefitted from decisions that have been made by past generations. So I ask you to -- to bear that in mind when you are considering Manitoba Hydro's supposition that the Intervenors' evidence merely shifts this burden unfairly to ratepayers in the future.

The City of Winnipeg recognizes Manitoba Hydro's responsibility to set just and reasonable rates. And the City of Winnipeg's position is the rate increases proposed do not meet that test. We look forward to your considered decision based upon the evidence that will -- you will hear over the course of this hearing. And on behalf of the residents of the City of Winnipeg, I wish to thank you for the opportunity to make these introductory remarks and look forward to the hearing as it proceeds. Thank you.

THE CHAIRPERSON: Thank you. I'd like to think counsel and the parties for not only adhering to the schedule, but being early. We're going to take a break now and we'll reconvene at quarter to 1:00. Thank you.

--- Upon recessing at 11:45 a.m.

--- Upon resuming at 12:49 p.m.

THE CHAIRPERSON: Okay. If we can resume, Ms. Ramage.

MS. PATTI RAMAGE: This afternoon, Manitoba Hydro will present the direct evidence of our

President and CEO Kelvin Shepherd and of Jamie McCallum, our Chief Financial and Strategy Officer.

But before we do that, a quick housekeeping matter is, they will be doing their presentation in presentation form, but a quick question for them just to -- to -- to get everything straight on the record, and that's for you, Mr. McCallum. You are the member of Manitoba Hydro's executive, responsible for the preparation of Manitoba Hydro's pre-filed evidence in this hearing?

MR. JAMES MCCALLUM: That's correct.

MS. PATTI RAMAGE: And do you adopt this evidence on behalf of Manitoba Hydro?

MR. JAMES MCCALLUM: Yes, I do.

MS. PATTI RAMAGE: Oh, I guess we should...

MANITOBA HYDRO PANEL 1:

KELVIN ANGUS SHEPHERD, Sworn

JAMES ANDREW MCCALLUM, Sworn

MS. PATTI RAMAGE: And now that you're sworn, Mr. McCallum, we'll try that again.

Do you adopt the pre-filed -- Manitoba Hydro's pre-filed evidence on behalf of the

Corporation?
MR. JAMES MCCALLUM: Yes, I do.

PRESENTATION BY MANITOBA HYDRO PANEL 1:
MR. KELVIN SHEPHERD: Good afternoon, Mr. Chairman, Madam Vice-Chair, Board members. My name is Kelvin Shepherd. I'm the President and Chief Executive Officer of Manitoba Hydro. Thank you for the opportunity to present today.

I'll begin by acknowledging we are gathered on Treaty 1 territory and the homeland of the Metis nation. Manitoba Hydro has facilities across this province, and we have a long history of interaction with many indigenous communities along the Winnipeg, Saskatchewan, Churchill, Rat, Laurie, Burntwood, and Nelson River systems. Our major generation facilities are located primarily within the traditional lands of the Cree in Treaty 5 territory.

Six (6) months ago on May 5th, we filed our general rate application. Since that time, Manitoba Hydro has produced an enormous amount of information and analysis, as of other parties involved in this proceed -- process, such as the independent expert consultants engaged by the Public Utilities Board and other advisors hired by Intervenors. I believe the running tally is somewhere in the neighbourhood of thirty-two thousand (32,000) pages of material filed on the public record. It would be nearly impossible for any one (1) person to synthesize all this detailed information.

So our purpose today is to lay out, from Manitoba Hydro's perspective, what we see is the big picture, material, and important matters that the -- rest at the heart of our rate application and financial plan. The next ten (10) weeks will necessarily explore a great many issues and in great detail. However, upfront, we think it's worth grounding the Board in the key issues that we can't lose sight of as we proceed through this oral hearing.

We have organized today's presentation as follows.

First, we'll start with a quick refresher on Manitoba Hydro, its electric business, and the scale of our operations.

Second, an overview of our new financial plan and the rationale behind it.

Third, a summary of the major business risks we face, which are crucial to understanding why it's so critical we not defer dealing with our debt problem any longer.

Fourth, key facts of this rate case. This is where we will lay out the major themes we'll keep drawing you back to over the coming weeks, as we all work through the details of this hearing.

Fifth, to put some context to why it is so important we act, we thought we should provide some history on how we got to this point.

And sixth. And finally, we will address some of the concerns and alternative views that have become apparent through the evidence brought into this process to date.

We have a team -- slide 3. We have a team here today to help answer questions as needed, but the principal speakers for today's presentation are Jamie McCallum and myself. I'll just briefly introduce us, beginning with my own background.

I've been with Manitoba Hydro as President and CEO for two (2) years as of this week. My professional background includes my training as a professional engineer with a degree in electrical engineering. I spent about the first twenty (20) years of my career with Sasktel, a Saskatchewan Crown Corporation providing telecommunication services; primarily in Saskatchewan, although I also had some international consulting and management exposure during that time. Starting as an engineer designing microwave and fibre-optic systems, I progressed to Senior Vice-President and Chief Technology Officer with responsibility for network services, wholesale customers, advanced information services, and corporate IT functions.

Moving to Winnipeg in late 2000, I joined MTS Communications as Vice-President Network Services and CTO. In fifteen (15) years with MTS and MTS Allstream, I function in a number of roles, including nine (9) years as President, leading one (1) of two (2) major operating divisions of MTS Allstream After leaving MTS in late October 2015, I joined Manitoba Hydro in December of 2015.

My colleague Jamie McCallum is our Chief Finance and Strategy Officer, a position I appointed him to in early 201. Jamie is new to Manitoba Hydro and to the utilities industry. I brought Jamie to the company in 2016 to work with me in the development and execution of a new strategic and financial direction for the company. We'll talk about this more shortly. But I saw a need for new financial leadership to drive the capital and operating discipline and strategic focus we need to set and meet our goals.

Jamie brings a wealth of experience as a private equity investor and corporate director setting strategic direction in leading capital and financial planning. Jamie spent almost the first decade of his career as an investment banker mostly at two (2) of the largest such firms in the world, advising corporate and government clients around the world, around the globe, on capital raising mergers and acquisitions and strategy. He has an expert level of understanding of how companies make business choices, plan and manage their finances, access capital markets, and think about risk.

Slide 4. Turning to our new financial plan, the task in front of this Public Utilities Board is challenging, and I understand, to some extent, you are in an unenviable position. While the questions at hand are fairly straightforward, there are very difficult choices to be made.

Manitoba Hydro is presenting a very candid and troubling picture of its financial condition. We are being transparent and factual, and despite what some may say, I don't believe we are alarmist. The situation is severe, and the Manitoba Hydro board, and I personally, believe the only correct choice is to act decisively and expeditiously.

There are a lot of things that impact the financial path of our business that we can only make reasoned forecasts about: water conditions, interest rates, export prices, more renewed export contracts, growth, or lack of it in Manitoba consumption. These are all examples.

However, what we know for certain is that Manitoba Hydro has an enormous amount of debt and has no path forward that does not include significantly adding to that debt. The risks and consequences of this debt, if left unchecked, for Manitoba Hydro and its customers, could impair not only the electrical utility, but also the financial well-being and competitiveness of our customers in the broader Manitoba economy for years if not decades to com.

Together as a company, and with our regulator, we have to come to terms with a debt balance that is already growing and will continue to grow out of all historical proportion to the size of our business. At stake is our ability to continue to meet our mandate of providing safe and reliable energy to Manitobans at stable, predictive, and competitive prices.

We acknowledge that our proposed rate

path is now higher, albeit for a shorter period, than previous management for Hydro has championed in past proceedings before this Board. However, we do not believe there is any remaining choice but to act decisively no.

Manitoba Hydro and the Public Utilities Board has to be responsive to today's realities and today's situation. We cannot stick to an old outdated plan that just does not -- just does not work. Previous plans simply left Manitoba Hydro and its customers far too exposed for too long. We are seeing that proven already in a severely deteriorated outlook for our business.

Right now we are cash flow negative on our core business operations. What we mean by that is even putting all of the spending and interest payment burdens of our major capital projects, Keeyask and Bipole III, to the side, we are borrowing money just to meet our interest payments and fund the ongoing needs of running today's business. This is not sustainable.

The debt we will inescapably build over the next several years is, simply put, unsustainable. The only -- the old way of thinking about how to fix Manitoba Hydro's finances, and how long to take to do it will simply not work. The old plans have clearly already failed. We cannot put this off any longer. Action to address today's immediate situation is required if we are to protect all stakeholders' long term best interests.

Slide 5. We certainly recognize that the rate increases we've asked for and the future rate increases that are forecasted as part of our new financial plan will not be popular, nor without consequence. We are sensitive to concerns that justifiably exist about the negative impacts on our low-income indigenous electric heat and heavy industrial customers. We are not asking for any more than we think is necessary.

As you will understand, under our legislative mandate none of us have corporate or printed personal financial motivation or incentive for seeking higher rates. We're solely motivated to act in the interests of the Corporation and its stakeholders. We have a duty to maintain Manitoba Hydro's financial security and to do what is in all of our int -- customers' best interests over the long run. Our job is to run sound, financially sustainable utility.

Questions of income and energy poverty

and economic competitiveness are certainly important and ones we have considered to the degree we can. But these are really issues of broad public policy and cannot easily be resolved through a rate-setting process. The responsibilities and tools for such matters do not rest with Manitoba Hydro or this Public Utilities Board.

Manitoba Hydro has always worked and will continue to work with all stakeholders on these kinds of issues, and will seek to play a positive role in solutions that improve the economic conditions for all Manitobans. But income adequacy and economic development issues are mostly beyond Manitoba Hydro's mandate or control. We cannot and should need not use this rate-setting hearing to do the work of developing and implementing public social policies. We are not well-equipped to handle these issues and the potential consequence of trying to do so is compromising both the financial integrity of the utility and ultimately making decisions that result in the transfer of costs from some groups of customers to other customers.

I believe these issues are best left to government, who are responsible for establishing the appropriate policy framework and directives for both Manitoba Hydro and this board to follow.

Before making this rate application, we took steps that reasonable persons would expect to mitigate rate impacts on our customers, including undertaking a significant acceleration of cost reductions. Manitoba Hydro has already, through attrition, reduced the staffing by more than four hundred (400) operational positions over the previous three (3) years.

In addition to this, our plan involves a roughly 15 percent overall reduction in actual staff count, which we are well on our way to achieving with over eight hundred (800) employees leaving under a voluntary departure program by January 31, 2018. As part of an executive reorganization in 2017, we reduced executive management by 30 percent and the next two (2) layers of senior management by 25 percent.

Our new plan is targeted at restoring Manitoba Hydro's financial strength and sustainability over the next ten (10) years. That time-frame was chosen to address the urgent need to address Manitoba Hydro's serious financial state within a reasonable time horizon, while balancing both near-term and longer-term rate implications for our customers.

We look forward to this hearing and the

opportunity to explain in detail or financial plan, including the necessity of these rate increases.

Slide 7. Given we have some new board members, but also as a refresher for everyone, we thought we should provide a high-level overview of Manitoba Hydro's operations.

Manitoba Hydro has, at September 30 of this year, just under $24 billion of total assets. Bear in mind our assets are measured at historical cost and our net of depreciation recorded against them. The full replacement value of our system would be many, many multiples of 24 billion.

We generate approximately $1.4 billion in electric revenues, serving five hundred and seventy-three thousand (573,000) residential and general service electric customers. Thanks in part to near record water flows, last year we generated just under half of a billion dollars in revenues from the export of electricity, which directly serves to keep rates down for Manitobans. Including our natural gas business, we had 2.3 billion of revenue in total, but made net income of only $71 million, of which almost 30 percent came from a one (1) time gain on a sale of surplus land.

A theme that will come up often in this

hearing is our views on the inadequacy of roughly $50 million of net income, just over 30 million in the electric segment. In comparison to the size of our assets, the ongoing maintenance and replacement needs of those assets, the breadth of our operations, and perhaps most importantly, the quantum of our debt which now stands at $18 billion.

When you operate a business this large asset intensive and indebted, 30 million in annual profit is inadequate to properly support this business. As we will outline in this hearing, having very modest annual net income, we are required to borrow significant amounts of cash; better described as running a deficit each year in order to fund ongoing operations.

As of the end of October, we had just under six thousand (6,000) employees, and that number will decline to under fifty-four hundred (5,400) as we complete our voluntary departure program early in the new year. That's down from around sixty-two hundred (6,200) employees as of April 2017.

I want to take a moment to acknowledge the hard-working, dedicated, proud and capable team of Manitoba Hydro employees we have out -- throughout Manitoba, serving our customers to the best of their abilities. I'm proud to lead this team who work so hard every day to support Manitobans.

We worked hard over many years to ensure we have a diverse workforce. And today, nearly one (1) in five (5) of our employees self-identifies as indigenous. If you look at the staffing complement helping build Keeyask and Bipole III, you will find these projects have been a contribute -- tremendous contributor to employment opportunities in First Nation communities and, indeed, for all Manitobans. Well over 40 percent of employment to-date on Keeyask has been from indigenous employees.

In August of this year, I was pleased to celebrate at the construction site, together with our Keeyask Cree Nation partners over 4 million person hours of indigenous labour on Keeyask, with 2 million of those hours worked by members of our Keeyask Cree Nation partners.

Slide 8. A little more on our electric assets. We operate fifteen (15) hydroelectric generating stations, and 99 percent of our electric energy is from clean, renewable sources. We have two (2) gas plants and one (1) coal plant. The coal plant is slated to be taking out of generating service next year, which are backup facilities and used to provide reliability support.

The majority of our power is generated by three big hydroelectric stations on the Nelson River, Limestone, Kettle, and Long Spruce, and brought south on our two (2) high-voltage direct current transmission lines, Bipoles I and II, that run side-by-each through the Interlake, and both terminate on our Dorsey converter station just outside of Winnipeg. We move all of this energy around the province to our customers, as well as to export markets through over 18,000 kilometres of higher voltage transmission lines, and over 68,000 kilometres of lower voltage, overhead, and underground distribution lines.

A word on our -- on the age of our assets because it's a critical issue that needs to be accommodated in our financial plan. The bulk of our generating fleet was commissioned in the 1970s or before. Our Winnipeg river plants were built between 1910 and 1955. Our last major new development was Limestone which came on stream almost thirty (30) years ago. Our two (2) Bipole transmission lines were built over forty (40) years ago, and some key components are nearing end-of-life.

On the distribution side, huge swaths of our assets date back to 1950s and 60s and rural electrification. Here in Winnipeg, significant distribution assets that belong to Winnipeg Hydro were installed in and around World War II during a period of rapid transition for the city -- rapid expansion, pardon me, for the city. We required Winnipeg Hydro in 2002 and need to make significant investments to address failing infrastructure. All to say we have a substantial network, with long-lived assets that are increasingly reaching later stages of useful lives, along with also needing regular investment to increase the capacity and capability of our system to serve evolving customer needs.

Why is this important? Well, there are a few issues. A few reasons. The cost of being in electricity business has increased substantially even after adjusting for inflation. But our revenue requirement is determined by depreciation expense which is based on historical cost of assets built one(1) or two (2) generations or more ago. Simply put, what we are recovering in rates does not come close to what we need to spend to maintain and renew our aging system. As time passes and our infrastructure gets older, this will become more critical. Utilities throughout North America are grappling with this issue, and Manitoba Hydro is no different.

It's very important we address our balance sheet deficiencies in the near-term, so we are in a better position to meet the longer-term capital needs of our system, while contributing -- or while continuing to meet the reliability standards are regulators require and customers demand.

Slide 9. A breakdown of our revenue in the electric segment shows $1.4 billion a roughly 75 percent comes from Manitoba customers with the rest from exports. Within Manitoba residential customers are our largest segment at 41 percent of revenue, followed by commercial customers at roughly 35 percent, with our industrial customers being the balance.

Slide 10. On our cost structure -- and this is based on our last completed fiscal year -- I'd like to make a few points. We are a capital intensive business. The size of our assets is really what drives our operating costs. Together with interest expense, which is driven by debt incurred to fund asset investment, depreciation of our assets and capital taxes drive over 60 percent of the current cost structure. That will go up complete Bipole III and Keeyask and bring almost another $1 billion of depreciation and interest expense onto our books over the next few years.

Notably, operating and administrative expenses, or O&A, represent the only costs I would regard as controllable, at least in the shorter term, and are under 30 percent of our cost structure. While we continue to focus on operating cost reduction and are taking more -- even more action on that front, our O&A costs are heading to be coming even less significant, more like 15 percent of the cost structure, once these big new capital assets come into service.

Slide 11. We continue to deliver safe and reliable services for customers, as highlighted by these two (2) standard measures used by the industry. For these metrics, a lower result is better. And as you can see, we compare favourably to our Canadian peers with fairly consistent top quartile performance.

While past and current performance is good, I should add a few words of caution. You can see, we are trending somewhat downward. These charts also combine our rural and urban performance, and the results do vary across those segments. In Winnipeg, we are now a third quartile performer on reliability scores. As our urban assets age, we will need to work hard to keep coming up with creative solutions and investing to keep our service where Manitobans need it to be.

Slide 12. Finally, we just wanted to put our customer rates and rate increase request into a bit of perspective. On the residential side, Manitoba customers enjoy the second lowest rates in the country, and should the proposed rate increase for April 1, 2018 be approved, that will continue to be the case. I think it's important to note that, broadly speaking, electricity costs are going up at rates higher than inflation as utilities throughout North America grapple with changing demand patterns, higher regulatory costs, aging infrastructure, and for many, the transition from carbon generating sources to renewables.

Slide 13. On the high consumption side, you can see that a sample industrial customer will continue to enjoy the lowest rates in the country, even after the proposed rate increase. In both residential and industrial rates, you can see that, except in Quebec, Manitoba Hydro rates have considerable room to grow before we would become even an average jurisdiction.

I recognize that what people pay for

electricity in -- in other places is not all that relevant to people who have chosen to build their lives and businesses here. But it is relevant to questions of our competitiveness as a province.

The future path of rate increases in other places is hard to know. But if you look around at the issues including decarbonization, major projects, and modernization of infrastructure, which others are dealing with, I'm hard-pressed to see very many places where inflationary rate increases are likely to be the norm.

So looking further out, we're pretty confident that in -- this -- in spite of the path of rate increases we are proposing, that we will remain among the lowest energy rates, and with the potential, once we stabilized out financial situation, to improve from there.

Slide 14. Changing gears just a bit, I thought I would briefly outline the -- the four (4) current strategic priorities of Manitoba Hydro. Our mission is creating value for Manitobans by meeting customers expectations for safe, reliable energy services at a fair price. Our four (4) strategic priorities are restoring financial sustainability, delivering an excellent customer experience, engaging employees in our transformation, respect and support for indigenous peoples in all aspects of our business.

The first priority, restoring financial sustainability, includes actions to put the company on track to achieve a 75:25 debt-equity ratio within a ten (10) year horizon; address the current deficit in operating cash flow; improve our financial capacity to manage known and potential operating risks over the next several years. This priority requires pursuing a balanced approach of cost reductions and efficiency improvement, together was seeking appropriate domestic revenue increases and pursuing new export revenues.

Our second priority, in terms of delivering excellent customer experience, means focusing on the end-to-end customer experience; meeting customer expectations on what we deliver, while striving to exceed expectations on how we deliver; building a service experience around our next generation of customers, this is what I would refer to as a looking forward strategy; managing the customer experience, in addition to what we already do in managing operational service metrics.

We're going through a tremendous amount of change, and it's critical that we engage employees in that transformation and change effort. In practical terms, that means corporate direction, strategy, overall goals will be established by the Board and the senior executive. Managers will work with their teams to implement and manage transformation initiatives. And employee input and active participation is a key success factor and will be actively sought and listened to by all levels of management.

Our final strategic imperative, one (1) that, in my view, is extremely important is respect and support for indigenous people in all aspects of our business. What this means is that we will engage in respectful dialogue and negotiation with communities who have concerns with past, present, and future Manitoba Hydro operations and projects; ensure that we respect existing agreements with indigenous peoples; create an internal environment within Manitoba Hydro that respects and supports indigenous employees and their culture; and we'll look to evolve a relationship with indigenous people in a positive and proactive manner and continue to be a leader in indigenous relations.

In addition to these strategic priorities, we have identified a foundation of core principles which we will continue to focus on.

Safety, being our top value and a priority which we absolutely will not compromise.

Jamie...?

THE VICE-CHAIRPERSON: Mr. Shepherd, just before you move on, could I just ask you a question?

You said at the beginning of your presentation that you see no path that does not add to debt. Can you clarify for me, this -- are you speaking of the projects that are currently underway in the operation of Manitoba Hydro, or are there additional projects that you're looking at that would add to the debt?

