MANITOBA PUBLIC UTILITIES BOARD

Re: 2008/'09 GENERAL RATE APPLICATION
MANITOBA HYDRO

Before Board Panel:

Graham Lane - Board Chairman
Robert Mayer - Board Member
Susan Proven - Board Member

HELD AT:

Public Utilities Board
400, 330 Portage Avenue
Winnipeg, Manitoba
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Pages 471 to 690

APPEARANCES

Bob Peters		)Board Counsel
Doug Buhr		)City of Winnipeg
Byron Williams		)Coalition
Jennifer Scott	(np)	)TransCanada Keystone
Tamara Trull	(np)	)Pipeline
Tamara McCaffrey		)MIPUG
John Landry	(np)	)
Michael Anderson	(np)	)MKO
Patti Ramage		)Manitoba Hydro
Odette Fernandes		)
Bill Gange		)RCM/TREE
Dan Rempel	(np)	)
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--- Upon commencing at 9:09 a.m.

THE CHAIRPERSON: Okay, good morning, everyone.

Mr. Peters...?

MR. BOB PETERS: Thank you. I think I'll be passing the microphone right away to Ms. Ramage for some matters to tidy up the record and provide an answer to an undertaking from yesterday.

THE CHAIRPERSON: Ms. Ramage...?

MS. PATTI RAMAGE: Thank you, Mr. Chair. This morning we've distributed the financial statements of Wuskwatim Power Limited Partnership.

This has been distributed in response to Undertaking 9, number 9 on the record, and we're suggesting it be entered as Manitoba Hydro Exhibit Number 9.

--- EXHIBIT NO. MH-9: Response to Undertaking 9

MS. PATTI RAMAGE: Also another undertaking was given but doesn't show up in the transcript numbering system as an undertaking. So I thought I would just put on the record that Mr. Peters had asked about the -- the Wuskwatim Partnership

Agreement itself and we were not sure whether it was confidential or not.

Apparently it's not confidential and, in fact, it can be found on Manitoba Hydro's website if anyone wants to look at it, which is probably the best place to find it.

THE CHAIRPERSON: Okay. Well we'll take it off the website then and introduce it as an exhibit. Very good.

MS. PATTI RAMAGE: Well it -- it's not a short document so I thought it would probably be best for the environment if we just -- those who want to scroll through it can just scroll.

THE CHAIRPERSON: I think we'll have to look at it.

Okay, Mr. Peters.

MANITOBA HYDRO REVENUE REQUIREMENT AND DEMAND SIDE MANAGEMENT PANEL RESUMED:

VINCE WARDEN, Resumed

WILLY DERKSEN, Resumed

IAN PAGE, Resumed

HAROLD SURMINSKI, Resumed

LLOYD KUCZEK, Resumed

CONTINUED CROSS-EXAMINATION BY MR. BOB PETERS:

MR. BOB PETERS: Yes, thank you, Mr. Chairman. Mr. Warden, Mr. Page, I'd like to continue and finish up with some questions on the Wuskwatim Power Limited Partnership that come from yesterday.

First of all, thank you for the unaudited interim financial statements. Mr. Warden, when I see "unaudited" and the word "interim" on financial statements, what does that mean?

MR. VINCE WARDEN: Mr. Peters, it just means that these are interim; this is for January 31st as indicated. So the -- the March of 2007 were audited as will the March of 2008 statements be audited. But the IR asked for the most recent available statements and these are the most recent.

MR. BOB PETERS: All right. And when the -- when the -- the audited statements are signed after March 31st, can the Corporation undertake to file a copy of those with the Board?

MR. VINCE WARDEN: Yes, we can do that.

MR. BOB PETERS: And, Mr. Warden, is there any significance to the document being marked as Manitoba Hydro Exhibit 9 this morning, not being signed by anybody?

MR. VINCE WARDEN: There's really no

significance to that. The -- the statements are in the same format as the year end statements. We don't change the format from month to month so they will be signed at March 31st.

MR. BOB PETERS: All right. Thank you for that. I believe also I've asked of the panel to -- and I'm not sure if it was in the Information Request or yesterday -- but to file the balance sheet, the cash flow statement and the debt-to-equity ratios related to the operating statements.

And I understand that's information that's still being produced?

MR. WILLY DERKSEN: Mr. Peters, could you please repeat that question?

MR. BOB PETERS: We'll just check for the source but I think it was PUB/Manitoba Hydro Second Round Question 4. We were looking for some details that we thought would be coming with a balance sheet; a cash flow statement and maybe the debt-to-equity calculations related to the WPLP, Wuskwatim Power Limited Partnership.

MR. VINCE WARDEN: Mr. Peters, there may have been some misunderstanding with respect to that undertaking. The -- the debt-to-equity ratio calculation is -- is, I think, fairly evident from the statement themselves.

But we can -- we can put together a supplementary statement that just provides those calculations. That -- that wouldn't be a problem.

MR. BOB PETERS: All right. If there's anything further on that, Mr. Chairman, I'll speak with Ms. Ramage and we'll -- we'll notify the Board accordingly.

--- UNDERTAKING NO. 10: Manitoba Hydro to supply Board debt-to-equity calculations related to the Wuskwatim Power Limited Partnership

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: At Tab 47, page 7, Mr. Chairman and Board members, is a -- an operating statement related to the WPLP, Wuskwatim Power Limited Partnership, and I'll certainly pronounce that incorrectly throughout the morning, but let's call it WPLP.

Mr. Page, was that prepared by you?

MR. IAN PAGE: It was prepared under my direction.

MR. BOB PETERS: Can you indicate to the

Board -- and let's pick, for example -- in looking at the revenue line, 2013 is now -- is projected on this statement to be the second year of operation, correct?

MR. IAN PAGE: That's -- that's correct.

MR. BOB PETERS: And it's fully up and running in 2013, according to this statement?

MR. IAN PAGE: Yes. There's three (3) units and they all come in -- they come in -- in-service in stages in the previous year.

MR. BOB PETERS: And that can be seen on the average generation line where in the previous year there's only five hundred and fifty-six (556) gigawatt hours generated, compared to the fifteen fifteen (1,515) that is full capacity?

MR. IAN PAGE: Yes.

MR. BOB PETERS: Is that number shown at $94 million calculated on the basis of average export revenues, times the one thousand five hundred and fifteen (1,515) gigawatt hours of mean flow scenario?

MR. IAN PAGE: There's a formula that Mr. Surminski referred to yesterday, the -- there's an on-peak portion -- or a firm portion which is given the average on-peak price and then there's the balances is given the average of all the unfirm price.

MR. BOB PETERS: Can you file that

calculation with the Board and show how you arrived at $94 million?

MR. IAN PAGE: Yes, we can provide that.

--- UNDERTAKING NO. 11: Manitoba Hydro to indicate to Board how it arrived at $94 million on the WPLP operating statement

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: And just so the Board is clear, yesterday, Mr. Surminski, you and I talked about expected values and that's what Mr. Page has referred to as the -- when you deal with on-peak you're taking the average of your firm prices or your firm expected values?

(BRIEF PAUSE)

MR. IAN PAGE: There -- there may be an issue in providing that calculation in terms of -- it -- embedded in that is going to be Manitoba Hydro for -- expected price forecast for those years and that may be -- so I'm not sure if -- if we can provide the calculation without revealing that number, but we will have a look at it.

MR. BOB PETERS: But then just -- let's go back here. For the on-peak sales -- and when we talk on-peak, how much is that? What -- what hours of the day or hours of the week?

Is this the five (5), sixteen (16) that -- that we talk about?

MR. HAROLD SURMINSKI: Yes, it is the five (5) by sixteen (16), 47 percent of the time.

MR. BOB PETERS: And five (5), sixteen (16), Mr. Surminski, is that five (5) days a week, sixteen (16) hours --

MR. HAROLD SURMINSKI: Yes. Monday -- Monday to Friday, peak hours of the days.

MR. BOB PETERS: Starting at what time, or is it -- is it a notional calculation?

MR. LLOYD KUCZEK: I believe it's 7:00 in the morning.

(BRIEF PAUSE)

MR. BOB PETERS: And then the off-peak is calculated as the un-firm -- the expected values of the Corporation for the un-firm sales that it would get across its system?

MR. HAROLD SURMINSKI: Yes. "Non-firm"

is the more appropriate term for that.

