

**First Session – Forty-First Legislature**  
**of the**  
**Legislative Assembly of Manitoba**  
**Standing Committee**  
**on**  
**Crown Corporations**

*Chairperson*  
*Mr. Dennis Smook*  
*Constituency of La Verendrye*

**Vol. LXIX No. 4 - 1 p.m., Friday, October 28, 2016**

ISSN 1708-6604

**MANITOBA LEGISLATIVE ASSEMBLY**  
**Forty-First Legislature**

<b>Member</b>	<b>Constituency</b>	<b>Political Affiliation</b>
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ALTEMEYER, Rob	Wolseley	NDP
BINDLE, Kelly	Thompson	PC
CHIEF, Kevin	Point Douglas	NDP
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**LEGISLATIVE ASSEMBLY OF MANITOBA**  
**THE STANDING COMMITTEE ON CROWN CORPORATIONS**

**Friday, October 28, 2016**

**TIME – 1 p.m.**

**LOCATION – Winnipeg, Manitoba**

**CHAIRPERSON – Mr. Dennis Smook  
(La Verendrye)**

**VICE-CHAIRPERSON – Mr. Shannon Martin  
(Morris)**

**ATTENDANCE – 11 QUORUM – 6**

*Members of the Committee present:*

*Hon. Messrs. Pedersen, Schuler*

*Messrs. Allum, Johnson, Johnston, Ms. Klassen,  
Messrs. Lagassé, Marcelino, Martin, Smook,  
Swan*

**APPEARING:**

*Hon. Jon Gerrard, MLA for River Heights  
Mr. Kelvin Shepherd, President and CEO,  
Manitoba Hydro  
Mr. H. Sanford Riley, Chairperson, Manitoba  
Hydro-Electric Board*

**MATTERS UNDER CONSIDERATION:**

*Annual Report of the Manitoba Hydro-Electric  
Board for the fiscal year ending March 31, 2012*

*Annual Report of the Manitoba Hydro-Electric  
Board for the fiscal year ending March 31, 2013*

*Annual Report of the Manitoba Hydro-Electric  
Board for the fiscal year ending March 31, 2014*

*Annual Report of the Manitoba Hydro-Electric  
Board for the fiscal year ending March 31, 2015*

*Annual Report of the Manitoba Hydro-Electric  
Board for the fiscal year ending March 31, 2016*

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**Clerk Assistant (Mr. Andrea Signorelli):** Good afternoon. Will the Standing Committee of Crown Corporations please come to order.

Before the committee can proceed with the business before it, it must elect a new Chairperson.

Are there any nominations for this position?

**Mr. Shannon Martin (Morris):** I'd like to nominate Mr. Smook.

**Clerk Assistant:** Mr. Smook has been nominated. Are there any other nominations? Hearing no other nominations, Mr. Smook, will you please take the Chair.

**Mr. Chairperson:** Our next item of business is the election of a Vice-Chairperson. Are there any nominations?

**Mr. Derek Johnson (Interlake):** I nominate Shannon Martin.

**Mr. Chairperson:** Are there any other nominations? Mr. Johnson has been nominated—oh, sorry. Oh, Mr. Martin—sorry. Mr. Martin has been nominated—elected Vice-Chairperson.

This meeting has been called to consider the annual reports of the Manitoba Hydro-Electric Board for the fiscal years ending March 31s 2012; March 31, 2013; March 31, 2014; March 31, 2015; and March 31, 2016.

Before we get started, are there any suggestions from the committee as how long we should sit this afternoon.

**Mr. Martin:** I suggest the committee sits until 3 p.m.

**Mr. Andrew Swan (Minto):** Thank you, Mr. Chairperson.

Just before I make our submission on that I—it looks like we're set here for a presentation from Hydro. Before we try and answer that question, if I could get some idea of how long Hydro intends to present, which I hope will be very useful information.

**Mr. Kelvin Shepherd (President and CEO, Manitoba Hydro):** We estimate the presentation should be approximately 30 minutes.

**Mr. Swan:** Well, I thank Mr. Shepherd for that.

And I—given that I don't think an hour and a half for questioning this afternoon on such an important issue that we all care about would be enough. I would suggest that this committee sit until 5 o'clock.

**Ms. Judy Klassen (Kewatinook):** I would suggest 5:30, so that I get half an hour as well.

**Mr. Chairperson:** Okay, our first submission was to sit until 3 p.m.

Is there agreement to sit 'til 3 p.m.?

**Mr. Martin:** Mr. Chair, I would suggest that the committee sit 'til 3:30. That will give the original two hours planned for questions and answers of the minister and the representatives from Hydro, as well as taking account the additional half an hour planned for the presentation by Manitoba Hydro.

And then we can reassess at the time.

**Mr. Chairperson:** Is it agreed that we sit 'til 3:30?

**An Honourable Member:** No.

**Mr. Swan:** Again, I don't think there was ever any tradition or any agreement that we would only sit for two hours of questioning.

I know the Liberal member—I'm quite satisfied she's got a number of questions that would be important to her. Suppose we could sit until—maybe, then, we sit until 4:30 and then we reassess at that time.

**Mr. Martin:** I'd like to suggest the committee sit until 4 p.m.

**Mr. Chairperson:** Is it agreed that we—

**Mr. Swan:** No. I mean, again, this is very important. If it can move us ahead into questioning, I would make a friendly amendment to what Mr. Martin has suggested. We sit until 4 o'clock and then we reassess at this time.

I think this is going to be a really productive afternoon, and I want to make sure that the Liberal member and that we—and, if there happened to be particular questions that are important to the government members, I want to make sure we have enough time to do that.

**Mr. Martin:** Four p.m. and the committee can reassess at that time.

**Mr. Chairperson:** Does the committee agree?  
*[Agreed]*

Are there any suggestions as to the order in which we should consider the reports?

**Mr. Swan:** Mr. Chairperson, I would ask that we consider these reports globally.

**Mr. Chairperson:** Is it agreed that we—*[Agreed]*

Does the honourable minister wish to make an opening statement? And would he please introduce the officials in attendance.

**Hon. Ron Schuler (Minister of Crown Services):** Yes, thank you very much, Mr. Chair. Congratulations on your election to these important duties chairing this committee.

Good afternoon. Thank you very much, Mr. Chair, and I'd like to welcome each and every member here today, including individuals in the gallery. It's great to see there's interest in the public. We even have a student from the University of Manitoba, and we hope that, by the time committee's done, he's taken something out of this.

This is the third and final standing committee on Crown corporations undertaken over the last five weeks. I thank you all for your participation today. And, for those of you who have participated in prior meetings, we thank you as well.

\* (13:10)

As Minister of Crown Services, Manitoba's energy provider, Manitoba Hydro, falls within my portfolio. Annual reports and financial statements under consideration, and for approval today, include those for the fiscal years ending 2012, '13, '14, '15 and 2016.

I would like at this time introduce Manitoba Hydro's new board chair, Mr. Sandy Riley, and Manitoba Hydro's president and CEO, Kelvin Shepherd. Both are new to their roles since we last gathered for standing committee on Manitoba Hydro.

Clearly, much has been disclosed about Manitoba Hydro, particularly in the last month, as the board publicly announced the results of their review. This review will be discussed further in detail by our board chair, Mr. Riley, and he will be taking the floor shortly.

Supporting Mr. Riley and Mr. Shepherd and seated behind them from Manitoba Hydro are Mr. Scott Powell, public affairs manager; Ms. Dori Chudobiak, manager of government relations.

Before I turn the floor over to Mr. Riley and Mr. Shepherd, I would like to make some brief opening remarks.

Following the election of April 2016, our government immediately took steps to provide a fresh perspective to Manitoba Hydro via a complete change with new appointments to the Manitoba

Hydro-Electric Board. This board brings a wealth of experience and business acumen to the table. We gave this board clear direction and information on our priorities through a publicly available framework letter, a letter that was, in fact, tabled in the Manitoba Legislature. We had a clear interest in the status of Bipole III and requested that the board investigate that project in particular. Their work quickly evolved, recognizing the interconnectedness of the large capital projects Manitoba Hydro was pursuing and the significant impact those projects have on the debt level of Manitoba Hydro, which, ultimately, is the debt of all Manitobans.

Manitoba Hydro should be a public treasure for the province of Manitoba. Manitobans have expected a lot from this Crown corporation over the years. Our most important expectation of this company should be what they are in existence to do, and that is to provide Manitobans with a reliable, affordable supply of energy.

While Manitoba Hydro was attempting to be all things to all people, two of the largest projects currently under construction in North America were entered into at the same time. In the case of Keeyask, this project was advanced to a schedule that was well ahead of Manitoba needs. Constructing both of these projects at the same time led to accepting a debt-to-equity ratio far, far below acceptable levels, placing the future of Manitoba Hydro and the entire province in serious and significant jeopardy.

Through the board review, the prior concerns about routing of Bipole III were also confirmed, a politically motivated decision against the advice of Hydro experts, costing Manitoba Hydro ratepayers nearly an additional \$1 billion.

Clearly, all of this is very concerning. Manitobans are asking: How did this happen? And how do we ensure it never happens again?

Our government's goal is to have our Crowns operate more effectively, all for the benefit of Manitobans. To be very clear, there will be no interference from this government into the Crown corporations. This board of directors will be backed by the government in applying their good judgment in how we will return Manitoba Hydro to the position of providing a critical and strategic contribution to the province of Manitoba. Our government is committed to reducing red tape, providing quality service, strengthening 'cultability' and delivering value for money, all of which Manitoba Hydro is committed to providing as well.

In follow-up to the Manitoba Hydro-Electric Board's review, Mr. Riley and Mr. Shepherd, along with other members of the board at Hydro, again, in an unprecedented show of openness and transparency, and following the example set by our government, have been holding public information meetings. These meetings are allowing the public to hear directly and in person from the board and the president and CEO regarding the very serious state of Manitoba Hydro and what needs to be done going forward to put Manitoba Hydro back on a path towards financial stability.

I'm told that the sessions recently held in Winnipeg and Winkler have been very well attended, with a variety of questions asked and answered. It is clear that Manitobans are concerned about the current status of Manitoba Hydro and prior actions taken and want to offer their views to the senior leadership of the company on how Manitoba Hydro should move forward.

I thank all members of this committee for being here today. This is an important process. I've now had the opportunity to sit on both sides of the table. And I respect and I appreciate the roles and duties and responsibilities of all members of this committee. And we look forward to going through this process.

Thank you, Mr. Chair. I will now turn over the floor to the president and CEO of Manitoba Hydro, Mr. Kelvin Shepherd and Mr. Sandy Riley, for their presentation.

Following their presentation, Mr. Shepherd and Mr. Riley are open and available to respond to questions. Mr. Shepherd will take questions relative to the corporation's operations and their go-forward plan, while Mr. Riley will primarily respond to questions regarding governance and the recent board review. I will take your questions of a political nature or that involving government policy.

I thank the committee for the opportunity to make these opening statements.

**Mr. Chairperson:** We thank the honourable minister.

Does the critic for the official opposition have an opening statement?

**Mr. Ted Marcelino (Tyndall Park):** Yes, please.

First of all, welcome to all the members of the committee and, of course, the Chair.

Manitoba Hydro is one of our most important Crown corporations. It has rightly been labeled Manitoba's crown jewel. We as a province have been blessed with access to important renewable resources that we can use to heat our homes, power our economy and share with our neighbours. In partnership with our First Nations communities, Manitoba Hydro has built and is building important electrical projects, which will contribute to the shared prosperity of Manitoba for now and for years to come.

These projects will also help Manitoba meet the important and serious challenges of man-made climate change. This challenge requires all jurisdictions to move away from climate-damaging resources and away from the consumption of non-renewable resources towards more clean and ecological ways of powering our economy.

Manitoba Hydro is well placed to meet these emerging challenges so as to transition towards the green economy of the future. Our party has always been committed to building hydro in a responsible fashion to meet the energy needs of Manitobans today while building for tomorrow.

Our party has always been committed to keeping rates affordable for Manitobans. Keeping rates low requires smart investments on the part of Hydro along with the vision and commitment to expanding Hydro's opportunities to export our power to our neighbours in Canada and the US. Low hydro rates are the cornerstone of keeping life affordable for everyday working Manitobans and for creating an attractive and vibrant economy for business.

Finally, our party has always been committed to keeping Manitoba Hydro a public corporation. It is a corporation that must serve—I think the emphasis is on must serve—the people of Manitoba and must be protected from attempts at privatization. It is important to keep this resource in the hands of Manitobans so that Manitobans can decide how best to develop and meet their energy needs and so that all Manitobans, including our indigenous peoples, can equally benefit from our province's rich resources.

Thank you, Mr. Chair.

**Mr. Chairperson:** We thank the member.

I understand the representatives for Manitoba Hydro-Electric Board wish to include a PowerPoint presentation as part of their statement to the committees.

Is there leave from the committee to allow this PowerPoint presentation? *[Agreed]*

Mr. Shepherd, Mr. Riley, you may proceed.

**Mr. Shepherd:** Thank the committee. We have a short presentation. I will turn the microphone over to our chair, Mr. Riley, for the first part of the presentation, and then I will finish up with a few concluding remarks.

**Mr. H. Sanford Riley (Chairperson, Manitoba Hydro-Electric Board):** Thank you, Mr. Chair, members of the committee.

I want to first start by thanking you for having us here today. I'm going to focus my remarks on what is likely of a great interest to this committee, which is the recently completed Manitoba Hydro-Electric Board review. In my opinion, this is of importance to all of us in the province and to Manitoba Hydro's future.

\* (13:20)

As you know, we've been out doing public information sessions. We've conducted two so far. We have two more to go in Thompson and in Brandon. And it's obvious to me, as we've gone through these hearings, that the public cares very deeply about this corporation, shares very much the views of the member of the committee opposite that it's an important asset for the province of Manitoba, that we should determine what's in the best interest of the province. And we certainly appreciate the community direct—the opportunity to communicate directly with the members of the public and to hear their questions and concerns.

So I'm going to share with you today what we've been sharing in the public sessions, hopefully in a slightly shorter version because of the time constraints; I know we want to get to questions. I'm going to provide some background of the board's review of Manitoba Hydro, our decision to proceed with Bipole III, and the financial challenges that are facing the corporation. Then Kelvin Shepherd, who is our CEO, will talk about the next steps Manitoba Hydro must take in the months ahead and what that means for our customers and, indeed, for all Manitobans as we move forward.

As this committee would be aware, following the election and the appointment of a new board to Manitoba Hydro, the government asked the board to review the Bipole III project. Very quickly we realized that the interconnectedness of the Bipole III

project with both the Keeyask project and the US intertie. And, as a result, we expanded our review to include these other major projects which, in turn, shed much light on the seriousness of the corporation's financial situation. We quickly realized that we needed help to assemble, organize, interpret and present the data we were working with. So, shortly after we started this process, we retained the services of Boston Consulting Group, one of the three or four leading management consulting companies in the world, to assist us at this review.

As the committee would be familiar with, the Bipole III transmission project is a 1,300-kilometre, high-voltage, direct current transmission line that will run from the Keewatinohk Converter Station, about 40 kilometres east of Gillam, Manitoba, down the west side of the province before cutting back towards Winnipeg and terminating at the Riel Converter Station, just east of the city.

Bipole III is being developed to provide additional reliability to Manitoba Hydro's direct current transmission system by providing it an alternate path for electricity from northern generating stations to flow to the south—that flow to southern Manitoba.

The Keeyask Generating Station, which is located just upstream from the existing Kettle Generating Station near Gillam, is being developed by Manitoba Hydro in partnership with four northern First Nations: Tataskweyak Cree Nation, War Lake First Nation, York Factory First Nation, and the Fox Lake Cree Nation through the Keeyask Hydropower Limited Partnership. At 695 megawatts, Keeyask will be the fourth largest generating station in our system.

So, after an in-depth study, what did the board conclude? And, by the way, when I say in-depth, we spent an enormous amount of time over the summer meeting, basically, a couple times a week to review the conclusions and the work that was being done, and I want to emphasize: this is the work of the board of Manitoba Hydro. We did retain the services of Boston Consulting Group, but the work you see here is very much the work and the ideas of the board. We concluded that there's no choice but to move ahead with the completion of Bipole III on its current west side route. It's urgently needed to protect Manitobans from the very real risk of blackouts that would result from a failure of the current Bipole I and II lines, which run side-by-side through Manitoba's Interlake.