MR. KELVIN SHEPHERD: No, I'm speaking to projects that are on the books, are currently committed and need to be funded over the next several years. But I'm not talking about any significant new projects or any proposed increase in sustainment or other operating costs.

THE VICE-CHAIRPERSON: And the other -- another thing you said is the comparisons you made for industrial customers to other jurisdictions in Canada. I'm assuming that you've done similar comparisons to North American jurisdictions, and is there anything there that would jump out for us?

MR. KELVIN SHEPHERD: Yes, we have looked across North America and -- and there are some jurisdictions that would have rates -- in the United States, pardon me -- that would have rates similar to ours, there are many that have rates higher than ours. So I would say we would still be considered, at this point, as having in the -- the lower end of rates for those customers anywhere in North America.

MR. JAMES MCCALLUM: Thank you, Mr. Shepherd. Good afternoon, Mr. Chairman, Madam Vice-Chair, Board members, Board advisors, Intervenors, and our audience.

I'm on slide 16 now. Mr. Shepherd spoke earlier about how our old financial plans just don't work for the circumstances we find ourselves in today. We'll add some more detail to show why this is. But talking about what our new plan had to address is an essential starting point to frame the discussion that follows on why our new plan is the right path forward.

So here's what we found when we started looking at our financial plan.

First, we've had a huge erosion in our outlook for major drivers of our business, as compared to the last few financial forecasts reviewed before this Board. We will explain that further shortly.

We can and do quantify the deterioration in our revenue, earnings, debt, and cash flow expectations. But as damaging as the dollars that have disappeared are, which are hugely impactful, it is also the significantly diminished growth expectations that fundamentally shape our point of view on risk and risk tolerance. Simply put, we are not growing and that change in outlook changes everything. All of our plans to date had, in my view, too much debt.

Our forecast debt levels have increased from too high to extreme. And now we have lost the prospect of, at least, on a relative basis, growing into that debt, and therefore our ability to manage and sustain that debt has gone way down and we must act accordingly.

Even more urgently, when you consider all the costs Manitoba Hydro must absorb to run its business each day, and we'll show this, you discover that today's rates are not at the right level. Today's rates do not fund the full costs of running our business today. Ms. Ramage described it in terms of using a line of credit to pay off your credit card. We are borrowing money each year just to meet the interest and operating requirements, obligations, of the current business, and even before we consider the current and future impacts of the two (2) major capital projects.

The 3.95 percent rate path that has been in place for a number of years, thus -- just doesn't work anymore. Left in place, it would leave Manitoba Hydro with cumulative net losses until 2032, and that's if nothing goes wrong. And we would be borrowing over $1 billion over the next decade just to fund our day-to-day operations.

We would be passing through the next decade, a time when we expect to be increasingly needing to address aging infrastructure and a continually changing utility industry with a fragile balance sheet and no margin for error. A plan like that almost assures a potentially decades-long march of rate increases above inflation at a much higher risk of rate instability. We had to find another way.

Slide 17. This slide is a picture of our income and expenses today, versus in 2030 -- 2023/24, six (6) years from now. The relevance of 2024 is that at that point Manitoba Hydro is in much more of a steady state than you'd -- than we'd be today. Keeyask is fully in service. Bipole three has been in service for about four (4) years. At that point, this big bulge of additional interest charges and depreciation expense associated with the Keeyask and Bipole III projects that we've been talking about here for a while, will be fully visible in our income statement, and the result is concerning.

Today, as you know, we are roughly break-even on net -- net income. We anticip -- anticipate about $30 million of net income for 2018, fiscal 2018, based on our year-to-date results and current water conditions. The -- it's a little mild today and over the weekend. The weather heading into our -- our fourth quarter could move us either way to the tune of 20 or $30 million.

But by 2024, without any rate increases, we will flip to a $700 million loss per year. And that's assuming again that all goes to plan, particularly that interest rates have stayed on their relatively low track and that export prices have appreciated, which they haven't done really for many years.

We are already off this track of export prices by 10 to 20 percent this year, compared to forecast. The prices we're realizing in the opportunity market this year are 10 to 20 percent below what's in our forecast. A $700 million gap means rates are about 43 percent too low. A 3.95 percent path fills about two-thirds (2/3) of this gap. But $300 million is still a huge annual hole.

Moreover -- and this is something you'll hear us say often -- as a planning matter, we don't believe you can target nil or breakeven net income for a businesses as large, complex, asset intensive, volatile, and indebted as ours. We have to plan, inclusive of in our rate strategy, for a cushion that allows for a margin of error and to create reserves in the form of paying down debt when things go right.

Slide 18, please. This slide is likely familiar to Intervenors and advisors and board members from past hearings. The columns represent our costs from 2018 through 2027. The dark dotted line is our domestic revenue at today's rates. The solid line is our domestic revenue at today's rates, plus our export revenues.

You can see that in 2021, '22, and '23, there is a step up in those revenues as new export contracts come into effect and Keeyask comes into service, supporting both those contracts and higher opportunity sales. But what you can also see in the bars is that costs are increasing dramatically, and without rate increases, we have a huge gap building between our revenues and our costs. This is the same picture as we showed for 2023/'24 on the page before.

Finally, at the top, you see a red dotted line. That's our total revenue, including exports, if we follow the 3.95 percent rate path. The scale of the graph somewhat obscures it, but you can see that for the next few years, we continue with minimal net income but then start to generate sizable losses. Those losses total $400 million over the next decade. The graph doesn't extend that far, but it takes until 2032, fifteen (15) years, before the red dotted line inches above the bars enough that we have cumulative net income.

Page 19; slide 19. But we aren't just trying to address income. Income is important, but we also have to really care about cash flow and how much cash we are generating or using to run our business each year. Here we have a huge problem. If you think back to Tab 2 of our application in May, we spent a bunch of effort making clear that we have a big cash flow problem. It's interesting that on the one hand, the Consumers Coalition has labelled our focus on cash flow, A radical re-imagining. Meanwhile, Morrison

Park Associates, engaged by the Coalition and MIPUG, concludes cash flow is really important, but we don't pay enough attention to it.

Well, we do think it's important. We are clearly paying attention to it. And the funny thing about cash flow is that it really isn't all that susceptible to radical re-imagining. There's no accounting policy with cash. It's either there or it isn't. I spent almost my entire professional life evaluating companies, their strategy, how they make money, how they're financed, what they're worth. On day one of my career, somebody told me, If you ever want to know something about company -- a company, follow the cash. So this table follows the cash.

We start with our receipts from customers, domestic and import. That's the top line. Then we take away all our payments to suppliers and employees to operate the business each year. There's no capital expenditures here just yet. Then we look at the interest paid in cash on our debt, again, just associated with the business and not the major projects, where although we are paying out hundreds of millions of dollars now each year in interest, we don't, in this analysis, consider that an ongoing burden on the business because the assets are not yet in service.

Then we get what we call our business operations capital expenditures. These are all the costs we pay each year to maintain, replace and enhance the system to make sure we keep meeting our mandate. Next is demand-side management, another regular expenditure. Then there are the payments we make each year for mitigation and other deferred expenditures, and finally the overhead costs this Board has directed not to be charged to income but are nonetheless cash expenditures we must make.

That brings us to our first subtotal, where you'll see in the last two (2) years, we have had a pretty substantial cash loss, and it forecasts to be marginally positive in the year just about to end in March, but there's more. We have a whole host of payments we make on account of commitments we have made that sit as liabilities on our balance sheet, things like mitigation agreements, major development agreements we have entered into, to adju -- address past and present development.

These are commitments that last many, many years more, and in some cases, into perpetuity. We continue to write a $16 million check each year, in perpetuity, to the city of Winnipeg as part of the acquisition of Winnipeg Hydro fifteen (15) years ago. These things don't flow through our net income to any great extent, but they sure are cash, and they are material. When you add that to the cash needs of the business, the situation worsens further.

Finally, we think there are a few more things you need to take into consideration sitting here in December of 2017 to get the most accurate picture of what your cash flow deficiency is. The first is on account of Bipole III. The interest paid line up above excludes all the interest on Bipole III, which we capitalized to our balance sheet per the accounting standard. But fundamentally, Bipole III is a reliability asset that supports the current system.

Save for, really, an immaterial amount of additional export revenue from reduced line losses, we don't generate new revenues when Bipole III comes into service, but its costs, as we know, are significant. Moreover, Bipole III enter service imminently. We expect to have it online next summer. As far away as summer always feels like when you're in December, in our business, it's not a lot of time. So we think that even though the accounting rules tell you to capitalize interest costs you're paying, if you want to think about the burdens on your business and what they really are, and whether your revenues are sufficient, then in these circumstances, you best be looking at the interest on Bipole III as well.

And finally, as it comes to sufficiency, you need to think about whether your revenues are repeatable. There we note that in each of the last two (2) years -- actually, the last thirteen (13) years -- and at least in our forecast for this year, we have earned substantial revenues from above-average water conditions. As a planning matter, we simply can't assume that that repeats in any analysis of our steady-state cash flow.

Adding all of that up, you'll find that of late, we've been consuming between 300 and $400 million a year simply carrying out the regular operation and meeting the normal obligations of the business. Our domestic revenues are in the order of 1.5 billion. So put another way, our current rates are falling roughly 20 percent short of paying the full costs of operating and maintaining the system in the normal course.

Slide 20, please. Turning to our debt, this slide should give us all pause. We have said a few times that our debt is growing out of all historical proportion to the size of our business.

Here's what we mean. This chart demonstrates our debt per kit -- gigawatt hour of domestic load or consumption, going back to 1990. In 1990, we had just over two hundred thousand dollars of debt per gigawatt hour of annual domestic load.

As you can see, we kept things reasonably steady for a while, but then around 2008, started really marching up. Things really take off over the last couple of years as Keeyask and Bipole III get rolling. But look where we go. We eventually climbed to over $1.1 million per gigawatt hour, and we stay there under the 3.95 percent rate path, which is what this shows.

So relative to the size of our business, we are building to being roughly four (4) times as indebted as we were immediately following Limestone. We've added on here for interest where the other Canadian Crown Hydro utilities are currently, and you can see that we are already much higher and will be multiples of their levels of relative indebtedness as well.

Why do I compare it to domestic load? Because that's who underwrites the liability of our debt, meaning that's who pays if interest rates go up. Every dollar of unplanned interest rate cost is going to come back on the domestic ratepayer, and so understanding how much leverage is being stacked on our customers is vital to appreciating how vulnerable the situation is.

Next slide, please, slide 21. This chart is a similar story. Patti touched on this earlier in her remarks. This looks at our interest costs per dollar of domestic revenue. The dark blue line at the bottom looks at finance expense. That's what flows through our income statement. The top line is overall cash interest, whether it is capitalized or not.

Once the major projects conclude and all of our interest flows through our income statement, the lines intersect. What we are seeing is a significant increase, even with the 3.95 percent path of the proportion of each revenue dollar that must go to interest.

Remember, this is where interest rate volatility hits, so we are heading to having 60 or 65 percent of each domestic revenue dollar go to pay interest costs. The other 35 percent, together with the export revenues, go to actually run the business and maintain the assets. It just isn't a lot of wiggle room. Interest rates don't need to rise very far before we have a big issue. Slide 22.

MR. KELVIN SHEPHERD: Thanks, Jamie. We had to develop a new plan. Working together with the Manitoba Hydro Electric Board, we developed a ten (10) year plan to restore Manitoba Hydro's financial sustainability and achieve key financial goals and metrics. I recognize there's a significant change from previous plans presented by previous Hydro -- Manitoba Hydro management. Those plans were also directed by and approved by previous Manitoba Hydro boards, plans that would have taken eighteen (18), nineteen (19), twenty (20) or more years to restore Manitoba Hydro's financial health. I want to address this change because it's important.

The reality about these prev -- previous twenty (20) year plans is as follows. A key constraint imposed on these plans was to keep rate increases below 4 percent, even if that required the financial strength of Manitoba Hydro to be materially compromised. In all cases, a 3.95 percent rate path requires that for the first ten (10) or more years, you accept extremely low or even negative net income and cash flow. So you're spending a decade or more without making any progress whatsoever in addressing an acute vulnerability to a range of business risks.

A decade is a long time. In any business I've been around, forecasting ten (10) years in the future, let alone fifteen (15) or twenty (20), is very difficult, perhaps nearly impossible. So a plan that has you walking down a tightrope of essentially no net income until the early 2030s is begging for trouble, especially when your outlook for growth is as weak as ours has become. So in taking up to twenty (20) years to deal with a serious problem, you're choosing to take insufficient action upfront, action that is required to be in the position where you have some flexibility to make different choices s the future unfolds.

Our previous plans relied to -- to far too great an extent on nothing adverse happening over a very long period of time. That's relying on hope. Put another way, your financial strategy is to stay lucky for a very long time.

The second issue is, it becomes a fair question as to whether you are ever going to deal with the debt problem outside of a crisis having set in. If by chance, after twelve (12) years and having increased rates every year by 3.95 percent, cumulatively by over 60 percent, nothing bad has happened, there will be a continued temptation to keep putting off dealing with the acute risks of the debt, which will still be there even after all those years of rate increases.

THE CHAIRPERSON: Sorry, can I interrupt, Mr. Shepherd?

MR. KELVIN SHEPHERD: Yes.

THE CHAIRPERSON: You -- you said that there -- the key constraint was to keep rates below 4 percent. Was there a Board policy saying that rates were to be below -- would not be higher than 4 percent?

MR. KELVIN SHEPHERD: So I wasn't here when -- when those decisions were made, Mr. Chair, but I can tell you I did have those discussions when I first came to Manitoba Hydro with some members of the board, and it was made very clear to me that rate increases above 4 percent would not be contemplated by the board.

And so I don't know if that was a -- I wouldn't say there was a policy, but I would say certainly from the board's perspective, there was a constraint which they were not willing to go above in terms of the rate requests they were asking for.

THE CHAIRPERSON: But from your testimony, it sounds like -- excuse me -- the primary consideration was the rate increase rather than sort of the good financial practices or a proper financial outlook.

MR. KELVIN SHEPHERD: The -- the rate increase was a constraint imposed upon the financial plan, and that definitely was a higher priority than other aspects of the plan, yes.

THE CHAIRPERSON: Thank you.

MR. KELVIN SHEPHERD: In the Board counsel's book of documents, there's an interesting chart, page 147. It isn't Hydro's chart, but it highlights the year that our minimum equity target of 25 percent is met, and each successive financial plan.

It clearly shows that with each passing financial plan presented by Manitoba Hydro, the date at which we meet our target moves further and further out. We need to stop doing this, especially now that our outlook for the business has deteriorated and the risks and uncertainty in the electric power business continue to increase. A twenty (20) year plan simply does not work anymore.

We will shortly talk about the outlook for our business, however, a key point is that our old plans had all the expectation of continued growth as an underpinning, growth and load, and growth in export pricing. However, consecutive years of actual results and each subsequent updated forecast have shown that to be far too optimistic.

I think a twenty (20) year plan is far too risky in any event, but at least if you think you're going to grow, you have some support for a period of inadequate financial strength. I don't believe we have that luxury anymore. In short, bluntly speaking, this old plan has failed. All of the shortcomings of a twenty (20) year plan are readily apparent in the deterioration of our business outlook. Revenue growth has been elusive, and our capital needs are much greater than anticipated.

If we could go back in time over five (5), ten (10), or even fifteen (15) years with the benefit of hindsight, we now know that we needed to have increased rates more and done so more proactively and earlier to build a stronger balance sheet before taking on these major capital projects so as to avoid the need for a higher level of rate increases today and going forward.

We obviously can't go back in time, but we can stop compounding the situation by no longer putting off what needs to be done and by not relying on overly optimistic forecasts or arbitrary regulatory accounting choices to give everyone a false sense of security.

So our new plan has the following features: We have substantial accelerated our cost reduction program to do everything we can to mitigate rate impacts and run our business more efficiently. We have accelerated rate increases into a shorter period of time. This is really important to understand. Whether we take ten (10) years or twenty (20) years to address our financial state, rates have to increase substantially. We can't avoid the destination. At issue is how fast to get there.

In fact, our proposed path can lead to lower rates, and certainly more stable rates in the long run, and that's a better destination. Our plan has us creating positive cash flow, meaning more cash comes in than goes out to run the business. That lets us take on less debt and then pay off a modest amount of debt after Keeyask starts up.

The outcome, which we think is in everyone's interest is that by reducing debt, we can change the trajectory of future rate increases. Debt we don't have is interest payments we don't have to make, which, in turn, is revenue we don't have to seek from our customers. By proactively reducing the amount of debt incurred, we can ensure no matter what the future holds that rates will be more stable and relatively lower in the long run than if we take twenty (20) years to address the simple fact that we have too much debt.

Slide 23. We have and will continue to attack our costs. Over the last three (3) years, we have reduced our operational positions by over four hundred (400). Over the next three (3) years, we will further reduce headcount by nine hundred (900) positions. We have taken huge steps already. Earlier this year, I took steps to reorganize and streamline our company, reducing my immediate executive team by 30 percent. We reduced our overall senior management team by 25 percent, and by the end of January, over eight hundred (800) employees will have left via a very successful voluntary departure program which we executed.

We're continuing to implement multiyear initiatives in our supply chain, where we expect to be able to drive up the 50 million a year out of our annual spending via strategic sourcing and improved purchasing practices. Over my career, I've had a lot of experience successfully designing and implementing cost restructuring programs. I can tell you that if I thought we could do more aggressive staff reductions in a shorter period of time, we would be doing more.

With these changes, we have a lot of work to do to transform our company so that we can continue to operate safely and provide reliable service with 15 percent fewer people. I'm confident we have the plans and leadership in place to make it happen, but not to be missed is that we have taken major steps, perhaps even unprecedented steps for Manitoba Hydro, to aggressively reduce our cost structure. That such dramatic cost reduction steps on their own can't address our financial challenges is indicative of the seriousness of the revenue capital, and debt challenges we face.

In short, I don't believe we have a fundamental operating problem. We have a capital structure problem created by a massive capital expenditure -- expansion funded entirely by debt, which is not supported by our current rates.

Slide 24. Turning to rates, I wanted to discuss the interim rate --

THE CHAIRPERSON: Sorry, we have a -- we have a question from --

MR. KELVIN SHEPHERD: Pardon me.

THE CHAIRPERSON: -- Ms. McKay.

BOARD MEMBER MCKAY: Just a quick question. You use percentages on reduction in executive and reduction in management, so is that just a simple subtraction, nine hundred (900) minus the eight hundred and twenty-one (821) positions to determine those two (2) percentages?

MR. KELVIN SHEPHERD: The 15 percent, if you look at nine hundred (900) positions over the sixty-two hundred (6,200) positions that we had in April of this year, is approximately a 15 percent reduction. Through our voluntary departure program, close to eight hundred and -- and twenty -- twenty-one (821) positions will be eliminated. The vast majority of those by the end of January and over the next couple of years. Through attrition and some other measures, we would expect to achieve the full nine hundred (900) reduction. So nine hundred (900) out of sixty-two hundred (6,200) is -- is where the 15 percent figure comes from.

BOARD MEMBER MCKAY: The 30 percent reduction in executive, how many positions is that, then?

MR. KELVIN SHEPHERD: There were ten (10) -- ten (10) executive positions, and we reduced three (3).

BOARD MEMBER MCKAY: And 25 percent in management, roughly how many?

MR. KELVIN SHEPHERD: You know, I would -- I would have to go check and get the actual number, unless, Jamie, you know it off-hand.

MR. JAMES MCCALLUM: It's subject to check. It would be in the range of forty (40).

BOARD MEMBER MCKAY: Thank you.

MR. JAMES MCCALLUM: And -- pardon me. And of that forty (40), some would be included in that eight hundred and twenty-one (821) number that -- that Kelvin -- Mr. Shepherd referenced as part of our voluntary departure program. We did have members of the management team put up their hand for that program, and we were able to, you know, move their workload around and not -- not fill that position.

BOARD MEMBER MCKAY: Thank you.

MR. KELVIN SHEPHERD: So I think I'm on page -- slide 24. So I -- I do want to discuss the interim rate awarded August 1st, 2017, and our request for a further increase on April 1st, 2018.

As you -- as you'll recall, we had initially requested a 7.9 percent rate increase for each of 2017 and 2018, assuming those to an initial two (2) years of 7.9 percent increases, we then projected a need for three (3) more years of 7.9 percent thereafter, followed by a return to roughly inflat -- inflationary levels of increases.

Order 80/'17 provided a 3.36 percent rate increase at August 1st, 2017. You know, the mathematical's -- mathematics of compounding are pretty brutal when the numbers are so large. The 3.36 percent interim rate increase had the consequence of pushing out the achievement of our ten (10) year plan to fourteen (14) or fifteen (15) years. We are committed to a ten (10) year plan based on our current forecast for the business. Therefore, in order to maintain our goal of reaching a 25 percent equity capitalization by 2027, two (2) additional years of 7.9 percent increases are not required, followed by a 4.54 percent the year after that. The return to inflationary increases is delayed from year six (6) to year nine (9).