MR. BOB PETERS: And that's 53 percent of the time?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: And that's -- and that's regardless of whether Manitoba Hydro is exporting any of the required generation from Wuskwatim to the United States?

MR. HAROLD SURMINSKI: The formula does also include import. If -- if we are not exporting, we use import as the proxy for -- for the value of the power.

MR. BOB PETERS: But the value of the power, as I understood from yesterday, Mr. Surminski, is determined once and only once in this agreement?

MR. HAROLD SURMINSKI: It's -- it's indexed to the price in every year as -- in every month as -- as exports are being made in the future.

The -- the methodology -- the ratios were determined only once, the ratios of the products. But, over time, as export prices change, the -- the power purchase agreement pays in accordance with the variations in -- in market prices.

MR. BOB PETERS: So the actual price paid under the agreement to purchase power by Manitoba Hydro from the Wuskwatim Power Limited Partnership will change year over year?

MR. HAROLD SURMINSKI: Yes, and that is why Mr. Page said by indicating exactly the formula and the prices, it is Manitoba Hydro's view of -- of what the firm prices and opportunity prices will be in the future.

If we -- if we provide that, we are -- we're not in accordance with our confidentiality, where we've stated that we do not want to provide our view of future export prices.

MR. BOB PETERS: But if you post it on the Internet, then surely you'll provide it to the Board?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Right, we do not post the -- the prices on the Internet. It's just the contract itself. The prices unfold in the future as -- as they will, and our projections of revenues are based on our forecast. So this is only our forecast.

What actually happens will be dependent on prices in -- in the months, in the days the contract is in place.

MR. BOB PETERS: But that formula will be publicly available?

MR. IAN PAGE: The formula is -- is available on -- in the -- on the power purchase agreement as part of the whole Wuskwatim Project Development Agreement. But it won't indicate what the actual price would be at any one (1) time, because that -- that would be base -- it's a -- it's a function of the average price that Manitoba Hydro is realizing in any one (1) month.

MR. BOB PETERS: In looking at the expenses shown on the operating statement, Tab 47, page 7 of the PUB's book of document, which was marked in the first day as PUB Exhibit 12, are those finance expenses including depreciation?

MR. IAN PAGE: Sorry, I didn't catch the question.

MR. BOB PETERS: Can you tell the Board how those finance expenses are calculated?

MR. IAN PAGE: The finance expense is based on the -- the interest costs associated with the -- the debt that's being attributed to the project. And the -- the Partnership -- the interests -- interest rate on the debt that's essentially assigned to the Partnership is based on -- on what Manitoba Hydro's borrowing costs would be on the dates that those debt issues were made.

It's -- there will not -- we will not actually be tracking exactly -- we won't be making --

going to the market specifically to borrow on any one (1) day for the Wuskwatim Partnership. The -- Manitoba Hydro will borrow for -- for its needs -- needs on an aggregate basis.

And so they'll be -- we will test -- test the market on -- on certain points and time when the -- when the Partnership requires advances, determine what that interest rate will be, and that interest will then be assigned to the Partnership.

MR. BOB PETERS: Does Manitoba Hydro add a risk premium to that?

MR. IAN PAGE: Not on the -- not on the debt portion. Only on the equity advances to -- to TCP (sic).

MR. BOB PETERS: All right. And -- and the advances to TPC are debt to Manitoba Hydro?

MR. IAN PAGE: Yes.

(BRIEF PAUSE)

MR. BOB PETERS: Is the agreement in which the equity advances are set out also appended on the Internet, to your knowledge?

MR. IAN PAGE: They're all -- they're all sub-agreements to the project development agreement.

MR. BOB PETERS: They're all linked together?

MR. IAN PAGE: I believe that they're all on their website.

MR. BOB PETERS: And is depreciation and interest on transmission included in either the operating costs or the finance expense on the expense statement?

(BRIEF PAUSE)

MR. IAN PAGE: The annual charge for the transmission is -- is included in the operating expense line.

MR. BOB PETERS: Can you help the Board understand the annual transmission charge, as to how that's calculated?

MR. IAN PAGE: I believe yesterday we saw the estimate for the transmission facilities was about $320 million. The $320 million, Manitoba Hydro will be making advances on behalf of the -- of the Partnership to the T & D side of Manitoba Hydro who will be building the facility.

And then that -- then on in-service, that $320 million loan is then amortized. And -- and then there's a blended principal and interest payment is made from the Partnership back to Manitoba Hydro.

MR. BOB PETERS: And when does that payment start -- when does it start to get repaid?

MR. IAN PAGE: It -- it starts on -- on the in-service date of the project.

(BRIEF PAUSE)

MR. BOB PETERS: In the expense -- the operating expense calculations, Mr. Page, is the inflation assumption 2 percent?

MR. IAN PAGE: Yes.

MR. BOB PETERS: Does it include water rentals?

MR. IAN PAGE: Water rentals are included in there, and there's no -- and there's no escalation on the water rentals.

MR. BOB PETERS: But that's the same as your regular IFF-07-1, correct?

MR. IAN PAGE: Yes, the same rates are used in both.

MR. BOB PETERS: And how many equivalent full-time employees will Wuskwatim Power Limited Partnership employ?

MR. IAN PAGE: I don't know that offhand.

MR. BOB PETERS: Well let's start off with, will it have -- will it have any employees?

(BRIEF PAUSE)

MR. IAN PAGE: There will be...

(BRIEF PAUSE)

MR. IAN PAGE: We can check but, the -- the plant is actually operated by Manitoba Hydro under a contract. So there -- it won't be WPLP employees on the daily operations of the plant.

But there may be some admin -- admin functions performed by WPLP employees. So we can check into what the estimate is for that.

MR. BOB PETERS: Okay, if you would. But in looking at the operating expenses, are you telling the Board that the charge-back from Manitoba Hydro to Wuskwatim Power Limited Partnership will include a cost for the employees that are operating the generating station?

MR. IAN PAGE: Yes.

MR. BOB PETERS: And 100 percent of those costs are included in the operating costs on the financial statement here of WPLP?

MR. IAN PAGE: Yes. Any incremental costs associated with the operation of that facility are included in there.

MR. BOB PETERS: Are costs split between generation and transmission?

MR. IAN PAGE: The -- yeah, there's different groups of people doing -- doing the different tasks. The generation station operating costs would be -- would be charged directly under the -- there's a system operating agreement that would -- those costs would be charged under. The -- under the interconnection and operating agreement, there's the transmission -- transmission people have -- have means to charge for their costs, so they'd be -- they'd be tracked quite separately.

MR. BOB PETERS: Tracked separately, but still included in the operating expenses?

MR. IAN PAGE: Well, they're -- they're all ultimately the responsibility of the -- of the Partnership. So, yes, they'll -- they'll all come together there, but they would originate from different sources.

MR. BOB PETERS: And taxes, are they including capital taxes? Is that included in operating expense?

MR. IAN PAGE: No. And the reason for that is that it's corporation capital tax. Manitoba Hydro will pay -- each -- each partner in this limited partnership will be taxed on their own tax situ -- based on their own tax situation, and -- and Manitoba Hydro, as a corporation, would pay capital tax. But, as far as I know, the other partner would not be responsible to pay capital tax.

So it's -- it's not a cost of the partnership, it's a cost borne by the individual partners.

MR. BOB PETERS: Is Wuskwatim Power Limited Partnership a Crown Corporation?

MR. IAN PAGE: No, it's not.

MR. BOB PETERS: And because it's a limited partnership and not a corporation, you're indicating that the taxes -- the capital taxes will flow back to the limited partner, Manitoba Hydro, as a corporation?

MR. IAN PAGE: Yes. Manitoba Hydro would be responsible for its share of the capital taxes on the project.

MR. BOB PETERS: And -- and TPC, your understanding, will not face exposure for those taxes because they'd be tax exempt?

MR. IAN PAGE: I don't have detailed information on their tax situation.

MR. BOB PETERS: Okay, that's fair. Yesterday I -- yes...?

MR. BOB MAYER: Before -- before you leave that issue. Firstly, my apologies for being late. I had to deal with some of Mr. Buhr's people at the place they call "The Parking Store" down the street. I -- I was treated very fairly. I don't understand how those people put up with people bitching at them every day, but okay.