The risk of failure of these two lines, or of the Dorsey Converter Station, where they both terminate, because of a weather disruption, forest fire or other catastrophe, man-made or natural, is very, very real. In fact, it's already happened. In 1996, a major storm brought down 19 towers on both Bipole I and II during the month of September. Fortunately, the fact it occurred during our shoulder season, with minimal heating load and demand on the system, is the only reason electrical service was maintained during that emergency. Not only were we fortunate from a time of year perspective, we were very, very fortunate from a location perspective as well. That '96 event came within one mile of the Dorsey Converter Station, far too close for the comfort of this corporation that is in business to provide reliable power for the province.

Today, with much higher electrical demand and usage, it's quite likely that a similar incident would result in rolling blackouts for days or weeks until the lines could be repaired. If Dorsey was damaged, it could be months before normal service was restored. We simply could not import enough energy over our existing transmission interconnections to keep the lights on over that period.

More than 70 per cent of all electricity generated in Manitoba flows down these two lines to Dorsey, a situation that the Boston Consulting Group called the largest single-risk exposure of any utility they had seen in North America. This growing gap has heightened the consequences and impacts of a failure on the existing HVDC lines. Without Bipole III, an extended failure of Bipole I and II could result in up to \$20 billion in societal impact, an unacceptable risk that could do permanent damage to our provincial economy.

We've been living on borrowed time, frankly, and it's reminiscent of the discussions that took place around the ditch—Duff's Ditch and the floodway, and we all wondered whether it was the right time to do it. And as you—and as soon as we did it, we got hit by the flood of the century. So it's a very similar situation.

Now, as this committee would be aware, Bipole III is also required to carry the additional electricity that will be generated by the Keeyask generating station. Bipole I and II are largely maxed out in terms of capacity. Without Bipole III, it simply is not possible to carry all the power from Keeyask to southern Manitoba to be fed into our provincial grid.

Power from Keeyask would be effectively stranded, creating an even larger financial problem as Keeyask will generate significant revenues from Manitoba Hydro once it enters service.

Any consideration towards cancelling either of the projects would have resulted in enormous costs, approximately \$7 billion spent without any functioning assets to show for the money that we'd put out, and that, for the board, was not a palatable option.

Despite the east-side route being shorter, more cost-effective and favourable, we concluded it was not economically viable or practical to change Bipole III's route at this point, given the advanced stage of construction. To date, \$2.9 billion has been spent or committed, 95 per cent of the contracts for the project are in place, and it would cost another billion dollars to cancel the project. And, most importantly, it would still leave our province exposed to the significant risk of an extended major outage.

The review also identified that there's a risk of Bipole III not meeting its target completion date or budget, with a potential delay of between 12 and 15 months and a potential cost increase from the current budget of \$4.65 billion to between 4.9 and 5 billion dollars.

With respect to Keeyask, the board concluded that while Keeyask's energy won't be needed by Manitobans until 2027 at the earliest, and most likely significantly later, or sometime into the 2030s, the project should be completed without delay. Determining the exact timing and Manitoba's need for energy is dependent on a number of factors, including ongoing economic growth; the addition of major loads, industrial customers, for example; and the future effectiveness of demand-side management efforts.

However, the need will eventually be there. This we know. And Keeyask is a virtually carbon-free long-term source of renewable energy that will last well into the next century. Two point one billion dollars has already been spent on the project, and cancelling it at this stage would cost at least another billion dollars in addition to the other risks—to other risks that would have to be managed and be very difficult to manage. And because valuable long-term export contracts worth \$4.5 billion in revenues are already in place for the majority of power from Keeyask, we recognize there is an upside to completing the project.

The review identified that Keeyask is also at risk of not being completed as originally scheduled, with a potential delay of between 21 and 31 months. There is also a risk that the budget for Keeyask could rise from the current control budget of \$6.5 billion to between 7.2 and 7.8 billion dollars.

Now, we started this process focused on the decision to build Bipole III, but quickly concluded that Bipole III was not the only issue facing Hydro. By far, the more significant problem is the fact that the decision to undertake Bipole III and Keeyask at the same time is having a significant and, in our judgment, an unacceptable impact on Hydro's financial situation with serious knock-on consequences for the province of Manitoba.

Manitoba Hydro's debt is expected to grow from its current level of \$13 billion to \$25 billion within the next three to four years. That's an extraordinary increase and of significant concern to the board. We, the board, looking at Manitoba's hydro finances from the perspective of our considerable business and financial backgrounds, consider Manitoba Hydro's debt-equity ratio a major problem that needs to be fixed.

So I want to show you a few charts here. First chart I'm going to show you is a chart that measures Manitoba Hydro's debt-equity ratio as we move forward to completion of these projects. Debt equity, for those of you who are—would like a quick tutorial, is essentially the amount of equity—debt is essentially the amount of money we borrow to do the project and debt—equity is essentially the amount of money we have inherently in place to support the debt and the operations of the business.

\* (13:30)

You'll see that under the original forecast we've been working with, the debt equity was scheduled to fall to 12 per cent by 2025. That—and with the potential to degrade to 9 per cent, according to Hydro's projections, if certain circumstances didn't work out as hoped for. That's a very low level. If you consider that the target of Manitoba Hydro is expressed—is 25 per cent, you can see that it's significantly below that—the minimum level of equity that Manitoba Hydro has said, and others have agreed, should be its basic level of cushion.

The reason this is of worry to us is you can see what happens—this is—and this will explain why you need a lot of—you need a certain amount of equity. What we did as a board is we then looked at one of



the non-positive scenarios, in other words a bad water year. We went back to 2003 and 2004 and we applied the same kind of water flows that happened in that year, and you'll see that as a result of that, our equity drops to basically 1 per cent, which means we have absolutely no cushion in the event anything else goes wrong in that period of time.

Now, for context, the last bad water years we've had were 2013–2003–2004. We're living on borrowed time. The law of averages and the idea that things revert to the mean means that at some point in time here, we're going to have a bad water year, and we're not properly financed to handle it.

I want to just show you—the next chart I want to show you is just a comparison to what other organizations of a similar nature do. The four organizations on the left represent investor-owned utilities, and they all typically try to have between 50 and 60 per cent of their business in equity and the balance in debt. That's a very significant cushion for them as they go forward, but they're running essentially the same kind of business that we are. On the right, you'll see Canadian Crown corporations, and you'll see that Manitoba Hydro, today, is at 18 per cent with the likelihood it could degrade to between 9 and 12 per cent in a kind of normalized, reasonable scenario, but not a bad scenario. And as I've showed you, if we have a bad water year, we drop to 1 per cent.

The other major Crown corporations in Canada all have much higher levels of equity and are planning, in the case of BC Hydro, for example, to increase their debt-equity ratio to 30 per cent, from the 20 per cent they're currently at. They're doing that by basically stopping the payment of dividends to the BC government until they get to 30 per cent. Quebec, as you see, is at 32 per cent. Their target is to get to 40 per cent over the next period of time.

So, our target of 25 per cent is the lowest target in the—in North America, basically, and we're below that. And we're—and as a result of the projects that we've committed to do, we're going to be significantly below that for a—for quite some period of time.

Now, the thing that really concerned us though is the impact that Manitoba Hydro's debt is putting on the credit capacity of the entire province. As the committee would be aware, Manitoba Hydro borrows on the credit of the Government of Manitoba. And up until now, credit rating agencies have looked at the Province's debt as separate from

Manitoba Hydro's debt. They do this because they view Manitoba Hydro as having—being a 'self-staining'—self-sustaining entity. That means the rating agencies think that Manitoba Hydro has a sufficient level of equity and the capacity to generate sufficient revenues to support its operations, if need be.

However, when rating agencies make the decision that Manitoba Hydro is no longer self-sustaining, as one has already done and others are cautioning us on, then they will look at all of the debt together, combined, the Province of Manitoba's and Manitoba Hydro's. So, what you see on this chart is the debt of Manitoba Hydro growing from 13—it's on the right-hand side. We've gone back to 1982 and showed three key pieces of information here. The dark blue line is the net debt of Manitoba Hydro. The light blue line is the project—is the net debt and projected net debt of the Province of Manitoba, and the dots at top—at the top represent the percentage that that total debt represents as a percentage of the GDP of the Province of Manitoba.

So, the first thing you notice from this as you look at this chart is that the level of total debt is climbing to somewhere in the neighbourhood of \$50 billion by the end of 2023. That's up from—at this—at the current level, we're around 32 or 33 billion dollars combined, and a large part of that growth, as you can see, is Manitoba Hydro.

The second thing you notice from this, I think, is that the percentage of debt—combined debt—climbs from 35 per cent to almost 60 per cent and, in comparison to other provinces, in Manitoba this puts us in—when it's done, we will be one of the worst provinces in Canada in terms of the level of debt compared to the product—the gross domestic productivity in Manitoba.

Some may ask, why does this matter? Well, it matters because in total the Province inclusive of Manitoba Hydro will be borrowing \$50 billion, and so if that is the amount that the rating agencies look at when they do their credit assessment of Manitoba and they look at the level of debt relative to GDP, and if they then decide to downgrade the Province's credit rating, as one of the four major credit rating agencies already has, the cost of borrowing will go up, the availability of capital will be more challenging, the ability to select the appropriate terms and conditions will be more challenging, not just for Manitoba Hydro but for the Province of Manitoba. And it's quite conceivable in an

environment of declining ratings that the cost of borrowing in Manitoba could increase by, say, 1 per cent. And, if that's the case, then it's an additional half billion dollars of financing costs, half a billion dollars of financing costs that will be—have to be covered by both Manitoba Hydro and the Province, and that has obviously a huge impact for the financial provincial priorities of schools, hospitals, et cetera. That's why we as a board believe action is required and required now, and we need to ensure that the worst-case scenario I've just described doesn't happen.

Now this situation didn't happen overnight. A combination of 10 years of low rate increases, coupled with increased borrowing to support major projects in infrastructure renewal, have led us to where we are today, and it's going to take us some time to get things back on track.

In the board's opinion, the plan to improve Manitoba Hydro's financial position must be balanced and, given the size of the problem, will need to include significant improvements to the operations of Hydro, first and foremost, rate increases and support from provincial government. The board will be providing the governance and guidance as Manitoba Hydro management develops their plan to address the key issues raised in this review and, ultimately, the review will—the results of that review will be made public and undoubtedly be taken to the Public Utility Board for approval.

I'm now going to turn the floor over to Kelvin Shepherd, with the committee Chair's permission, to talk about the next steps at a high level.

**Mr. Shepherd:** Thank you Mr. Chair.

As Sandy has outlined, Manitoba Hydro is facing some significant challenges moving forward. The question is, how do we begin to move forward in light of the board's review and findings so that we can continue to meet the energy needs of Manitobans today and tomorrow?

We plan on taking a balanced approach to address the key issues raised by the review. We'll continue to work closely with our board who will provide guidance and support as we work through some tough issues over the next several months.

We will be making some important decisions about rates charged to our customers, about significantly reducing our costs at Manitoba Hydro, and about how we can return Manitoba Hydro to a

stronger and healthier financial situation so that Manitobans are not exposed to undue levels of risk.

So let me talk about a few key elements of what we will be doing in the plan and where I see us taking actions to address our current situation. One area we are already strongly focused on is delivering both Bipole III and Keeyask as quickly as possible by minimizing any future cost increases. Through the review, we have clearly identified that both projects are likely to cost more than their current budgets and take longer to complete.

We're going to work to reduce these risks as much as we can with a goal of staying as close to our current schedules and budgets as possible. Our engineers and project management staff are developing plans to see where we can increase our productivity and efficiency in the construction process. Because so much of the cost of these large projects is finance expense, anything we can do to shorten the construction timeline will generally result in cost savings to the project overall.

\*(13:40)

However, I believe that we are going to see higher costs for completing these projects, somewhere in the ranges that were outlined in the board review, and so we are going to include updated higher cost for these projects in next year's financial forecast, which we are currently working on.

One thing that is very clear from the review that we need to take—we need to find ways to more quickly address the significant financial challenges facing Manitoba Hydro. We plan to do so through a balanced and multi-pronged approach. We will be looking for savings internally, in every area of our business. We are going to have to reduce our operating costs, but we also need to increase revenues. They need to be part of the balanced solution.

We are also going to look very carefully at every capital project we plan to undertake, because we will only have so much capacity to invest and will have to focus on getting more done with the funding we have. The fact we have a lot of aging equipment, power lines and poles means that there is some risk in not replacing that as fast as we might like, but to help address our financial pressures in the near term, we will have to consider replacing some of this older equipment at a slower pace than previously planned.

Manitoba Hydro has reduced over 400 full-time positions over the past three years. This was done

through normal retirements and attrition and without layoffs. We have over 900 employees eligible for retirement right now. So retirement and some attrition could potentially take us a long ways towards reducing our staffing levels and our operating costs. It's clear to me that we will need to have a significant reduction in staffing, over the next few years, as part of correcting the financial issues we face. As a first step, I've frozen most hiring and internal staffing changes while we rework our financial plan in order to ensure that, in the near term, we take advantage of not filling positions in the company when they become vacant. We also have several major union agreements we will be negotiating over the next few months, and I expect those may be challenging negotiations, because we cannot afford to provide the same level of salary and benefit increases as was done previously.

We need to focus strongly on providing the best value for customers. Today we have among the lowest electricity rates in Canada and rate highly for customer satisfaction and service levels. As rates increase, we will need to increase our focus on building stronger customer relationships while at the same time increasing our operating efficiencies. And I know people want to know, what is it going to cost me, what is going to happen to hydro rates? We had previously been projecting the need for ongoing rate increases of 3.95 per cent annually to pay not only for bipole and Keeyask but for renewal of our existing infrastructure. But, as the board review showed, that plan was resulting in us accumulating way too much debt and putting the company's financial integrity at serious risk. Will that level of rate increase be adequate going forward? Well, we don't know exactly what—yet what we will need to do in terms of rate increases, but I personally believe that the previous plan of 3.95 per cent rate increases will not be adequate going forward. We're currently developing a new financial forecast to establish what level of rate increases, and for how long, will be required. Of course, any changes to rates that Hydro may request will continue to be reviewed by the Public Utilities Board and ultimately needs their approval.

At the end of the day, whatever we propose for rate increases, we are committed to reducing our operational costs and using the combined benefits from both cost reduction and rate increases to improve the financial strength of Manitoba Hydro, which I believe is in the best long-term interests of all Manitobans. Even with rate increases, Manitoba

will continue to have economical and competitive rates when compared to other provinces, because our rates are about the lowest to begin with and most of those other jurisdictions are going to see rates continue to rise for many years as well.

The investments in Bipole III and Keeyask are long term ones that will ensure Manitobans have a reliable supply of self-renewing hydroelectricity for years into the future. Our province will continue to be a Canadian leader in renewable energy field with the advantages that brings. Other jurisdictions are facing the significant challenges of phasing out carbon emissions from their electricity systems. Eliminating coal has been the focus, but, as we have seen from the recent federal government announcement on carbon pricing, it's clear that all forms of carbon emissions, including those from natural gas, will face increasing regulatory and economic hurdles.

We have over 99 per cent of our electrical production already from clean, renewable, greenhouse-gas-free sources, and it's a tremendous position to be in. We have a great deal of work ahead of us, but I'm extremely positive about Manitoba Hydro's future. While we need to transform to become leaner, more efficient and more customer-focused, my view is that this is a positive opportunity for customers and our employees. In my opinion, we have an opportunity to build a stronger and better company, one that will continue to be an important contributor to Manitoba's economy for decades to come. And I have every confidence in our board, our leadership, and the people of Manitoba Hydro, and believe we are up to the challenge in front of us.

Mr. Chair, Mr. Riley and I are open to questions from the committee.

**Mr. Chairperson:** Thank you for your presentation, Mr. Riley and Mr. Shepherd.

The floor is now open for questions.

**Mr. Swan:** Welcome to Mr. Riley and Mr. Shepherd. Congratulations to both of you.

Mr. Shepherd, I know you've served in this role since December, 2015. And, of course, Mr. Riley, you were appointed as chair of the Hydro Board just this spring.

This afternoon there'll be, I think, a lot of things we'll have some common ground on and we'll agree upon. I expect there may be a couple points we may have different views, but it's my hope we'll be able to

ask and answer questions respectfully and move things forward.