Taken over ten (10) years, the impact of the interim order is to create an overall aggregate rate increase of 77 percent, up from the 61 percent under the five (5) year 7.9 percent plan, just to achieve the same outcome. This is an excellent example of why it's so important to take purposeful steps now instead of waiting. Delaying such action just makes the inevitable rate increases that much harder to absorb. However, it's important to highlight that, in actual fact, our future rate increase requests will be determined in large part by how the future unfolds.

So we understand that projected rate increases are important as a guidepost of where we are trying to get to. But we shouldn't lose sight of the fact that, whether high or low, our forecasts are likely to be wrong, at least in some degree. It's the nature of forecasting, particularly in a business as impacted by things beyond our control as ours.

We believe we must start building our strength back up now. This is where the twenty (20) year plan with relentless annual 3.95 percent rate increases, which would lead to at least a doubling of rates, fails, because we make absolutely no progress in the first ten (10) years. A drought, or even just lower water conditions, which we can never forget about, or some other unforeseen event may slow our progress, but if we have begun steps -- taken steps to begin dealing with our problems earlier, we buy ourselves the flexibility not to be trapped in a corner and forced to take drastic short-term rate action if things go differently than are forecasted.

Jamie...?

THE VICE-CHAIRPERSON: Mr. Shepherd, can I just ask a question about this table before you move on?

MR. KELVIN SHEPHERD: Sure.

THE VICE-CHAIRPERSON: So for 2016/ 2017, under the old plan, you've got the three point three-six (3.36), so that's the rate that was awarded on August 1st, 2016. The request was 3.95 percent for that.

MR. KELVIN SHEPHERD: M-hm.

THE VICE-CHAIRPERSON: But I am understanding you to say, then, that Manitoba Hydro is not asking that that rate be changed, that the three point three-six (3.36) is as filed? Or could you clarify what -- just -- just in terms of that rate increase, because we -- we need to consider that one in this hearing as well.

MR. KELVIN SHEPHERD: Yes, I think -- so first, I mean, we understand that, you know, the panel, the Board has, if you wish, the opportunity to go back and -- and adjust an interim rate. From a -- a practical perspective, it's difficult to -- to see how to go back and really effectively increase an interim rate from -- from our perspective.

So while it certainly something that would be open for consideration, we've based our forecasts and -- and our plan going forward on the view that the interim rate of three point three-six (3.36) is -- is what is in place, and we're seeking, obviously, that to be affirmed along with requesting a 7.9 percent rate increase for April 1st.

So while certainly, we understand the rate is interim, it could be adjusted. Simply from a practical perspective, we've assumed that that rate is -- is what it is, and we focus more on the go-forward rates than -- than going back to the interims.

MR. JAMES MCCALLUM: Continuing on on slide 25, I just want to touch on something pretty important, which is clearly going to get a lot of discussion over the course of this hearing. In looking at our new financial plan, it was clear to us that we needed significantly higher income and cash flow in order to bring our debt down to a more sustainable level in order to protect our customers' long-term interests.

In looking at that expectation of cash flow, we realized that we could use these higher cash flows, after our major capital project spending abates, to save our customers some interest expense.

Most of the time when you look at the capital markets, you'll find that shorter term maturities -- that's debt coming due in the nearer term -- has a lower interest rate than debt with maturities that are a lot further in the future.

Not different than if you go to your bank and you'll generally find that a one (1) or a three (3) year mortgage has a much lower rate than a five (5) or a seven (7) year. This is known as the term structure of interest rates, or the yield curve. The amount by which shorter maturity bonds will have a lower rate than longer maturity bonds changes all the time. In fact, over the summer and fall, we've whisked -- witnessed a significant flattening of the yield curve where interest rates for three (3) and five (5) year bonds shot up a fair bit, while longer-term interest rates moved up much less dramatically.

So as we approached and proceeded through this major period of capital investment, Manitoba Hydro's borrowing strategy has been to focus, relatively speaking, on borrowing for longer terms. While we were sacrificing some potential savings, overall, we were and are borrowing at very favourable rates relative to history.

The risk management decision was

against a backdrop of financial plans with almost no income or cash flow for a decade or more, that we should not compound risks to ratepayers by introducing too much refinancing risk into the equation. If you instead use a lot more shorter-term debt maturities, in the absence of income, you are guaranteed to have to go back to the markets to refinance, and therefore you're 100 hundred percent exposed if interest rates have gone up in the meantime.

Our choice, and I think it was a good one, was to lock in the rate on more of our debt for longer periods of time. Homeowners who have a mortgage payment that is right at the outside of what they can afford will often be advised to take out longer-term mortgages. They forgo saving a little bit of money, but they're in a situation that's a bit of a Pascal's Wager. They can't afford to be wrong and have rates go up. Manitoba Hydro's in a similar situation.

However, if we think we're going to have earnings and cash flows, then there's the opportunity to move some of our $13.5 billion in new borrowings and refinancing over the next five (5) years to come due earlier. This is not risk-free. If the cash flows don't show up for whatever reason, poor water conditions, rising interest rates, soft export prices, lack of rate increases, unexpected capital needs, then we will have exposed ourself to even more refinancing risk. But if we are reasonably confident in the cash flows materializing, it is, in our estimation, a risk worth taking for the savings opportunity.

So our plan includes the assumption that our new borrowings will have an average maturity of twelve (12) years. In practical terms, we use a mix of three (3), five (5), ten (10), and even thirty (30) plus year bonds to arrive at that. Old plans would have had an average maturity of twenty (20) years.

So when we show the impacts of our plan, or a 3.95 percent plan, just be aware that there is an important difference in assumption. Our debt management strategy is a key element of how we manage risk in a period of high vulnerability. It would be very, very unwise to shorten up our maturity schedule when we are so vulnerable to interest rate volatility.

This hasn't changed. Regrettably, what has changed, as I mentioned, is this yield curve. While when we did our financial plan, this looked like a $500 million savings opportunity over ten (10) years, based on the current yield curve, about $250 million of that opportunity has, at least for now, gone away. Slide 26.

THE VICE-CHAIRPERSON: Mr. McCallum, can I just ask you to comment on the vulnerable -- vulnerability issue in the context of the provincial debt guarantee?

MR. JAMES MCCALLUM: Vulnerability -- perhaps I could ask you to rephrase the question?

THE VICE-CHAIRPERSON: So there is a provincial debt guarantee --

MR. JAMES MCCALLUM: Correct.

THE VICE-CHAIRPERSON: -- for debt incurred by -- by Manitoba Hydro, correct? So you talk about vulnerability because of the -- well, the fragile position that you've described, and the potential for changes in the situation, but there is the debt guarantee. So how does that impact the vulnerability that you speak of?

MR. JAMES MCCALLUM: Sure. Well, the -- the debt guarantee fee is paid almost as an insuran -- as an insurance premium to the Province of Manitoba, which basically compensates the Province of Manitoba for stepping up to the obligation to step into our shoes and take on our debt to the extent we can't support it ourselves. And so in so far as we have that guarantee in place, it's really, you know, kind of quite difficult for -- for Manitoba Hydro or the Province of -- it's quite difficult for Manitoba Hydro to default on its debt. All that happens is that -- that Manitoba Hydro may not be able to service the full extent of its debt, and the Province of Manitoba would have to step in.

MR. KELVIN SHEPHERD: Jamie, Madam Vice Chair, perhaps I -- I'm -- because I was listening to your question, and I think where you were going is we talked about this vulnerability period, and -- and does the -- I think the essence of your question was, does the provincial guarantee fee somehow mitigate that work --

THE VICE-CHAIRPERSON: That's correct.

MR. KELVIN SHEPHERD: Yeah.

THE VICE-CHAIRPERSON: That's what I was wondering.

MR. KELVIN SHEPHERD: And -- and the vulnerability is really around the need to refinance. So certainly, the provincial guarantee fee helps ensure that we will be able to refinance it, and the -- and, you know, we'll talk later about this, but in my view, the -- the guarantee fee lets Manitoba Hydro access debt that, given its current capital structure and rates, might not otherwise be able to access.

What it -- it doesn't necessarily do is reduce the risk that you might have to refinance at a higher rate. That's really a market risk. Now, the guarantee fee will help us ensure that we can refinance, and it helps ensure that we get refinancing at a -- at the most attractive rate, or at least the rate that's available to the Province. So it does help mitigate refinancing risk to that degree, but it doesn't necessarily eliminate the risk that you might have to refinance at a significantly higher rate. That really depends on the -- the markets at the time.

THE CHAIRPERSON: But if -- sorry, if I could follow-up on that, if -- if the situation for the Province of Manitoba improves, and the situation for Manitoba Hydro doesn't improve, you would get the benefit of an interest rate based on the better Manito -- Government of Manitoba rate.

Similarly, if your situation improved and the Government of Manitoba situation worsened, notwithstanding the steps you took, you'd be looking at higher rates because of the government. You're borrowing off the government line. That -- that --

MR. KELVIN SHEPHERD: That's -- that's

correct. We're -- we're not really totally in control, because really, our -- our debt is raised really through the Province and subordinated through the Province.

THE CHAIRPERSON: Thank you.

MR. JAMES MCCALLUM: Yeah. Mr. Chairman, you're -- you're raising a -- a vital point. Really, we are susceptible to -- to the overall condition of the capital markets. When we borrow money through the Province of Manitoba today, if it costs, call it 3 1/2 percent before the debt guarantee fee, roughly 2 1/2 percent of that, or 2.2 percent of that is in the form of -- of the way debt is priced as on a Government of Canada -- who reference a Government of Canada or sometimes a Government of Ontario bond yield, and then there's a provincial spread on top of that.

And all of these things move around for all kinds of reasons, some relating to Manitoba, some relating to Manitoba Hydro, some relating to -- to a whole bunch of other things that have nothing to do with what happens, you know, in this neck of the woods. It's this total debt level that we're concerned about, and what the overall rate, you know, overall interest rates could do in the future and where that will leave us and our customers.

So moving on to slide 26, please. We're going to look at a comparison of net income under our financial plan that's known throughout the -- the evidence as MH16 update with interim, which is a long handle, and I don't have a -- an acronym to offer -- and the same plan using 3.95 percent rates. As noted, our plan assumes utilizing this -- this more aggressive debt terming strategy, while the 3.95 percent path uses our traditional debt management strategy, consistent with an outlook for no cash flow or income in the next decade, which you can see clearly in that chart.

The Intervenors have produced a -- a bunch of evidence relying on a scenario with 3.95 percent rate increases, but with twelve (12) year debt terming. In our view, they've been wrong to do so. The debt strategy doesn't exist, and won't be followed if we have an expectation of higher -- if we do not -- do not have an expectation of higher cash flows in the next five (5) or ten (10) years.

As you can see, the two (2) plans lead to markedly different outcomes. The blue bars are annual net income under our plan. They total about $3.8 billion over the next ten (10) years, or average about $380 million a year. That's obviously a significant departure from where we've been late in -- in lately, but actually, in line with 2008, when we made 346 million, or 2006, when we enjoyed 415 million of net income, both on a much smaller business. The amounts are significant. You need income if you are ever going to generate the cash flow that you need to pay down your debt.

The next ten (10) years are about getting our debt under some control to take some of the risk out of a perilous and unprecedented financial situation. I say "unprecedented" for a reason. We have seen and will undoubtedly hear lots more evidence along the lines of, we've been here before -- we heard that this morning -- and that so a slow and steady fix to the balance sheet is the right answer again.

Coming out of Limestone and other periods of major capital investment, Manitoba Hydro did have a 5 or a 10 percent equity ratio, and nothing bad happens -- happened, goes the argument. First off, avoiding calamity once doesn't mean you will again. But we have never been here.

After Limestone, we had $4 1/2 billion of debt. That was about ten thousand dollars ($10,000) of debt per customer. Today we have thirty-five thousand dollars ($35,000) of debt per customer. We're heading to about forty-two thousand dollars ($42,000) of debt per customer, four (4) times higher.

That should make sense if we think back to that debt per gigawatt hour of load chart. Now let's look at what happened next back then, as compared to what we would be planning to do if we followed the 3.95 percent rate path. In the ten (10) years after Limestone, we had net income of almost $1 billion. Those are in then dollars, not even adjusting for inflation over twenty (20) years.

That was earning -- earned operating a business that averaged about $5 billion of net plant in service over that decade. It was earned operating a business in a significantly higher rate interest environment, three (3) to four (4) times higher, and in a decade where we enjoyed above-average water conditions in two (2) of the ten (10) years.

Let's turn to the 3.95 percent plan. These green bars add up to a loss of 400 million for the decade, including $850 million of losses in the last five (5) years, so a $400 million loss in an environment of multi-generationally low interest rates, with the assumption of average water conditions throughout, and rising export prices as an assumption while operating a business with $26 billion in assets and plant in service.

So our business is five (5) times larger. Our relative debt levels are four (4) times greater, and we would propose to, instead of making the 1 million -- 1 billion we did in the decade after Limestone, instead, if things go well, lose 400 million. The suggestion we were in the same place as we have been before is preposterous.

We are going to talk more about equity and reserves, but for now, the message is we have to plan. And again, this is a plan based on a view of the future that is not without considerable variability. But we need to plan to make an adequate amount of money to manage our risks and start modestly chipping away at an epic level of debt before we lose the opportunity to do.

BOARD MEMBER GRANT: There -- Mr. Chair, could I interrupt on this point?

THE CHAIRPERSON: Sure.

BOARD MEMBER GRANT: I know we're going to talk about this financial stuff later, but I don't want to fall behind for the first test. Earlier, on page -- just so I understand this, on page 16 of your presentation, not that I want to go back, when you say 'negative' -- you referred to negative net income.

And now, are you taught -- I'm not sure what you meant on -- in the context of page 16. Is this -- we have positive net income today?

MR. JAMES MCCALLUM: Today and for fiscal '18, we do anticipate positive net income of $30 million.

BOARD MEMBER GRANT: So on page 16 -- you used the header "Current and future rate instability." There is negative net income. That's looking forward as --

MR. JAMES MCCALLUM: Looking ahead to the next decade cumulatively.

BOARD MEMBER GRANT: Okay. And so I just want to -- I -- I think I'd appreciate the difference between cash flow and a -- and an income statement. But again -- my people are helping me, here. Thank you, sir.

MR. JAMES MCCALLUM: I could hear you okay.

BOARD MEMBER GRANT: The row -- the rowdy roadies, here. I think you said on page 4 -- I'm just not sure if it was meant to be sort of a casual shorthand, but the current rates are not funding the ongoing costs of the current system. So I hear a bal -- I hear an income statement there.

MR. JAMES MCCALLUM: M-hm.

BOARD MEMBER GRANT: Is that -- that would not be correct, then. Am I misinterpreting that?

MR. JAMES MCCALLUM: Yeah. I -- I -- our point of view is that on a cash basis, we don't have enough rate revenue to meet our ongoing regular needs. So an ongoing cost is a -- you're using that in terms of a -- okay.

BOARD MEMBER GRANT: And just one (1) other -- again this morning. Ms. Ramage said on page 3 that Manitoba Hydro does not have enough cash to pay its operating expenses, interest expenses, and then puts in -- manage its risks. Now, risk management, I presume, refers to retained earnings for drought or potential interest rate increases?

MR. JAMES MCCALLUM: Retained earnings would be one (1) factor. I think we would look at risk management a little more broadly, which would include the expectation of using that cash flow to reduce our debt, which reduces our risk, and having the expectation of -- of income and cash flow such that as risks present, be it drought or -- or forecast, you know, forecast variance, that instead of immediate -- immediately needing to -- to return to the ratepayer, or -- or borrowing more money to -- to fund our business, we have a cushion. We can absorb these risks without necessarily needing to take action or dramatic action quickly.

BOARD MEMBER GRANT: And -- and just the last question, for clarity. The big difference between your income statement and the cash flow would be largely the sort of sustaining capital expenditures that are coming in as a -- it's cash going out, and yet, some is being amortized over -- and not showing up -- not all of it be showing up in the current --

MR. JAMES MCCALLUM: Yes, there's -- the -- the major source of the differential would be that in -- in our income statement, you'll see a depreciation and amortization charge. And that's what goes into, you know, the thinking around revenue requirement.

And that depreciation and amortization charge is quite a bit lower. It includes charges on account of -- of our current asset base, and it includes charges on account of some of these -- these liabilities that we hold for the City of Winnipeg, owing, you know, on -- on the -- the commitment to the

Winnipeg Hydro acquisition, or on some of our mitigation and -- and major development liability payments.

There is a -- a small piece that goes through that depreciation and amortization. But when you turn around and look at the actual cash we need to spend to meet these commitments and meet the commitments of -- of sustaining and -- and maintaining the system, they're quite a bit higher. And that leads to this cash gap.

BOARD MEMBER GRANT: And -- and last point, I promise. The DSM would be an example of that, where your -- the money is going out the door today, but the cost is being amortized over several years?

MR. JAMES MCCALLUM: DSM would be another example, correct.

BOARD MEMBER GRANT: Thanks.

MR. JAMES MCCALLUM: I forgot where we were.

MR. KELVIN SHEPHERD: Slide 27, I think.

MR. JAMES MCCALLUM: Twenty-seven (27). Okay, slide 27, please.

This next slide just shows another

comparison of our plan to the 3.95 percent plan. We saw a fair bit of common ground in the -- in the Morrison Park advisors report commissioned by the Coalition and -- and MIPUG. I thought was actually a very good, balanced piece of work, but I don't agree with all of their conclusions, just to be clear.

But in -- in there, we take some criticism from what's seen as a -- a sole focus on the equity ratio, and without good reason. And the cash flow should be our concern in measuring financial health and rate adequacy. Our evidence actually shows an enormous focus on cash flow, which somehow got overlooked.

We will have a good debate on all that in due course, I'm sure, but this chart simply shows that the relationship between cash flow and improving equity ratios. Under our plan, again in blue, we generate net income and cash flow, and are able to end 2027 with $4 billion less debt than under the 3.95 percent rate plan strategy.

Attaining an equity ratio is a function of generating net income and/or reducing debt. With improved net income generally comes improved cash flow, which pays off that debt. So the two (2) work together, which this chart shows. Under the 3.95

percent plan, we have negative net income and negative cash flow. Consequently, the debt continues climbing, even after Keeyask is on board, and the equity ratio erodes even further until reaching 10 percent in 2026, where, incidentally, it would stay until 2032. To my knowledge, we have never put forward a plan like that.

Slide 28. So our plan starts attacking the debt to take some of the risk off the Corporation and its customers. This chart tracks debt to domestic revenue. Again, the relationship of debt to domestic activity is critical, as it is the domestic customers who absorb 100 percent of the volatility that comes from any of the risks that face our business, including interest rates, water conditions, and export prices.

Once again, you can see that since Limestone, debt has grown out of all proportion to our business activities. Our debt to domestic revenue is already double historic norms, and triple our two (2) Canadian peers who are Hydro generators. Our plan is more aggressive in bringing this relationship back toward where it was -- it was before the build program began, but will still leave us with levels of debt, on a relative basis, 30 percent above where we were from 1990 to 2010.

The 3.95 percent path doesn't do nearly enough, while the denominator in the equation, that being domestic revenue, goes up on the back of 47 percent worth of rate increases over a decade. A lack of income and cash flow means there's no progress whatsoever on the debt.

MR. KELVIN SHEPHERD: Pardon me. Slide 29. Thanks, Jamie. Now, to draw this together, what does our plan achieve? First, I would say this is not a plan that, over ten (10) years, even should everything unfold according to the financial model, puts us in a position of great strength. Manitoba Hydro will still be a highly leveraged company by any standard, including a comparison to our own history. With this new plan, we will still have $21 billion of debt with all the consequent rate risks that go with having that much debt in comparison to our domestic business, but we will have avoided 4 billion of debt, which means we will be avoiding over 200-$250 million a year of more interest costs.

Debt we don't have represents a reduced risk to our customers and improved rate stability and certainty. Depending on the future state and investment needs of our business, having reached an acceptable level of financial strength, we will have the potential ability to return to our customers the benefit of this work in the form of substantially lower rate increases going forward, or perhaps even to consider rate decreases. Meanwhile, if we stick to the old failed twenty (20) year plan, we will find ourselves with nine (9) or ten (10) more years of 4 percent rate increases, pushing overall rates to well over double where we sit today.

Slide 30. This slide provides an illustration of just that, showing how our new plan provides the potential flexibility for lower rates once financial strength is restored. Again, this is simply an example of the powerful benefits of coming to terms with our unsustainable debt and taking action to reduce debt and debt service costs.