In any event, I'm looking at the diagram we have on -- for the Wuskwatim project. And we've heard now about an agreement between NCN and Manitoba Hydro, and I'm thinking there are a number of other agreements.

I am assuming that there is an agreement between the Wuskwatim Limited Partnership and the -- the holding company that Hydro owns that will own .01 percent of the shares.

Am I correct in that, that Hydro has a -- that Wuskwatim Partnership and the holding company have an agreement -- and Hydro's holding company?

What I'm trying to determine is just how many agreements there are, how many have we seen and how many are accessible to us. I know there's an agreement between Manitoba Hydro and NCN. I have to believe there's an agreement of some kind between NCN and Taskinigahp Power Corp., which is their holding company. I gotta believe that there is an agreement between their holding company and possibly NCN with the Wuskwatim General Partnership.

I'm seeing a number of possibilities for agreements, and I just really would like to know how many there are involved, and how many are accessible to us?

MR. IAN PAGE: As -- as far as I know, the Wuskwatim Project Development Agreement, which is -- I understand is now on our website. That's the umbrella agreement and -- and it includes a number of additional agreements that are -- that are in integral part of it and they -- and there's -- and there's a gre -- there's contracts for financing the debt, financing equity, operating the plant, dispatching the plant, building the plant, maintaining it, and -- and so forth. And -- and they're all part and parcel of that.

Manitoba Hydro act -- it's not using the general partner I don't believe as a holding company but it's actually Manitoba Hydro. So Manitoba Hydro would be the general partner, directly. So there is no separate agreement that way.

As far as --

MR. BOB MAYER: I think Ms. Ramage might be disagreeing with you on that, or me.

MS. PATTI RAMAGE: No.

MR. BOB MAYER: Okay.

MS. PATTI RAMAGE: I'm just concerned. I don't want to be giving evidence, but the schedules to the agreement -- and the agreement has multiple parties -- the agreement on the website we described include the Limited Partnership Agreement, the Management Agreement, the Project Financing Agreement, the Construction Agreement, the Power Purchase Agreement, the Operation, and Maintenance Agreement.

They're all listed in that Agreement as schedules and that might be of assistance in --

MR. BOB MAYER: That would probably solve my problem. Thank you very much.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: And I thank Ms. Ramage for assisting the Board on that. In Note 10 to the financial statements, Mr. Page and Mr. Warden, there's related party transactions and it does reference the WPLP and it lists seven (7) agreements.

And unless you tell us otherwise from what

Ms. Ramage has now indicated, can the Board then assume, or the Board will assume that all seven (7) of these agreements are also publicly available on the -- on the website?

Would that be a fair position, Mr. Warden? And if that's not correct, you'll notify us as to where can locate those documents?

MR. VINCE WARDEN: Yes, Mr. Peters, we -- we will do that for sure.

--- UNDERTAKING NO. 12: Manitoba Hydro to indicate to Board where the seven (7) agreements can be found: Limited Partnership, Management, Project Financing, Construction, Power Purchase, Operation, and Maintenance Agreements

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: That -- that will hopefully assist the Board. Mr. Warden, you and I yesterday talked -- and I -- I looked a little bit on the transcript this morning but perhaps didn't have enough time -- Manitoba Hydro has already loaned money to NCN's limited partner which we've called "TPC", that's correct?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And from yesterday, it appears it was initially $1 million and then another $14 million?

MR. VINCE WARDEN: Well no. The $1 million was put up by NCN, the $14 million is the amount that -- that Manitoba Hydro has advanced by way of loans.

MR. BOB PETERS: And Manitoba Hydro, if we assume that the Wuskwatim generating station has a capital cost of $1.2 billion, Manitoba Hydro would also be prepared to extend a loan to NCN's limited partner, TPC, to help TPC put up its portion of the overall equity required for the project?

MR. VINCE WARDEN: That's correct.

MR. BOB PETERS: And according to my rough calculations, at a $1.2 billion total cost, approximately $300 million of equity would be needed.

MR. VINCE WARDEN: Yes, 25 percent of the total capital cost, that's correct.

MR. BOB PETERS: And of the $300 million of equity needed, TPC would put up one-third (1/3) of those, or 33 percent of those, and Manitoba Hydro, as a limited partner, would put up the other two-thirds (2/3s) -- the other thirty (30) -- 66 percent -- 67 percent?

MR. VINCE WARDEN: Correct.

MR. BOB PETERS: That suggests to me, Mr. Warden, that the maximum amount that Manitoba Hydro -- well, first of all $34 million of the total $100, approximate, million coming from TPC was going to be sourced by NCN, other than from Manitoba Hydro.

Would I be correct in that understanding?

MR. VINCE WARDEN: I believe that's correct, Mr. Peters, subject to check. But I think that -- that sounds right.

MR. BOB PETERS: I actually have $34 million written down here, but I -- I don't have my source but -- so 34 million is coming from NCN, or TPC is sourcing it other than from Manitoba Hydro, that would be subject to check, correct?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: So that means $68 million would be the maximum amount to be loaned to TPC from Manitoba Hydro?

MR. VINCE WARDEN: Based on the -- the 1.2 billion capital cost, yes.

MR. BOB PETERS: And that $1.2 billion capital cost may move and if it moves these numbers also move as well?

MR. VINCE WARDEN: Correct.

MR. BOB PETERS: Is there a maximum amount that Manitoba Hydro has agreed to loan to TPC for the TPC investment in Wuskwatim Power Limited Partnership?

MR. IAN PAGE: The maximum isn't a dollar value, it's -- it's a ratio. Manitoba Hydro will provide financing of four dollars ($4) -- a four dollar ($4) loan for every dollar that -- that NCN or TPC invests, up to a 25 percent equity in the project. If -- if NCN chooses to go beyond 25 percent then Manitoba Hydro will not loan any of that money.

So it depends on the level of equity -- the percentage that -- that Manitoba Hydro will loan.

MR. BOB PETERS: Mr. Page, you appear quite familiar with the -- the intricacies of the agreements, but my understanding is there's a project financing agreement that's posted on your website, signed in June of '06, where there's a $200 million limit on financing available.

Are you familiar with that agreement?

MR. IAN PAGE: The $200 million limit is the -- there's -- short-term financing during construction is used and then once -- once the -- once the short-term financing hits 200 million then that 200 million is -- is rolled over to what Manitoba Hydro's long-term debt rate would have been at that time, and -- and it's treated by the partnership as if it was a long-term debt. But that's not -- but then -- then after the $200 million limit is set then we'll start over again with more short-term -- short-term financing.

So it's -- it's -- the 200 million is the point at which short-term switches to long, it's not the absolute limit.

MR. BOB PETERS: All right. And that's financing for the overall project, not just for one (1) of the limited partnerships?

MR. IAN PAGE: Yes.

MR. BOB PETERS: And --

MR. IAN PAGE: Well, that -- that's for the debt portion of the project, is the 75 percent.

MR. BOB PETERS: Yes, on the debt portion. And -- and there's a fifty (50) year term on the repayment of that debt?

MR. IAN PAGE: Yes.

MR. BOB PETERS: And the repayment year starts twenty-five (25) years after in-service?

MR. IAN PAGE: No. Repayment -- well interest -- interest begins -- interest is charged immediately and the -- and the partnership is required to start setting aside essentially a sinking fund towards debt retirement. So it -- it's treated exactly the way Manitoba Hydro treats its own debt.

MR. BOB PETERS: All right. Thank you.

Mr. Warden, yesterday there was a point that I want to make sure is clear: Manitoba Hydro has already advance 14 million, and from Mr. Page's evidence to the Board there is a formula prescribed where -- where Manitoba Hydro will loan additional monies to TPC.

And I'm wondering, from what you said yesterday, is there an absolute requirement for TPC to repay that money?

MR. IAN PAGE: If NCN were to elect not to participate in the project they wouldn't have to repay the -- the loans, Manitoba Hydro would essentially just take possession of their shares and it would be as if Manitoba Hydro built the plant entirely on its own without a partner.

MR. VINCE WARDEN: I think that's pretty much what we said yesterday, Mr. Peters.

MR. BOB PETERS: It's probably exactly what you said yesterday, Mr. Warden. But -- but what I don't understand is you -- you're paying TPC $14 million already, and they can walk away with your $14 million and no further responsibilities or obligation with respect to Wuskwatim Power Limited Partnership?