The presentation that we saw today does contain some of the information which is taken directly from the report that was prepared by the Boston Consulting Group—that was prepared for Hydro.

If we can just start off with one question: How much did Hydro pay for the Boston Consulting Group report? *[interjection]*

**Mr. Chairperson:** Excuse me. Mr. Riley.

**Mr. Riley:** I beg your pardon, Mr. Chair. I will—I won't make that mistake again. Thank you.

Approximately \$4.2 million.

**Mr. Swan:** And that's an approximation; if Mr. Riley can provide the exact number in a reasonable time, that would be just fine.

**Mr. Shepherd:** Yes, we'll undertake to provide a precise number. I think it was \$4.3 million, perhaps; 4.2 to 4.3, but we will undertake to provide the exact number.

**Mr. Swan:** I thank Mr. Riley and Mr. Shepherd for those answers.

Now, was this report put out for tender? Or, how was it that Boston Consulting Group came to do this work for Hydro?

**Mr. Riley:** As I said in my remarks, we as a board, started meeting in May, shortly after our appointment, with the belief that we were really focusing, and needed to focus on Bipole III and the decision with respect to routing of Bipole III.

But, as we did our own investigation and our own review of the financial results of Hydro, we quickly came to the conclusion that we had a much bigger issue and there was an awful lot of time sensitivity surrounding that issue because we were talking about not just Bipole III and what to do with it, but also Keeyask and the Minnesota tie line. And we recognized we were in midstream in some major projects that—on which fast decisions had to be made.

So, on very short notice we were—we able—we were able to retain the services of Boston Consulting Group. Now, I should say that there are three or four firms in the world that I think have the capacity to do this in the kind of time frame that we talked about: Boston Consulting Group, Bain & Company, McKinsey. I've worked with all of them in my business career so I was able to make an assessment

as to which was the best firm. And we were able to assemble a team out of their Toronto office, but drawing on resources from all over North America—and, in fact, from Europe, with experts on capital projects, on utility operations. And we were then able to start a very intensive process which, we as a board, as I said earlier, were very engaged in, where we were, basically, posing the questions, asking Boston Consulting to go work—way and work with Hydro to—and Hydro officials to provide answers to the questions that we were asking. And then we were having an interim process where we review the answers, probe what we were getting and, eventually, it came to the report that you saw.

As I said, the report was prepared by Boston Consulting Group, but it reflects the views of the board, and an intensive amount of work from the board.

**Mr. Swan:** I thank Mr. Riley for that. And, again, I think it shows the value of this committee. We're received, I think, a pretty clear answer very quickly that took a bit longer to get in the Legislature. So I do thank Mr. Riley for that.

Were there terms of reference that were provided to Boston Consulting Group? Was there a document that was used to retain Boston Consulting Group? *[interjection]*

\* (13:50)

**Mr. Riley:** Yes, I did it, eh—beg your pardon, Mr. Chair.

I'm—to be honest, I can't remember what piece of paper was provided. We'll undertake to get that for you.

**Mr. Shepherd:** Yes, to answer the question more directly, there was a letter of engagement or a form of engagement, and there were terms of reference provided. Those were done through the board, because, obviously, the board was engaging in the review. But I can confirm that there was that in place.

**Mr. Swan:** And just to carry that forward, Mr. Shepherd, would you undertake to provide us with a copy of those documents in due course?

**Mr. Shepherd:** Yes, I'll undertake to provide them. I don't believe there's any confidentiality provisions that would prevent that. But assuming there are not, we will undertake to provide them.

**Mr. Swan:** I thank Mr. Shepherd, and we have to be a little disjointed, which is why I'm speaking through the Chair. I would say, you, but I'll try not to do that this afternoon, just as you'll try to put your hand up and things will move along.

I'd like to ask Mr. Riley, then, did Boston Consulting Group—was he aware they had specific experience with hydroelectric generation, or was it general work they had done in the utility area?

**Mr. Riley:** They brought resources that had both general utility expertise and specific expertise in hydroelectric projects throughout North America.

**Mr. Swan:** I thank Mr. Riley for that. I mean, from looking at the report, which we will discuss in some detail this afternoon, it's clear that Hydro provided a great deal of financial information to the Boston group so they could prepare their report.

We'll have a look at the terms of reference in the letter of engagement, but did any of the folks at Boston Consulting Group doing the work, did they do on-site visits? Like, did they visit hydro dams? Did they visit any of the First Nations that are partners with Hydro? Did they visit any of the First Nations on the east side of Lake Winnipeg? Or was it more of a paper review and discussions with the board and officials at Hydro?

**Mr. Shepherd:** I don't believe that they're—conducted any on-site visits to the actual construction sites. They relied significantly on internal expertise and data and information provided by Hydro, as well as their own independent information from industry sources. I do not believe that they met with any of the First Nation partners that were involved in the projects.

**Mr. Swan:** All right, and I thank Mr. Shepherd for that. And we'll get into some of the areas of this report and Hydro's direction. Again, I think it's fair to say there is a fair amount of common ground. And from reading the report, from reading Hydro's reports and from the presentation today, I think we have common ground that building a new bipole, a new route to get hydro south is—was and is absolutely necessary for Hydro.

So we may disagree on certain details of that, but I think—I suppose I can ask both Mr. Shepherd and Mr. Riley, I think we can all agree that was necessary, and any Manitoban who says building bipole wasn't necessary is just plain wrong. Is that a fair thing to say?

**Mr. Riley:** Building a bipole was essential.

**Mr. Swan:** I expected we'd get to an area where we might have a difference of opinion. And I know Mr. Riley has been outspoken about the choice of the line. The first thing though we can agree on is that building a bipole was better than any of the other alternatives. Boston Consulting Group considered some other alternatives, such as building hydro—or rather, natural gas as a backup or some other choices using natural gas.

We agree that it should be a bipole, even if we don't agree on exactly where that line should go. Is that fair?

**Mr. Riley:** Yes.

**Mr. Swan:** You know, Mr. Riley—I'll ask Mr. Riley: Given that there are 16 First Nations on the east side of Lake Winnipeg, there were more than 80 meetings that government and Hydro had with those First Nations who made it very clear they were opposed to ever having a power line go down the east side of Lake Winnipeg. Does Mr. Riley or any of his board members—do they have any dispute with that?

**Mr. Riley:** You know, we spent our time focusing on going forward. We didn't spend a lot of time trying to parse the decision about whether or not the original decision to go down the east side versus the west side was the correct one, except we did come to the conclusion, from a financial perspective—and bear in mind that the primary focus of our review very quickly became our concerns about how the financial position of Hydro had deteriorated in this process. From a financial perspective, we saw considerable difference in costing going down the east side versus going down the west side.

**Mr. Swan:** And I won't disagree with Mr. Riley. We have an engineer in the room, but we don't need an engineer to tell us that building the route along the west side, which is a longer route, has a greater cost than building a theoretical line down the east side.

And I guess the question I have for Mr. Riley, though, is: Does he have any evidence that would disprove someone saying the line would never have been built down the east side because of widespread opposition by the 16 First Nations on the east side?

**Mr. Riley:** No.

**Mr. Swan:** Well, let's get back into things that we agree upon. I know Mr. Riley is an optimist about his province. I would like to think that all of us are optimists about the future of the province. We know

that Hydro sales come from three main sources, if I can call it that. There's the domestic market supplying power to Manitoba businesses, farms, homes, and there's an export market. And that export market is really two separate markets: there's a firm market which deals with long-term power sales that Hydro has and will continue to try to lock down with major utilities in the United States, and there's also an opportunity market, or spot market, which is the sale of surplus or extra hydro which may be available to Manitoba Hydro. And, if either of these gentlemen can just confirm that or correct me if I've misstated that, that would be fine.

**Mr. Shepherd:** I think, broadly speaking, that's a correct characterization. Opportunity sales, or the opportunity market, are generally short-term sales that cannot be relied on, and the predominant source of energy for opportunity sales are from higher than average water flows that are outside the normal or dependable regime.

**Mr. Swan:** I will return to that, but again I think we've got common ground on that front.

There are two factors that affect domestic demand. The first, as optimists, I'm sure that Mr. Riley and Mr. Shepherd would agree that we are hopeful that Manitoba's population will continue to grow for the foreseeable future.

Is that a fair statement?

**Mr. Shepherd:** I think we would hope that to be the case.

**Mr. Swan:** And, everything else being equal, an expanding population in Manitoba will result in more domestic demand.

**Mr. Shepherd:** We do a fairly detailed load forecast that projects load, and certainly population growth is one of the key factors in the load forecast and has been one of the main drivers of electricity growth in the province. The population growth going forward may or may not continue to grow as aggressively as we would both like.

**Mr. Swan:** Well, I accept Mr. Shepherd's comments.

As well, population growth is a factor in economic growth, but it's not the only driver. I think it's fair to say that we are all hopeful that Manitoba will continue to grow economically, which will mean, hopefully, more demand from large industrial users, but even from smaller industrial users, from more economic activity, from more businesses, from more stores. Those are all things, everything else

being equal, that would increase the demand for power domestically in Manitoba.

**Mr. Shepherd:** I would agree that if there is growth in those areas that it would tend to increase the overall demand on the system.

\* (14:00)

**Mr. Swan:** And one of the other factors which would increase domestic demand is the use by Manitobans of far more electronic devices, far more, potentially, electronic heat—electric heating than has been used in the past. In our house, every night, we have four smartphones that are lined up and being charged. We've got a tablet being charged. We've got two laptops owned by my daughters being charged. Those are the kinds of things that can actually also increase domestic demand, even if the population was remaining the same and even if economic growth didn't happen, which, we hope, will not be the case. Is that fair?

**Mr. Shepherd:** There are a range of things that contribute to growth. Those are certainly things that will help. They're relatively smaller in the scheme of things, and I think we produce a very extensive load forecast which attempts to analyze that. Of course, those are also offset by other factors, and so, generally speaking, load growth has been somewhat slower, I think, than over the last number of years than we would have projected in some of our forecasts.

**Mr. Swan:** And Mr. Shepherd, as just coming to the other side of this, that power use, even with the growing economy, the pace of that growth can be reduced—and I know it's the hope of Manitoba Hydro that it will be reduced—due to changes in technology and due to various choices that we hope Manitobans will make to conserve power. So an example would be the use of LED lights replacing old types of lights. That could include a program to encourage Manitobans to get rid of their old fridges and freezers and purchase newer items which might use less power. Those are all things that would reduce the domestic demand. Is that fair?

**Mr. Shepherd:** Yes, I think that's fair, and I think, as the committee knows from our report, we run programs to encourage energy efficiency, and we undertake a number of initiatives to attempt to encourage customers and find ways to work with both industrial and regular consumers to be efficient consumers of electricity.

We also are a major supplier of natural gas. About 60 per cent of the homes in Manitoba are heated with natural gas, and we encourage efficiency in that area as well.

**Mr. Swan:** And I thank Mr. Shepherd for discussing natural gas.

It is, as much as possible—it is—it forms part of Manitoba Hydro. As much as possible, the costs of natural gas are flowed through to Manitoba consumers. The price of natural gas fluctuates. We know right now it's at a relatively low rate, and it's a regular process for Manitoba Hydro to go to the Public Utilities Board to ask the utilities board to adjust that. We're happy there was a recent decrease effective November 1st. But, really, the cost of natural gas is neither—it's neither profit nor loss for Hydro. The effort is made by Hydro to simply pass that on to consumers. Is that a pretty fair statement?

**Mr. Shepherd:** Yes. Our gas rates, you know, at the highest level have—it's a little more complicated than this, but, at the very high level, there's two major components. There's the cost of the actual gas itself, which is acquired by Manitoba Hydro on behalf of its customers and flowed through at cost. Because costs vary, there's this process of adjusting prices up and down and passing on, sort of, cost increases and decreases to true up the cost of gas. And then there's another component, which is really related to our investment in gas infrastructure and operations and staffing, which is a separate issue from the actual gas cost itself.

**Mr. Swan:** And, just to make it very clear, the revenue from the gas part of Manitoba Hydro's operations is meant to be revenue-neutral. There's no suggestion that there are profits from the sale of natural gas that are used to subsidize the electric side.

**Mr. Shepherd:** Yes, that's essentially correct. If you get into the details of the accounting, there is some contribution from gas to cover the overhead and corporate costs of the corporation, but essentially there is no attempt to cross-subsidize between the two operations.

**Mr. Swan:** I thank Mr. Shepherd for that. And here we are agreeing on a whole bunch of things this afternoon.

Manitobans do make choices about the type of power they will use. We know that some Manitobans have chosen to put in geothermal heating units to try and reduce their costs. Some Manitobans are

choosing to invest in their own solar units or wind units to reduce or in some cases even, from time to time, completely eliminate the need for power.

But would Mr. Riley and Mr. Shepherd agree that some may choose to rely more on Manitoba Hydro for electric home heating in the future than is currently the case?

**Mr. Shepherd:** I can't really speculate on a broad sense of what customers would do. I can tell you that we have a forecast, and the forecast has been pretty stable.

I would say that I see—when I out and visited many communities, First Nations communities, rural communities, many of these communities do not have access to natural gas and, therefore, rely on electricity. And the No. 1 issue I hear from them is the high cost of heating their home with electricity. And they would adopt natural gas if it is available, because it is more cost effective. And so, you know, about 60 per cent, and I can't remember the exact number; it's in the forecast—but about 60 per cent of homes use natural gas, about 40 per cent heat their homes with electricity. And I believe if we made gas available to more customers they would very likely see an increase in gas for heating purposes, because of the efficiency and the cost effectiveness to the customer. It's a significantly cheaper option.

**Mr. Swan:** Although I would suggest to Mr. Shepherd that that is now likely to change. As we know, Prime Minister Trudeau has announced that he will be imposing a carbon tax on all forms of carbon.

It's—what he has said is that the carbon tax will have a base of \$10 per ton, starting in—I believe it's 2018—and that will increase to \$50 per ton by 2022. It sounds like the Prime Minister is going to give the provinces some leeway as to what they will do, but the bottom line is that it looks like natural gas, propane, other types of carbon heating are going to become considerably more expensive.

And I'm not an expert, but from looking at some of the data it appears the cost of natural gas heating, everything else being equal, would double if there was a \$50 per ton carbon tax. Is that in the range? Is that fair?

**Mr. Shepherd:** You're correct that the Prime Minister and the federal Liberal government in Ottawa has signalled their intent to introduce a carbon tax, and that it will increase over a period of time to about \$50—to the \$50 a ton level.

So, to give you some sense of what that might mean: a \$50 a ton carbon tax, which will be in place, I believe, in 5 years—I could be correct—incorrect, but about that time frame would increase the average natural gas heating bill for a Manitoban by just under 30 per cent. However, you are correct if you look at the gas charge of the bill. The gas charge itself, a \$50 price at today's gas prices would about be the same as the charge for the gas. However, and this is at today's electrical rates without increasing the rates, that is still substantially cheaper for residential home heating purposes than an electrically heated home. And so, while it will, undoubtedly, increase the cost of heating for Manitobans if it is applied—if a \$50 carbon tax was applied directly to natural gas, it will still be a more efficient and cost-effective way to heat the average home than electricity.

**Mr. Swan:** But it does—it is one of the factors set out in Hydro's documents as well as the Boston Consulting Group report that there is identified the risk of future moves on CO<sub>2</sub>. This will only impact natural gas and other carbon forms of energy here in Canada, but it is that sort of risk in the United States that exists even though none of us today know whether there will be any additional tax on carbon in the states or whether there'd be additional incentives for clean energy.

But it's—what Prime Minister Trudeau announced yesterday—or the other day for Canada is the same kind of risk that's set out in the documents that Hydro has put forward. Is that fair to say?

\*(14:10)

**Mr. Shepherd:** I believe, in the review, the report that BCG produced that you reference, they do talk, in particular, about the export market and about the potential upside of a carbon tax regime or other type of carbon tax initiative in the United States, and that does, potentially, have some potential upside in terms of export markets, which have been significantly depressed, partly by gas prices and partly by significant subsidies in parts of the US on wind, in particular.