What ends up being appropriate in terms of rate action ten (10) or fifteen (15) years from now will be a function of events between now and 2027, but it goes to show you how dramatically different the future can be where the only difference is the time taken to restore our financial health. The long-term interests of our customers and the economy is served by taking steps today to bring our debt back to levels that allow us to absorb risk.

Slide 32. We're moving into a

discussion of our risks. So what risks do we face? Well, we have a lot of them, which Jamie will elaborate on shortly. Along with a rapidly changing regulatory environment, and by regulatory, I'm not necessarily talking the Public Utilities Board. I'm talking environmental and federal regulation, and the overall industry that -- that we're in. So that is changing rapidly. We have rapidly changing technological and economic environment. These risks are a major part of what makes forecasting such a challenge.

Our risks are not theoretical. Every single one of the things that we worry about and suggest we ought to plan for is something we have seen happen before. We have had below-average water conditions. We've had droughts. We have had export prices defy rebound projections. We have had domestic load growth slow. We've had capital investment needs go up. We've had interest rate volatility.

The risks we talk about are not remote or implausible. We don't know which, when, or how severe each one will present, or worse, if a few of them will present concurrently, but we can be pretty sure one (1) or more of these risks will materialize, even in the near term, let alone the longer term.

No other major hydroelectric utility has the volatility in water conditions we face, nor does anyone else have such a small reservoir relative to their operations. Our exposure to mother nature in that respect is quite extreme.

By just about any measure, we are heading towards having more debt than almost anyone else in our industry, and certainly more debt relative to the size of our business than potentially we have ever had. The argument goes that as a hydroelectric generator, you have long-lived assets, and you're not exposed to fuel price volatility the way coal or a natural gas-fired utility would be.

And that's true in part, but financing ourselves in such an extreme way, we are replacing commodity price volatility with interest rate volatility. We can't borrow at a fixed rate for the seventy (70) or a hundred years our generators are expected to last, so we are perpetually exposed to interest rate risk, all of which is borne by a relatively small customer base.

Our export business has been of huge value to keeping rates low for Manitobans, but having such a heavy reliance on it means we are exposed to the risks that pricing doesn't go up like the previous management and Board had hoped. We've seen this for the last seven (7) or eight (8) export price forecasts. This risk increases after we bring Keeyask into service, when we will have more energy to sell into export markets -- unless more susceptibility to weak pricing and/or the inability to sign or extend long-term contracts at premium prices.

Last, but most certainly not least, our major capital projects, principally Keeyask and Bipole III, but not to overlook our US tie-line project. We are working to bring these projects in or -- in on or ahead of schedule, and below or at current budget estimates. Our financial forecast has both cost and revenue dependencies tied to completion of these projects.

We look forward to the report of the Board's independent expert MGF to hear their assessment. However, it cannot be understated that these are massive and complicated megaprojects, and there remain real risks of cost escalation or schedule delays. In particular, with Keeyask, we were almost four (4) years from first power, and six (6) years from full completion. Our current budget estimate is what is known as a P50 or 50 percent probability budget. Although I have tremendous confidence in and respect for our project teams who are working extremely hard and diligently, the potential for increased capital costs is a risk that at least needs to be considered in our financial plan.

Jamie...?

MR. JAMES MCCALLUM: Slide 33. I think I'll try to pick up the pace a little bit to get through -- through these risk slides, if I can.

This chart depicts our -- our water flows over the last, I believe it's a hundred and five (105) years, maybe hundred and ten (110) years. As you can see, extremely volatile. I will perhaps just point out that in -- and -- and it -- it can also change quite quickly. You can see that, in roughly 2003, we had water flows at about 60 percent of mean, and two (2) years later, we had what remains our -- our record.

I think what I'll steer you towards the right-hand side of the page, where you can see -- and -- and I can tell you that's fourteen (14) years -- that we've had fourteen (14) consecutive years of good water. We're grateful for that, but perhaps when coupled with a decade of continuously lowering interest rates, it's helped to obscure the acute inflation of risk that has been happening here. If water conditions are a coin flip, and we don't know they are, the impacts of climate change are unclear. I'm sure there will be an opportunity to -- to talk more about this, but, you know, some of our evidence will be that -- that water conditions are likely to get more volatile. But if they are a coin flip, the odds of flipping heads fourteen (14) times in a row is about 16000:1. That said, once you've done it, the odds of the 17th time are 50/50.

We don't know what's going to happen next year. Less than six (6) months ago, nearing the end of the first quarter, we thought we were going to make $90 million extra from water conditions this year, after the -- starting the year with extremely high reservoir levels and having very high spring runoffs. That extra income from high water levels we were anticipating would cause a hundred percent of our net income this year after adjusting for the impact of the interim rate order in August.

So put another way, with average water conditions, we would've expected to make zero. That was in June, when we prepared our updated financial forecast in advance of the interim hearing.

Over the summer, it was particularly dry in the Saskatchewan River, and -- and throughout our -- our watershed. Inflows and reservoir levels dropped dramatically, meaning opportunity export -- meanwhile, opportunity export prices remained barely above last year's level, and well below our forecast. And so almost $60 million of that increment -- incremental or excess net income evaporated, no pun intended.

Thankfully, fall precipitation has been fairly normal, but it goes to show you how quickly this can all turn, and that's the message. We can't rely it. We can't hope to keep repeating what has happened since NFAT, what's happened for fourteen (14) years.

From NFAT, or from the end of 2014 to the end of 2017, virtually all of the growth in our retained earnings, our equity, in other words, our net income for those three (3) years, came from unexpected contributions from above-average water conditions.

Slide 34. I spoke to this, but just by way of update to the Board, when we published our second quarter report in early November, we updated our forecast. For our electric segment, we have seen a $63 million drop in our outlook for test years' net income. When we prepared MH16 update with interim -- still don't have a -- an acronym -- in response to the rate order and in order to respond first round information requests, we were forecasting $93 million of net income in this 2017/'18 year. We now estimate that to be $30 million, a decline of almost 70 percent. Almost all of this drop is caused by poor water inflow conditions over the summer and opportunity export prices that continue at levels unchanged from last year, or as our forecast had appreciate -- had anticipated appreciation.

Slide 35. Looking ahead to next year, which begins in only four (4) months. This shows our exposure -- our net income exposure -- or net export revenue exposure, pardon me, to water flows. So in a year that starts four (4) months from now, we are anticipating -- and this is updated for -- for the water conditions that transpired this summer, we are anticipating roughly $200 million contribution from our export business, net of water rentals and fuel and power purchased.

What you can see here is that this is not very far away, and we have a huge amount of exposure. There is roughly a $500 million potential variance from top to bottom in terms of what the export business will actually contribute next year. If water flows between then and now are in drought condition, we would have a negative $200 million hit to our -- our net income.

If water flows are -- are, you know, kind of on a record basis, the $200 million we are anticipating moves up $100 million to 300 million. You can see the risks asymmetric meaning that water flow conditions hurt us much more on the way down than they do on the way up.

I think, though, what we would say is that we would be wise to kind of take what happened this summer and what it did to our 2017/18 anticipated net income as a little bit of a warning. An example of why we should be very cautious with how much we can rely on what, ultimately, is a natural phenomenon.

The Board also needs to be aware that our financial forecast relies on appreciating opportunity export prices. We're not anticipating those prices to appreciate as much as we had in the past, but they're still in the plan heading upward. Each of the last plans have said that; each time it hasn't happened yet.

But, if you look forward nine (9) or ten (10) years from now roughly $90 million of our net income will be coming from the rise in export prices from today's level; that's significant to our plan.

Taking the 3.95 percent path, it's the difference between losing $200 million a year in 2027 and losing $300 million a year.

Slide 36, please. Finally and just briefly on interest rates, in the sensitivity analysis we produced drought emerges as the biggest financial risk. A five (5) year dry spell costs us well over $1 billion. But in my mind, given our debt levels it's actually the interest rates that are the true iceberg.

Under our plan, or what I'll call a competing theory of 3.95 percent rate increases, but with a very risky debt terming strategy in light of having no expectation of income and negative cash flow, we will need to go to the markets for somewhere between 19 billion and $23 billion over the next ten (10) years; roughly 14 billion of that in just the next five (5) years.

So over the next decade we are borrowing new or refinancing virtually all of our debt. Depending on how fast rates moved, and it's worth pointing out that the five (5) and ten (10) year bank of Canada rate is already above what we had in our forecast for fiscal 2018, a 1 percent rate increase versus our plan could be costing the company upwards of $200 million per year by the end of the decade, depending on how fast the interest rates rose.

And that keeps going and going into the next decade. A drought presumably at least has an end. If you get on the wrong side of a cyclical change in interest rates, there's just no telling how much damage will get done.

THE VICE-CHAIRPERSON: Mr. McCallum, can I just -- sorry, can I ask you to clarify on that -- you said you need to go to the markets for between 19 and $23 billion over the next X number years, but that's not all going to be new borrowing. Like, there must be some that's already in place that -- that you would have at -- in predetermined interest levels?

MR. JAMES MCCALLUM: Over the next ten (10) years, you will need to go to the market -- first over the next five (5) years we're going to need to go to the market for about $8 billion of new financing; that's basically to fund the completion of these major capital programs and run our business.

There's an additional $5 1/2 billion which is refinancing existing debt that we have today as it comes due over the next five (5) years. It's scheduled. And likewise, if you take what we have kind of -- the debt we have today, and its maturity schedule over the next ten (10) years. And that's where this -- this discussion or decision around our terming strategy becomes important. That $8 billion we know we have to borrow. If we start borrowing that money on three (3) and five (5) year kind of maturities that too will fall into this ten (10) year window.

And so, there are elements of our -- of our -- of our debt portfolio which extend well beyond 2027. But in the main, and this -- this depends on the debt terming strategy you take and your expectation of cash flow, but in the order of $19 to $23 billion, we're going to need to go to the market for either as new funds or to refinance existing debt.

THE VICE-CHAIRPERSON: Thank you.

MR. KELVIN SHEPHERD: It's almost the entirety of our debt portfolio.

MS. PATTI RAMAGE: Mr. Chair, before we carry on, Mr. McCallum and Mr. Shepherd are switching off your having to listen to constant -- to them constantly. We're open to if you'd like a five (5) minute break, or if you'd like to keep going, we look to your direction on that.

THE CHAIRPERSON: I think we're into negotiations up here as to the -- we'll take ten (10) minutes right now.

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

--- Upon resuming at 2:54 p.m.

THE CHAIRPERSON: Okay, if we could resume. If we could maybe pick it up a little, we'd like to be finished a little over an hour and starting crossly so we can keep to the schedule.

MR. KELVIN SHEPHERD: We'll do our best, Mr. Chair.

THE CHAIRPERSON: Thank you.

MR. KELVIN SHEPHERD: Slide 38, there's a number of really important themes we regard them as facts which we'll keep coming back to throughout this hearing.

When you cut through all the detail, the minutia, the noise and take a step back, there emerge just a few critical observations which we will -- believe will help inform the right rate decision.

The first is unequivocally and undeniably our business outlook has deteriorated since it was last reviewed with the Public Utilities Board. This chart shows our outlook for domestic load growth. The yellow and green lines show our outlook for the last two (2) integrated financial forecasts. MH14 would've underpinned the last full General Rate

Application while MH15 would have been reviewed as part of the 2016 interim rate process.

The dark blue line represents our current load forecast. Our current expectation is that net of our existing demand-side management plans, we will see no net load growth for ten (10) years. We'll see a decline in the next four (4) to five (5) years followed by an increase to just get us back to where we've started.

This forecast is increasingly looking optimistic. Since we submitted this financial plan in July, a major customer project in the energy sector that was in our plans starting in 2021 has been cancelled. Just the loss of this project pushes us to almost 2030 before we'll see net growth. The province of Manitoba has enacted legislation to create Efficiency Manitoba.

The legislation sets out efficiency goals for DSM programming that generated 22.5 percent reduction in electricity usage over fifteen (15) years. Our current DSM plan, that is reflected in this forecast, assumes achievement of a 17 percent reduction, and includes DSM programming costs associated with achieving only 17 percent.

The incremental impact on net load

growth of achieving legislatively mandated targets would be to push the point at which we simply return today's low level all the way out to 2035.

Finally, our rates are set in units of demand and usage. Our rate increases are expressed in percentages. Not to be lost as we record our actual revenues in dollars, a substantially reduced load arose the revenue impact of the same percentage increase in rates. So if you look out to 2026 or 2027, you can see that there is about a 2000 gigawatt hour difference in our expected load from our MH-15 projection.

Regardless of the rate path taken to generate the same revenue dollars that year, we would need about 9 percent more in rates than we would have if the load were higher.

Slide 39. Turning to our export business, we've also seen dramatic erosion in our outlook. This continues a pattern seen since the market for electricity collapsed in 2008 and 2009 amidst the global financial meltdown.

The chart demonstrates our price forecast in successive financial plans. For competitive and commercial reasons we blend our contracting opportunity pricing. This understates the impact of declines in the outlook for opportunity or spot market pricing. The decline in forecast opportunity pricing between our 2015 export price forecast and our 2017 export price forecast is expected to cost us almost $170 million per year by the time Keeyask is fully on-stream in 2023/24.

However, it should be noted that we are still forecasting price appreciation, notwithstanding seven (7) or eight (8) years now of essentially flat opportunity pricing. So, that's quite an assumption.

By 2026/27 if prices haven't materially improved, our forecast will be upwards of $100 million per year too high. Bear in mind, we may net income of only $33 million last year and expect we will only make $30 million this year.

Slide 40. I spoke about Keeyask already, but I'll just say it again, it's a massive complicated project that is a long long way from finished. Our risk of still experience additional cost overrun increases is real. With an $8.7 billion project measured against the business with about 1.5 billion of domestic revenue, small percentage changes in the project cost can reflect through our revenue requirement quite significantly.

For example, if there was a further $1

billion increase in capital cost, it would add $60 to $70 million per year to our costs without any offsetting revenues. Importantly as it comes to the question of whether our business outlook has deteriorated since our last full rate process, the Keeyask control budget has increased by $2.2 billion, or 25 percent.

Slide 41. Bipole III is also increased by $400 million since our last rate process. Our confidence level in the $5 billion cost estimate is quite a bit higher in this project since it's far advanced construction is well along and, in fact, we've began some commissioning work on the HVDC converter stations.

Bipole III is expected to come into service in just over nine (9) months, but it should be noted that hereto we have seen a material budget increase over previous forecasts and as we finish construction and enter a very complex commissioning phase, we're still a degree of schedule and cost risks remaining. However, we do expect Bipole III to be fully in service next year. And that's important to our financial plan; a significant new operating cost will start to flow under our income statement and this reinforces the necessity of obtaining the 7.9 percent rate increase on April 1st.

Slide 42, and I'll turn it over to Jamie.

MR. JAMES MCCALLUM: Thanks, Calvin. So to sum up, the comparison of our new financial outlook using the old 3.95 percent rate trajectory versus MH15, which would've been the financial plan reviewed during the 2016 rate process before this Board, revenue is down $3 billion; roughly 50-50 split between export and domestic.

Net income over the next decade has gone from a forecast under MH15 of $600 million to a negative $400 million loss; that's a $1 billion decline. And debt will be $3.2 billion, or 15 percent higher at the end of 2027.

The equity ratio which had been forecast to reach 14 percent at the end of 2027, we anticipate, if all went to plan and we stuck to this 3.95 percent rate path, the equity ratio would've deteriorated to 10 percent.

Slide 43, please. As bad as that looks this actually understates the erosion. MH15 didn't count on $87 million of additional net income that was earned from high water conditions last year. MH16 in comparison is overstated by 78 million in that it assumes water conditions from this fiscal year impacting this year's results and next year's that as of now we don't think are going to occur. In fact, we've already seen the -- the results of that.

And most importantly, MH15 and MH16 have two (2) different in-service dates for Keeyask. So when comparing an eleven (11) year period, you've got one where you have Keeyask operating for twenty-one (21) months more than the other one; that's pretty material, particularly because -- and we've shown this in tab 2 of our application, Keeyask we anticipate being a -- a net detractor to our financial position, our net income for a considerable period of time, decades even based on the current outlook for its costs and -- and the revenues that will flow off of that.

I'll pause here just because important to be clear, Keeyask is going to have that detrimental effect. Its revenue won't really even come close to covering its incremental costs, including depreciation. We've heard this morning that we need to be measured in absorbing Keeyask and the impact Keeyask because its payoffs will be such as if they were for Limestone, you know, enjoyed over the long term. I think we have to pause and wonder how long that term is going to be and on the current outlook, it's -- it's going to be a long, long, long time before Keeyask is needed for domestic use. And before Keeyask is in a position where it's really able to -- to generate coverage of its costs.

So I think we have to -- to start considering that ratepayers will need to -- to start bearing the cost of carrying this asset and this excess capacity.

THE CHAIRPERSON: Sorry, Mr. McCallum, so when is Keeyask needed? You're saying it's a long, long time. What's the projected date that it -- that it's required.

MR. JAMES MCCALLUM: Well, the -- the projected date Keeyask will start filtering into servicing and it's -- it's a system of course, but the incremental energy from Keeyask will be needed domestically, we think, in the 2033 to '34 timeframe, which would mean -- and then as the business grows into and absorbs Keeyask, it's kind of the early -- it's 2040 or just beyond that we're, you know, looking at the next need but I would say, you know, a couple charts ago, Mr. Shepherd talked about, you know, reductions in -- in load growth owing to an already known cancelled project owing to the potential for

Efficiency Manitoba. We're not sure.

THE CHAIRPERSON: Okay, but your comment was, Keeyask, it's a long time before it's needed for domestic use. When is it needed for domestic use?

MR. JAMES MCCALLUM: Under the current load forecast 2033 it begins.

THE CHAIRPERSON: Okay. And -- and just, sorry, now that I've got you, what's the P90 on Keeyask? You've got 8.7 as the P50, what's the P90 for it?

MR. KELVIN SHEPHERD: Subject to just check, I think it's close to 900 million higher than the control plan.

THE CHAIRPERSON: So 8.7 plus nine hundred (900)?

MR. KELVIN SHEPHERD: 9.6 billion, yeah.

THE CHAIRPERSON: Thank you.

MR. JAMES MCCALLUM: So, again, back to this twenty-one (21) month delay if you put things on more of an apples-to-apples basis, we estimate that the MH16 net income would be $750 million worse over the eleven (11) year period if both comparisons had the same in-service date for Keeyask.

Taken altogether, the net income deterioration between MH15 and MH16 is in the order of $1.8 billion or 300 percent. We've seen a lot of Intervenor evidence that there's been no deterioration. There's just simply no basis for that assertion. The numbers are stark and the conclusions inescapable.

Slide 44, please. Net income is only part of the story. First, I want to differentiate between the net income we've reported and what I would regard as normalized income. And perhaps in the interest of time, I'll -- I'll try and skim over this a lot more quickly, but we -- at the top of the chart you can see our -- our net income; that being -- the net inc --income attributable to Manitoba Hydro over the last three (3) years and -- and forecast for 2018.

In 2017, we had a nonrecurring gain which when you come to think about your normalized go forward net income, you need to -- to look at those in a certain way. This is, I fear, kind of losing the plot here a little bit on -- on some accounting nuance but there is a phenomenon of sorts that occurs under the accounting policies that really has you capitalizing interest on the Bipole project at a higher rate than you're actually paying on the new debt you incur which is -- we can spend as much time on this as the panel wishes but -- but it -- it really results in a bit of a phenomenon of taking out of your interest expense more interest than you're -- you're adding to it in the form of the interest on your new borrowings and it creates a phenomenon of boosting income in -- as the project is -- is underway.

And -- and the reason the phenomenon exists is because interest rates have been declining over the course of the -- of the project. I hope I haven't lost everybody on that.

Above-average water, again, when it comes to what is sustainable, we think you need to -- it's happened. It's great. It's in our retained earnings, and most importantly it's -- it's contributed to -- to mitigating debt growth, but assuming it's going to happen again is probably -- probably not the right frame of mind.

And finally, we've got this adjustment to our current outlook in 2017 and '18 based on what we've seen happen year to date.

And finally, not to be left out, is we've been making -- not insignificant expenditures in this year and a touch last year in order to enable and implement the cost restructuring activities that are underway at Manitoba Hydro and those won't repeat into the future and so we've added those backs.

So when you kind of make those adjustments you -- you see a picture that goes from looking like you've made -- you're kind of rolling along making roughly $300 million in aggregate over the last four (4) years to really a picture where, you know, on a normalized basis, you've lost in the order of $100 million.

Slide 45, please. Net income, and we -- we -- we talked about this before is not really the whole story. We need to care a lot about cash and cash flows, because we have to make sure we can meet all the ongoing annual payments the company needs to make to keep the business operating and meet our mandate.