MR. IAN PAGE: The 14 million isn't in their hands, it's a -- it's a payment made to the partnership on their behalf.

MR. BOB PETERS: And is there security for that, Mr. Page, in the Limited Partnership Agreement?

MR. IAN PAGE: Throughout the Agreement, in the event of any number of reasons for default, Manitoba Hydro can -- can seize the units held by TPC.

MR. BOB PETERS: And the security or the taking possession of the units is the -- is the ultimate remedy for Manitoba Hydro in case of default?

MR. IAN PAGE: Yes. I mean, some -- some depending on the nature of the default, some provide us a short period in time for TPC or NCN, depending on which party it is to remedy the problem.

But gener -- but ultimately if -- if there's a default, Manitoba Hydro would seize the units, and its -- and they would -- Manitoba Hydro would end up being in the same position as if it had built the project on its own.

MR. BOB PETERS: Okay, and that last phrase, Mr. Page, I wanted to come back on that is, so you've structured this in such a way that if there is a default, Manitoba Hydro keeps itself whole, because they'll be no worse off than if they would've built the project themselves without the WPLP being involved?

MR. IAN PAGE: Yes, that was our goal from the outset.

MR. BOB PETERS: And is there any sureties or guarantees that extend beyond the limited partner, TPC, back to NCN?

(BRIEF PAUSE)

MR. IAN PAGE: I -- I'm not familiar with the details or the arrangements between TPC and NCN. I understand that there's -- maybe I'll just leave that. I -- I don't know exactly how it works there.

MR. BOB PETERS: Manitoba Hydro's remedies only go back as far as TPC. They don't go beyond that?

MR. IAN PAGE: There's some arrangements -- or some of the agreements NCN is a party to and other agreements that's TPC.

So the -- the remedy, whoever -- well, TPC's holding the units, so -- so Manitoba Hydro -- so that would be where Manitoba Hydro would -- would -- would enforce its security.

MR. BOB PETERS: Mr. Warden, you're familiar with Manitoba Hydro either allocating or directly assigning some of its operating costs through to subsidiaries such as Centra Gas?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And in the Centra Gas example, which we won't dwell on here, you have various unit prices developed and various methodologies created for the allocation of the costs incurred that should be assigned or allocated back to the -- to the gas company?

MR. VINCE WARDEN: Well, we have a system of activity rates that are being used to allocate costs along with applicable overheads.

MR. BOB PETERS: There's various cost drivers that help you determine how to do that?

MR. VINCE WARDEN: Correct.

MR. BOB PETERS: And are the very same and exact cost drivers, activity rates, and overheads being charged through to the Wuskwatim Power Limited Partnership?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: In exactly the same fashion as with the gas company?

MR. VINCE WARDEN: To the extent that we have employees dedicated to the project. The bulk of the work being done at the project, though, is through contractors. So there's -- there's not a lot of Manitoba

Hydro employees at the -- at the site.

MR. BOB PETERS: And that -- and that may be obvious from the operating expense line that we're going to get broken down.

But for those employees of Manitoba Hydro that are providing service to WPLP, they will be treated exactly the same as if they would have been working for Centra Gas?

(BRIEF PAUSE)

MR. BOB MAYER: Am I correct in assuming that all this information is in that list of agreements that Ms. Ramage told us about earlier?

MR. IAN PAGE: Yes, it's all laid out there. Essentially, if a Manitoba Hydro employee is working for the Wuskwatim Partnership, they would be time carding to that Wuskwatim Partnership. And then the costs would be charged in the same manner they'd be charged to any other function that they provide.

MR. VINCE WARDEN: We do, though, Mr. Peters -- maybe just to answer your question a little more directly as to whether or not they're identical -- there are some specifically developed overhead rates for the Wuskwatim site that -- that are slightly different than the -- what we would otherwise charge to Centra Gas.

(BRIEF PAUSE)

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Mr. Warden, yesterday you told the Board that the WPLP Wuskwatim Partner -- sorry -- WPLP was going to be the template for other developments in the North.

Do you remember that discussion?

MR. VINCE WARDEN: I think we probably modified that somewhat in our subsequent discussion that it won't be the identical template. We will be, certainly, based on the experience of the Wuskwatim Partnership, we will be structuring agreements with Keeyask and possibly Conawapa. But they won't be identical to what they were for the Wuskwatim partnership.

MR. BOB PETERS: All right. And those subsequent agreements that are being contemplated by the Utility, would it be fair to say that there -- there's already planning studies and negotiations underway on those?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And in each of those

instances are the negotiations being held with either First Nations or First Nation communities?

MR. VINCE WARDEN: They are.

MR. BOB PETERS: Are they being held with any non-First Nation communities?

(BRIEF PAUSE)

MR. VINCE WARDEN: No, none to my knowledge.

MR. BOB PETERS: Would the agreement that you're contemplating for other northern development, it's refine -- it's constricted to and restricted to generating stations as opposed to any other type of development?

(BRIEF PAUSE)

MR. VINCE WARDEN: The -- there have been some discussions with respect to a transmission line allowance. No -- no equity ownership in transmission, but there has been some discussions with respect to a benefit-sharing formula for the transmission lines that may arise from -- from new generation.

MR. BOB PETERS: And that's still in the

negotiation stage?

MR. VINCE WARDEN: Yes, very preliminary.

MR. BOB PETERS: What about for wind development? Any wind development planned for Northern Manitoba?

MR. VINCE WARDEN: No, not at this time.

MR. BOB PETERS: Only Southern Manitoba?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And does the Corporation envision using the Wuskwatim Power Limited Partnership agreements as a template for their wind development in Southern Manitoba?

MR. VINCE WARDEN: No.

MR. BOB PETERS: Is it not suitable for that?

MR. VINCE WARDEN: No.

MR. BOB PETERS: Can you tell the Board why?

MR. VINCE WARDEN: Well, the wind -- so far, the St. Leon Wind is not -- Man -- Manitoba Hydro has no ownership in that facility. We are only -- have -- we have a long-term agreement to purchase the output of that -- of the St. Leon Wind Facility, but there's no ownership by Manitoba Hydro.

MR. BOB PETERS: Simply a power purchase

arrangement?

MR. VINCE WARDEN: It is, yes.

MR. BOB PETERS: And with -- with Manitoba Hydro now posting the Wuskwatim Power Limited Partnership and related agreements publicly, how does Manitoba Hydro expect to negotiate something that may be different or may be not as favourable to the other party with that information being in the public domain?

(BRIEF PAUSE)

MR. VINCE WARDEN: I guess, Mr. Peters, the simple answer is that despite the fact that those agreements are posted on our website, the -- the details -- or perhaps not the details, but the principles of those agreements were well known before they were posted anyway. So I don't think there is anything really secretive about the -- the deal that was struck with -- with NCN.

MR. BOB PETERS: Manitoba Hydro believes it can, you know, separate and distinguish the Wuskwatim project from any subsequent project just based on the -- on the facts surrounding each separate project?

MR. VINCE WARDEN: I think that's fair to say, yes.

(BRIEF PAUSE)

MS. SUSAN PROVEN: Can I -- can I just interject at this point? I'd like to go back to that wind comparison, when you were talking about -- you viewed them as different.

And I'm wondering if they're not similar in a sense in that there's a resource base that you are getting in exchange for the agreement, right?

You have the -- the opportunity to work with Native people in their area and build the dam and -- and the generating station. And then, hopefully, those people will, over time, be able to put money into the project and then have an ownership.

That's the case, right? That's the ultimate hope?

MR. VINCE WARDEN: That is the case with Wuskwatim, yes.

MS. SUSAN PROVEN: Right. So, I'm thinking of my area where, right now, wind development is, you know, there are lots of private -- private -- I'm in Western Manitoba, so there's lots of private concerns moving in, because they're the only people with money to be able to develop wind power.

But they -- they are not really paying much for the resource that we hold as landowners. And there doesn't appear to be any way for farm people to actually -- what would you say -- have any part of the development.

So I'm thinking, here we have Crown Corporation money being put up to allow Native people to be able to participate in development, but we're not doing the same thing for agricultural producers.

That's a question, I throw -- I throw that out to you. Why would that be?