But back, you know, just to make a point on the importance of natural gas, and I think it's important to understand it, from a heating point of view, it is a very efficient and effective and cost-effective way of heating. If you took the 60 per cent of homes in Manitoba that were heated with natural gas, and tried to just say, what would it cost—what would it take to replace that with electricity? To give you a sense of that, our current electricity system in Manitoba, you

know, has the capacity somewhere in—just north of 5,000 megawatts, I think; not sure of the exact number, but call it 5,500 to be generous. You would need to add another 7,000 megawatts of capacity to the electrical generation and distribution and transmission system to replace that natural gas, and that capacity would only be used for approximately 25 per cent of the year. So the cost to replace natural gas in an area where it's very well-suited and very effective and very economical, it would be substantially high, and I think it is an important energy source for Manitobans and one that Manitoba Hydro is focused on and is committed to offering to our customers as effectively as we can.

**Mr. Swan:** I thank Mr. Shepherd for that, and I think this is a good discussion, and I would agree that we don't expect Manitobans en masse to convert from the natural gas, which is reliable, to electric. But there can be decisions that Manitobans make, and I'll give a very real example, not that the Swan household is the driver of all things hydro.

We replaced an old hot water tank in our 100-year-old house. It was almost 20 years old. It was a gas hot water tank. We had also put in, in the past 20 years, a high-efficiency furnace, which is not vented in the chimney; it's vented out the back of the house, very common thing. When the fellow came to replace the hot water tank, he said, well, I am not going to put a new gas hot water tank in until you get your chimney fixed. And we said, well, what are the options? He said, well, for a few extra hundred dollars, I can actually replace your gas water tank with an electric water tank. We decided to avoid capital costs. Doing on a micro way what I know we all want to have Hydro do on a macro way, we made an individual decision. I'm not criticizing my daughter who takes very, very long showers, but it was a reasonable choice.

We're not the only 100-year-old house with a new high-efficiency furnace that will make that choice. That's the kind of little decisions that Manitoba households will make that could very well take some energy that's now being received from gas or from other carbons and switch over to hydro. That's an example, but I'd just like you, Mr. Shepherd, to agree that those are the kinds of decisions that all Manitobans will be making in the years to come.

**Mr. Shepherd:** I appreciate the simile; I don't have a daughter, but I do have a wife and I also have an electric heating—water heater.



**Mr. Swan:** We'll hope that nobody in our households reads Hansard.

But another example again, a typical situation. We have an old cottage on the west side of Lake Winnipeg, and when we bought the cottage, we inherited what I believe they call a Quebec heater, which is an old black heater with a stove pipe that goes through the cottage to throw off heat. I never really liked it. My wife really doesn't like it. We removed that diesel-fuel-powered heater, and we put in—we got a portable furnace, which, again, is electrical.

So, again, even in recreational properties, in agricultural operations, Manitobans will make those choices, and because they have confidence in electricity and because, as we've already said, the price of electricity is quite attractive, I'm sure you'd agree that many other Manitobans may make those choices, no one of which is the tipping point, but, collectively, would continue to push up demand in Manitoba.

**Mr. Shepherd:** I think if the point is that there are lots of individual decisions and people make individual decisions on a whole range of things. Some of us are engineers, and so we do it with a lot of math and science. And other ones are more emotional and concerned about the environment or—and are willing to pay more. So not everything is a rational, dollar-based factor. In some cases, it's what a person believes in. In other cases, it's the individual's situation—is gas available or not?

But I think I would agree that there's a bunch of factors, and we try to analyze them in our forecast and try to produce the best forecast for growth that we can. And we update that. We have a team of experts. They update the forecast every year. And, I think, based on those forecasts, you know, we project future demand for electricity as well as natural gas in Manitoba.

**Mr. Swan:** I thank Mr. Shepherd for that.

I do want to talk a little bit about the different—the three different markets that we talked about at the start. On page 29 of the most recent report of Hydro for 2015-16—page 29 has a nice little chart, the happy kind of chart that Manitobans like to see, that demonstrates that Manitobans enjoy the lowest average retail price of electricity among all the jurisdictions selected. And I presume, first of all, that if every other jurisdiction in North America had been

included, Manitoba would still have the lowest average retail price of electricity. Is that correct?

**Mr. Shepherd:** I can't absolutely swear to that across all jurisdictions in North America, but I think it's fair to say we have, if not the lowest, one of the lowest. The chart on page 29 of our—of the annual report that you referred to is the average retail price of electricity in Manitoba. And I think there's a couple of things to note there.

It's the average retail price, which means it's retailed to large customers, medium-sized customers and residential customers. And the average rate for a residential customer is higher, and the average rate to a large, industrial customer is, of course, lower. So the 6.5 is an average, but it is not the rate a residential customer would see. So I just wanted to correct that—or to clarify that.

And many other areas—jurisdictions, it's difficult to get really good reporting on rates. So we do our own survey, and we do go out and find public information. And we try to show a reasonably representative sample here. And I think the point in particular we make is when you compare ourselves to some—particularly Canadian jurisdictions, our rates are very affordable.

**Mr. Swan:** And, I guess, I'll pose this question more to Mr. Riley, as the chairperson of the board.

Is providing dependable electricity to Manitobans at a—if not the lowest, at a low cost? Does he believe that's part of the mandate of Manitoba Hydro?

**Mr. Riley:** Absolutely.

**Mr. Swan:** And, similarly, the attempt to prevent—I think rate shock might be an alarmist word, but the attempt to sort of smooth out increases so that there isn't a large increase one year and then flat the next year. It's also a goal of Hydro to avoid that happening. There would be a preference to having any increases be smoothed in over a number of years.

**Mr. Riley:** As a matter of principle, yes.

**Mr. Swan:** I don't know if Mr. Riley and Mr. Shepherd have the Boston Consulting Report in front of them. I believe that Mr. Shepherd does, which is handy. I just wanted to take a few minutes looking at some of the information that's being presented, which, again, I believe is largely taken from numbers that Hydro has provided.

Quick look at exhibit 20, which is: Firm export volumes and prices benefit economics. And there's a chart on the right-hand side which talks about price expectations, and there's two lines. One—the one line is described as Domestic industrial unit revenues, which I presume is the price that Manitoba Hydro sells to its largest industrial customers. Is that right?

\* (14:20)

**Mr. Shepherd:** Yes, that Domestic industrial unit revenues is a rate reflected of the rate that would be charged to our larger customers.

**Mr. Swan:** And then the line above it, which is—it's blue on my copy, but the same colour of grey on yours, is—it's described as firm. This represents the average revenue received from sales to extra-provincial customers under these long-term stable contracts. Is that right?

**Mr. Shepherd:** Yes. I'm trying to cut back on the colour of printing costs. All the printers default to black and white, which is not the easiest to read these charts sometimes, but, yes, that is correct. The line there is an analysis of a forward-looking forecast for contract prices.

**Mr. Swan:** So it's fair to say that for all years, with Hydro's best forecast at the present time, that's been taken up by Boston Consulting, every year from 2015 through to 2030, not only is the unit revenue from export sales greater than that price that's charged to industrial customers in Manitoba, it's greater by a pretty substantial margin.

**Mr. Shepherd:** Yes. If you look, and it perhaps isn't clear on the—totally clear on the chart to folks, but this is Canadian dollars and it's in dollars per megawatt, so, typically, we talk about kilowatt hour costs, which would be in cents, so if you translated this down, the industrial rate today in 2016 is just over four cents a kilowatt hour. Our firm price revenue is somewhere shown on the chart here as just—it's hard to read, but I think it's on the order of—between 7 and 7 and a half cents.

**Mr. Swan:** Yes, and I thank Mr. Shepherd for that. And in looking at this same chart, it looks like there's a substantial increase in the revenue—the average revenue that Manitoba Hydro is going to get from these firm export sales in 2017 and on to 2018, in fact, going from what looks like something less than 8 cents per kilowatt hour, up to—it looks like over 10 cents per kilowatt hour.

Can Mr. Shepherd explain why that is?

**Mr. Shepherd:** Yes. I will attempt to do that, but at a very high level. As you can appreciate these contracts that we have with customers are commercially sensitive and although we do report on firm and opportunity costs in our annual report we report averages.

What I could say, generally, is that many of our contracts are negotiated with—over a very long period of time, and most long-term contracts, for most commodities, would have some kind of price escalator or market comparator figures in them.

And so, in general, what's reflected here is the underlying indices that those escalator factors are tied to. They vary significantly depending on the contract, the customer, and even the jurisdiction. But that is why the price forecast is shown as increasing, and there are positive and negative indices in those contracts.

**Mr. Swan:** But overall, by 2017, I suppose it is, Manitoba Hydro is going to be earning average revenue from all of these export contracts in excess of 10 cents per kilowatt hour, or a hundred dollars per megawatt hour, which is the same thing.

**Mr. Shepherd:** The forecast here is for unit revenue and, again, as part of our integrated financial forecast which we developed, and it's publicly filed, so all the revenue projections are in there, would include these types of updated price forecasts, as well as volume forecasts in that revenue.

**Mr. Swan:** So, again, just as—even though we may have some differences of opinion and we can stop Manitobans who say building a bipole wasn't necessary, we can also say that we receive—or Manitoba Hydro receives more money per kilowatt hour from export contracts—firm export contracts, than from domestic sales.

**Mr. Shepherd:** The unit prices we get from firm export sales, and I think this has been consistent before, are significantly better than what we would charge to a very large industrial customer in Manitoba. Yes.

**Mr. Swan:** And, of course, that's only part of the equation, because, as we know, there's also the spot market or the opportunity export. And I think we have common ground, again, that there is never any guarantee in a given year as to what that revenue per kilowatt hour will be, or what the overall revenue will be. It's been that way for a long time, and I expect it will remain that way.

I'm sure that you'd agree with me that although Manitoba Hydro would like as much of its export capacity to be firm export sales, that's simply not possible. There's a number of factors that we can talk about, but even—no matter how well Manitoba Hydro has been run or will be run, there's always going to be the prospect of selling some of Manitoba's hydro on the spot market

**Mr. Shepherd:** Yes, I think, as I explained earlier, opportunity sales or spot market sales, short-term sales, whatever term is used, are predominantly a mechanism for Manitoba Hydro to sell surplus energy, but it's surplus energy that cannot be depended on. And it's a fair question to ask, you know, why do you have energy that's not dependable? I thought our whole objective was to have dependable energy. And the answer to that is that we have a very, very high proportion—about 97 per cent of the electricity we generate comes from hydro generation, and hydro generation is reliant on water. And so to be able to guarantee or to provide, essentially, a firm contract that says I'm going to deliver the electricity, requires a dependable supply of water.

And so we have a very sophisticated—and I won't pretend to understand it, model of the splash model, I believe. It's very—engineers do have a sense of humour, but I think that was the accountants that named that one. And that attempt, as much as possible, to look at all of the historical water flows in Manitoba and we use that to understand what a reliable flow of water is and, when water flows are above that level, you can't necessarily rely on them being available. But, when they are there, we can use them to turn the turbines, to turn the generators in the existing stations at really very, very low incremental cost and generate electricity which can be sold on the spot market. But, unfortunately, we can't commit to those in longer term contracts because we have no assurance that it's there.

So spot market prices are, as you might expect, more volatile and they're less valuable. And the major markets we sell into is the MISO market, in the United States, the midwest independent system organization. And I think, you know, spot market prices there have been generally depressed, as I said, from—for a while, partly the price of natural gas, it's partly a significant amount of wind power, which is heavily subsidized in the current US regime in that market coming into the market. And so, if you look at those spot market prices in peak demand there this year, in about the three cents per kilowatt hour range

and, in the off peak, as low as two. So there's a very significant difference in opportunity sale revenue than from energy revenue.

\* (14:30)

**Mr. Swan:** Right. And I'm—again, I think we have some common ground, because I expect that Mr. Riley, if he's at the shopping centre, or Mr. Shepherd, if he's out for a walk, or myself, we will have Manitobans come up to us and say, well, why are you selling power to Americans for 2 cents or 3 cents. And I think we can agree that there's a common explanation that we're selling that power short-term because it's excess power, and frankly, the alternative is not to sell the power, open up the dam and let the water simply flow down the river into Hudson Bay. And I think we can all agree that it's in everybody's interests that if Hydro has excess power, that it be sold on the spot market, for whatever we can receive.

**Mr. Shepherd:** We take very seriously our task of delivering reliable energy and affordable energy to Manitobans. And, clearly, this is an opportunity to take a resource, which may not be dependable, but still has value in the market and which we can produce at very low incremental costs and export, and it provides positive revenue and profitable revenue to Manitoba Hydro.

I think it is difficult for some people to understand that when they look at comparing it to an 8-cent residential rate, but I would agree that it's a positive contributor to Manitoba Hydro's operations, and it's an effective use of our water resources in Manitoba.

**Mr. Swan:** Well, it is, I think, more common ground this afternoon.

I want to talk a little bit about the Keeyask generating station that's being built. Mr. Riley in his comments said it was just shy of 700 megawatts. It's—I believe 695 is the capacity. I just want to—and I'm glad we have an engineer in the room. I want to just, in my own mind, clear up how we convert the amount of generating capacity to the amount of transmitting capacity. We have Keeyask which is being built, which is generating 695 megawatts. We have the bipole being built, which is a 500 kilovolt system. Can Mr. Shepherd just clarify for everybody—and it's very helpful—how much transmission capacity do you need to move 695 megawatts of energy?

**Mr. Shepherd:** I'm going to think just for a second, because this is an area where—so, first of all, I am an electrical engineer, but I had to—I've slowly been recovering my basic electricity courses and transmission engineering courses over the course of the last 10 months. I could probably tell you more effectively how a cell site works.

However, to try to give you some sense, Keeyask, at 695 megawatts, is sort of what they call the faceplate generation capacity. If you looked at the faceplate on the turbines, it would say 695 megawatts. You effectively are going to deliver less than that by the time you get to the transmission line because of the way the transmission works. A bipole system—meaning bipole, two lines—each line is a 500-kilovolt line. One line is positive; one line is negative, effectively 1,000 kilovolts of potential. Voltage is a measure of potential, not power.

Each of our existing bipoles, Bipole I and II have slightly different power capacities, megawatt capacities, even though they have exactly the—you know, have similar voltages in some cases on them. And it's a complex factor that's related to the engineering of the conversion from AC to DC, the transmission over the line, the conversion back. But to give you a sense, the Bipole III line—and if I'm mistaken here, we'll correct it, but I believe it's at 2,300-megawatt peak capacity in terms of power transmission capacity.

To operate a line at full capacity increases the losses on it, and so there's a loss factor. And so, generally speaking, each of these bipole lines will have a slightly different megawatt capacity factor. But maybe to translate it into the math that, you know, I would understand is, if you took Keeyask alone, a Bipole III, for example, or Bipole II, which has a slightly lower capacity, has about, at peak capacity, the ability to carry about three or three and a half times the power that a Keeyask would be generating.

**Mr. Swan:** I thank Mr. Shepherd for that. I didn't mean to put him on the spot, but I think he explained it reasonably well, meaning that a 2,300—the bipole now being built will have a capacity of about 2,300 megawatts, which would be enough to carry about three Keeyasks, so somewhere in the range of 2,100 megawatts. But we're not going to hold him to that.

Is it fair to say that when building—making the decision to build the bipole—I know Mr. Riley has been critical of the decision to build Keeyask at the same time—if a new bipole had simply been built,

Hydro would have incurred a multi-billion-dollar expense, which, although necessary to protect the transmission and the distribution, would not have generated any additional income for Hydro?

**Mr. Shepherd:** A transmission line, bipole or otherwise, by itself does not generate revenue.

**Mr. Swan:** So I understand that as late as this summer, the expectation was that the Keeyask generating station would be scheduled to produce its first power in 2019. Is that correct?

**Mr. Shepherd:** Yes, that's the control schedule or would have been the expectation, certainly, in the early spring time frame.

**Mr. Swan:** What in particular I'm talking about by as late as July of this year, that was what Hydro was publicly telling people. Is that right?

**Mr. Shepherd:** Yes, I believe that's correct. To help maybe anticipate, maybe, and provide a bit of information, we have a control budget and a control schedule. We update that budget and schedule on a regular basis. And so, in that time frame, the current budget and schedule would reflect the—that in-service date, 2019—or mid-2019 to—for first generation.

And, really, during this year, which was a very—a peak construction year and really the first major year of construction of concrete and earth works at Keeyask, we saw significant concerns with schedule and potentially cost develop. So that really only materialized over the construction season, which, of course, this summer was the first major construction season.

So it's only been really through the time frame, and I think coincidental with the review time frame, that some of the schedule issues at Keeyask were identified and, in fact, occurred.