So why is net income so different from cash flow? I think Dr. Grant -- Board Member Grant got -- got to some of these questions earlier, but, to get to net income you -- you deduct an expense for depreciation and that's meant to be a proxy for the annual cost of all the capital assets you have employed to keep the business going and meet your customers needs.

And depreciation expense goes into

revenue requirement. But depreciation expense is calculated based on historical cost. As Calvin mentioned, a lot of our assets date back to the 1950s and '60s, many more even further. So what we paid for those assets in, say, 1930 or 1950 or 19 -- in the 1970s in the case of, you know, a big chunk of our generating plate is a lot different than what it cost to replace these assets using today's dollars as they fail or as they need to be replaced.

This difference has been in the order of $150 to $200 million a year for -- for quite a while. We also have a big basket of payments we're committed to; many of them contractually so which barely impact our income statement and, therefore, revenue requirement. We talked about these: DSM, payments for mitigation, payments on liabilities, on past development, payments to the City of Winnipeg. All of these add up to roughly $200 million a year. Some are increasing. A lot of them go on for a really long time, and others are perpetual. So we think we have to be thinking about these in any discussion of revenue adequacy.

Slide 46. So this is, in a nutshell, our -- our cash flow problem, and again, turning back to the 3.95 percent rate path, you can see in the chart on the left that over the next ten (10) years we would be kind of setting ourselves up to be cash flow negative running -- running the business every year except for one.

On the right - and I'll just focus on the blue column which is the sum of all these points in the chart on the left - it's $1.1 billion. This is how much we borrowed to run the basic operation over the next ten (10) years; meaning that the ratepayer of 2027 will be saddled with an additional 50 or $60 million a year of interest, if not more, just to fund the debt this generation rang up by not paying the full freight. That's ignoring whatever comes of the $25 billion in debt we will have done nothing to address over this next ten (10) years under the 3.95 percent rate plan.

Slide 47. Changing gears, we -- we wanted to flag equity ratio. It's received a lot of profile in these proceedings, and it should. We think it's important to set out in a financial plan -- set out on a financial plan with a clear view of where you are trying to get to. The rate increase trajectory clearly forms an integral part of that.

Manitoba Hydro has traditionally focused on three (3) financial targets. I will say, having spent really my entire career analysing companies and markets, that a debate about what financial targets are best is really going to be quite difficult to resolve. There are literally dozens of metrics each with their proponents, each with their merits, each with their limitations.

And frankly, for all the blinding pages of numbers - and I'm guilty of showing you more today - there's considerably more art than science to a lot of this. The people I've seen do better at making complex decisions, managing businesses or investing are the ones who don't let a spreadsheet override common sense and accumulated wisdom.

So with that caveat, we thought it was important to maintain some consistency with the metrics the Company has reviewed with this Board in the past, and obviously reports on regularly.

Of our three (3), in our view, the equity ratio is by far the best indicator of whether we are making progress on rate adequacy, sustainability and risk. The real issue and Morrison Park in their review touches on this too, is that our capital coverage and interest coverage ratios are incomplete. They don't capture all of the cash burdens facing Manitoba Hydro, even excluding the impacts of Keeyask or the US tie-line and that's a big issue.

More importantly, equity ratio works because its inverse is an indicator of debt and debt is our central problem. But perhaps I'd just like to take a minute to touch on what equity is and what it is not. It's not cash. It's really important. It is not cash. It's not a cash reserve. It's not a rainy day fund squirreled away that we can draw from to mitigate rate impacts during a drought or other adverse event.

When those things happen if we do not have income or cash flow at that time, we will be borrowing yet more money or raising rates, or both, to fund our business. Equity represents debt avoided. But for Manitoba Hydro, it's the historical accumulation of net income dating back to our inception. Almost all of our equity was generated before 2009. Most of what has been created since is thanks to consecutive years of high water conditions.

Without income and cash flow an equity balance is not a great deal of help to a company. Like Manitoba Hydro, when things go bad; rather, we will be glad to not be in so much debt, which is what this ratio helps tell us.

Slide 48. But our equity ratio is inextricably linked to cash flow. Interest is our largest expense and extends its lead by a lot as Bipole and then Keeyask come into service. The higher our equity ratio, the lower our debt and the lower -- lower debt ratio and the lower our debt, all of which lead to lower interest payments and lower cash burdens.

When you target an equity ratio and set your plan accordingly, you're really targeting a net income and a cash flow level. An equity ratio is the end result. It is the end product of making an adequate amount of net income and thus paying off some debt.

When we speak of reserves, this is what we are talking about; a plan that includes provisions for reserves like our governing legislation says should be considered in rates, so we can cushion against the unforeseen and over time pay down some debt.

Slide 49. The suggestion that debt markets don't care about equity ratio is simply inaccurate. Equity ratio is a good proxy for overall debt levels. Investors care very much about that. Markets and rating agencies, bond investors understand the inherent relationship between equity ratio and cash flow and all of the other metrics that one (1) analyst might personally prefer over another.

But regardless of the credit markets, we should all care about debt levels, as they are what, if we turn our back on it, will continue to inflate a huge risk of rate volatility, and overall higher rates for our customers in the long run.

Slide 50. This is just a final slide to demonstrate the relationship between equity ratio and cash flow. As you can see as equity ratio climbs and that's the solid black line in our plan, the blue bars of interest expense under our plan fall; that's the cash flow. Taking the 3.95 percent path as equity levels drop interest rises because the debt is higher.

Slide 51. I spoke about this already, so in the interest time I'll pass over this slide, but our other two (2) traditional ratios have some shortcomings. The biggest being is they seek to represent the adequacy of our cash flows, but don't actually incorporate all of our cash needs.

Slide 52. I'll perhaps spend a minute on EBITDA which stands for earnings before interest, tax, depreciation and amortization, which is one of our metrics and appears at least by virtue of my read of Morrison Park's evidence to be the one (1) they favour. Some say EBITDA. I say EBITDA. It's not a gap or IFRS figure. You won't find it on a financial statement. But a lot of investors and analysts use EBITDA as a pretty good proxy for the cash flow you have after you've paid your operating expenses. It's what you have left over to pay your interest costs, pay your capital expenditures, pay dividends, and pay down debt.

EBITDA to interest ratio just looks at whether we have enough EBITDA as a proxy for cash flow before debt service and capital needs to make all of our interest payments. From my point of view, we need to be cautious in how we use this ratio. We know that we have more payments to make than just our interest costs. We have to fund system capacity and renewal. We've had a pretty steady $500 to $600 million a year that we need to invest to continue to maintain and increase the capacity of the current system to meet our customers needs and to support our revenue projection.

We have all of these other costs like mitigation and other liability payments that really don't hit our income statement and, therefore, our EBITDA. For an electric utility in the very short term, we can probably move some things around but at the end of the day these expenditures are not discretionary. When elements of the system wear out and fail, which happens every day, we have to replace them or we are not meeting our commitments to Manitobans. More simply, without the assets in good working order, we can't even generate all the revenue that leads to this EBITDA.

Finally, if we cut corners on investing in our system because we don't have the cash flow invariably the cost of replacement go up as instead of proactively making repairs, replacements and upgrades, we're doing it on an emergency basis, which cost more. So EBITDA to interest is informative but it's not a complete picture becau -- because it does not tell you whether you have enough cash to continue to run your operation, and therefore, it does not tell you if your debt is going up or going down.

Slide 53. Lots of numbers. Nonetheless, we have these three (3) targets and the 3.95 percent rate path fails to meet any of them over ten (10) years. In fact, we have to keep marching on the 3.95 path until 2030 before we meet the EBITDA to interest target and 2036 for the equity target. As you can see and these are the red figures, the 3.95

percent rate path noted as MH15 rates applied to our current projections do not meet our minimum levels and alarmingly generally show a declining trend over time; meaning the financial situation is getting weaker, not stronger with the passage of time, notwithstanding ten (10) years of compounding 4 percent rate increases.

You can also see that our plan reflects restoring equity to 25 percent over ten (10) years and by extension, and this is down at the bottom, lowering debt by 4 billion over the 3.95 percent path. While imperfect, the other two (2) ratios are comfortably met. This should not be unexpected, given an essential element of this plan is to accelerate debt paydown, to derisk our balance sheet. In the longer term, we don't need to exceed these targets by as far.

I've added EBIT to interest on here. The difference between EBITDA and EBIT is depreciation and amortization. So EBIT reflects a charge to cash flow for the capital needs of the business and it uses depreciation as that proxy. I included it because Manitoba Hydro used to use this ratio with a minimum target of 1.2 times; meaning, Manitoba Hydro has enough earnings before interest cost to provide for all of those interest costs, plus a 20 percent cushion.

Mr. Bowman of Intergroup on behalf of MIPUG points to this ratio as a critical test of rates sufficiency. We add it here for the reason to show that the 3.95 percent rate path Mr. Bowman argues is adequate grossly fails his own preferred test. If nothing else, this page demonstrates unequivocally that the 3.95 percent rate plan just doesn't work.

Slide 54 and another busy one with lots of numbers. And I'm -- I'm introducing this for illustration but what we're doing is we're saying taking that EBITDA to interest ratio, and recognizing that the -- that we have this big basket of other expenditures we have to make that aren't really all that discretionary, we have to pay them just like we have to pay our interest. So if we put that alongside interest and the denominator of the EBITDA to -- to interest calculation, a little -- are called the whole -- pile of that are cash burdens. And you can see that, again, EBITDA is again is a proxy for cash flow.

You can see and -- and -- and you'll see credit analyst will -- will look at a ratio like that, sometimes you see derivatives called free cash flow to Capex or funds from operation to Capex, there's lots of names and lots of things that sometimes are included here and there or not included.

Again, there's some art more than science, but you can see that even under our financial plan, we are less than one (1) time for the next year -- next few years and barely above that for the next two (2) after that.

So we still have -- we're still cash flow negative in the early years, inspite of 7.9 percent rate increases. This is consistent with our argument that we are cash flow negative right now, even putting to the side the major capital projects. Over time, you see we build up to having a good but not extravagant cushion, considering the size of our business.

This is the source of the cash we need to deleverage our balance sheet. By comparison, the MH15 rate plan leads to inade -- inadequate cash flows, increasing leverage and a declining financial profile.

Slide 55. Debt keeps going up. Mr. Bowman's evidence provided a version of this graph which we needed to update a little bit to correct some of the data, but inexplicably it is used as an argument that there's been no deterioration in the financial profile of Manitoba Hydro because our debt is tracking along the path established at NFAT.

In fact, you can see our debt balance

is unavoidably going to track materially above the sensitivity range established at NFAT for the Keeyask development plan. Those are those dotted yellow lines that you see right at the top over the shaded blue. The shaded blue is the range of potential debt under the NFAT scenario.

If we stick to the 3.95 percent rate plan, our debt will climb to $25 billion and plateau. That little purple line that you can kind of see extending is an NFAT scenario that included building Conawapa. So, in other words, if we continue to follow the 3.95 percent rate plan we're headed to a -- to a debt level consistent with -- with a plan that also included being well along with building Conawapa.

There's just no conclusion but that our business outlook and financial profile has massively deteriorated.

Finally, one (1) last demonstration of that. We talked about EBITDA. We talked about how there are lots of credit ratios you see used.

Next slide 56, please. Another is debt to EBITDA. It's another way of looking at how much debt your cash flows is -- is expected to service. Ratios of six (6) and seven (7) times are often considered highly leveraged and are associated with very low credit ratings, like BB or CCC; that's pretty close to the last stop on the scale. The last stop is D, which means you're in default.

In my former career we called debt of this quality noninvestment grade or high-yield. It's known more colloquially -- colloquially as junk. So we can see here our debt to EBITDA has been steadily climbing, even since before the start of our major bill program. You can see that if we follow the 3.95 percent rate path, that's the top line, we will touch almost fourteen (14) times. We're about double the level of BC Hydro and we'll stay there.

Over to the left you see our debt to EBITDA ratio when we lost over $400 million during a drought; just over eighteen (18) times. So we're talking about building debt to a level directionally consistent with the temporary level we reached during a drought, a time after which this Board was so concerned about our financial condition that it gave us a higher rate increase than we applied for and having be our steady-state.

MR. KELVIN SHEPHERD: Slide 57. I want to spend a bit of time talking about the province of Manitoba. They're a critical stakeholder on several fronts and the Manitoba Hydro Electric Board and Hydro Management, together with the Public Utilities Board have to consider their interests.

It's accepted doctrine that our customers must bear the full cost of operating the system. Our governing legislation says so. This Board has previously said so.

The relationship with the province is well defined and understood. The province is our owner, but does not receive any return on investment in Manitoba Hydro. There is no dividend policy and our rates are not set on the basis of generating a rate of return for anyone.

I'm also not suggesting anything should change in this regard. And, in any event, that's a public policy issue, not a Manitoba Hydro management issue. However, this alone has been a huge positive factor contributing to the low electricity rates Manitobans enjoy. If one wanted to provide for a rate of return on a balance sheet our size, I believe rates would need to be 30 or 40 percent higher to do so.

The province of Manitoba is also, in some ways, our banker by guaranteeing our debt directly or borrowing on our behalf and advancing it to us, we are afforded the same access and costs in global credit mark -- markets as the province. This is enormously valuable to our customers. With our current balance sheet, on a standalone basis, it's quite unlikely we could borrow the $13 billion we need over the next five (5) years, at any interest rate.

Our credit profile on its own would be enormously more expensive than the interest rates we enjoy by utilizing the provincial guarantee. Even if we could get the money, companies with credit profiles like ours pay at least double for that -- for us that would be an additional $1 billion more per year.

In other words, the relationship with the province is a good deal for Manitoba Hydro's customers, but more importantly, it is the deal. As a consequence, there are a few things we are not allowed to do. We cannot wilfully threaten or impair the credit standing of the province of Manitoba. The evidence so far has produced a nuance debate over whether Manitoba Hydro at this moment is or isn't self-supporting or at this moment is or isn't affecting the province's credit spreads right now.

There is no clear answer. Both sides of the debate can pull a quote from a rating agency to defend the point of view. From my perspective the view on whether Manitoba Hydro is self-supporting really boils down to a belief on the part of the rating agencies and debt investors that electricity rates will be increased when and to the degree required to virtually eliminate the likelihood the government in Manitoba feels it must take action.

In Manitoba Hydro's view, we have clearly reached a point where the old financial plan has failed and so, therefore, continuing on the rate path associated with that old financial plan is going to be very difficult for capital market participants to have confidence in.

Ultimately, the answer to that question isn't what is at issue. As we've discussed today, what is principally at issue here is that Manitoba Hydro has too much debt and must take more aggressive action to come to terms with that. This would be the case whether the pro -- whether the province appeared headed for a credit rating upgrade or a credit rating downgrade.

What is clear is that capital market participants are important. They're concerned and they are paying attention to this rate case and the next steps we take. Credit ratings and credit standings are in some ways like reputations. There's no definitive right line test of where you're going to lose people's trust and confidence but once it's gone, you're in a really hard place.

So let's be clear, regardless of what happens in this rate case, we are continuing on a path that will see our debt balloon to levels which are multiples of where it has been relative to the size of our business.

However, without strong rate action we will be continuing on a financial plan that has us building to $25 billion in debt while generating almost half a billion in net losses and 1 billion in negative cash flow on core operations.

The thought that this won't eventually catch up with us, with how investors view the province, is kind of an enormous leap of faith. We're not allowed to drive the province's borrowing costs up. It's not our deal with them, and it most certainly is not what the debt guarantee fee is meant to compensate for.

Manitoba Hydro customers should care about this too. The province's cost of debt is our cost of debt which directly impacts electricity rates. Our principal concern should be that we just have too much debt, and thus are extremely exposed to interest rate movements, whatever their cause.

But why would we exasperate this by

risking further pressure on the province's rating without -- which we couldn't remotely afford this debt and these electricity rates. Beyond that, we shouldn't allow ourselves to. It's not the deal we have with the province.

Secondly, the end game for not dealing with our balance sheet is clear, so let's be candid about it. At some point, if we're not careful or lucky or both, something bad is going to happen in terms of the risks inherent in this business that is going to necessitate taking emergency rate action.

We have seen in other jurisdictions where the scale of rate increases needed to deal with the cost of the electricity system are beyond what the government feels customers can absorb. What really happens is governments of the day, as Ontario has demonstrated, conclude that the rate increases are more than the government can tolerate. It becomes a political issue at a minimum and potentially an economical one.

The solution has often been to have the taxpayer step in to provide relief against the required rate increases. This is wholly inappropriate as an outcome for Manitoba Hydro. We cannot be allowed to inflate our debt until this becomes a real risk for Manitoba's taxpayer and it -- it just isn't our deal with the province.

Slide 58. We believe it's important to act now. We spoke earlier about the impact of the August 2017 interim rate. In order to keep to a ten (10) year plan that 3.36 percent first-year interim rate increase puts -- push the aggregate ten (10) year increases from 60 percent to 77 percent.

So it's important to take strong and appropriate action now to preserve the future. The following few slides help make this clear.

On this chart you can see the blue dotted line is our proposed rate profile. If instead of 7.9 percent on April 1st, 2018, the rate increase is 3.36 percent -- again, you can see that it will then take eight (8) consecutive years of 8.25 percent rate increases, totally a hundred and one percent or 24 percent higher than in our plan just to get to the same place.

If for April 1st, 2019 the rate increase were to be another 3.36 percent, the compensating rate increase to reach a 25 percent equity target by 2027 would need to be 9.6 percent per year each year for seven (7) years.

Slide 59. Another way to look at the

importance of acting now is the value of having taken action today if things go wrong. On this chart we show the comparison of the impact of a five (5) year drought starting in 2022/23. Under our plan, all else being equal, no compensating rate action would be required. Obtaining our 25 percent target equity is delayed by only two (2) years.

However, if we continue to march forward with the old plan, that is the 3.95 percent path, our equity is headed for 10 percent in 2027 and a scenario where our forecasts is exactly right and water conditions are averaged throughout. A drought knocks our equity to 5 percent in 2027. Even to recover to 10 percent would need four (4) years of 10 percent rate increases. We would arrive at the end of ten (10) years with 6 percent higher electricity rates then under our plan, a still severely undercapitalized utility and a long march still ahead of us to address that.

Slide 60. Finally, while Keeyask is clearly a fiscal challenge for the Corporation, right in front of us is Bipole III. We discussed this at the interim hearing in July. The only thing that has changed is we are now roughly nine (9) months away from bringing this asset into service. When we do it will begin bringing roughly $350 million of additional costs through our income statement where today we are essentially breakeven. We do begin to realize the 11 percent or so that is in our rates today but being allocated to the Bipole III reserve. But that only addresses just over half of the gap.

This is the last rate increase before Bipole III comes in to service and what we have requested will still leave us roughly 30 million short of covering the incremental costs.

Slide 61. Our rate increase is 7.9 percent for April 1st, 2018. It's an essential first step to address the fact that Manitoba Hydro's debt is on a path to grow to completely unsustainable levels. It's a first step to building reserves in the form of a plan for income and cash flow that provide actual protection against known risks. Risks like rising interest rates, disappointing export prices, anemic load growth, subaverage water conditions, let alone drought and capital cost increases. Risks we've seen before and can reasonably expect will occur again.

This first rate increase is amply justified simply by our current circumstances. It would only -- it would cover only roughly 60 percent of the forecast cost deficiency in the last test year.

On a cash basis, we believe current rates are too low by 15 to 20 percent. This rate increase is still not enough just to cover the incremental costs of Bipole III, which is imminent.

Slide 62. So we believe it's essential that we start on this path and continue. As a forecast matter we simply cannot build a rate strategy based upon targeting zero net income. Manitoba Hydro will be -- shortly be a $30 billion asset at book value, and one that is highly leveraged. We are leveraged to debt, to water conditions, to export market conditions and to capital costs.

One cannot prudently run this kind of business with a goal of zero net income. You have to plan to make enough income on a regular basis, so that you don't need to take drastic action when you don't have that net income.

We need to be clear on what reserves mean. Intervenors will point to our equity balance and say it's roughly $3 billion; that's plenty. That position represents a fundamental misunderstanding and naivety about what equity is and what it does for you.

As Jamie discussed, we're targeting a return to a 25 percent equity ratio. The point of the equity target is to get our absolute debt levels down.

The equity ratio is the end product. It's the result of following a financial plan where we generate positive net income and positive cash flow so that we can pay our debt down to more sustainable but hardly low risk levels.

Equity in and of itself does nothing for you. This is particularly the case when almost all of our equities is derived from cumulative earnings generated more than ten (10) years ago. Even more recently, the entirety of the growth in our equity has been a byproduct of unexpected profits owing to near record water conditions over the last several years.