MR. VINCE WARDEN: It's a good question, one I personally have not heard before. I -- my understanding is that the farmers that were able to participate in the existing farm around St. Leon were -- were very pleased with the arrangement; that they were able to generate some additional revenues from having those facilities on their properties. I have -- I must honestly say I've never heard of a desire by any other farmer to have an equity ownership in -- in any of the wind facilities.

So there are people that are a lot closer to that discussion than I am, or any of the panel members are, and we can certainly undertake to -- to see whether or not that has been an issue with people that are involved in those negotiations.

MS. SUSAN PROVEN: Well, I'm just suggesting it to you because St. Leon is totally private and land owners have benefitted because some have gotten the wind development on their property and some haven't, obviously. But Somerset is another example of where it's a community that benefits.

And I think what you're talking about in the north is a community benefitting, because it's a group of Native people, right, that will share, share in the revenues?

MR. VINCE WARDEN: Yes.

MS. SUSAN PROVEN: Yes. And I'm -- I'm just suggesting that maybe some thought should be given to community development in agricultural areas. Or -- I'm just asking why there's sort of a two (2) -- it's a -- it's a little -- it would seem like there hasn't been enough thought given to -- to doing that. But it's just a thought.

MR. LLOYD KUCZEK: Mr. Warden, maybe I can add a little to this. We are looking at doing a -- a community-based, or at least exploring the opportunities with community-based wind generation, and our people in power supply are currently in discussions with the Government on that. So I know there is an initiative that is being discussed right now.

So there might be something that's coming out in the next few years on that but maybe even earlier. But it is being discussed, at least in the office.

MS. SUSAN PROVEN: Thank you very much.

(BRIEF PAUSE)

CONTINUED BY MR. BOB PETERS

MR. BOB PETERS: Mr. Warden, also yesterday you and I had a discussion about the financial targets of the Company. And in Tab 8 of the PUB book of documents there were, first of all, a schedule and then some charts showing the different financial targets of the Corporation.

You'll recall that?

MR. VINCE WARDEN: Yes, I do.

MR. BOB PETERS: And the debt/equity ratio includes -- that's an all-in ratio, that's -- that includes Wuskwatim, Conawapa or Keeyask expenditures, it includes possible expenditures for Bipole 3, it even includes head office expenditures, correct?

MR. VINCE WARDEN: It does.

MR. BOB PETERS: But when we get to the -- and the interest coverage ratio, that's all in as well?

That's all your major capital expenditures?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: But when we get to capital coverage ratio, you've excluded, and we may have used the words "major capital expenditures" or "extraordinary capital expenditures", and that's not included in that category, is it?

MR. VINCE WARDEN: No, it's not. And that might appear to be an inconsistency, however, I think it does get back a little bit to the discussion I may have had with Mr. Mayer on good debt/bad debt. The -- so what this is intending to -- the capital coverage ratio is attempting to segregate the debt that is good -- that is, the -- the good debt for long-term capital investments -- would be separated out of -- out of this. And this capital coverage ratio is not intended to -- to capture that.

MR. BOB PETERS: Could I ask for an undertaking from the Corporation then, to -- to refile that schedule which comes from PUB/Manitoba Hydro Second Round 77 with the capital coverage ratio numbers and even the chart being revised all in with, Mr. Warden, in your words good debt and bad debt.

So the total -- the total capital expenditures of the Corporation which include the new headquarters, new generation facilities, new transmission facilities of a major kind are also included in there.

MR. VINCE WARDEN: We can do that, Mr. Peters. It I -- I guess my only hesitation and -- and what that conclusions that might be drawn therefrom it -- it might be somewhat misleading to -- to do that, but why don't we -- why don't we put it together then we can perhaps talk about it.

--- UNDERTAKING NO. 13: Manitoba Hydro to refile for Board, the schedule from PUB/ Manitoba Hydro Second Round 77

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: All right. and certainly if the Corporation has any -- any comments or assumptions it wants to make and add to the -- to the answer, please include those in your response.

MR. VINCE WARDEN: Fair enough.

MR. BOB PETERS: What you're probably looking ahead through -- through your glasses, Mr. Warden, is that that chart's going to look a lot different than it does right now with that capital coverage ratio being very low.

MR. VINCE WARDEN: The -- the capital coverage ratio would be very low and it wouldn't be appropriate, I don't think, to include a target on that particular chart because there, we don't have a target -- a target for -- for that particular ratio that you're asking for.

MR. BOB PETERS: With -- with those qualifications from you I think the Board would appreciate your undertaking to do that and present it.

MR. VINCE WARDEN: We'll do that.

--- UNDERTAKING NO. 14: Manitoba Hydro to indicate to the Board what the capital coverage ratio target would be after the PUB/Manitoba Hydro Second Round 77 chart is revised

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: And when we were talking about the Wuskwatim matter earlier, there was a Information Request, PUB/Manitoba Hydro First Round 35(d) and (e), which was seeking additional information, which -- which I think is still perhaps outstanding or it will be developed. And we can discuss that at the breaks with your counsel if there's anything further on that.

I'd like to turn with this panel to the book of documents, Tab 11. Mr. Surminski, you and I have talked about this, I don't want to duplicate it, but what I believe from one (1) of your previous answers on the second page of the document at PUB book -- book of documents, Tab 11, in response to PUB/Manitoba Hydro First Round 55, there's a chart and it has export revenue assumptions contained in it.

Those assumptions include wind?

MR. HAROLD SURMINSKI: Wind energy is -- is part of our total generation, and so part of our total exports would -- would be derived including that, yes.

MR. BOB PETERS: On the line item for "Import Energy" do you include any factor for wind in that line item?

MR. HAROLD SURMINSKI: Yes, it's -- it's totally included in -- in that row.

MR. BOB PETERS: If it's included on the top part of the -- part of the page, in terms of gigawatt hours of production, then the "Import Energy Costs" line in the bottom half of the schedule would also include your wind purchases?

MR. HAROLD SURMINSKI: Yes, that would be right.

MR. BOB PETERS: I think I had asked you a question that caught the eye of one of my colleagues earlier about thermal generation, and in terms of thermal generation here is the reference mostly to the coal plant?

MR. HAROLD SURMINSKI: Yes, it would be the majority of the generation because it's lower cost.

MR. BOB PETERS: And when you say the majority is it like 98 percent, or is it a 100 percent?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: I -- I do not have the breakdown for that, but I don't think it'll be that high. I think maybe 90 percent or something like that.

MR. BOB PETERS: All right. In -- in the last fiscal year -- or the fiscal year, I guess, we're in, Mr. Surminski, did you fire up the gas plant?

MR. HAROLD SURMINSKI: It's only fired up for training purposes, normally.

MR. BOB PETERS: So it wasn't fired up for production purposes in fiscal two (2) -- 2008?

MR. HAROLD SURMINSKI: I would have to check on that, but I don't believe so.

MR. BOB PETERS: And again, because it

was a higher cost option, that's one (1) of the reasons it wasn't -- didn't have to be brought on stream?

MR. HAROLD SURMINSKI: Yes, it's very high cost.

MR. BOB PETERS: Mr. Surminski, I have a little bit of confusion with understanding.

When does Manitoba Hydro say the coal plant is going to be decommissioned?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: We do not plan to decommission the plant. We have a date for operation and it could be a licence review to -- to continue operation indefinitely.

MR. BOB PETERS: Maybe those were poor words on my part.

When you say you will have the coal plant indefinitely, Manitoba Hydro is not planning on shutting down the coal plant in any time in the planning horizon of the IFF.

Would that be correct?

MR. HAROLD SURMINSKI: Yes, that is Manitoba Hydro's view, that the plant physically is -- is in good enough condition to -- to operate, and there is no reason from that perspective to shut it down.

MR. BOB PETERS: And if in your previous answer you said operated indefinitely, you're making that consideration without regards to, perhaps, environmental issues, correct?

MR. HAROLD SURMINSKI: Yes, that's correct.

MR. BOB PETERS: Has the Province of Manitoba provided guidance to Manitoba Hydro as to when that coal plant should be shut down and no longer used for generation purposes?

MR. VINCE WARDEN: Not to our knowledge on the panel, Mr. Peters. The -- we are going ahead on the assumption that the coal plant will continue operating until at least 2018/'19.

There have been some references to the Brandon coal plant, however, and we are aware of that. And we have provided within our integrated financial forecast what the implications -- the cost implication would be, should it be shut down before that date.