**Mr. Swan:** Can Mr. Shepherd, then, just highlight what those concerns are, what is the expectation now, and what Hydro is doing to mitigate that—because I think we can all agree that we want Keeyask generating power as soon as is practically possible.

**Mr. Shepherd:** So, to address the expectation, I think the review, as you would, I think, expect—we, in conducting the review, the board wanted to have a really good look at the project and cost and schedule and, through that process, as things developed during the summer, we identified these risks. And so the review clearly articulated, for Keeyask, a potential schedule risk of 21 to—

**Floor Comment:** Thirty one.

**Mr. Shepherd:** Thirty one weeks—

**Floor Comment:** Months.

**Mr. Shepherd:** Months—months, pardon me. And I wish it was weeks—months, and a cost that would go from the control plan of about 6.5 billion to between 7.2 and 7.8.

To try to expand a little bit on what those specific issues are, Keeyask is a major civil works project. And there's a significant amount of earth dam construction and, of course, a significant amount of concrete construction involved.

\* (14:40)

And beginning this spring was really the first pour—first major construction season, and we have about a six-month construction season at Keeyask. So this spring and summer were really the first major years of both concrete and earthwork dam construction.

And what we saw materializing on the ground was that we were simply not achieving, I guess, what we would call production rates, but other people might call how much concrete we're pouring, or how many feet of dam are being constructed. And the production this summer was not meeting the control plan. And there's a number of reasons for that, which we're working through with our engineers and our project team and, in particular, with our major general civil works contractor to understand. But I think, as you can appreciate, if you have a—you know, a project which is—basically, if you'd asked me this question in May, I would have said it looks like we're on track and on budget. And during the construction season, we fall significantly behind those production targets. It's very clear, I think, to the team and to me that we have a challenge with both schedule and, potentially, cost.

And so it's really those elements that are reflected in the review that the board did, was a view at the time of an estimate. As the construction season winds down here and—we will still be, for example, pouring concrete for a period of time—probably through into December using different construction techniques. But the earthwork dam construction is largely winding up here in the next few weeks because of the cold weather. We will—we are regrouping, re-evaluating, and we'll be looking at both root causes as well as what can be done to go forward to improve the production levels as we go

into next year's construction season. But that's probably as good an explanation as I can give to you is the underlying causes of some of those cost and schedule concerns.

**Mr. Swan:** I thank Mr. Shepherd for that. So the term in the report is a potential schedule risk. I take it that Mr. Shepherd and his team are doing everything they can to try to minimize the delay, which could involve more cost. I think everybody would agree to try and speed up construction.

Does Mr. Shepherd have confidence that Hydro will do everything possible to bring this on, if not the exact date that was thought as late as this summer, but another date as soon as possible after that?

**Mr. Shepherd:** Well, I have high confidence that the team at Hydro and our contractors will do everything we can to find the best solution we can.

As I was saying, we've been focused this summer on getting as much done in the construction season as we can, as effectively as we can. We will be doing some—what we would call winter work through to December to help, and that will have a cost, but we believe it will help with the schedule and, ultimately, a shorter schedule generally results in lower costs overall.

And we will be reworking and coming up with a new plan, a new control budget, a new schedule that we believe will be based on the best information we have from this summer's work, and for looking at the root causes and doing what needs to be done to correct them.

So, when we have that information, we'll certainly be putting it on the record. We file quarterly reports with the Public Utilities Board. At this point, as I was saying, we haven't formally adjusted either the control budget or the schedule. We felt it important to talk about the risk in the review and to be open and transparent and put as much information as we could on the table. But, until we go through further work, I can't give you a better number than the figures that are there and that we've talked about on the record.

**Mr. Swan:** That's fair, and I thank Mr. Shephard for that.

Similarly, as late as this summer, I understood that Hydro still believed that Bipole III would be in service sometime in 2018. Does Mr. Shepherd agree with that?

**Mr. Shepherd:** The reports that we provided publicly during the summer would have, I think, had that information in it. Yes.

**Mr. Swan:** So I take it that once Keeyask is operating, which—and we hope will be 2019, but we accept could be delayed a little bit—I understand the power that's being generated from Keeyask not needed within Manitoba has been spoken for, that Hydro has been able to enter into contracts with various utilities in Saskatchewan and in the United States. I wonder if Mr. Shepherd could comment on that.

**Mr. Shepherd:** So, with respect to the power that will come from Keeyask, it's not 100 per cent committed, but, yes, there are significant contracts in place and they predominantly are into the US with some key customers, and we have a 20-year 100-megawatt sale with Saskatchewan that's been publicly announced.

**Mr. Swan:** Is Mr. Shepherd able to tell me what is the price that we're charging our watermelon-wearing friends in Saskatchewan for clean Manitoba power?

**Mr. Shepherd:** Well, I think, as Mr. Swan probably knows, as a native Saskatchewanian, I would wear my watermelon with pride. I don't know if you know, but this Saturday is the last game we played in Taylor Field in Saskatchewan, and some of us will shed a tear, and I would also shed a tear about the very good price that the people in Saskatchewan are paying us for their power. But I can't comment on the details.

**Mr. Swan:** I've been bitten by wasps in Mosaic Stadium on many a Labour Day in the past, so I thank Mr. Shepherd for that.

One of the other pieces which we need to discuss is the new transmission line, which is known in Minnesota as the Great Northern Transmission Line, but I think, for the purposes of this committee, we can refer to as the tie-in line. I understand that would also be 500 kilovolts, so it would be the same—roughly the same capacity as bipole, although I can be corrected on that, and that's also being built as part of the series of projects which include Keeyask and Bipole III.

**Mr. Shepherd:** Mr. Swan obviously did not go to electrical engineering class; he's incorrect on your assumption. Five hundred kilovolts, it is, but it's 500 kilovolts AC. It's not a bipole line; it's a three-phase 500-kilovolt AC line, and the capacity

for—and this gets a little tricky at times why a line has a different capacity one direction than the other. But it's both an import and an export line. It can be used to carry power and would be used to carry power into Manitoba in the event we needed to acquire it from the US market in the event of an emergency or that situation.

It has about a 700-megawatt import capacity and about an 800-megawatt export capacity. And the differences are really because of the way the system works. So it is a very different type of system than Bipole I, II or III. It's different—operates differently, has different capacity, but it is part of an improvement to first allow us to have greater export capacity to the US market and, in particular, opens up some new markets in the US, Wisconsin, in terms of having a greater capacity into Wisconsin, and it also is a key reliability improvement. It will allow us access to the MISO market in the event that we needed to import electricity in an emergency.

**Mr. Swan:** Well, I thank Mr. Shepherd for that, and I appreciate his answer, that the 500-kilovolt line can carry about 800–700, 800 megawatts, which is more than the capacity of Keeyask, just as a point of reference.

\* (14:50)

The Boston Consulting report talks about the convergence between the desire of Manitoba Hydro to be able to sell its power, including new power from Keeyask, as soon as possible. That ties in well with Minnesota Power's desire to have access to clean, reliable hydro power. And Minnesota Power, I understand, is a fan of Manitoba Hydro. We spoke with Dave McMillan, who's the executive vice-president of Minnesota Power, and he wanted me to put this on the record today, saying: We have exceptional relationships with Manitoba Hydro. Manitoba Hydro's long-term, 250-megawatt deal with Minnesota Power and 133-megawatt renewable optimization agreement, plus agreements surrounding Great Northern Transmission Line are absolutely critical pieces of Minnesota's long-term power supply. We couldn't imagine a better partner than Manitoba Hydro by which to go forward and establish a commercial relationship to supply renewable hydroelectricity well into the 2040s.

So we thank Mr. McMillan for his enthusiasm. But that is the kind of deal, of course, that Manitoba Hydro has been, and I presume will continue to try to strike with our American friends, to try to have steady, firm markets for our power.

So, just a few minutes ago, Mr. Shepherd said that virtually all the power from Keeyask has already been sold. I presume that those are not as long contracts as some, because of the possible need for use in Manitoba, but if I'm wrong on that certainly Mr. Shepherd can correct me again.

**Mr. Shepherd:** Contracts are a range of terms, and I don't want to get into all the specifics of them, but there are some shorter term and some longer term contracts. I mentioned the Saskatchewan contract, for example, as a 20-year contract. That would be long term.

**Mr. Swan:** And, certainly, anybody who's interested in Manitoba power, we collectively are interested in selling it to them, as long as the price is beneficial and as long as we can come to terms with the emitted cost of building transmission.

Is it fair to say that Manitoba Hydro is hopeful of entering into more contracts to export power to our neighbours, to Saskatchewan, Ontario and perhaps even Alberta?

**Mr. Shepherd:** I think it's fair to say that export revenues have been and continue to be an important part of our business. We have some very long-term relationships with customers. I think we're on good terms with, obviously, with our friends at Minnesota Power. They're a very good customer, and we work hard with them, as we do with other customers. We've developed a relationship with SaskPower and we continue to talk to them.

But our interest is really to optimize our assets for the benefit of our customers and for Manitobans. And so any time we look at a deal, an energy deal, it has to make economic sense. But we also don't pursue exports just for the sake of pursuing exports. They have to fit with our long-term resource development plan. And I think you can appreciate that when you build a very large facility, like a hydro facility, have very long time frames, and on the first day, you can't use all the power, and so exports have been—and firm export contracts have been a way to manage the balance between building resources for generation and domestic load. And I think we continue to work with those customers to try to optimize the use of our assets.

And at the same time, though, you know, very cognizant of the fact that we're here to primarily serve Manitobans and exports are simply part of the tool kit we have to try to serve Manitobans better.

And that should be and will continue to be our primary focus.

**Mr. Swan:** And I would ask Mr. Shepherd just to confirm that successful export contracts are one of the ways that Manitoba Hydro works to keep domestic power rates low in Manitoba.

**Mr. Shepherd:** The—I can confirm and I think it's clear in our report that revenues from exports come back and, essentially, benefit Manitobans. Now, there is a complicated—and I don't pretend to understand all the regulatory details—a complicated mechanism by which the PUB and Manitoba Hydro, through its rate-setting and cost-allocation process, allocate revenues that are earned. But, generally speaking, the majority of the benefit comes back to either support lower rates for customers or to support the operations of Manitoba Hydro, which, effectively, you know, means very similar things.

*Mr. Vice-Chairperson in the Chair*

**Mr. Swan:** And when we talk about the tie-in line—I just—I want to expand on that a little bit more. It's an AC line, and as Mr. Shepherd has explained it, it can work both ways. It's both a pathway for further exports of Manitoba power; it can also serve to provide imports of power which may happen—and I expect Mr. Shepherd will agree that that's primarily in the winter months when we experience our peak demands for power in Manitoba. Is that correct?

**Mr. Shepherd:** From a capacity point of view, the normal use, the normal, major uses for what we call diversity arrangements, where we would essentially supply energy to utilities in the US during their peak season, in return they supply energy to Manitoba in our peak season, which is the heating season in winter.

However, it's also used extensively for reliability purposes. And we rely on it; for example, if we have a maintenance or failure on a bipole, we often will import electricity for a period of time to deal with those types of short-term interruptions or failures. So that is an important element of import, to help improve the reliability of our system here and reduce the amount of additional reserve we would have to carry if we didn't have access to that market.

And, in addition, it's part of our contingency in the event of a low-water situation where we may have to import electricity to cover the gap if we had a low-water situation. We also do, on a normal basis, because of the nature of our hydro operations we have the ability to import some electricity at very,

very low prices during off-peak periods and then essentially store it in our hydro system and export the power during higher rate periods.

So there's a number of ways interconnecting into, in particular, the MISO market—I mean, part of the MISO market and having access to import and export capabilities benefit Manitobans.

**Ms. Klassen:** You said that the focus is to benefit all Manitobans. The bulk of generating stations are in the North. Why are there northern communities that still are on diesel, and what are the plans for those reserves?

**Mr. Shepherd:** Thank you for the question. There are four northern communities that are generally remote and isolated communities in northern Manitoba that's served by diesel-electric generation—don't have access to a grid connection.

There's a number of concerns, and Manitoba Hydro and, I think, Manitoba and the federal government are all involved in working with the First Nations—share the concerns about that. One of the big limitations is that the amount of electric power is quite limited from the diesel generators, and therefore you cannot use electric heat in the communities. The alternative is typically a fuel which is not as desirable.

So we continue to work with a committee of the federal government—they have primary responsibility for the communities—but also Manitoba and—to look at alternatives. Grid connections connecting with a transmission line are extremely expensive.

*Mr. Chairperson in the Chair*

And they—this point has not proven to be an economic case, a funding case, to look at a grid connection. We have looked at other renewable sources, such as supplementing the diesel generation with solar generation. We are looking at biomass options. We have had some discussions with smaller hydro generation, which could potentially be more local to the community.

\* (15:00)

But, at this point, working with both Manitoba and with the federal government and the communities, we have not found a solution at this point that we can move forward with, but we continue to engage in those discussions. And I know from updates I've received recently, the federal government has got an ongoing interest in finding

improved solutions to find cleaner and more reliable generation solutions for those communities.

**Mr. Martin:** I'm curious: in 2011, when bipole was under consideration, the comment made by the then-NDP government was that the bipole would not cost taxpayers a single cent. That was a direct quote.

I'm wondering if Manitoba Hydro can give the committee an idea in terms of the net cost of bipole to Hydro, but as well as the cost to an average residence on an annualized basis.

**Mr. Shepherd:** Well, the current—so, going back to the cost of bipole, the current cost of bipole—and we'll be reviewing this with the PUB in our next quarterly report, but we're currently estimating to be in the \$5-billion range. That's consistent with the board review.

But we've been going through, as I mentioned, an updating process to really look at the schedule and cost to ensure that it's as accurate as it can be. We have to report that publicly to the public utility board in our next quarterly report, and we will be doing that.

How that translates to an individual customer is, I think, more complex. And I would be glad to take an undertaking to provide a more accurate answer. It depends, really, on how that—those dollars are put into the cost base and then how many years it's recovered over, and, essentially, how it flows into rates.

And so I would have to do a bit of work to try to translate it into a simple answer for a customer, but I'd be willing to undertake to do that. I think it can be done.

**Mr. Martin:** Just a point of clarification.

I believe, in one of my more recent statements from Manitoba Hydro would—indicated a rate increase of 3-point-some-odd per cent. It did note that 1-point-some-odd per cent was dedicated towards the cost—or, as a result of the cost of bipole.

I'm wondering if the—if Hydro can confirm that.

**Mr. Shepherd:** I have to admit, I'm not familiar with that statement, but I would undertake to go back.

It certainly is a significant part of the contributing factor to the 3.95 per cent rate increase over 15 years annually that had been previously proposed. Bipole is definitely a contributor to that. As I said, there is no revenue associated with it. And



so, effectively, the cost will be recovered from ratepayers—the entire cost over a period of time.

I believe what may be in my—thank you to my assistant, here, for just reminding me. It may be that that figure reflects the amount that the PUB directed us to put in a deferral account, but I don't believe that that necessarily reflects the cost—the ultimate cost to ratepayers. I think that's—you know, I'd be cautious about saying that's the cost.

I think, you know, a more simple way to do it, I guess, if you want a cost, would be to take the \$5 billion and divide it by the number of electricity customers. And it's not equal, because different customers use different amounts, obviously, and so that's why I say it gets to be complicated. I'd have to do a little bit of math to try to give you a good answer.

**Mr. Martin:** One of the costs that Manitoba Hydro will be facing as a result of the change in route—going to the longer western route, which is about 479 kilometres longer, former CEO Bob Brennan indicated that Hydro was looking at a 40-megawatt line loss.

What would that be in terms of a cost to Hydro? I believe the original estimate was about \$320 million a year cost, those line losses. I'm wondering if those numbers are still valid.

**Mr. Shepherd:** Again, I'd be happy to undertake to provide a more detailed explanation, but—because it is complicated, but there is an incremental-line loss if you compare it to a shorter line, and I can undertake to provide the exact figures. But I think if you looked at a line that was a third shorter, if my memory is correct, it's about a third longer going on the west route than a direct route on the east side would have been, you increase the line losses from—call it a nominal, say, 6 per cent of the loss to 7. You end up with about a 25 per cent increase in the line loss but, of course, the loss is relatively low, so as a percentage, it's about—I think about a one and a half per cent increase at nominal load.