Equity is not cash. This is essential to understand. Equity is not a store of cash that we can use to mitigate rate increases when bad things happen. The only cushion to absorb unforeseen events and risk without having to raise rates even more and/or borrow yet more money is having rates at sufficient levels where your generating income and cash flow. And as we make clear, the old plan with its 3.95 percent rate path comes nowhere near close to doing this for us.

Without this cushion when adverse events occur, the only choices available are to increase rates, potentially a lot, or borrow more money. We should not and cannot as a planning matter knowingly put ourselves in that position.

Slide 63. I've covered a lot of this slide, but really the only path we have to create the reserves we need in the form of expectations of income and positive cash flow is through higher levels of rate increases. If we do this, then things should go -- and then things should go better than planned or risks not come to fruition, by reducing our debt we will have enabled a larger range of attractive options.

Rates will be more stable and predictable. Rates won't need to be immediately -- respond to negative events. Longer term rates may even be able to go down. If our concern is the long-term health of our customers and the economy, and it should be, what we have proposed in our plan is the right path.

Finally, we need to keep emphasizing that we have to start now to get ourselves on the right trajectory. With the full benefit of hindsight, Manitoba Hydro should have acted sooner in asking for different rates. Let's not make that mistake again. We need to start being more defensive. We can no longer rely on hope as our planning criteria.

In this hearing we are talking of approving one (1) rate increase, at most two (2), I think, if the Board wishes to revisit last summer's interim rate; fully understanding there's the interim -- the previous interim rate but we're -- we're really talking about 2018.

And we need that to get us on the right path. We do need a commitment to restoring our balance sheet but the exact path really can't be known today. It can be adjusted going forward as circumstances warrant. But what is for sure, if something goes wrong in our plan and let's be clear, there are plenty of risks in the plan, we are not going to be able to go back in time to revisit today's choices.

Slide 65. I think we may make your timeline, Mr. Chair. I'm working on it. We wanted to touch on a bit of history. The reason we do this is that informs a lot of the decisions we have in front of us and the risks and realities, we have to come to terms with. And so the question -- I know people ask us: How did we get here?

First off, electricity export prices collapsed after 2008. Export sales were and still are a major credit to the total cost of domestic electricity that are borne by domestic ratepayers. The value we're getting for our excess water has diminished substantially and really has remained, you know, frustratingly stagnant at lower price levels.

An unprecedented streak of above-average water has obscured the damage that these lower export prices have -- have caused. Domestic rates have never properly adjusted to the decline in the export business which unchecked is going to expose a huge issue should water levels simply normalized or be below average. As a result, we missed a great opportunity to add to our reserves and avoid more debt by taking advantage of many, many years of excellent water conditions which should have been used to boost net income.

As we discussed our outlook for growth in Manitoba consumption has dropped significantly. Being in the electricity business is expensive. A lot more expensive than it used to be. By only allowing for effectively net zero income or low income levels, we've been recovering in rates based upon the historical cost of our assets, the bulk of which are quite old but we have to sustain and enhance these assets in cur -- current dollars. The gap as Jamie has talked about is a couple hundred million dollars a year.

The economics and business case for Keeyask has eroded. Many of the risks previously exhaustively reviewed have come to present themselves; lower export prices, lower load growth, and higher construction costs. Keeyask is now going to be a drag on net income well into the 2030s, if not longer.

Bipole III is an enormous necessary asset for system reliability but its cost is one which are old financial plan did not properly allow for.

Slide 66, I'll turn it over to Jamie.

THE VICE-CHAIRPERSON: Sorry, Mr. Shepherd, can I just -- it must be getting late in the day, can you just go over that point again about, you didn't take advantage of high water conditions by making contributions to reserves. How could you, in fact, have done that differently?

MR. KELVIN SHEPHERD: Yes, well, if you go back and we've -- we've mentioned this for -- we've had 13 -- or we're into our 14th year potentially of above-average water conditions. If those had been treated as an opportunity to essentially add to net income, in other words, if we had raised domestic rates even slightly during that timeframe and used that -- call that windfall of excess water to lower our debt or build equity, depending on how you want to perceive it, two (2) things would've happened. We would be in a stronger position financially and rates -- domestic rates would have been increased more appropriately over the last decade than they have been.

Instead, I think our target of having a very modest net income or even zero net income and using those above-average water conditions as a way to -- to achieve that, it's a -- it's a lost opportunity. It's unfortunate because you can't go back, but that's the point I was trying to make.

THE CHAIRPERSON: Mr. Shepherd, going back to your earlier point, if your starting point is 4 percent and everything falls in to that, isn't that -- isn't that the trigger? If your starting point is that we're not going to have interest rates more than 4 percent, then the -- then the excess water is sort of a blessing.

MR. KELVIN SHEPHERD: Yes, I -- Mr. Chair, so, you know, my comment that really coming out of the decision to go ahead with these major projects, there is a decision that rates could not increase more than 4 percent, that is a limiting factor.

THE CHAIRPERSON: Yes.

MR. KELVIN SHEPHERD: But I would argue, if you go back further than that and go back to the ten (10) years before that, there was substantial opportunity and lost opportunity by Manitoba Hydro to increase domestic rates only modestly and build a much stronger capital position before entering into those major capital projects.

It's a different view. I understand that, a different judgment and, quite frankly, I have 20/20 hindsight. But I would argue that it's a missed opportunity. You -- you can't get back those years where, you know, those higher export prices and higher water levels could have, you know, substantially strengthened the Company's balance sheet.

THE CHAIRPERSON: Thank you.

MR. JAMES MCCALLUM: Slide 66, please. These -- these will be just some quick slides to build on what Calvin describes.

This chart shows our net plant in service, our property, plant and equipment, less accumulated depreciation in the blue bars, and you can see building from about just under 8 billion in 2008. It's in the right axis you can see the -- the index there. Building to about 12 billion at last year end in March.

Meanwhile, our net income has dropped from $350 million in 2008, to $51 million in 2017 which is really 31 million if you take out that one time land sale gain which I believe you should. I note these -- the numbers in these chart -- in this chart have been adjusted to make an apples-to-apples comparison for the impact of accounting changes.

So even before we start talking about the major capital projects, our assets have gone up over 50 percent while our net income has fallen by 90 percent. This is what Calvin talked about in terms of that missed opportunity.

During this time every single year enjoyed above-average water conditions, and in the main, falling interest rates.

Slide 67. Calvin spoke to domestic rates not adjusting to the drop-off in our export market pricing. Here you can see that from 1994 to today, Manitoba Hydro's rates have at least until very recently tracked well behind inflation. The rate path -- this is all indexed to 100 in 1994, is the red line at the bottom. Manitoba's consumer price index is that middle blueline.

I think importantly an index of

construction costs, which is an important factor driving our cost structure, given our asset intensity, as of late been substantially outpacing inflation.

Slide 68, please. So interest rates have been dropping which have really saved the day up until now -- for now. Our situation with an additional 3 or 4 percent per year of interest expense would be particularly dire. We would be wilfully ignoring history and, in my view, common sense to at least not factor in the possibility that interest rates can go up.

Slide 69. Even with the declining interest rates, as Mr. Bowman points out in his evidence, which we've reproduced here, our cost of debt, interest and the debt guarantee fee, is increasing at a rate substantially greater than inflation and it just takes off as these major projects conclude and the interest expense on Bipole III and Keeyask enter our income statement.

Notwithstanding lower interest rates, we're seeing a near tripling of interest cost per kilowatt hour of load. So the proportion of each kilowatt hour rate being dedicated to interest costs is really exploding and, again, this is at a time when interest rates sits at levels not seen since the Great

Depression.

Slide 70. Back to NFAT and past plans blows a chart of net costs, being all of the costs on the income statement less export revenues and per kilowatt hour of domestic load. As you can see by the red dotted line, our current outlook and using the 3.95 percent rate plan, leads us to a net caught -- cost position per kilowatt hour and our rates are charged -- well, in part in kilowatt hours, it is far above what we projected under MH14 or MH15.

Probably of more concern is we are on a path that will take us from just over $0.06 cents per kilowatt hour this year to over $0.10 by 2024 when Keeyask is fully on stream. So we're talking about a 65 percent increase in net unit costs.

The 3.95 percent rate plan produces a 30 percent increase in rates over that time. So while our unit cost goes up 65 percent, our rates are going up 30 percent. This doesn't work.

Slide 71. Looking further at net cost versus rates -- and this is another index chart dating back to 2000 as a base of 100. You can see that our rates, and that's the dotted line, have increased at a much lower pace than our net unit costs from 2000 to 2017; that's part of our problem today. Today's rates haven't kept pace with the increasing net cost of the operation. This is what we mean when we say we don't believe that the -- the -- the current ratepayers is paying for the full cost of the system.

In fact, last week, Moody's released a new report on Manitoba Hydro wherein they state:

"While rate increases are nominally set on a cost-of-service basis rate increases in recent years have clearly not kept up with the costs, as evidenced by ongoing week financial metrics." closed quote.

Slide 72. This chart extends this analysis to look at the future. The dotted lines are two (2) alternate rate plans. Our proposed financial plan and the 3.95 percent plan beneath it. The dark solid line is the progression of net costs under our plan while above it is the same under the 3.95 percent plan.

So the 3.95 percent plan would see us not closing this gap between the progression of costs and rates, but rather widening it. Our plan doesn't close the gap either, but it at least keeps it from widening and in doing so, funds a reduction of debt that allows us a significantly higher probability of lower and more stable rates in the long run.

MR. KELVIN SHEPHERD: Were nearly at the end. We did want to talk to some key concerns. I've heard these from customers, employees and other stakeholders. I somewhat joke that I think that -- Free Press, I can't go to the Co-op without running for -- down the aisles with my groceries so.

Certainly people are interested in this and -- and I've heard these concerns. You know, first people often believe that because Manitoba Hydro makes a positive net income, 33 million, 37 million, 30 million, take your -- take your pick, things are fine and no rate increases are warranted.

We've talked extensively today about why that is just not the case and why substantially higher levels of net income are absolutely required to address our increasing levels of debt and provides sufficient cash to meet operating requirements.

Some stakeholders will say that rates must be kept low. They're opposed to the idea of rate increases probably including the previous plans 3.95 percent increases, which by the way, results in even higher rates over the longer term than our new plan would provide for.

It's a fact that rate increases are

needed to support Manitoba Hydro's debt. I believe our economy and our customers are better served by a realistic plan that creates longer-term certainty and stability. Some stakeholders believe that stopping Bipole III and Keeyask would solve the problem and reduce or eliminate the need for rate increases. Together with the Manitoba Hydro Electric Board, we examined potential options; stopping or delaying these projects. And I can tell you that those courses of actions are worse economically and would result in huge costs without any functioning assets able to deliver operational benefits or, in the case, of Keeyask incremental revenues.

Slide 75. It's common for people to tell me that Hydro just has too many people, too much management, we should cut our costs and not raise rates. As I've previous outlined we're taking action in costs and that includes streamlining the company, reducing executive management, accelerating staffing reductions. However, I must also ensure this company can deliver on its mandate as safe, reliable energy service for Manitobans. It takes people, operating expenditures and sustainment capital to do that.

Fundamentally, this is not an operating problem. It's a capital structure -- structure and debt level issue that can only be addressed by taking action to generate enough net income over time to reduce the amount of peak debt and provide the required cash flow and net income to restore Hydro's balance sheet to a more sustainable level.

Some people believe that if you just raise the rates over a longer period of time it has less impact. I don't believe that. I don't think the numbers support that. Taking longer to address the current issues Manitoba faces results in higher rates over the longer term, and exposes the Utility and its customers to a great deal more risk for a longer time frame.

You'll hear from Intervenors, individual customers and other organizations that low income customers cannot afford the proposed rate increase, and I empathize with these customers and groups. I know from personal experience there are many families who live with less than adequate resources, many individual groups and communities that suffer from poverty. I've been to many First Nations communities. I've met with the leaders and community members. I've listened to the Elders. I know there is a real problem, a real issue and that all of us should be embarrassed and perhaps even ashamed at the living conditions that some Manitobans are in.

Manitoba Hydro does many things to help people in these situations, however, fundamentally, I believe the root cause of this problem is social policy and inadequate income. It's not directly electricity rates.

Under the legislation governing Manitoba Hydro, we're not allowed to set rates that differentiate by geography or density of population. This insures that a residential customer in Brandon pays the same cost per kilowatt hour as one in Winnipeg, one in a rural residence or one living in Thompson. I understand that a customer pays bills, not rates and the electricity bill for each customer is affected by whether they have access to lower cost gas heat, a home with better insulation, and whether there are two (2) people living in the home or three (3) generations.

Manitoba Hydro has engaged with stakeholders and bill affordability studies and will continue to work with customers, organizations and governments. However, the issue of low income, and customer's ability to pay is not something that I think can be fully resolved during this rate setting process. Jamie...?

MR. JAMES MCCALLUM: So we're going to hear lots, I think, we already have about how we should change the projections to justify lower rate increases. We will hear points of view that Manitoba Hydro has been too pessimistic in our forecasts; notwithstanding, having shown that over the last few successive forecasts we've appeared too optimistic in our views of export prices and low growth and capital needs on these major projects.

Other ideas will be that we should use robust use of regulatory deferral accounts to take cost out of the income statement and move it on to the balance sheet. The reality is that projections are just that. They're our best view today of the future, but it's no guarantee. And we've run out of latitude to be wrong on this stuff.

Making arbitrary changes to a forecast in support of lower rate increases is false security. It's not a good choice. Ultimately, as it comes to the test years or the years just thereafter more aggressive growth assumptions, if that's what one wishes to make, or better improvement in export prices, the signing of another long term contract, you can put those into the model, that doesn't make them happen.

And -- and some of these assumptions candidly I think we're already starting to see signs of worry that the forecast that forms the backbone of our evidence here is starting to leak a bit of oil. We fell far short of our export price forecasts for this year.

We're starting to see short-term interest rates creep up a little bit, and we've seen a project that represented 20 percent of our gross -- gross -- growth in gross net load -- growth -- pardon me, it's been a long day, growth in gross load over the next ten (10) years fall to the wayside.

So we'll also hear that there's views that the credit markets are relaxed and that Manitoba's rating and borrowing costs and thus Hydro's are not at risk. I don't think you can make that conclusion that credit markets aren't worried about Manitoba Hydro. When I read the global credit rating agency Moody's, their statement in a report last week, referring to our recent credit metrics and the outlook for them, these financial metrics are among the weakest, if not the weakest, of any of Manitoba Hydro's peers; including vertically integrated, provincially owned Crown corporations in Canada.

The only thing really open to debate is

how worried investors and rating agencies are and when they will start acting on it. In other words, how close are we to the point where confidence in all of us erodes? I can tell you from considerable experience in the capital markets that sometimes when this happens it doesn't come in the form of a slow trickle. It takes the form of a stampede and my question would be: Why flirt with that? And regardless of the credit markets and rating agencies and that whole discussion, our vulnerability is to the overall rate increase -- the overall interest rate increases, no matter what their costs.

Taking steps to minimize our risk to the province is simply honouring our deal with the taxpayer and acting in our own and our customers best interest. We'll hear we can cut our sustaining capital. We've got an aging system and a mandate to uphold. We have a lot of work ahead of us, particularly on the distribution side of the business.

To suggest they're material savings to be had in our sustaining capital, we think is misinformed, shortsighted and risky. But even so and not to burst Mr. Hacault's bubble from this morning who told us there was a considerable amount of positive impact that would come from this, in over ten

(10) years, where if we were to take $100 million out of that spending which would be a really, really big deal when you work it through and understanding where that spending goes and how much goes to things that -- you know, replacing things as they fall down. There's not a lot of discretion around that.

But even so, taking $100 million out probably has an impact of about .3 percent to the rate increases we're asking for. It really -- a hundred million dollars in a 25 or $30 billion balance sheet just doesn't move the needle. I'm not trying to diminish that we should be doing everything we could and every penny counts but we need to be realistic about arbitrarily adjusting the model.

Slide 77, please. So we talked about that there will be this idea that we should use a much more aggressive debt management strategy concurrent with what we believe we've shown as an unworkable 3.95 percent rate plan. Old plans also had limited net income for the next ten (10) years, and thus more appropriate debt terming.

We didn't hear a lot of protests from the Intervenors then. We think this is another example of cherry picking, a savings opportunity for today while parking yet more burden on tomorrow's generation. This is another example of just change the model thinking that completely ignores the consequences. Back on change the model, yet again, we'll be attacked that we've been too conservative. As noted, major elements of our growth and capital forecast have proven optimistic.

I think I've spoken about more of this already, but we're 10 or 20 percent under plan on our opportunity export pricing so far this year, which tells you that when you're forecasting upward sloping export prices on the opportunity side, you're way behind where you think you're going to get next year.

At the end of the day hope's not a plan. For now, we are asking for a first step in a plan; is a step that is amply justified by the inadequacy of today's rates, our huge cash flow shortfall and the imminent in service of Bipole III.

We would obviously love to see better growth, higher export prices and lower interest rates than are in our forecast. Those forecasts were prepared with a lot of care and outside expert -- expertise, but they're telling us that right -- but that's what they're telling us right now, is -- is the outlook we've shown here.

We'll continue to work diligently to

make the best choices we can with scarce capital and to bring our major projects into service ahead of time and ahead of budget, but we shouldn't make this year's rate choice, assuming all of that happening, because when it doesn't we'll be a far worse place.

Successive forecast after successive forecast have been too optimistic on the major growth and capital drivers of our business. We have to be more defensive in how we approach rates.

Finally, we'll hear that this isn't fair to the current generation of ratepayers. Well it most certainly isn't fair to park an overinflated and unsustainable debt burden on the next generation. Moreover, it's clear that rates haven't kept up with the cost of the system and effectively no material contribution to reserves have been made in almost ten (10) years. So if anyone has been treated unfairly it has not been today's ratepayer.

MR. KELVIN SHEPHERD: Slide 79. This has been a long presentation this afternoon and I want to thank the panel, Intervenors, and others in attendance or watching remotely for your attention and your patience.

In closing, I believe we have demonstrated that Manitoba Hydro's business outlook has deteriorated significantly since the last full rate hearing. Manitoba Hydro's previous financial plan was inadequate and risky, and has failed. As a result, Manitoba Hydro's financial condition is unsustainable, with debt levels growing out of proportion to the revenues required to support them.

Manitoba Hydro has been borrowing money to make its operating and debt payments and is in a cash flow deficit. So a new plan is required and is being presented to the Board during this rate application. We believe taking action now, and having a realistic plan to restore Manitoba Hydro's financial strength and return to self-supporting status over ten (10) years is absolutely required.

However, the Board is only being asked to approve the current rate request which by itself is inadequate to fully address the current cash deficiency and the costs of Bipole III, which will go into service within a year.

In my view, the evidence presented demonstrates that the Board cannot be wrong in approving the rate increase Manitoba's requesting, and that by doing so it will create a much higher likelihood of stable and lower rates over the longer term.

Thank you once again and that concludes our prepared remarks and we're available for questions.

THE CHAIRPERSON: Thank you very much. You know what, we're going to take ten (10) minutes and then we'll -- then we'll start with cross-examination. Thank you.

--- Upon recessing at 4:08 p.m.
--- Upon resuming at 4:23 p.m.

THE CHAIRPERSON: If we could -- if we could start, Mr. Peters.

CROSS-EXAMINATION BY MR. BOB PETERS:

MR. BOB PETERS: Yes, thank you, Mr. Chair, Board members. Good afternoon, Mr. Shepherd, Mr. McCallum.

I take it, gentlemen, this will be your first time testifo -- testifying before the Public Utilities Board?

MR. KELVIN SHEPHERD: Yes, it is.

MR. BOB PETERS: Welcome. And on a few preliminary matters, just so that we can be clear -- and I think my preliminary matters may spill over to other counsel -- so we understand, Mr. McCallum, you will also appear on the next panel of Manitoba Hydro, which we call the Revenue Requirement Panel.

Would that be correct?

MR. JAMES MCCALLUM: Yes.

MR. BOB PETERS: All right. And, Mr. Shepherd, you will not be on any further witness panels.

MR. KELVIN SHEPHERD: No, I do not plan to be.

MR. BOB PETERS: All right. So while I may direct most of my initial questions to you, Mr. Shepherd, I'm sure, Mr. McCallum, there'll be opportunity for you as well.

And before I begin, I'd like to remind both of you that -- and also your counsel, that the questions that are asked by Board members or by their counsel are not intended to elicit responses that would place information that Hydro believes is confidential or commercially sensitive on the public record.

Would you accept that?

MR. KELVIN SHEPHERD: Yes, thank you.

MR. BOB PETERS: And for those who are observing this from afar and aren't familiar with the procedure, Mr. Shepherd, Manitoba Hydro has filed I'll say every piece of information that's been requested of them from the Public Utilities Board and others.

Is that your understanding?

MR. KELVIN SHEPHERD: That's my understanding, yes.