MR. BOB PETERS: And -- and I believe the MIPUG analysis includes some of that information.

What you're telling the Board is that if you're not able to use the Brandon coal plant, there is a financial cost to the system by generating or purchasing electricity elsewhere?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And in the drought year, am I correct in recalling in your evidence that the Brandon coal plant in the drought year saved Manitoba Hydro and its consumers approximately $50 million?

MR. HAROLD SURMINSKI: Yes, we did provide...

MR. BOB PETERS: And, Mr. Warden, you referred to the impacts of not using the coal generation in the IFF.

Can you approximate the annual cost to impacts to the Board if the coal plant was not available as it presently is utilized in the IFF?

MR. VINCE WARDEN: Yes, Mr. Peters. We -- we've indicated that the cost will be in the order of $20 million per year.

MR. BOB PETERS: And that's telling the Board and others that without the coal, replacing that electricity will cost consumers $20 million more?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And, Mr. Warden, we may talk about it later, but in terms of environmental impacts, you will acknowledge that the Brandon coal plant is the one (1) facility operated by Manitoba Hydro that causes the most greenhouse gas emission?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And can you indicate to the Board, at this time, what your plans are in terms of lowering those emissions or making it more environmentally friendly?

MR. HAROLD SURMINSKI: There is no means that we have to reduce greenhouse gas emissions. If -- if coal is burned, the emissions are released. We don't have the means of sequestering those.

MR. BOB PETERS: Is there any opportunity or has there been any opportunity investigated to use a different grade of coal or a different technology in the emissions control?

MR. HAROLD SURMINSKI: We are already using a coal that is very efficient, the most efficient that we can get. So I don't think there is any room in that direction to -- to improve things.

MR. BOB PETERS: Mr. Surminski, also in the book of documents, Tab -- Tab 11, the third page in contains some export revenue assumptions. And I should indicate at the outset that those assumptions were not published by Manitoba Hydro, but they were derived from some of the responses from Manitoba Hydro, including responses to PUB/Manitoba Hydro First Round 55.

Have you had an opportunity to look at the assumptions that are contained on that page?

MR. HAROLD SURMINSKI: Yes, I have.

MR. BOB PETERS: Do you take any -- do you take issue with any of the calculations?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: No. I -- I believe they were line items taken right out of each of the IFF.

MR. BOB PETERS: And the math works on the bottom third (1/3) of the chart in terms of the inferred average prices?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Sorry, I was looking at -- at the wrong page. But, yes, I have also looked at the inferred prices. And, yes, I -- they were just a -- a mathematical calculation by dividing the revenues by volumes. We provided the volumes and the revenues. You can calculate average prices by just dividing those.

MR. BOB PETERS: And, from what you've

seen, you don't see any material errors in the -- in what is calculated to what is the Corporation's in fact prices?

MR. HAROLD SURMINSKI: These are average prices, so it's -- it's a grouping of -- of many products. So on average, those are the numbers.

MR. BOB PETERS: One (1) thing noted, Mr. Surminski, was that the average prices and the assumed prices from IFF-07-1 appeared to be lower than what was assumed by the Corporation in IFF-06-4.

Was that correct?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: I don't recall exactly, but it's -- it's a race between the export prices going up from forecast year to forecast year and the currency exchange rate cancelling that out. So it -- it is possible the -- the '07 is less because of the exchange rate.

MR. BOB PETERS: And the assumed exchange rate was the Canadian dollar being eighty-five (85) cents American?

MR. HAROLD SURMINSKI: In which case?

(BRIEF PAUSE)

MR. BOB PETERS: In the earlier IFF.

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Can you tell me if it's specific years that you're looking at as opposed to the later years in the period?

MR. BOB PETERS: All right, let's not get quite that deep then. Let me approach it this way.

To the extent that the export prices that are assumed are lower in the IFF-07-1 than they would be in 06-4, if that is the case, your explanation would be that the only thing that could do that would be the change in the exchange rate?

MR. HAROLD SURMINSKI: Yes. Although we did in -- in early years of the forecast, there may have been a small reduction in export prices.

But in the longer term we had an increase in the order of 10 to 15 percent, so that's why I find it surprising that there's actually a decrease.

MR. BOB PETERS: All right. And I -- I did preface my question that if -- if there was if the Board find there was, that would be the only thing to which you could attribute it?

MR. HAROLD SURMINSKI: Yes, other than in the early years it -- they could have been the forecast quite almost equal, and then the exchange rate would bring it down.

MR. BOB PETERS: Mr. Surminski, have -- has Manitoba Hydro adjusted the value of greenhouse gash -- gas reduction emissions and credits in its assumed export prices downward in the last three (3) years?

MR. HAROLD SURMINSKI: I think we went downward, and then we went up again.

MR. BOB PETERS: And that's based on forecasts from independent proprietary forecasts?

MR. HAROLD SURMINSKI: Yes, that's right.

MR. BOB PETERS: Is the assumed export rate used today the same or higher than it was forecast three (3) years ago?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: It's a combination. From three (3) years ago there's a drastic change in the currency exchange rate. So the two (2) -- the two (2) almost cancelled each other out.

MR. BOB PETERS: Make no mistake, Mr.

Surminski, it's to Manitoba Hydro's benefit if there is a carbon tax or a similar charge on industries, organizations, and even utilities that emit greenhouse gases, correct?

MR. HAROLD SURMINSKI: To Manitoba Hydro's advantage?

MR. BOB PETERS: Yes.

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: Can you tell the Board approximately how much of a sanction would have to be applied -- and maybe it's dollars per ton -- before Manitoba Hydro would be motivated financially to change its Brandon coal plant to something other than coal or find electricity elsewhere?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: It would be very significant, in the order of, I would guess, a hundred dollars ($100) a ton for CO2.

MR. BOB PETERS: You'd need a carbon tax of a hundred dollars ($100) a ton before financially that it would eat up that $20 million that Mr. Warden told the Board was the advantage of using coal over other sources?

(BRIEF PAUSE)

MR. BOB PETERS: Mr. Surminski, let me interrupt before you answer, because I -- it's not my practice to ask a question when I have an answer at hand. And my colleague here provided me a copy of MIPUG/Manitoba Hydro First Round 5(g).

And it seems to be an indication that for Unit 5, it's producing about one point seven (1.07) tons of greenhouse gases per megawatt hour. And the cost to avoid greenhouse gas emissions utilizing gas conversion is approximately a hundred and forty dollars ($140) a ton.

And I wondered if that then would be the equivalent number for what the carbon tax would have to be.

(BRIEF PAUSE)

MR. BOB PETERS: Are -- are you waiting for me or am I waiting for you, Mr. Surminski?

MR. HAROLD SURMINSKI: I'd like -- yes, well, I see the -- the reference here, and there are some qualifications about the -- the capital cost of converting to -- and this is a comparison to -- to operating on natural gas.

Is that the -- the question here? Is that -- it's not quite clear what the -- the context of this is.

MR. BOB PETERS: Well, the -- the cost -- the carbon tax, if we can assume there would be a carbon tax, would have to be, probably, at least a hundred dollars ($100) a -- a ton before Manitoba Hydro would be financially motivated to switch out the Brandon Generating Station.

Would you agree with that?

MR. HAROLD SURMINSKI: Well, the alternative has to be looked at also. And so it's not that clear if we require a diverse supply, a thermal type of supply, for -- for emergency purposes cost may not be the -- the primary driver if it's sitting there for -- for short-term emergency use. So there are, you know, different factors that come into play other than just economics.

MR. BOB PETERS: And I grant you that, sir. But in terms of just being an economic decision -- and I appreciate that may not be all the factors the Corporation considers -- but it would need a very significant carbon tax, in the range of a hundred dollars ($100) per ton, to motivate Manitoba Hydro financially?

MR. HAROLD SURMINSKI: Yes, from the economic perspective.

MR. BOB PETERS: All right. And Mr. Warden, what Mr. Surminski is telling the Board is that there are other factors to be considered.

And presumably social and environmental concerns would also be one (1) of those factors considered as to what to do with the Brandon plant, correct?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And at this point in time would it be correct for the Board to assume that Manitoba Hydro is not motivated to discontinue the use of coal for environmental or social reasons?