So there is an impact on the loss and if you convert that into revenue, it obviously depends on what your assumption is as to whether that revenue could be sold and at what rate. But I believe in the original board recommendation back in, you know, when bipole—the west route, was approved by the Hydro board, and obviously I wasn't there at the time, but I went back and reviewed the information. At that time there was an estimate on the order of

\$250 million of cost over the life of the line associated with incremental losses and costs.

**Mr. Martin:** What are the comments Hydro has made in terms of—in their presentation—long-term sustainability—it had to do with interest on debt. I know in the 2011 annual report the interest on debt was \$573 million. In the more recent report, it is \$654 million, so roughly, you know, roughly \$100 million—about 15 per cent more.

Now, with Hydro, if I remember right, we're looking at a doubling of Hydro debt from roughly 12 and a half to 25 billion. I'll be the first to admit I'm not an accountant, so if you—if I don't—give an idea as to what impact it will have on the interest on debt payments. I mean, is it as easy as a doubling of that payment from the current 654 to 1.2 billion, or can Hydro give me some clarification on that?

**Mr. Shepherd:** If everything was constant, everything remained constant, in other words, you acquired the new debt at the same interest rate that you have, you'd be correct, but I would go to our financial IFF forecast which details that in more detail and takes into account factors such as when we're acquiring the debt and what our estimate of the interest costs are.

We're in a period of time when financing costs are low and so it may be that the debt doesn't exactly double because of forward-looking interest rates being somewhat lower. But, in effect, you are correct, I think, with the thrust of your question, which is that our expense—finance expense will increase significantly as the debt increases.

**Mr. Johnson:** Mr. Riley mentioned, in his preamble, Hydro's financial situation has deteriorated.

Could he please tell us more about the financial state of Manitoba Hydro?

**Mr. Riley:** Well, thank you, Mr. Chairman. I've been enjoying the conversation between members of the committee and Mr. Shepherd because I'm learning a lot about the very details and minute issues in the business. I tend to focus on the bigger picture and to get a sense of the financial well-being.

And if I can, in a—what's happened here is we have—we've taken on way too much for the revenues we have coming into the business, it's that simple. You can take each individual contract we sign and you can say this contract's worth more than our domestic rates. The simple fact is the combined rates are charged on domestic rates and export sales,

multiplied by the amount of sales we're doing, and compared against the costs we took on to do this, it puts us in a very difficult situation.

\* (15:10)

Hydro, this year, is going to—if everything goes according to plan, will make about \$30 million—\$30 million would be, I think, the net income. In our best years we might have done two or three hundred million dollars of earnings.

When you start to go forward here and you look at the next four or five years, a lot of the challenge will be masked by the fact that we're capitalizing a lot of the expenses, interest included. And, when these projects come on to the books and we start expensing the revenues through the income statements as opposed to putting it in capital, you're going to end up with a situation, which we've articulated here, which is that we will be lumping along at a kind of a break even or a slightly better than break-even basis without doing something for many, many years, and that's assuming a bunch of things don't go wrong. That's assuming that we can maintain future power sales at the levels we're at or better. That's assuming that the rates on those sales will not be affected by gas prices.

I mean, we could get a positive surprise, and I think that's something that one of the members of the committee was referencing about gas—the gas situation in the United States. But, in my view, you don't build a business plan for an organization of this scale on hope; you build it on a hard-headed assessment of what is likely going to happen to power rates. And I think that the chart that I showed—that shows you the level of equity that would be in this business if we had a bad water year sums it up for me because then we have no room for any other problem.

**Mr. Johnson:** How bad do you expect Hydro's debt to get, the best-and-worst-case scenario?

**Mr. Riley:** That's very hard and I may defer at some stage to Mr.—to Kelvin, Mr. Shepherd, to comment on this. But it's very hard to be—this is you're making long-term forecasts over many, many years because we're talking about long-lived assets and long construction periods and huge amounts of money.

We're currently showing \$25 billion of debt at the end of about four years, I believe, and there's—that's all dependent upon us delivering, for example, construction within the ranges we've articulated today, so getting Keeyask done between 7.2 to

7.8 billion and completing the construction of Bipole III for \$5 billion. And it's assuming that the water levels are fairly constant and assuming that we don't—there's just a whole range, interest rates don't move between now and the end of the construction period because we still have a lot of financing to do and we've got, what I would describe as very optimistic rate expectations that—all it takes is a one point interest rate move in the period of time we're dealing with to find ourselves in even worse trouble.

So it's—I think for the purposes of the dynamics, 25 billion is kind of a—is—it could go either way, but, more likely, there would be more debt than less debt in my judgment.

**Mr. Johnson:** What is Hydro's plan to decrease the debt pending any biblical drought or something to that nature?

**Mr. Riley:** We're working on that.

I think when you build these projects there's generally not a lot of debt repayment involved, and it's not—unfortunately, it's not like a house. You end up putting these debts in place, and because it's a 100-year asset you tend to live with that debt for long periods of time. That's been the history of Hydro. But we have to improve our ability to manage that debt and hold that debt and that's the position that—I think the view that we've been advancing it at the board of Hydro, and I'd say—as I said earlier in my remarks, it's a balanced approach. We can't do it all. We—I would like nothing better than to be able to say that we can do it all on the basis of reorganizing and managing Hydro on a much better basis.

But this is not a problem—and there are lots of areas where Hydro can improve its affairs. That is a certainty. But this is not a problem of the management of Hydro or the cost that Hydro is spending on an operating basis. It's just the simple fact: we took on way too much debt, way too much relative to the level of revenues we can expect over a reasonable period of time and relative to what we have already accumulated in the way of a cushion in the event that something goes wrong. And so I think that's—I'm missing something now—

**Mr. Chairperson:** Mr. Shepherd.

**Mr. Shepherd:** I may just expand on Mr. Riley's comments a little bit on what we're going to do. And, as I said in my remarks, we're going to have a balanced approach. We will look for efficiencies and

cost reductions inside Hydro, that's a given, and we will be looking at rates.

You know, our—the previous plan that was put forward by Manitoba Hydro had a 3.95—nearly a 4 per cent rate increase for 15 years. We're going to have to look at rates as a way of helping address the situation. And we're talking, really, about a capital structure problem. So it can't be solved quickly. At least, not easily quickly because, you know, if you were in a different situation, you would seek other means, potentially, to get there.

But the things that are certainly under my control as the CEO would be to try to find as much efficiency and cost-efficiency, look at other capital spending so that if we have to spend more on Keeyask and bipole to complete them, I'm going to have to look elsewhere to find those reductions, which will probably be painful, but something that we have to look at as responsible managers to do.

And I'll develop, with my plan—and, I think, working with the board, what we think is a reasonable rate plan. Rates are a sensitive issue. It's important to recognize the interest of different stakeholders, and we try to do that. But I think we'll have to look at rates and, ultimately, our board will weigh in on this with their best judgment and guidance, and we will go to the PUB with a new plan, and they'll have to examine it, I think, in some detail. And, ultimately, as you know, rates are approved by the Public Utilities Board, so I can ask for rates, I can suggest what's needed for rates, but I have to convince, I think, the PUB, which is independent and has their own mandate and objectives, that what we're asking for is reasonable.

So that's certainly what we're working on. It takes some time to put together that kind of reforecast and re-plan. And I would expect that we will be coming forward at some time with a very detailed plan, as we usually do, a forecast that covers both our capital operating and revenue requirements for the corporation.

**Mr. Riley:** I just had one further point of clarification. And this is a simple question of math.

Our target equity for Manitoba Hydro, which has been approved by the Public Utilities Board, is 25 per cent of the total assets of Manitoba Hydro. In four years' time, Manitoba Hydro will have assets of around \$28 billion; 25 per cent of \$28 billion is \$7 billion.

The current equity in Manitoba Hydro is three—

**Floor Comment:** Two point eight.

**Mr. Riley:** \$2.8 billion.

So you do the math and if you want to get to the target, it's \$4.2 billion.

Now, I'm not suggesting that we have to get there tomorrow, but that's what I mean when I say we have a significant problem, and why I say that we have taken on something that's very imprudent and likely to cause us problems if we have any kind of—anything that goes bump in the night. And you always do in these kinds of projects and these kinds of businesses.

**Mr. Johnson:** What are your net income projections going forward and, assuming you stay at 3.95 per cent, what are your net income projections? And, if you—if they're negative, what is your plan?

**Mr. Shepherd:** So our—the question was about net income projections going forward. And this year, our budget—our plan—our forecast is for about a \$30 million net income, so pretty modest in the scheme of things.

I don't have the full forecast going forward, but I can tell you that our net income for the next number of years, which assumed the 3.95 per cent increases, is very modest. It's in the same range. So what is happening, really, is those additional costs.

\* (15:20)

So, to begin with, much of the rate increases that have been approved by the PUB are not actually flowing to our net income. They're flowing to regulatory deferral accounts and will only be brought into net income once bipole and Keeyask come into service. So you're not—we're not really seeing the—a positive impact on net income from rate increases at this time. But, effectively, our net income, because of the impact of the additional finance expense, is extremely modest for the next number of years.

**Mr. Chairperson:** Just for clarification before I—there was a House leaders' agreement, I believe, that if it sat for two hours, there would be a 15-minute allowance for the government to ask questions. That's what I was going by, so we will now go to Mr. Swan.

**Mr. Swan:** Well, I will move to the lightning round then.

I do want to talk a little bit more. The—Mr. Martin has put some highly incorrect information on

the record, so I think we should clear that up before we go any further. If I can direct Mr. Shepherd and Mr. Riley to exhibit 10, to the Boston Consulting Group report. And that document contains a comparison of the different options. And, under additional benefits from the Bipole III west route, there's additional benefits of \$26 million per year from reduced losses, meaning reduced line losses, and the hypothetical Bipole III east route, which we submit could never have been completed, the additional benefits from that were \$28 million per year from reduced losses, so Mr. Martin is actually out by a factor of about 150 times.

Per year, the actual line losses based on Hydro's own numbers seem to be about \$2 million a year between those two routes. And I'd like Mr. Shepherd or Mr. Riley to confirm that and also to acknowledge that I expect those reduced losses, the reduced line losses, are because of better technology in the way that the new bipole is being built.

**Mr. Shepherd:** So there's two elements to this. The number I quoted previously—which I'm pretty sure my memory's correct—from the original recommendation was a lifetime number. So you have to look at this—this is a—you know, \$2 million a year may not seem like much, but you look at it over 50 years and the net present value adds up. At the time, it was based upon the export rates that were in place. They looked at export in the opportunity market for pricing, so, as I say, the revenue impact from the losses—you have to really have a view as to what revenue you're displacing. But, look, the estimate at the time was at the time the decision was made, that's why I—you know, it seemed to be a good number. It was on the record. This estimate, you know, is reflective of what I said, which is that there's an incremental loss. It's a relatively small incremental loss because of the nature, but there is an incremental loss.

I think further confusing this to some extent, actually, early on when bipole comes in, because we can de-load and essentially spread the power over three bipoles, we actually result in about an 80 megawatt capacity gain, which is positive, and it goes it—it's like adding 80 megawatts of generation. And so this is where the electrical engineering and the accounting kind of gets a little bit hard to totally follow.

But what I could tell you for sure is that a shorter line has less losses, less revenue impact, less maintenance cost, better reliability in general

because it's a shorter line, and I think that's all, you know, a pretty well-proven, documented fact.

**Mr. Swan:** Well, thanks. And again, we're now clear that it's based on the numbers that Hydro provided to Boston Consulting Group. It's about \$2 million a year between the route being built and the hypothetical route, which is less than some members of the government pay for their house in a year.

So, if we move on to exhibit 12, this talks about new generation capacity being required, and again, it has a graph, which I appreciate Mr. Shepherd will only have in black and white, so I will do my best to colour the record of where we're at. It shows a Manitoba supply, excluding imports, and then the amount of power that we're actually selling at the current time. And, as a matter of fact, the net demand, which is all of the power that we sell to domestic customers and also to our extra provincial customers, whether through firm contracts or through spot prices, is actually greater than that amount. And we're only actually meeting all of our capacity because, from time to time, we do import from other jurisdictions. Is that fair?

**Mr. Shepherd:** Imports, so just to comment on the import and the requirement around imports, generally speaking, the import—the major form of import, as I said, is in two ways. One is as contingency. So you have a failure, if you are a stand-alone system, you would have to carry a contingency, what's called spinning reserve in the system to address that requirement to address the failure. Because we're interconnected into a very large market, we can carry less reserve, which is very beneficial, and use import capability for short-term purposes.

So the other major purpose of imports that we have is actually associated with diversity agreements. And the best way I can describe that, it's our neighbour in Minnesota has a peak requirement in the summertime when they have air conditioning demand. In Manitoba, we have a peak requirement for electricity in the winter. And so, through what we call diversity arrangements, you could think of it as a swap, we, essentially, give them—sell them electricity in the summer when they need it and they sell it back to us in the winter when we need it. And both of us avoid the need to build more generation that would be unused.

So I don't think it's necessarily totally accurate to say that we rely on imports. We effectively work with other neighbouring utilities, as any utility

would, to try to optimize the use of our assets and to come up with the most cost-effective way to serve our customers. So, certainly, we are in a better condition and able to optimize our assets better by being part of a bigger market. And I think being part of larger markets and freer markets where you can trade freely and acquire, you know, the goods you need at cost-effective prices and work to have a more reliable system, that's what we're doing here and why it's been beneficial to us.

**Mr. Swan:** Just getting back to that same graph, which I presume is based on information Hydro has supplied, if we look at the two lines on the bottom, even if Manitoba didn't export any power at all, our supply will actually be outstripped by the demand, based on the NFAT in 2022.

Would Mr. Shepherd agree with that, based on this information from Hydro in exhibit 12?

**Mr. Shepherd:** No, I wouldn't.

First, though, just to be clear, this is information that was put on the record at NFAT and so it's publicly available. It was reviewed in some detail. And I think you have to look at forecasts carefully. And, you know, there is a tiny point in time there where you might say we need more. I don't think anybody reasonably would assume that we would build a major asset to meet that requirement at that time. We would have found other ways to bridge that solution.

And, really, I think the key of this, which was from that time frame, is that we really didn't need new generation for a significant number of years. And, as time has went on, and it's always difficult to foresee the future, but, in effect, our load growth has been less than anticipated in our requirement for new generation. The last number of years has continued to move out, and, more realistically, today, I would say it's probably in the early 2030s that we realistically need new domestic generation.

**Mr. Swan:** Well, I'd like to ask Mr. Shepherd, then, based on this exhibit and exhibit 12, which seems to show that right now we do rely on imports, and I accept his explanation that that is a reasonable way for Manitoba Hydro to act and has been and will continue to do so, we see that without imports, our domestic demand would not be met by 2022 with our current generation, and that, in any event, within a couple of years after that, there will be a need for more capacity.

\* (15:30)

What has changed from the documents that are contained in this report which was just released in September?

**Mr. Shepherd:** This document, which was released in September, and I think it's, pretty clearly, it is the information that was available during the NFAT. I think our updated—our most current load forecasts and resource forecasts show that domestic requirement is into about the 2032 time frame, and I think the time when we needed Keeyask for domestic development, you know, would've, I think what it was was advanced, you know, during NFAT decision. The argument was, you'll build Keeyask earlier than required; I think it was very obvious that we were building earlier. There was a case made, and I don't think—I'm certainly not qualified to go through the entire NFAT process. Hundreds of people and experts went through it, so I'm not going to try to go into that decision. But I think there clearly was an advancement, and then, really, what's happened, then, is the real requirement for Keeyask for domestic purposes has moved out, and it largely has been because of changes in load growth and less domestic requirement than what was forecast at the time.

**Mr. Swan:** I want to ask Mr. Riley about some of his comments about debt. I mean, the—this is a place that Hydro has been before, and I think the material supplied by Hydro, the material in the report, makes it clear that Hydro does incur debt when it is building and Hydro did have an equity ratio which was in the single digits from various times from 1970 through to 1995 when there was a great deal of Hydro expansion, which I think every Manitoban would agree has been a positive thing for the province of Manitoba. I don't know if Mr. Riley'd be surprised to know that, actually, Hydro's financial position is better than it was in its 1999-2000 report with a better debt-equity ratio, greater ability to service interest.