MR. BOB PETERS: And, sir, when some of that information is considered by Manitoba Hydro to be confidential and Manitoba Hydro doesn't want it on the public record, Manitoba Hydro has still filed it with the Public Utilities Board and has asked the Board to keep it confidential, correct?

MR. KELVIN SHEPHERD: Yeah, that's my understanding of the process.

MR. BOB PETERS: And, sir, that -- the reasons ,just for those again who might be from afar, that Manitoba Hydro is asking that materials be kept confidential and not put on the public record, can you just give a couple of examples that would explain that.

MR. KELVIN SHEPHERD: Sure. I think a couple of examples, one (1) would be where -- potentially, it would put proprietary information that was provided to us as part of a proposal or a project from third party on the public record, and we have a confidentiality or non-disclosure obligation because it would be commercially sensitive for that vendor. So that might be one (1) example.

Another very pertinent one, is that clearly we have to negotiate export contracts and arrangements and -- and those contracts are, you know, with different utilities, different customers, and have different terms. And so while were perfectly happy to talk about aggregate information, the details of individual arrangements are commercially sensitive.

MR. BOB PETERS: Thank you for that, Mr. Shepherd. Should there be responses that Hydro wants to provide to the Board that do contain confidential or commercially sensitive information, your counsel and you are aware of the process for that, and that would include even an -- in-camera hearings before this Board. And so that would be the route to follow if that was your intention.

Would that be acceptable?

MR. KELVIN SHEPHERD: Yes, I believe so.

MR. BOB PETERS: All right. And, however, you did -- you did, perhaps, hit on it that to promote the maximum transparency in the public hearing, my request is that you would attempt to first respond using information that is not considered confidential by Manitoba Hydro. And that, by way of example, could be the aggregated information that you indicated without disclosing the components of the aggregate?

MR. KELVIN SHEPHERD: Yes, we will do our best to -- to answer the question. And if we believe it can't be answered without getting into confidential matters, we'll indicate that.

MR. BOB PETERS: Thank you, sir. And as was noted in the Chair's opening comments, the Board has direction from the Ombudsman's office, related to the information that is publicly disseminated. So my questions of Manitoba Hydro do not seek to disaggregate any of that information, such that an individual customer could be identified.

Would that be acceptable?

MR. KELVIN SHEPHERD: Yes.

MR. BOB PETERS: All right. And, Mr. Chair, Board members, and Manitoba Hydro witnesses, ladies and gentlemen, in an effort to be efficient, we've assembled various documents into what we call Board Counsel's Book of Documents, and the first four have been filed on the -- on the Board's website. They are marked as exhibit PUB-42-1 through 42-4.

So, to the greatest extent possible, my questions -- I'll refer to those exhibits and the documents are there, and -- and I'm -- in a form that'll be available for those who are following the transcripts, as well as online.

Mr. Shepherd, if we could then begin, you've indicated in your opening comments that your appointment to Manitoba Hydro as president and CEO may have been announced in November of 2015, but you started in December of 20 -- 2016?

MR. KELVIN SHEPHERD: December 7th, to be exact. Pearl Harbor Day.

MR. BOB PETERS: And you're responsible for leading the executive management team and overseeing all strategic, operational, and financial facets of Manitoba Hydro?

MR. KELVIN SHEPHERD: Yes, that's true.

MR. BOB PETERS: And you report to the Manitoba Hydro Board of Directors?

MR. KELVIN SHEPHERD: Yes.

MR. BOB PETERS: And, Mr. McCallum, before I turn to you, sir -- Mr. Shepherd I may have misspoke. Mr. Shepherd, you indicated that you had celebrated your second anniversary, I think. Or maybe

it was this week with Manitoba --
MR. KELVIN SHEPHERD: This week.
MR. BOB PETERS: It's tomorrow -- or no, it's -- you said the 7th, so it's this week.
So I may have misspoke. Your -- your starting date was 2015 with the Corporation?
MR. KELVIN SHEPHERD: December 7th, 2015, yes.
MR. BOB PETERS: All right. Thank you, sir.
And, Mr. McCallum, your starting date was in -- also in 2016 or '15?
MR. JAMES MCCALLUM: It was in 2016. I'm not as good as Mr. Shepherd with the exact dates, but it was the Tuesday after Labour Day, September 2016.
MR. BOB PETERS: And can you -- you're the Vice-President Finance and Strategy Officer, according to the materials you provided, correct?
MR. JAMES MCCALLUM: My formal title is Chief Finance and Strategy Officer, but I am a Vice-President of the Corporation.
MR. BOB PETERS: And can you explain briefly what does the Chief Strategy Officer do for Manitoba Hydro.

MR. JAMES MCCALLUM: Well, the Chief Finance and Strategy Officer has a number of functions. I am responsible with my colleagues for the Corporate Control Group, which does financial reporting and management reporting. I have responsibility for the treasury function, where we raise the debt and manage -- manage our cash position. I have responsibility for internal audit. I have responsibility for rates and regulatory affairs. And I am responsible for a unit called Strategic Business Integration, where we combine some of our corporate level asset management initiatives along with the financial and strategic planning.

MR. BOB PETERS: I take from that answer, that strategy implies more than just one (1) approach to many issues. And so in coming up with strategies, such as for rate increases, you have to consider a number of options?

MR. JAMES MCCALLUM: I'd say that's a fair statement.

MR. BOB PETERS: And was there anybody doing this before you assumed that position, sir?

MR. JAMES MCCALLUM: Well, per -- perhaps I'll have to -- I'll take an attempt, but if I miss the mark I'm sure you'll -- you'll ask a clarifying question. But I would differentiate perhaps between the corporate strategy which is an area I'm -- I'm with the CEO responsible for, and strategies around a financial plan, and -- and really is, you know, one (1) element of that, a rate increase strategy.

But there have always been people at Manitoba Hydro who have been responsible for all of these things. They haven't necessarily rolled up into the same vice-president's office, but -- but there have always people responsible for these things. Does -- does that help?

MR. BOB PETERS: Thank you, yes. I'd like to turn to the PUB Exhibit 42-1, which is the first book of documents, over to page 5, if I could.

(BRIEF PAUSE)

MR. BOB PETERS: Thank you. And specifically on this page we will scroll down and see, starting on lines 23, that Manitoba Hydro is first asking that the three three (33) -- three point three six (3.36) interim rate accre -- increase that was granted August 1st of 2016 be approved as final, with no changes in that amount.

Have I got that correct?

MR. KELVIN SHEPHERD: Yes, that's correct.

MR. BOB PETERS: And while Vice-Chair Kapitany asked about that matter, Hydro acknowledges that the Board can review it, and the Board can make decisions whether it was appropriate, whether it was too much or too little and adjusting accordingly?

MR. KELVIN SHEPHERD: Yes, that's our understanding.

MR. BOB PETERS: All right. And turning to the point number 2, Manitoba Hydro asked for approval on an interim basis of 7.9 percent, effective August 1st of 2017.

And we've already heard that the Board awarded Manitoba Hydro 3.36 percent, effective August 1st of 2017, correct?

MR. KELVIN SHEPHERD: Yes.

MR. BOB PETERS: And I take it, Mr. Shepherd, from your exchange with the Vice-Chair, that Manitoba Hydro is not asking for any changes to the amount of 3.36 percent that was awarded that date?

MR. KELVIN SHEPHERD: No, we've chosen to focus on the go-forward rate application, although we understand the Board can ask to confirm the interim rate and can revisit if they want.

MR. BOB PETERS: On page -- we -- we've got it in a number of places in your presentation, Mr. Shepherd, but on that Tab 5, page 68 of the Board counsel book of documents, we see that the revised rate plan that Manitoba Hydro has put before the Board includes the 7.9 percent, extending for six (6) years, followed by the four point five four (4.54) for one (1) year and 2 percent thereafter.

Have I got that right?

MR. KELVIN SHEPHERD: Yes, that's correct.

MR. BOB PETERS: And so what Manitoba Hydro did was they mathematically calculated what the impact of not getting the 7.9 percent rate increase was in the first year that it was requested, and then in essence added it onto the back-end.

MR. KELVIN SHEPHERD: Yes. Essentially, we flowed that through the financial model.

MR. BOB PETERS: And while Mr. McCallum warned us with pages of numbers, and there's unfortunately a lot of them -- but if we turn to page 179 of Board counsel's book of documents, Exhibit 42-1. The panel will have Manitoba Hydro's Integrated

Financial Forecast, IFF as we abbreviate it, was number 16, or for the year 2016. And this one contains Manitoba Hydro's update, and it also includes the impact of the 3.36 percent interim award awarded on August the 1st of 2017, correct?

MR. KELVIN SHEPHERD: Yes, that's true. And if we go down to the rate increase line which is near the bottom of the page, and it says, "additional domestic revenue," and then underneath that it says, "percent increase," we see under the 2018 column that the 3.36 percent number is embedded. And that now is being accepted by Manitoba Hydro and allowing the Board to determine whether that was appropriate or not?

MR. KELVIN SHEPHERD: Yes. So though -- I think I -- I would just add that we did receive instruction from the -- from the Board to update the forecast based upon assuming the interim, and so we had to make a decision about how to incorporate that into the forecast.

And so we've chosen to incorporate it this way by keeping basically our overall ten (10) year plan intact and by including the thee point three six (3.36), as we were requested to do so by the Board. That's why we call it MH16 Update With

Interim.

MR. BOB PETERS: And on that same page, 179, of Exhibit 42-1, we see near the top of the page under the column of 2018, there's additional domestic revenue of $37 million standing out.

Do you notice that?

MR. KELVIN SHEPHERD: Yes.

MR. BOB PETERS: That represents the additional revenue in Manitoba Hydro's fiscal 2018 year that will be generated from the 3.36 percent rate increase.

Is that correct?

MR. JAMES MCCALLUM: It -- it's mostly correct. That's -- that's certainly the additional rate receipts that will come into Manitoba Hydro as a consequence. But due to the direction of the Board to defer the new revenue to the Bipole III reserve account, that won't actually flow through to revenue as -- as an accounting term.

MR. BOB PETERS: All right. We'll -- we'll come to that. And probably more than a nuance, but we'll deal with that, Mr. McCallum, in a -- probably tomorrow.

And, Mr. Shepherd, looking on that same page 179, we look out and we see the last two (2) items under 2026 and 2027, we go down to the rate increase line, and we see the 2 percent number, correct?

MR. KELVIN SHEPHERD: That's correct.

MR. BOB PETERS: Is that a promise from Manitoba Hydro that it'll be 2 percent in those fiscal years?

MR. KELVIN SHEPHERD: No, it's not a promise. It's simply an estimate of what we believe the inflationary increases would approximate. But a plan is not a promise; a plan is simply a forecast.

MR. BOB PETERS: And it's not even -- in terms of a plan, it's -- it's -- the calculation of this IFF was set, so that it recovered your ratio, a debt ratio by 2027 -- I guess, more accurately an equity ratio by 2027, and the rate increase numbers just fell out of the calculations.

Would that be an acceptable way to describe it?

MR. KELVIN SHEPHERD: I think so. You could choose different rate profiles over ten (10) years to get to the same -- same point. But because we had originally proposed five (5) years of seven point nine (7.9), when we updated this with the interim three point three six (3.36), we chose to extend out the seven point nine (7.9) additional years, versus, you know, trying to come up with a totally different rate proposal.

MR. BOB PETERS: And, Mr. Shepherd, if we turn one (1) page to page 180, and we're looking down at the bottom of that page in the right-hand corner, we see that, under the equity percentage line, Manitoba Hydro expects by 2036, some twenty (20) years hence, to have a 64 degree -- 64 percent equity struc -- in their structure, correct?

MR. KELVIN SHEPHERD: I probably -- I'll answer, you know, briefly and then I'll turn it over to Jamie for a bit more elaboration here.

But I would say that our focus has been predominantly on achieving our ten (10) year plan. We made assumptions around an ongoing 2 percent level of annual rate increase, on the basis of sort of it being inflationary rate increases.

But I would not interpret the 2036 time-frame as a -- as an objective. It's simply an outcome of the model.

MR. JAMES MCCALLUM: I -- I would both echo that in and -- and just reiterate that the focus was on the next ten (10) years. And in fact, in evidence and -- and I can't, off the top of my head, quote the specific Round 1 Information Request, although it was from the Public Utilities Board, asked us if this was our -- our goal, and it is not. We do not have a goal to build 64 percent equity structure.

MR. BOB PETERS: I hear that answer, Mr. McCallum, that the goal is 25 percent, and at that point in time you'll take stock of where things are?

MR. JAMES MCCALLUM: I think that's fairly put.

MR. BOB PETERS: And for the Board panel members who are new to looking at these integrated financial forecasts and these are sheets of numbers, Mr. McCallum and Mr. Shepherd, would it be appropriate to call the Integrated Financial Forecast as Manitoba Hydro's master planning tool, which is a culmination of all internal forecasts and assumptions?

MR. KELVIN SHEPHERD: In effect that's what it does. It brings together a number of different key forecasts, some of which are operational such as water-flow assumptions, some which are financial. It brings them together into an integrated forecast.

MR. BOB PETERS: Okay, let's turn then if we could gentleman to the -- the last of the test years, where the rate -- the years in which rate increases are being sought. And we see way back on page 5 again that Manitoba Hydro is seeking 7.9 percent increase for all components of rates for all customer classes, effective April 1st, 2018, correct?

MR. KELVIN SHEPHERD: Yes.

MR. BOB PETERS: Why April 1st of 2018?

MR. KELVIN SHEPHERD: Jamie, do you want to elaborate on the timing?

MR. JAMES MCCALLUM: I don't think there's necessarily any magic in April 1st, the 2018, other than the -- the dark magic, I guess, of compounding. Insofar as the rate increase comes in at a later date, it is less effective at generating the cash flow we need.

But April 1st, I think, you know, for practical purposes aligns with the beginning of our fiscal year.

MR. BOB PETERS: Do I take from that answer, Mr. McCallum, that a rate increase in the calendar year is important because of compounding, in the earlier you get it, the more opportunity for additional revenues in the year in which you get it?

MR. JAMES MCCALLUM: That's correct.

MR. BOB PETERS: And, from Manitoba

Hydro's perspective, what period of time should elapse between rate increases to your consumers?

MR. KELVIN SHEPHERD: Perhaps I can take a crack at that. I know historically, I think rate increases have typically been on an annual basis. Again, when we brought our request forward, we were clearly focused on getting back on a -- a track to achieve positive cash flow. One (1) of the other factors we are quite cognizant of was the fact that Bipole III would be coming into service.

And so that's why we've -- we've identified two (2) rate increases in the space of a year. And subsequently we go back to the annual rate profile.

MR. BOB PETERS: Does that annual profile start each year on the commencement of the fiscal year, Mr. Shepherd?

MR. JAMES MCCALLUM: Yes, that's the assumption that's in the financial model.

MR. BOB PETERS: Mr. McCallum, just to pick up on that there's no magic comment that you made -- I actually wrote that down in my notes -- the 7.9 percent is -- is the -- and this isn't meant pejoratively -- but is the magic in that number, optically it's less than 8 percent? That's --

that's...

MR. JAMES MCCALLUM: No. It -- it's that's not where it comes from. When you -- when you look back to our original financial plan as -- as submitted in the May, we had five (5) years of 7.9 percent rate increases. And what we were really talking about doing there was doubling the rate of increases for a much shorter period of time in order to accelerate rate increases to produce the revenue and cash to -- to deal with what we regard is a difficult fiscal situation.

So it's a doubling of the past 3.95 percent.

MR. BOB PETERS: And mathematically, that 7.9 percent annual rate increase approximates 125 or $127 million of additional revenue if you have it for the full twelve (12) months? If you take that subject to check, and your counsel will tell you that when I put numbers on the record it is wise to check them.

MR. JAMES MCCALLUM: Yeah, that -- I just wanted to turn to the model which I lost the -- the page on. But -- but that sounds directionally correct; that would be built over and on top of the 3.36 percent that was a put into rates under Order

80/17.

MR. BOB PETERS: I'm not sure you'll get the math on page 179 that you were looking for, Mr. McCallum, but I -- we'll -- we'll proceed on that basis and if it changes you'll tell me.

And so if we do the math further, that 7.9 percent, or $127 million annually for a full 12 months, it works out to approximately $16 million per percentage point of the rate increase that Manitoba Hydro is seeking.

MR. JAMES MCCALLUM: I'm sorry, Mr. Peters, can you repeat the question.

MR. BOB PETERS: You were checking my math, weren't you?

MR. JAMES MCCALLUM: I was -- I was on the latter question, I admit it.

MR. BOB PETERS: Mr. McCallum, the $127 million annually works out to about $16 million per percentage point of the 7.9 percent that you're seeking?

MR. JAMES MCCALLUM: That -- that sounds about right. $127 million divided by 8 percent would be about that per percentage point.

MR. BOB PETERS: And just so that we're all clear in this room and those watching from afar, Manitoba Hydro's request for rate increases back on page 179, it stops at, in this hearing, with the 7.9 percent rate increase in your fiscal 2019 year.

MR. JAMES MCCALLUM: That's correct. Our fiscal 2019 year begins on April the 1st of 2018. Perhaps at another time we can talk about moving to a calendar year-end, because I think it would be easier.

But that's right, it's April 1st, 2018, which is the last of the rate increases on the agenda here.

MR. BOB PETERS: Is Manitoba Hydro required to use the province's fiscal year?

MR. JAMES MCCALLUM: We are. It'll be a short discussion.

MR. BOB PETERS: And so, Mr. Shepherd, when we look on page 179 at the rate increases in the years 2020 and beyond, those are indicative rate increases they're not promises, is what I've heard you say already?

MR. KELVIN SHEPHERD: That's correct. They're provided to provide general direction and a plan.

MR. BOB PETERS: And that's -- this is Manitoba Hydro's current and most latest plan, is demonstrated on page 179?

MR. KELVIN SHEPHERD: I believe that's true. There are things that will change in subsequent forecasts, but this was the latest forecast and the best at the time of filing.

MR. BOB PETERS: Maybe I'll jump there now, although I -- I was going to get to it. But when you say you -- Manitoba Hydro has already provided this Board with its second quarter update, correct?

MR. KELVIN SHEPHERD: Yes, that's right.

MR. BOB PETERS: And this morning and -- this afternoon, I should say, in your presentation you provided the Board with revised estimates as to net income for 2018, correct?

MR. KELVIN SHEPHERD: Yeah. Updated as of the second-quarter report.

MR. BOB PETERS: All right. Are there any financial updated reports that Manitoba Hydro has that they haven't provided to the Public Utilities Board in this rate case?

MR. KELVIN SHEPHERD: Not to my knowledge. Jamie, could I ask you to confirm, perhaps, but...

MR. JAMES MCCALLUM: Well, we -- we're -- we're constantly in a process of -- of updating our financial information and the key inputs to the model. I -- I -- you know, I am not aware of anything that we haven't made the Board aware of in this process.

MR. BOB PETERS: The latest financial information that Manitoba Hydro has provided though, has been through the second-quarter report, correct?

MR. JAMES MCCALLUM: That's our latest outlook on the fiscal 2017/'18 results.

MR. BOB PETERS: Has Manitoba Hydro prepared a new integrated financial forecast based on the second-quarter results, and everything that's happened before that?

MR. JAMES MCCALLUM: No, we have not.

MR. BOB PETERS: That's not your intention?

MR. JAMES MCCALLUM: It is not our intention.

MR. BOB PETERS: Mr. Shepherd, while my colleague will cover the specific asset -- aspects with respect to Manitoba Hydro's rate panel, would this Board be correct in understanding that, in this General Rate Application, Manitoba Hydro is not proposing conservation rates?

(BRIEF PAUSE)

MR. KELVIN SHEPHERD: I just wanted to check. But no, I don't believe we are actually proposing to implement conservation rates.

MR. BOB PETERS: And, Mr. Shepherd, Manitoba Hydro is not proposing electric heat customer rates either?

MR. KELVIN SHEPHERD: No. I know there's been some discussion, but we're not proposing that.

MR. BOB PETERS: And Manitoba Hydro is not proposing bill affordability rates?

MR. KELVIN SHEPHERD: No, I do not believe we are proposing anything specific around bill affordability rates.

MR. BOB PETERS: And lastly, it's my understanding and I'll ask you to confirm, that Manitoba Hydro is not proposing any time-of-use rates for any of its customers in this application either?

MR. KELVIN SHEPHERD: No, we are not.

MR. BOB PETERS: All right. And would this Board be correct in understanding that Manitoba Hydro's motivation for not proposing conservation rates or electric heat rates or bill affordability rates or time-of-use rates is that Manitoba Hydro has determined that a 7.9 percent rate increase is high enough, and any of these other rate adjustments would result in some customers paying in excess of 7.9 percent?