(BRIEF PAUSE)

MR. VINCE WARDEN: Well, Mr. Peters, I think it's an issue we're going to have to deal with. So I wouldn't say we're not motivated, but I think we'll have to -- we recognize there are those issues are there and it's something we're going to have to deal with in the future.

MR. BOB PETERS: All right, fair enough.

Mr. Surminski, looking forward and

thinking backward to yesterday's questions, did you disclose to the Board your prospective view on CO2 tax that you would embed in your export prices?

Or did you claim confidentiality of that?

MR. HAROLD SURMINSKI: I did claim confidentiality, yes.

MR. BOB PETERS: All right, so you do develop a number as to what it may be going forward?

MR. HAROLD SURMINSKI: Yes, and we use our consultants as -- as a guide for that.

MR. BOB PETERS: Is there an assumed carbon tax included in each of the years on the IFF? Can you disclose that?

MR. HAROLD SURMINSKI: There is, yes, a consideration of greenhouse gas, environmental, and -- it is built in -- into our export price forecast.

And it gradually builds up. It's a ramping over time. It's not very significant before 2011. It -- it builds up after that.

MR. BOB PETERS: And that coincides with an assumption as to when you believe legislation will be in place or some other requirements for sanctions against greenhouse gas emission?

MR. HAROLD SURMINSKI: Yes, that's the basis for it.

MR. BOB PETERS: Would it -- would the process used by Manitoba Hydro be similar to the process that Manitoba Hydro used in its submission to the Clean Environment Commission?

MR. HAROLD SURMINSKI: Yes, it's very similar to that.

MR. BOB PETERS: And that was included in the filing of this case in Appendix 13?

MR. HAROLD SURMINSKI: Of that submission -- I don't remember the number, but it could be there.

MR. BOB PETERS: All right, Mr. Surminski, let's briefly turn to the book of documents, Tab 12.

And I don't want to cover ground that we've already addressed, but these schedules on the first page of Tab 12 are ones that we've seen before. And I reflected on an answer that you gave, either to myself or the Vice-Chair, about why export prices were falling.

And I want to draw your attention to two (2) of the -- two (2) of the price listings on the bottom half of the chart. And they're coded as EPE-155, and they're coded as EPE-224.

Do you see those -- those numbers?

MR. HAROLD SURMINSKI: Yes, I do.

MR. BOB PETERS: And those are coded

because you don't want to disclose who the counterparty is with whom you have this agreement?

MR. HAROLD SURMINSKI: I would assume that's the case. I am not very familiar with this reporting. It's an obligation we have to the National Energy Board to report it.

MR. BOB PETERS: And in any event, you don't want to disclose the contracts that underlie these codes.

MR. HAROLD SURMINSKI: Yes, that's right. We -- we do not break out individual contracts in our reporting.

MR. BOB PETERS: I understand that some of your contracts -- and I understand from PUB/Manitoba Hydro Second Round Question 57 -- that they're not tied to time of use for some of your contracts.

Would you be able to confirm that to the Board?

MR. HAROLD SURMINSKI: I don't know what you mean by "time of use."

MR. BOB PETERS: In terms of whether they're on-peak or off-peak for the user.

MR. HAROLD SURMINSKI: Yes, we need a clarification on that, because often, the terms -- different contracts do have different periods of when they're effective. Like, some are only five (5) by sixteen (16) hours or -- or two (2) by sixteen (16) or, you know, different terms.

MR. BOB PETERS: I'm going to make the assumption that EPE-155 and EPE-224 are not five (5) by sixteen (16) or similar contracts, that there's no restriction on price based on time of day and time of use.

Can you make that assumption with me?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: We could make the assumption, but it would not be correct.

MR. BOB PETERS: Well, I -- then, let's not go there.

But let's -- can we -- can we make the assumption that there is -- there is no pricing in those arrangements for off-peak generated power from Manitoba Hydro?

MR. LARRY KUCZEK: Some of those contracts could have arrangements for off-peak pricing. And, for example, one (1) of the contracts might have pricing that includes 75 percent capacity factor, which would include some -- probab -- likely all on-peak hours, but not necessarily, because the contract might also specify that the purchaser has the right to schedule up to 75 percent any time he wants.

And the prices could be set within the contract. And then they can also schedule, upon mutual agreement, maybe above that, and those prices might be negotiated at the time that there are scheduled.

MR. BOB PETERS: All right. And without identifying specific contracts, are there also contracts that -- that have no off-peak pricing?

MR. LLOYD KUCZEK: We do have some contracts that are five (5) by sixteen (16), which would mean no off-peak pricing. But the contracts almost always have provisions for going beyond that, upon mutual agreement.

So if the parties agreed to do that within those contracts the numbers that would be filed with the National Energy Board would include -- they're all unit prices as I mentioned before, so they would include -- include those prices that were off-peak as well.

MR. BOB PETERS: So then, Mr. Surminski, maybe you can explain to the Board again why and -- those two (2) examples that I have taken out, EPE-155 and EPE-224, why the Corporation believes the pricing declines over the months from April through to September of '07?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: There are at least two (2) factors at play here. Exchange rate, as I had mentioned previously is -- is a factor, the -- the dollar declining -- or increasing -- the Canadian dollar increasing in value, and a secondary factor is that there are some off-peak sales likely in -- in these numbers.

And we do -- I have checked on it and found that there are -- there's more additional off-peak energy later in -- in that summer period, as opposed to April had very little, and -- and later on there were some -- some significant off-peak energy, so they would bring down the total overall average price.

MR. BOB PETERS: Thank you, Mr. Surminski.

Mr. Kuczek, in -- in your indicating to the Board what some of the agreements may or may not contain, do some of the long-term agreements contain pricing adjustments that are tied to the pricing and generation available from other fuel sources?

Let me reword that in a way -- are some of your pricing tied to coal or gas generated electricity?

MR. LLOYD KUCZEK: Yes.

MR. BOB PETERS: Can you explain to the

Board in general terms what that -- what that means and how the Corporation deals with that?

MR. LLOYD KUCZEK: Well, when I say yes, I just know that we did negotiate some contracts that have escalators in them, if not all of them. And when you're trying to come up with an escalator, one of the options is, is to tie it to an index, a gas index. And so I, in one (1) particular case I know we did do that. Another particular case I think we used inflation.

So we use a variety of -- it's a negotiated agreement and how you're going to escalate the prices as you move forward.

MR. BOB PETERS: Would -- I gather from your answer, Mr. Kuczek, that to your knowledge, that none of the pricing of Manitoba's exports is tied to the price of coal generated electricity?

MR. LLOYD KUCZEK: I haven't worked in that area since 2000, so I couldn't say that for certainty, but I don't recall the contracts that were existing at the time I left being tied to coal, but I couldn't say for certain.

MR. BOB PETERS: Mr. Surminski, can you bring us more current than that as to whether there's coal as a denominator of any of the contracts?

MR. HAROLD SURMINSKI: We don't believe

there's any currently.

MR. BOB PETERS: At Tab 13 of the book of documents there's a listing of some of the current agreements and I'm not going to go into them in any depth, but my understanding from what's filed is that 69 percent of Manitoba Hydro's export sales are opportunity sales in the IFF forecast.

Is that correct?

MR. HAROLD SURMINSKI: Is that information that we have provided?

(BRIEF PAUSE)

MR. BOB PETERS: I think it might be in PUB/Manitoba Hydro First Round 58. And I see that part of that is attached at the back, in the later pages, in Tab 13 of the book of documents, Mr. Surminski.

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: The ratio would depend on -- on the flow year also in -- in a lower flow year more of the sales would be long term dependable and -- and less opportunity. I'm surprised at the high number, I thought it's -- it's closer to the 50/50 or...

MR. BOB PETERS: Let -- we'll check further and if -- I'll just indicate that I was of the understanding that it was 69/31 weighted in favour of opportunity sales as opposed to firm sales in the IFF planning horizon, but we'll look at that further.

In the sales that are listed there's a new arrangement that was announced, and I think the press release is also the last document in the book of documents, Tab 13.

This is a prospective arrangement with Minnesota Power. Is that correct?

MR. HAROLD SURMINSKI: Yes, that's correct.

MR. BOB PETERS: And while it's a -- it's a firm sale that would only come into play in about 2020, as I recall.

MR. HAROLD SURMINSKI: Yes, that's correct.

MR. BOB PETERS: But it also allows you to do opportunity sales before then?