We're never going to agree on those details, but I think Mr. Riley will acknowledge that when Hydro was building, the day before bipole starts transmitting power for export, the day before Keeyask opens and starts selling power, the day before the tie-in line to Minnesota opens, is going to be the worst day for Hydro because we've incurred, and it's acknowledged, billions of dollars to build those assets, and until those assets come online, there is no revenue generated. We saw that with other hydro developments. For example, with Limestone. In the '90s, the worst day for Limestone was the day

before it opened, and after that time, Limestone began generating significant revenues for Manitoba Hydro and for the people of Manitoba.

So I would disagree with Mr. Riley in his view. Obviously, Manitoba Hydro has taken on a lot. You've seen its power that they were able to sell under long-term contracts. Some of it has been debt; they've been required to take on to build the bipole that we know is responsible, and I was also disappointed with Mr. Riley in his comment that we're building dams that aren't needed to 25 or 30 years, because I would simply submit that's just not the case based on all the evidence that we've seen.

**Mr. Riley:** You're correct, when you look at the history of Hydro debt as a percentage of its equity and—but there are some fairly significant differences. The level of debt for the combined entities of Manitoba Hydro and the government of Manitoba were in the 30 to 35 per cent of GDP rate in those days. It's climbing to 60 per cent, 60—which is a dramatically different dynamic than the dynamic that was in the—in place when the other dams were being built.

Those dams were built with a lot more—clear line of sight to domestic demand than was the case with this project. This project was clearly designed and accelerated to try and take advantage of US contracts, which, as it turns out, they—the—those contracts, while they looked better than our contracts, are not delivering an economic rate of return for Hydro, and it's clear from the numbers and doesn't provide Hydro with the level of—the cushion that's involved.

The other thing that's different is the fact that when we were building hydro projects through the 1980s and 1990s, and we were doing the same thing, we were relying upon the credit of the Province of Manitoba to support the operations of Manitoba Hydro. It made a lot of sense, because if you looked at the composition of the ratepayers of Manitoba Hydro and you compared them to the composition of the people who were actually using Hydro assets, there was a much closer level of similarity. We were basically running the risk of corrupting our credit, because—and it made sense in those days, I guess. I would question whether it made sense, but it certainly—it made sense to the people of the day, because it gave us the capability of building power that we were going to use ourselves within a reasonably short period of time.

That's not the case here. What's happened here is that we're now building for an asset that it's probably—and I think I might have said 10 to 15 years, mid-2030s is what I've been saying when I've been out and talking to people, not 20 to 25 years. The Free Press said it was 20–25 years, but that's not what I said, and I don't always agree with what the Free Press says.

So what I would say is that—I've lost my train of thought here for a second—you brought up an interesting topic for me. I—but remind me where I was. That'll be in Hansard, won't it?

**An Honourable Member:** The Free Press. You don't agree with the Free Press.

**Mr. Riley:** Yes—no, I want to get back before that. I want to talk about the real issue at hand, which is the difference of—this is where we do have a difference of opinion, because I believe that what's happened now is that people—I've got it—the composition of our rate base versus the taxpayer base. We now have—probably 30 per cent of our business goes to—is export—25 per cent of our business is an export-driven market, so they are beneficiaries of it.

We have a lot of large consumer—a lot of large commercial customers that use power. You—it would be an interesting to do a correlation between the amount of power they use and the amount of jobs they have. Companies like Tolko, clearly, are big users of power, but there are others that are big users of power but don't have a lot of employees. And we have an inequity in this province between people who have to in—on—in First Nations and in rural communities, who use an awful lot of power relative to other people in this province.

So there's not a complete alignment of interest between taxpayers and ratepayers is my point. And now what's happened is rating agencies have woken up to the fact that we've corrupted our credit, and they don't see the equity we need, and they don't see the level of revenue we need to justify that level of debt. And we, as Manitobans, are going to pay the price for that going forward, because of the impact it's going to have on the cost of debt and our ability to get debt.

**Mr. Swan:** Well, I'm—this has been, actually, a very good conversation. We've got a lot of areas we agree on and some we don't, and we'll see where the conversation goes. I'm going to turn it over to the member for Kewatinook (Ms. Klassen).

For my part, I would like to thank Mr. Riley and Mr. Shepherd for what I think has been a really illuminating afternoon. This is useful. I know the time is running short. Because of the importance of Hydro, I would suggest maybe we reconvene in the spring and have—I know there's a tradition of only meeting once a year. I think we could carry this conversation forward, because I've got a lot of—I've got a lot of tabs left, but I want to thank both these gentlemen and also the other people from Hydro who are down here this afternoon.

**Ms. Klassen:** Manitoba Hydro manipulates water for profit. Indigenous communities have suffered the most from this.

In your report of the mitigation—note on page 91, it specifies the NFA. There's mention of five signatory First Nations.

I'd like for you to table a list of those First Nations. I'd also like tabled a list of the rates communities in the North pay per kilowatt, and I would like to hear from either one of you if you could tell us what happened, in history, to any one of those First Nation communities.

\*(15:40)

**Mr. Shepherd:** Well, thank you very much for the question. We will undertake to table a complete list of the signatories of the NFA and any other communities that you may be interested in as a matter of record.

The—we will also table rates, but I can tell you that the per kilowatt rate for a customer—all customers, regardless of communities, is the same. However, having visited many of the communities—I've been in, you know, Split Lake, I've visited TCN, I've visited York Landing, I've been to Norway House recently, Nelson House, Fox Lake several times. And I've met with many of the elders and the leaders and held community meetings, and I hear, consistently, concerns about the hydro bills, and I think there's a belief which is not based in truth, but I understand why it is there, that somehow the rates are higher. The rates are the same. We charge a residential rate. It's the same in Winnipeg; it's the same in Rivers, Manitoba; it's the same in—in fact, it's the same in a diesel community. They don't pay higher costs; they pay the same rate.

But, unfortunately, in many of our First Nations communities that I visited, housing is not good. They have significant challenges with infrastructure and,

in nearly all cases, they have electric heat because they do not have access to natural gas. And so those two factors—you know, substandard housing, electric heat—generate high bills. And so I understand, and I sympathize with customers in these communities. They face challenges. Communities are not economically as advantaged as other communities in Manitoba. Many families struggle and—but it isn't a question of rates, it's a question of housing, the amount of poor insulation and other things, and the combination of that and having to use electric heat caused very high bills.

And we see similar things in some rural areas where customers, you know, face higher costs from electric heating. And so I talk to the communities about that. I hear from them, I understand the challenges they have. But I do have to say: the rates are the same, but I do understand bills can be higher and can be very challenging.

**Ms. Klassen:** I appreciate that.

Do you have any concerns about Manitoba Hydro International competing directly with tax-paying consultants in what is known as kneecapping?

**Mr. Shepherd:** I'm not familiar with the term.

**Ms. Klassen:** Okay. So Manitoba Hydro International, a fully owned subsidiary of Manitoba Hydro, is competing with other independent consultants on projects. They have an advantage of not paying corporate taxes, insurance, and have huge resources that Manitoba Hydro makes available to them. And that's what this guy says is known as kneecapping.

**Mr. Shepherd:** Thank you, I hadn't heard that term before, but now I understand it better. So I appreciate the explanation.

Manitoba Hydro International has been around for many years. It is a subsidiary of Manitoba Hydro. We've operated primarily outside of Manitoba, not exclusively, but, certainly, our consulting—international consulting business is predominantly outside of Manitoba. I think we've operated in probably close to 95 countries, typically providing help to utilities to help them improve their operations.

We often partner with other Manitoba companies. And, in fact, one of our goals is to help build and support the ecosystem of other engineering and consulting companies in Manitoba. And so we have very good relationships with many other

consulting and engineering companies here, and often work in partnership with them.

In Manitoba, the services that Manitoba Hydro International provides are quite limited, and there's—usually provided to end customers as an auxiliary service to our business and in—but I would say that, for the most part, they are not competing directly with other major companies, and they're being provided in such a way as to support Manitobans.

So, for example, as part of Manitoba Hydro International is Manitoba Hydro Telecom, but they're involved in providing—taking advantage of surplus capacity that we have in our main business and making it available to First Nations communities for Internet services or to rural areas to improve services. So that's an area where we're—we view ourselves as not directly competing but helping Manitobans get better access to services through the fact that we're investing in infrastructure in Manitoba.

**Ms. Klassen:** In the peak load growth you submitted for Bipole III, Keeyask in tile—in review to the Boston Consulting Group. The peak load is shown at about 4,750. What was the actual peak in 2016?

**Mr. Shepherd:** I'll take an undertaking to get you the exact answer. I don't know off the top of my head.

**Ms. Klassen:** Would you agree that without a proper industry standard, probability-based study results such as what Teshmont Consultants did for Muskrat Falls, the Boston group could not provide a meaningful recommendation on the need for Bipole III reliability—for reliability?

**Mr. Shepherd:** I would disagree with that. First, there were significant studies undertaken by Manitoba Hydro, and they've been, I think, publicly available and reviewed. And I think the case for bipole, in terms of reliability, can be made by a group such as Boston Consulting Group, based on the information they had available plus their own expert experience and capability. And so I think their conclusion that Bipole III is required to address reliability concerns is supportable and defensible and accurate.

**Ms. Klassen:** In view of the termination of your firm 850 MW export contract with Xcel Energy, without renewal in 2025, what plans do you have in place to develop significant firm export contracts at those high rates?

**Mr. Shepherd:** I actually do read the Free Press because sometimes it has information in it that is correct, but often has information that is incorrect. And Mr. Will Braun wrote a story. I actually met Will in Winkler the other night, and he asked me that question, and when I told him the answer he said, gee, I guess you'll have to correct me, because I think I wrote something that was wrong.

And the answer to that—to just expand on a little bit. Xcel, first, is a major customer of ours. They have over 200 power purchase agreements of a similar nature to what they have with Hydro. And it's their practice to publish the contract dates, and that's what they do. They make—and part of that is they make no assumption about renewal, because effectively they're going to evaluate each contract and look at it against other options.

But we have a very long 'termship'—long-term relationship with them. Much of those power agreements, Mr. Braun is looking at their buy side but there's a sell side, because they're a diversity arrangement, and we're buying similar power from them. We've been negotiating for several years and, you know, while there's no certainty about an extension, we have a very good relationship and we believe that there's a very high probability that we will renew those contracts. And we believe that because to a great extent, they're in both of our interests to do that. So I've asked our folks to write to the Free Press and to the Brandon Sun and just put the facts on the record. And we will be doing that.

\* (15:50)

**Ms. Klassen:** How will Manitoba Hydro develop the flexibility to quickly adapt to the rapidly changing electric energy scene?

What strategy is being put in place to avoid re-occurrence of their current financial disaster based on taking risks without flexibility?

**Mr. Shepherd:** We—so Manitoba Hydro has got a number of ways we look at emerging technology. We have a long-term resource plan that looks to develop resources, and that plan looks at the opportunities and costs around all types of resources, you know. Although we've talked about natural gas, and there's issues with natural gas, that's a resource. Solar is a resource. Wind is a resource. Biomass is a potential resource. Import is a potential resource. And, when we do our resource planning, we look at



all resources, and also look at our requirement, and we continually look at the economics and the technology development associated with them.

So we won't really be facing a requirement, I don't think, to make a near-term decision on new resources, because we don't need new generation now and for many years. But, if we needed new generation, we would clearly look at all the options available for—to meet that requirement.

In addition to that, we are working through efficiency programs to work with both small customers and large customers, to help them become more efficient, whether that's co-generation or geothermal-solar. And, by doing that, we also gain a lot of experience with what might be done in terms of demand-side resourcing, which is another option down the road, which is for us to play a different role, and for customers to take on, you know, more of the generation requirement themselves. So I have confidence we've got excellent people, and we're part of the industry that is looking at these things. And we'll be in good condition to manage those risks going forward.

**Mr. Riley:** Just one other piece of information.

The best way to guarantee flexibility is to ensure that we're operating off a sound financial footing. And that's why the—it's—there's a requirement for us, now, to address the financial issues we now have so that Hydro can play its traditional role as being the crown jewel of Manitoba.

**Ms. Klassen:** I'm also the Ag critic, so I got some farmer questions.

Land has been expropriated from a considerable number of farmers and, perhaps, landowners who are not farmers. How many people have had land expropriated?

**Mr. Shepherd:** I'll give an undertaking to provide an exact answer, but I can tell you that I believe—and it may not be specific to Bipole III, but I'll answer the Bipole III question because, obviously, you could have expropriations in a number of different situations. But it's on the order of 60. But I will undertake to give an exact answer because it changes from time to time as we meet with land owners and we reach arrangements which allow us to go forward without expropriation.

**Ms. Klassen:** It's my understanding that you were planning to take this to the LVAC, the Land Value Appraisal Commission?

Is this the case? And, if so, why is Manitoba Hydro not considering talking to the members of the Manitoba bipole landowner committee as well? Many of them are on the Canadian association of energy and pipeline and looking at the possibility of coming to an agreement with the Manitoba bipole landowner committee?

**Mr. Riley:** I'm very glad you asked that question.

I have been in the—both Kelvin and I have been out, now, to several meetings with the community, and we would be delighted to meet with the landowners and the representatives to have a conversation around what we can do to soften what I know is a very tough blow for them.

I mean, this is—I understand the feelings of the farmers in that community. I would be outraged myself if I end up in that kind of situation. And it's one of those awful things when you have a major project such as what we're embarked on, which has huge implications for the whole province, when individuals are affected. And we will be delighted to meet with them, and we've said so in all the public meetings we've been to, and we—that's something we would welcome.

**Mr. Martin:** On page 10, on exhibit 9, it notes that the east route—Hydro instructed not to pursue by the minister for Hydro, 2007. I'm wondering, how was that communicated to Hydro? Is that communicated in a meeting in the minister's office? Was it communicated through a memo, or what means was that? And, if it was a formal correspondence, can that correspondence be shared with the committee?

**Mr. Riley:** Well, I wasn't on the board at the time, so—but I can tell you that there is a letter that was received, so—I don't know what other conversations took place, but there was a letter that was directed to the board of Hydro at the time, directing them not to look at the route down the east side.

**Ms. Klassen:** Well, you're willing to meet with the farmers. That's awesome. And I'd like to go back to my question, because it wasn't clearly answered. Let's take South Indian Lake First Nation. What happened to them in Manitoba Hydro history?

**Mr. Shepherd:** So I think it's a question that there's a lot on the public record about. But I know from personal experience meeting with communities, including meeting recently with the chief from South Indian Lake, that many Hydro projects, historically, have had some major, major impacts on communities in northern Manitoba. And, as a result of that, you

know the impacts range; in some cases, communities were relocated. In some cases, you know, communities have suffered, you know, economic disruption, and many of these were, I think, things that, you know, we look at today, and, you know, are just not acceptable.

So, as we've went forward with our projects, and I'll use our Keeyask development as an example, we've went through a very long process of engagement with the First Nations communities that are affected. We've consulted; we went through lots of studies on impacts. We ultimately went through a process of the communities holding referendums to determine whether or not they were supportive of the project. And I believe—I wasn't there at the time, but I believe Hydro made the commitment of communities—couldn't reach agreements, we wouldn't go ahead, so we got—we did reach agreements. Communities held referendums. As a result of that, we have four Cree nation partners on Keeyask. When we talk about Keeyask, it's not a Hydro project; it's Keeyask Hydro project, and our First Nation partners are integral and essential to that.

We've went—entered into the Joint Keeyask Development Agreement with our partners, and through that we have worked hard to deliver economic benefits, jobs and business opportunities to the communities. We've employed a very significant number of our Cree nation partner people, as well as other indigenous people and Manitobans on the project. And, in addition to that, where there are impacts—and there are impacts from hydro development, and they—I think they do disproportionately affect the communities in the area—we've entered into a number of adverse effect agreements and other agreements to work with those communities to help offset those adverse effects.

So I think we need to continue to work to do more. It's not perfect. We have many, many issues, and I work closely with our partners. Our Hydro team is working closely to address those issues. Some of them are challenging. Some of them are very difficult to get to, but I think, you know, what was done in, you know, 1960 or 1970, don't agree with, I think was bad. We've done a lot of things over the years to try to address those, and yet I would be the first to say we have not fully reconciled those issues, and we continue to work to do that.