MR. KELVIN SHEPHERD: Well, the details of rate design are complex, but that is certainly a factor that we -- that we discussed, yes.

MR. BOB PETERS: And when you say it's a factor -- maybe we'll leave it to -- to the other -- the rates panel to get the specifics, but from a policy perspective, should this Board understand that Manitoba Hydro has no appetite to look at new rate structures that I've mentioned, because that will cause some consumers rates to exceed the already 7.9 percent proposal?

MR. KELVIN SHEPHERD: Perhaps at a policy level, I can say that we did discuss a number of different things that come into play around rate design and we made a decision to seek a uniform 7.9 percent rate increase, understanding that some of these other, you know, rate options would necessarily, you know, differentiate rate increases and cause some increases to be higher and some lower.

And we felt during this hearing that the focus should be on the -- on the ten (10) financial plan and the 7.9 percent and -- and -- so we haven't moved forward with those other options. That doesn't mean those options are somehow off the table for future discussion but we simply did not propose for this hearing.

MR. BOB PETERS: But doesn't that mean, Mr. Shepherd, that those other options for conservation rates or electric heat rates or bill affordable rates or time of use rates are off the table so long as Manitoba Hydro is proposing a 7.9 percent rate plan?

MR. KELVIN SHEPHERD: No, I don't believe so. I think given all of the factors that we had going into this rate application, including timing, and some very significant issues on the table, we didn't feel it was the right time to propose those options.

But if you're suggesting they would be off the table for three (3), four (4), of five (5) years, I wouldn't agree with that. They -- they are future options.

MR. BOB PETERS: So Manitoba Hydro hasn't made a policy decision to put those on the back burner until the 7.9 percent has run its course?

MR. KELVIN SHEPHERD: No, we simply were not prepared to move ahead in this particular rate application given all the other things we had on our table at the time, but, there's no suggestion that those couldn't be considered in future rate hearings.

MR. BOB PETERS: All right, thank you. Mr. Shepherd, I took from your presentation today and I'd ask you to tell me if I'm correct in understanding your presentation as indicating that Manitoba Hydro has a capital problem not an operating problem?

MR. KELVIN SHEPHERD: Yes, I think fundamentally it's an issue around debt and our capital structure. Clearly, we are working on the operational part of our business. We're seeking efficiency. We're making operational reductions. And so there is work that -- that can be done and will be done there, but the fundamental underlying problem, in my view, is one (1) of the major capital expansion and the amount of debt that has been taken on not the operating part of the business per se.

MR. BOB PETERS: But bluntly, the capital problem is the Keeyask generating station?

MR. KELVIN SHEPHERD: I would say it's not just Keeyask, Bipole is $5 billion of the problem and has no revenue with it and Keeyask, although it's a -- a major capital expenditure at least does come with some incremental revenue. So it's the sum total of that expansion problem, and probably, more importantly, the reliance on debt to fund it entirely and the inability of rates to really -- current rates and rates prior to taking on the projects supporting that level of debt.

MR. BOB PETERS: And you don't disagree that Manitoba Hydro knew going into those projects that it was going to be debt funded?

MR. KELVIN SHEPHERD: Oh I think it's fairly obvious that that was part of the plan, yes.

MR. BOB PETERS: Would this Board be correct in understanding that Manitoba Hydro's current Board of Directors would not have approved the building of Keeyask if -- if this Board was consulted at the time that Keeyask was supposed to be constructed?

MR. KELVIN SHEPHERD: Well, I believe the chair of our board has publicly made that statement.

MR. BOB PETERS: And so Keeyask was started. Was it back in 2008 or 2009? Maybe subject to check, looking at capital expenditure --

MR. KELVIN SHEPHERD: I -- I would have to check the exact dates, but I know there were -- I mean, there's a good question as to when it starts because the consultation and licensing period probably started before that.

MR. BOB PETERS: And Mr. Shepherd, if I can take from your answer that the current Board of Directors of Manitoba Hydro would not have proceeded with Keeyask, can I also take that the current Board of Directors would have proceeded with the Bipole III?

MR. KELVIN SHEPHERD: I think it's safe to say after a pretty in-depth review, the current Board concluded that Bipole III is a required reliability project. They would have perhaps different views about aspects of the project; in particular, timing that it should have been completed in or the route -- route of the line, but I believe that they would concur that the project itself is important and essential.

MR. BOB PETERS: Can I take from that answer, sir, that the current Board of Directors would've approved the Bipole project probably even if they knew what the $5 billion of costs were going to be?

MR. KELVIN SHEPHERD: You know, I don't want to -- I don't want to put words into my board or the chair of the Board. I simply will tell you that they concluded after the review that Bipole was a project that was important, was required to ensure the reliability of the electrical system in Manitoba; was probably overdue, and therefore they believe that it's a project that needed to -- to go ahead and -- and they approved continuing with it.

MR. BOB PETERS: All right, thank you and I -- I respect you don't want to put words in your board's mouth and just understand that I am trying to put words into your mouth and you'll correct me if I'm -- if I'm wrong on that, sir.

Mr. Shepherd, while your current Board of Directors would not have proceeded with Keeyask, why as Manitoba Hydro's president and CEO in 2015 didn't you cancel Keeyask?

MR. KELVIN SHEPHERD: So let me -- let me give you a bit of perspective on that. So I mentioned I started with Manitoba Hydro in early December 2015. I was hired by the then Board that was in place and the chair that was in place. I had perhaps a week of spare time between my previous job; considering I was also chairing the United Way campaign at that point in time before I joined Hydro.

So I'd done some research prior to coming to them, but I think reading public information, public records only gets you so far. So some of the things I did when I came to the Company are the things that you would expect anybody to do. I received briefings and orientation from my executive team in I believe it was January. I actually went to Keeyask to visit the site; saw the -- the construction progress and -- and the status of it. I received briefings on both Keeyask and Bipole from the vice-president that was currently in charge of major projects at that time.

And I did that go through, not immediately, but certainly over the subsequent, you know, couple months a set of -- of examinations of the projects with the team where I asked what if questions, but I concluded fairly early on that the level of expenditure, the progress on the project, coupled with other factors which are very important. Our partnership agreement with our four (4) Keeyask Cree Nation partners, the export contracts that we had entered into with our US customers, all of these things really made Keeyask a project that would be very difficult and -- and, in my conclusion, really economically impossible to back out of at that point in time.

So I had concluded in early 2016, at least to my satisfaction having looked at a number of options, that the project would proceed. Now, I also understood fairly clearly that there were risks with the project. At that point in time, I would say that the risk of the cost escalation was simply that, a risk. It would not have been until much later in 2016 that some of the factors that lead to the Keeyask cost escalation would've become apparent to the project team or -- or to myself. But I certainly understood there was risk.

So I can tell you that my perspective fairly early on was the Keeyask was a project that was at a stage that it was really not viable to pause for any significant period of time, or to halt.

MR. BOB PETERS: That view that you had was shared by your then Manitoba Hydro Board of Directors?

MR. KELVIN SHEPHERD: Yes, I -- I believe the -- the Board at the time who did receive regular briefings on these projects and the status of the projects, certainly none of them, to my -- best of my recollection ever suggested that we should pause or halt Keeyask.

MR. BOB PETERS: So one (1) of the key drivers that I take from your presentation today, sir, that's behind the current rate increase and the trajectory of rate increases is the financing costs and the pending increases in the in-service costs of first Bipole, and then the Keeyask generating station; would that be correct?

MR. KELVIN SHEPHERD: Certainly capital cost escalations are one (1) factor.

MR. BOB PETERS: And then the in-service costs that have to be paid for when those projects come in service is another concern?

MR. KELVIN SHEPHERD: The, you know, if I went through and listed the concerns, there would be several, but I think we've outlined in our presentation a number of key underlying forecasts and assumptions in the financial plan have deteriorated significantly over the last year or year and a half. So, capital cost escalation is a key one; that in itself does drive up additional debt and borrowing and -- and creates additional pressures.

Export price forecasts and deterioration in export pricing is another significant factor. As well as, you know, changes in the forecast for domestic load growth which have the impact of really, you know, pushing out the date when domestic consumption of Keeyask power, in particular, is required.

MR. BOB PETERS: Let me just touch on those last two (2) briefly, and I know we're going to get into them in greater detail with the panels but Manitoba Hydro's export price forecast has been reduced from what was previously before this Board and what was in your previous integrated financial forecasts?

MR. KELVIN SHEPHERD: Yes, that's true.

MR. BOB PETERS: And is also true, Mr. Shepherd, that the export price forecast has been adjusted by Manitoba Hydro which has caused there to be a lower export price forecast?

MR. KELVIN SHEPHERD: Could I perhaps ask counsel for a little clarification.

MR. BOB PETERS: Yeah, let me -- let me try that again.

MR. KELVIN SHEPHERD: When you -- when you say "adjusted by Manitoba Hydro," adjusted from...?

MR. BOB PETERS: Manitoba Hydro made some adjustments to its export load forecast as it took out a couple of components that used to be in it.

Are you familiar with that?

MR. KELVIN SHEPHERD: Yes. So if --

MR. BOB PETERS: I think -- I think that's on the public record.

MR. KELVIN SHEPHERD: Yeah. Yeah, so if -- if -- are we -- are we talking load forecast or --

MR. BOB PETERS: No, I was talking export.

MR. KELVIN SHEPHERD: Price. But you said export load. I think you're talking about export price forecast or export load? I just want to --

MR. BOB PETERS: I'm talking the export price forecast.

MR. KELVIN SHEPHERD: Okay, that's -- that's what I thought. I just wanted to be absolutely clear I understood what the question was.

Yes. No, there have been and I'd ask Jamie to talk to more particulars here, but we did examine our export price forecast. As you know, we do rely on third parties to provide some of that information, at least the base forecast that we rely on.

But one (1) Of the key adjustments we've made is to reduce the expectation that we are going to be able to achieve premiums in export pricing associated with a firm or capacity demands and -- and that's based upon a view that those are very uncertain at this stage that we will be able to actually achieve that level of pricing premium.

So we've been more conservative in our export pricing forecast, and I think given our track record of it seems like regularly overestimating export pricing, being a little bit more conservative is the prudent thing to do.

MR. BOB PETERS: And I took from your answer, Mr. Shepherd, that there were two (2) adjustments that you're acknowledging; one (1) was to do with a reducing a premium. I believe it was on the -- on surplus dependable energy. And the other one was to do with the capacity value associated with certain of the exports?

MR. JAMES MCCALLUM: That's correct.

MR. BOB PETERS: And then we deal with the load forecast and I'm talking about the domestic load forecast to be clear, Manitoba Hydro has also changed the methodology in its domestic load forecast from what had previously been included in Manitoba Hydro's integrated financial forecasts.

Is that correct?

MR. KELVIN SHEPHERD: That's true. There had been -- there's been a methodology change and it's primarily around large industrial loads.

MR. BOB PETERS: All right and we'll deal with the -- probably Ms. Morrison on the revenue requirement panel with some of those specifics, but what you're telling the panel is that under the large industrial or top consumers category, Manitoba Hydro used to make some assumptions that were simply numerical assumptions going forward and Manitoba Hydro has now adjusted those assumptions?

MR. KELVIN SHEPHERD: Yeah, I agree it would be best to talk with Ms. Morrison on the details --

MR. BOB PETERS: Okay.

MR. KELVIN SHEPHERD: -- but broadly speaking directionally, that's correct. We -- we took -- had received I think previous comments on the -- on how we manage forecasts of large industrial loads, and had taken those into account and determined that there was merit in making those adjustments in the process.

MR. BOB PETERS: Mr. Shepherd, before I leave it, the latest increase announced for Bipole III was an increase from the $4.6 billion to the $5.04 billion, with a July 2018 in-service date; is that correct?

MR. KELVIN SHEPHERD: Yes, the -- the

5.04 billion is correct. I must admit I'm trying to figure out whether it's July or August. It's either July or early August. There is a period of time where the system is in-service operationally, but has not been turned over to us by the contractor and so I believe it may be technically something like August 1st before it technically goes into service but, operationally, the plan will be -- it will be carrying power in the July timeframe.

MR. BOB PETERS: Is there any further capital cost adjustment to the $5 billion?

MR. KELVIN SHEPHERD: Not at this time. The latest project update I had from the team has us continuing to be within -- on track to achieve that -- that capital forecast.

MR. BOB PETERS: How recent is that update to you?

MR. KELVIN SHEPHERD: I receive an update -- meet with the project teams every two (2) weeks and so it certainly is, you know, within that time frame.

MR. BOB PETERS: Thank you, sir. And then turning to Keeyask, I think the evidence discloses that at the needs for and alternatives to review before this Board, the Keeyask cost was forecast at $6.5 billion and that's now increased to $8.7 billion; correct?

MR. KELVIN SHEPHERD: That's the current P50 control plan.

MR. BOB PETERS: All right. And then when you say the current, how current is that number to you if I could, sir?

MR. KELVIN SHEPHERD: That's the control budget that's in place today. It's been in place since the -- it was adjusted earlier this year, and it remains the control budget at this time.

MR. BOB PETERS: All right. Have you been given information that suggests that that control budget is no longer accurate?

MR. KELVIN SHEPHERD: No, the review I hold with the project teams regularly updates me and I would say that the project team's best view at this time is that they believe they are on track to the $8.7 billion control budget. They may be six (6) months ahead of plan on schedule.

MR. BOB PETERS: Let me help understand that and make sure the panel's aware. In this application Manitoba Hydro in IFF-16 updated with interim has indicated Keeyask was going to be delayed twenty-one (21) months from its initial in-service date; is that correct?

MR. KELVIN SHEPHERD: That's correct.

MR. BOB PETERS: And are you now suggesting that it's possible that it may only be fifteen (15) months delayed?

MR. KELVIN SHEPHERD: It is possible. Again, the official control budget that we're working to is -- is 8.7 and it still remains twenty-one (21) months, but you asked for my most recent information and I would tell you that right now the project team believes they could potentially achieve a six (6) month advancement.

MR. BOB PETERS: Mr. Shepherd, there were additional incremental increases from the $6.5 billion number that was public and I believe it went to 7.2 billion, and then to 7.8 billion, and I believe the source of that was the Boston Consulting Group.

Can you confirm that?

MR. KELVIN SHEPHERD: Yes, you know, the -- if I can just draw a little bit of track here for you. The BCG was engaged by the Board to help them conduct a review of a number of matters. Some of the key matters were -- the Keeyask, Bipole, and US tie-line projects.

They were conducting that review during

-- pardon me, the summer of 2016 and -- and the Board reported out on the results of the BCG review I believe in September of 2016. BCG during their review which I think as you can appreciate is in the middle of a peak construction period and 2016 happened to be really our first full year of concrete placement on the Keeyask project. So they were reviewing the project, I would say, in real time as the project was -- was progressing and they developed their review and a range of 7.2 billion to 7.8 billion in project costs and I have to admit, I can't remember the -- offhand the exact schedule, but also a schedule delay of about a year, I believe, based upon information they had available at that time.

That was never a Manitoba Hydro management estimate. It was simply an estimate that BCG developed and, by the way, we, you know, believed and knew at that point in time that costs were escalating. We could see problems in the construction during the first year.

But I felt and certainly, you know, I think my board understood that it would be much more prudent for us to wait until the completion of that first year of construction activity and have a really good understanding first of the progress that we had made during that first year of concrete placement and then, as importantly, to be able to sit down and work with our general civil contractor to understand what improvements and changes we could make going forward before coming out with a new project estimate.

So the 8.7 billion is the result of that work. I would say the BCG estimates of 7.2 to 7.8 were directionally correct but did not have the benefit of the full knowledge of the concrete and other construction work during the summer and fall of 2016.

MR. BOB PETERS: But in the $8.7 billion number that's now embedded in IF -- in Integrated Financial Forecast 16, didn't Manitoba Hydro take the high end of the Boston Consulting Group forecast price and add an amount to it?

MR. KELVIN SHEPHERD: No. No, we -- I think it would be incorrect to assume that we accepted the -- that we used the BCG estimate as the basis. We conducted a complete review of the project. The project team completed that review. They re-examined all the factors in the actual plan, including sitting down and developing really what is a revamped construction schedule of activities; none of that was available really in the BCG work.

So, I would say the 7.2 to 7.8 was a reasonable high-level estimate and directionally gave our Board an understanding that costs were going to increase on Keeyask, but the actual estimate is based upon a revised project plan and work schedule that the project team developed.

MR. BOB PETERS: Mr. McCallum, when will Manitoba Hydro produce an Integrated Financial Forecast 17, if at all?

MR. JAMES MCCALLUM: We have not settled on the name for the next integrated financial forecast. It will go to our Board of Directors in March of 20,000 -- 2018. I suspect we will name it IFF18.

MR. BOB PETERS: Is there a capital expenditure forecast 17 or will that have a name not dissimilar to the integrated financial forecast?

MR. JAMES MCCALLUM: That's correct. They get developed essentially in parallel.

I also, Mr. Peters, just wanted to come back to your question on I guess forecasting in general, and when the revenue requirement panel begins sitting on Wednesday, I suspect Ms. Carriere will -- will take us through the integrated planning process, but I'd made the statement about updates to -- to forecasts, and including component pieces of the forecasts that come into any given integrated financial forecast.

We do that exercise fairly regularly in some elements twice a year and we will have, I believe, on Wednesday a -- at least an indication of where our export price forecast is coming out kind of which will go feed into this Integrated Financial Forecast 18 that you're talking about.

One (1) of our concerns or cautions with -- with, you know, a -- we're -- we're sensitive to trying not to overwhelm the Board with -- with constantly changing forecasts, but the reality is we're -- we're constantly looking at all of the variables that go into our forecast. And so we've elected not to, you know in advance of this hearing, this oral hearing, advance a new -- prepare in advance a new financial forecast. We felt there was no need to do that, but rather just call out, you know, things that are appearing to develop for better or worse differently than what -- what's embedded in this forecast.

MR. BOB PETERS: Thank you, Mr. McCallum. Does that timing that you indicated of your board looking at the integrated financial forecast in

March, when will Manitoba Hydro pulled together all the pieces that are going to result in -- in that going to the Board in March.

Is that being done right now or is that -- is that something that will be done early in the new year?

MR. JAMES MCCALLUM: Yeah, that's -- that's a process that's underway. It -- I would say it picks up in -- in earnest in some of our free time but we're building towards bringing that through our internal approval process, inclusive of bringing it to the executive committee in February, which is the committee of senior management, and then taking it -- we have an appointment with our board of directors in mid-to-late March where we'll review and hopefully have approved the new plan.

MR. BOB PETERS: Does that suggest to this Board, Mr. McCallum, that the cycle for Manitoba Hydro to produce its integrated financial forecast has shifted from the -- from the fall to the spring?

MR. JAMES MCCALLUM: You know, there's probably others that can speak a little better to the -- the history. We -- we -- and I joined the company in September of 2016 and -- and really joined in full flight of preparing the -- the financial plan that became IFF16 in front of us here.

So I -- my -- certainly my understanding was in the past there would be a -- this process would occur more in the -- in the November, December time frame, maybe a little earlier in some years, depending on what's going on a little bit later. But we have, yes, to -- to answer your question directly, we've moved to a -- a March timeframe wanting to bring all this together as close as we can to the first day of our fiscal year.

This is an important tool for managing the business, in particular, the first year of the integrated financial forecast is our budget for the year. And it's pretty conventional in corporate management to do that process pretty close to the -- to the beginning of your fiscal year.

So we felt that doing all that in the November, December, or even earlier timeframe left you a little bit too stale by the time you got to your fiscal year.

MR. BOB PETERS: What does that do, Mr. McCallum, for the planning cycle of Manitoba Hydro in terms of filing rate applications with this Board? Does that trigger a change in the window that is needed by Manitoba Hydro to present those to this

Board?

MR. JAMES MCCALLUM: No, I don't believe so. I think that coming out of this process and, you know, the eventual conclusion of this process, I think we're -- we're all going to have to sit down and figure out where we go next in terms of when the next rate application ought to be. Clearly in our financial plan, we are seeking -- expecting to seek rate increases on April the 1st of, you know, of each year going forward and so we're going to have to figure out how to -- how to kind of work through that with -- with the -- with the Public Utilities Board, but I don't see that by virtue -- the decision taken to change the planning cycle, to target a March approval process is one driven, you know, first and foremost by the needs of the business which is, you know, how we operate. We look at the needs of the business.

MR. BOB PETERS: Thank you, Mr. McCallum. Mr. Chair, this might be an appropriate time to adjourn for the day and I could pick it up tomorrow morning at nine o'clock.

THE CHAIRPERSON: Thank you, everyone. So we will adjourn now and we will resume at nine o'clock tomorrow morning. Thank you.

--- Upon adjourning at 5:26 p.m.

Certified Correct,

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Cheryl Lavigne, Ms.