And going forward, though, we're committed extremely—have an extremely strong approach to engage and to work with indigenous communities

and to really try to do everything we can to address the impacts that come from hydro development. Because any form of energy—I don't care if it's windmills or natural gas plants or even solar—all have impacts. Hydro's impacts are different, and we're very fortunate that hydro is a renewable resource and greenhouse gas emitting, but there's no doubt it's a major, major project that has an impact in the area. And, you know, my team and myself are very, very committed to work with our partners and the other indigenous communities to try to find solutions going forward.

\* (16:00)

**Mr. Chairperson:** The hour being past 4 o'clock, what is the will of the committee?

**Mr. Martin:** Mr. Chair, I believe the agreement was to sit to 4 o'clock. I move that the Chair—that it rises.

**Mr. Chairperson:** The agreement was to sit until 4 o'clock and revisit. Do I have a motion to—for the committee to rise?

**Mr. Marcelino:** I just wanted to make of record that we wanted this to be 'til 5, and to revisit at 4. And that's the agreement.

We have a lot more questions to ask. And I understand that it's Friday. But if we could keep on asking, because I haven't asked a question yet, and I'm the critic, and because my designate was asking very substantial questions. So I would ask if we could add about half an hour more.

**Mr. Martin:** I would put forward, Mr. Chair, that the committee sit until 4:15.

**Mr. James Allum (Fort Garry-Riverview):** Mr. Chair, I respect everyone's time commitments here. I don't think we're asking for an excessive amount of time just to go to 4:30 to make sure the questions that we have are covered off. We had put the suggestion that we would perhaps like to reconvene this and have—continue to these conversations in the next six months or so. I didn't quite hear an answer to that. So, in light of that, I think it's only reasonable that we not really engage in this long-winded negotiation process. Up to a half hour seems to us a very reasonable deal. If we're done before that, then we'll terminate.

**Ms. Klassen:** I just wanted to say thank you. And one of the most heartbreaking stories I heard was, in south Indian, was when they had to rebury all the caskets that came out of the water. So I just wanted to thank you for acknowledging that.

**Mr. Chairperson:** Is there agreement to sit until 4:30?

**Some Honourable Members:** Agreed.

**An Honourable Member:** No.

**Mr. Chairperson:** There is no agreement. What is the wish of the committee, then?

**Mr. Martin:** The suggestion has been put forward that the committee sit until 4:15, at what point the committee rises.

**Mr. Chairperson:** It's been put forward to sit until 4:15. What is the will of the committee?

**Mr. Allum:** Mr. Chair, without making it—being too difficult, we had put 4:30, and it's another 20, 25 minutes. If it's the will of the government, then they're going to have to put a motion forward in order to achieve the consequence they're looking for.

**Mr. Schuler:** Initially we had indicated committee would sit 'til 3 o'clock, and then there was some discussion. We agreed we would sit 'til 4 o'clock. And the critic, who never designated anybody to take his role, we—you know—we don't question how the opposition runs its operation, but he never designated anybody, decided not to ask questions, and that's his prerogative. We're prepared to give him 15 minutes to ask his set of questions, which is about the extent of what the other 40 members of the Legislature got on the other side—from the government side.

And, you know, the critic had a lot of time, could have availed himself—you just raise your hand and, as critic, you get that opportunity. The committee has sat quite a bit today. I think we've gotten outstanding, up-front, straight-up, honest answers. And I would suggest that the committee pass some of the reports and give the critic 15 minutes to ask some questions and then committee rise.

**Mr. Allum:** I think we've put our position on the table.

We would like to sit for 4:30. We're kind of wasting time debating this. We wasted time at the beginning of the meeting negotiating the time frame of it. This is our opportunity to have a good dialogue with the chair and the CEO. We certainly appreciate the dialogue we've had today.

This—if it's the will of the government side to stop now, then they need to put a motion in front of it, and we need to vote on it. And we'll go from there.

**Mr. Martin:** Mr. Chair, 4:30, in terms of whether or not a motion's required. The original motion at the front end was that the committee would sit until 4 o'clock, at which time it would be reassessed—*[interjection]*

I'm asking for clarity, James. That's all.

**Mr. Chairperson:** Originally, there was—it's not a motion, because it has to be a written motion—it was an agreement from both—from all three sides to sit 'til 4 o'clock and then revisit. I would encourage everyone to solve this amicably.

**Hon. Blaine Pedersen (Minister of Infrastructure):** Mr. Chairman, let's go to 4:30 and, at 25 after, whatever it is you need to do, we'll discuss whether we're passing any reports or not. Let's get on with it, and get the day done.

**Mr. Chairperson:** Is that in agreement on everybody's—*[interjection]*

Is it in agreement that we sit until 4:30, at 4:25 calling the questions as to which reports will be passed? *[Agreed]*

**Mr. Marcelino:** Mr. Chair, this question is more directed to Mr. Riley. It's regarding the presentation, which I appreciate very much and which I have here.

And the question that I had really relates to the debate, whether Bipole III is useful or not, for the purposes of Manitoba Hydro. Let's not talk about the costs for now. Let's talk about the—what it does for Manitoba Hydro because we are continuing with the construction of that bipole anyway.

The conclusions that were mentioned about what Bipole III does, I just want to reaffirm this and—because I want to be able to at least confirm it for my own conscience that what we're doing is right.

The risk of blackouts due to the danger of any natural disaster hitting bipoles I and II was already experienced in 1996. And would you agree that Bipole III gives us some level of comfort, that even if I and II went down in a catastrophic manner, would Bipole III save our butts?

\* (16:10)

**Mr. Riley:** I'm going to give you the—I'll give you the layperson's answer, and if I miss something, I'll ask Mr. Shepherd to add the technical capability. You're correct when you say that Bipole III is essential to protect Manitobans. A Bipole III is essential to correct—to protect Manitobans from a blackout on routes I and II; we've been living on

borrowed time. That was one of the factors we took into account when we made the decision to continue on.

The other reason we made the decision to continue on, frankly, was because it had become so inextricably wound up in Keeyask that a decision not to proceed would have resulted in about \$7 billion of stranded assets in Hydro, and as I 'sturdlier'—said earlier, Hydro has \$3 billion in equity. So we would eliminate the equity of Manitoba Hydro, and then some, if we had made a decision not to proceed. But you're completely correct, the fundamental protection that Bipole III offers to Manitobans in the event of a catastrophe, and bipole—Bipoles I and II is of great benefit to Manitobans.

**Mr. Shepherd:** I just wanted to just qualify what Mr. Riley said. So he is correct that it does actually accomplish the purpose. It doesn't fully replace the capacity. If you lost Bipole I and II, the combined capacity of Bipole I and II from a simultaneous failure is higher than what Bipole III has. So it isn't a total solution, but it does accomplish the purpose, which is to give us sufficient capability, along with other backup and other options, to manage the situation.

So I think from the point of view of accomplishing the goal of increasing reliability and addressing the major risk, it does that, but it's not—it's not a total backup.

**Mr. Marcelino:** Considering that there would have been a risk exposure of about 20 billion, and that's what the PowerPoint presentation said, that's on page 3, that the 20 billion in possible societal impacts, if Bipole I and II would fail, would you agree that that would have paid for what it eventually cost us to create Bipole III?

**Mr. Riley:** I would say, first of all, page 9 of the BCG summary of our work will give you the range of scenarios that might occur.

And the scenario we talked about, which is the most 'extremistic' scenario is that if we lost the services of Dorsey, which is one of the two bipole stations in Winnipeg, and that would be a \$20-billion number. And, if that happened, you know, you would look and say to yourself, it was a very smart move to build a Bipole III. And similar—I would make the similar comment about—as I say, it's very similar to what we did with the floodway. You know, you never know when you're going to get hit by

something of that nature, but you know it's likely to happen at some stage. I'm not—I think the most—the least—the least likely of the scenarios we looked at of the catastrophe was the—a year, a year's outage at the 'dorset'—at the Dorsey station, but even the other—there are a lot of other effects that are of not-as-great significance, but more likely to happen, and that's why you need something of this nature.

**Mr. Marcelino:** Thank you for that answer, and I believe if I read it right, there are two converter stations that are being constructed now. They are still in the process of being constructed. I'll address that question to Mr. Shepherd. So, is it—how far along are those converter stations? I was told by somebody that it will take at least two or three more years with the engineers who are working on it.

**Mr. Shepherd:** There are two converter stations associated with Bipole III, the Keewatinohk station, which is the north end of Bipole III, and a new converter station at Riel. Those stations are well advanced in construction. The main converter halls, which house the most sophisticated equipment, are enclosed as of, you know, the current time, and major progress has been made on the switching gear and other gear. The first four converter transformers—there's about 20 in total—shipped from Germany and should arrive here in Manitoba, in a matter of weeks, and work on the other converter transformers is also well advanced in production.

So what I would tell you is that work is well along, and it's our view that at this time, anyways, I would say that although there's always schedule risk, we have a very high probability, probably at least at the 75 percentile confidence level of meeting the original schedule of in-service date for Bipole III, which, of course, requires both the converter stations and the transmission line.

**Mr. Marcelino:** Regarding Keeyask, if you know the scheduling of the delivery of the turbines, from what I gather from some friends, is that it's already—it has been ordered.

**Mr. Shepherd:** So question about the turbine contracts, yes, they are a very long-lead-time item; they are quite specialized. The contracts for those have been placed for some time, and they're well advanced in engineering, and I think could possibly also be into some stages of production.  
*[interjection]*

**Mr. Chairperson:** Mr. Marcelino.

**Mr. Marcelino:** Sorry—a rookie. How far along has those orders been? Have we paid for at least half of that order?

**Mr. Shepherd:** I don't know the details on the turbine contracts. I do know from the analysis that we did that there have been some progress payments, and there would be contractual penalties associated with the—with not proceeding with them, and that was some of the costs that were looked at in the analysis that we completed. But, in effect, the turbines will not be delivered for some time, as I said, but they are a very, very long-lead item in the project.

**Hon. Jon Gerrard (River Heights):** I just wanted to follow up on a question earlier on in terms of—I understand that the chair is ready to meet with the farmers, but I think that in the answer to the question, there seemed to be some conditions around that meeting, and just so that there can be further clarity, and that potential for that meeting to occur sooner can be accelerated?

**Mr. Riley:** The only condition is that there be no conditions. And then—and we've said that we'd like to have an initial meeting with the farmers and the representatives to talk about perspectives, to listen to each other's perspectives, and I think the problem has been so far is that we've been advised that there are some conditions that the farmers would like to see met beforehand, and there really are—and we can't do that until we have a conversation with them on a just a—on a basis of let's share our views.

**Mr. Johnson:** On your presentation, on page 8, your slides—show presentation, it appears, if I'm reading it right, Manitoba Hydro has started taking on significant debt in 1999. Can you explain that? Page 8.

**Mr. Riley:** Oh, yes. I would have to give you an undertaking. I was not the chairman of the board in 1999. But we can certainly give you a scenario, I think, of what caused the debt to increase over that period of time.

\* (16:20)

**Mr. Shepherd:** I think it would be best to undertake the follow-up of their surety. I wasn't here, either, and so it would be speculation, but I could speculate that it may be around development of Wuskwatim, which was an earlier project. But I think it would be best for the record for me to take an undertaking and to show exactly what the debt was incurred by.

**Mr. Chairperson:** Mr. Lagassé, you had your hand up earlier. Do you still have a question?

**Mr. Bob Lagassé (Dawson Trail):** No more. Thank you.

**Mr. Chairperson:** Mr. Martin.

**Mr. Martin:** Just—in the financial statistics, when Manitoba Hydro indicates that its extraprovincial revenue for 2015 is \$400 million, that would obviously include intraprovincial, or Canadian, but is that—is the information available as to what would be Canadian revenue, extraprovincial revenue versus international revenue?

**Mr. Shepherd:** I will have to find the exact page in the book. I think it's page—

**An Honourable Member:** Page 90.

**Mr. Shepherd:** There is a page earlier, though, on page 27 of the annual report—

**An Honourable Member:** This.

**Mr. Shepherd:** Oh, you're looking at that one. I apologize.

**An Honourable Member:** Am I in the wrong year?

**Mr. Shepherd:** Yes, I have the breakdown you want in this report, the current report, which is page 27 of their most recent annual report for the year-end 2016. And you'll see on page 27, there's a fairly extensive breakdown that shows domestic electricity sales, and breaks it down: Residential, Commercial, Industrial, both in dollars and volumes, in kilowatt hours, and then below that, there's Extraprovincial, and it's broken into Dependable, Opportunity, and Other, which is a bit of an esoteric small category. And the volumes, and so you can, with that date, have a very good view of the year-over-year change between '15 and '16; you can see that our total electric revenues were 1.84 billion for 2016, and 415 million of those came from extraprovincial revenues.

**Mr. Martin:** Sorry. I was trying to find that. It—just—a point of clarity. What I'm looking for, though, is a—the—when you talk about domestic, domestic is exclusive to Manitoba, or is it exclusive to Canada?

**Mr. Shepherd:** Domestic is Manitoba. Extraprovincial would include, for example, Canadian as well as US revenues.

**Mr. Martin:** Jumping the track slightly in the—on exhibit 3 on page 4 of the Boston Consulting Group

it talks about a less prudent decision on behalf of Manitoba Hydro. I am quoting the report: Imprudence can be traced to systemic decision, government's issues. Example: lack of clear objective function and criteria, constraints of Hydro and regulatory body, rates not linked to allowable returns, iterative versus upfront approaches to investment decisions. I don't have an investment background; I'm wondering if that can be shared with me in more plain English.

**Mr. Riley:** Well, I'll try and put it in simple terms. Essentially, you have to have proper governance and clarity as to who is responsible for what decisions. And what are the—what is the purposes of everybody's role? So, for example, when you have an outside agency going to a board of directors and telling a board of directors that they should do something that's not necessarily the best business interest because there are other factors that they're considering, that's dysfunctional. It's not an—and that's, I think, what happened here with at least one or two decisions that I'm aware of.

When we talk about rates not being a link to allowable returns, one of the problems we have with—what we have—that we have here is that we are so focused in this province on rates of return that we have allowed the regulatory process to proceed on the basis that it doesn't take into account the health of the financial—the financial health of the organization that's delivering the services. So we've continually driven down rates to very, very low levels, which is wonderful for consumers, but we put the taxpayers at risk because we haven't allowed Hydro to build a proper equity base.

When we talk about an iterative approach to versus an upfront approach, we're already talking about, you know, incrementally adding and making decisions instead of taking a more systemic look at the decisions that you make with respect to the development of a major hydro process. The only work that I'm aware of that was done on a sort of systemic basis was the NFAT hearing, that was done about two or three years ago, but even that hearing was not—did not consider Bipole III. It considered everything else but Bipole III.

So those are the kinds of things that—there needs to be much more clarity about what it is we want each party to do, and what it is that we want Hydro—what's Hydro's—what are Hydro's primary objectives, what are the primary objectives of the Public

Utilities Board, what are the proper concerns for the Public Utilities Board, how does the government exercise its legitimate policy objectives when it's dealing with an organization like Hydro that's essentially a business?

Those are the—that's what we're already talking about, and there was a—there's—there needs to be more clarity on that going forward, because I think part of what happened here was a lack of clarity on that basis.

**Mr. Chairperson:** The hour being past 4:25 p.m., I shall proceed with the questions for the annual reports.

Annual Report of the Manitoba Hydro-Electric Board for the fiscal year ending March 31, 2012—pass.

Annual Report of the Manitoba Hydro-Electric Board for the fiscal year ending March 31, 2013—pass.

Shall the Annual Report of the Manitoba Hydro-Electric Board for the fiscal year ending March 31, 2014 pass?

**Some Honourable Members:** No.

**Mr. Chairperson:** The report is accordingly not—no, not passed. [*interjection*] That's what I said. It's not passed.

What is—shall the Annual Report of the Manitoba Hydro-Electric Board for the fiscal year ending March 31, 2015 pass?

**Some Honourable Members:** No.

**Mr. Chairperson:** The report is not passed.

Shall the Annual Report for the Manitoba Hydro-Electric Board for the fiscal year ending March 31, 2016 pass?

**Some Honourable Members:** No.

**Mr. Chairperson:** The report is not passed.

If—I would like to remind all members to please leave the copies on the tables for future meetings. Now this concludes the business we have before us.

The hour being 4:28 p.m., what is the will of the committee?

**Some Honourable Members:** Committee rise.

**Mr. Chairperson:** Committee rise.

**COMMITTEE ROSE AT:** 4:28 p.m.

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