MR. HAROLD SURMINSKI: Yeah. Surplus sales are up to, or before that period, are a part of this.

MR. BOB PETERS: But you're doing surplus sales to them in any event?

MR. HAROLD SURMINSKI: Yes, this gives Minnesota Power the right to -- to be first in -- in getting the sales.

MR. BOB PETERS: Does it advance any construction in northern Manitoba?

MR. HAROLD SURMINSKI: The surplus portion does not.

MR. BOB PETERS: No, but the -- the firm portion assumes there will be major construction in northern Manitoba.

Is that correct?

MR. HAROLD SURMINSKI: Yes, it's in fact con -- contingent on -- on new construction.

MR. BOB PETERS: And it's either Conawapa or Keeyask?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: Does this advance transmission facility requirements in Manitoba?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: The interconnection, one (1) of the requirements of -- of this is -- is a new interconnection.

MR. BOB PETERS: Yes. But in terms of

transmission inside Manitoba is there a requirement to advance transmission to facilitate this sale?

MR. HAROLD SURMINSKI: No, because Bipole 3 is -- is planned for -- for -- is planned prior to this new generation, either Keeyask or Conawapa, coming on.

MR. BOB PETERS: And you'd referenced that there will be a new interconnection required with -- with Minnesota Power?

I'll just repeat that, Mr. Surminski, unless you had something you wanted to add at this point?

MR. HAROLD SURMINSKI: No, please repeat.

MR. BOB PETERS: A new interconnection is going to be needed with Minnesota Power to be able to provide the energy that you're hoping to sell to them in 2020.

MR. HAROLD SURMINSKI: Yes, that's right.

MR. BOB PETERS: And when you say "interconnection", this is a -- physical facilities located at or near the Canadian/Minnesota border -- the Manitoba/Minnesota border.

MR. HAROLD SURMINSKI: Crossing the border. And yes, we have a portion in Manitoba and there would be a portion in -- in the US to their major load centres.

MR. BOB PETERS: And who pays for the

portion in Manitoba?

MR. HAROLD SURMINSKI: Manitoba Hydro is responsible for that.

MR. BOB PETERS: And who will pay for the portion in Minnesota?

MR. HAROLD SURMINSKI: Yes, the counterparties in Minnesota would be responsible for that, or Wisconsin; it could be a share between Minnesota and Wisconsin.

MR. BOB WARDEN: These interconnections are what we've been referring to as tie-lines?

MR. HAROLD SURMINSKI: Yes. Tie-lines is another term for that.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Is this a new tie-line or is this an upgrade of an existing one?

MR. HAROLD SURMINSKI: It is very -- a brand new one.

MR. BOB PETERS: All right. Has Manitoba Hydro quantified the cost for the -- developing the tie-line or interconnection on its side of the border?

MR. HAROLD SURMINSKI: It's under study and there are several proposals for -- for the type of line, AC or DC, and where it terminates. So there's a --

a range of possibilities but we -- we definitely do not have a specific estimate of that.

MR. BOB PETERS: Those capital costs are not included in the IFF?

MR. IAN PAGE: No, they're not.

MR. BOB MAYER: Did you say DC?

MR. HAROLD SURMINSKI: Yes.

MR. BOB MAYER: I'm assuming you could dispatch out of Riel, but would that then not require a converter station in the place of destination of the power?

MR. HAROLD SURMINSKI: Yes, but there is efficiency in -- in high voltage DC. If -- if you have a large quantity of energy there's efficiency from the loss point of view.

MR. BOB MAYER: And I understand, as the distance gets farther, that becomes more efficient?

MR. HAROLD SURMINSKI: Yes.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: I'd like to just finish up before the morning recess, Mr. Chairman, on the same topic but the -- the US counterparty or parties with which -- with whom you'll be dealing, Mr. Surminski, they likewise have an obligation to upgrade their interconnection or their tie-line?

MR. HAROLD SURMINSKI: Yes, it's -- it's in their interest since they will be getting the green power from Manitoba Hydro.

MR. BOB PETERS: And the arrangement is -- the arrangement with the US counterparties is contingent on their upgrading their tie-line and if they don't, this deal is off?

MR. HAROLD SURMINSKI: Yes. It's -- it's a package deal: transmission, interconnection and -- and a power sale.

MR. BOB PETERS: And when you said "green power" from Manitoba, Mr. Surminski, at the third page -- sorry, the fourth page in, in Tab 13 of the book of documents, is a response to PUB/Manitoba Hydro First Round 58.

Can the Board take from that, that when you are selling your green power you are valuing it as replacing natural gas volumes, not coal production, down in the States?

MR. HAROLD SURMINSKI: It's a combination of -- it's not something that we target. It's the counterparty that is displacing their own generation, whatever source that may be.

MR. BOB PETERS: You're not aware of any

coal plants shutting down in the United States as a result of Manitoba Hydro's exports?

MR. HAROLD SURMINSKI: No, we are not. There are even plans to -- to build coal plants in some areas of the US.

MR. BOB PETERS: Including South Dakota?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: That will become a competitor of Manitoba Hydro in terms of exporting into the MISO region?

MR. HAROLD SURMINSKI: Yes, any coal plant that's built would be.

MR. BOB PETERS: The last topic before the morning recess that I'll suggest, Mr. Surminski, is the export capacity capabilities and we find at Tab 14 of the book of documents the import and export capabilities on the various interconnections that Manitoba Hydro has.

Would it be correct for the Board to assume that there is a limitation that Manitoba Hydro has in exporting due to interconnection constraints?

MR. HAROLD SURMINSKI: Yes, there's a physical line flow limit.

MR. BOB PETERS: And in the summer months Manitoba Hydro has the tie-lines and the interconnections fully loaded and, therefore, there -- there is a restriction in the summer months?

MR. HAROLD SURMINSKI: Yes. It's -- it's more -- more critical in the summer months, because our loads are low, and we have a lot more to export.

MR. BOB PETERS: And during the peak hours, you can't export any more electricity, even if you wanted to, because the tie lines are -- are full?

MR. HAROLD SURMINSKI: Yes. Often that's the case.

MR. BOB PETERS: And, so, what you are left to do is export it only in the off-peak hours?

MR. HAROLD SURMINSKI: Yes, that's correct.

MR. BOB PETERS: And when you export in the off-peak hours, we've seen that the price may not be as attractive as on-peak hours?

MR. HAROLD SURMINSKI: Yes.

(BRIEF PAUSE)

MR. BOB PETERS: And when we say "off-peak pricing," the Board has seen, in the surplus energy pricing orders, that the cost of some of the off-peak can be down around to two (2) and three (3) cents a kilowatt hour?

MR. HAROLD SURMINSKI: Yes, that's right.
MR. BOB PETERS: And on -- maybe on rare occasions, but on some occasions, it even drops lower than that?
MR. HAROLD SURMINSKI: Yes.
MR. BOB PETERS: Can you indicate to the Board what Manitoba Hydro's plans are in terms of upgrading these interconnection ties and maybe why it hasn't been done already?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: An upgrade would require a counterparty on the other side to -- to cooperate. So it's -- it's definitely a -- an agreement that has to be done on both sides of the border.

(BRIEF PAUSE)

MR. LLOYD KUCZEK: This activity of upgrading the transmission lines is ongoing, but it's -- it's not something that happens every year. Back in the '90s, when we negotiated a contract with NSP -- Northern States Power -- we -- part of that deal was to upgrade the 500 kV line, so we upgraded it back then.

Subsequent to that, we actually added a fourth line. And I forget exactly where that is, but it's on the western part of the province. And, so, that's effectively an upgrade -- it was a new line, but it upgrades the capacity between the -- the two (2) regions.

So the transmission people on both sides are in discussions. But, generally speaking, to -- to embark on a project like that, you need some sort of sale that's usually tied to it so there's economic benefits from both sides to provide the -- the benefits associated with the costs.

MR. BOB PETERS: Would you agree with me, Mr. Surminski, that the tie line restriction that currently exists will limit the pricing of new export capabilities of Manitoba Hydro?

MR. HAROLD SURMINSKI: Yes. Tie line is always a constraint on -- on getting maximum revenues.

MR. BOB PETERS: Well, let's put it in dollars and cents terms.

If you're already maxed out in the summer months, any additional production from, say, a Wuskwatim or a Conawapa or a Keeyask, you may not be able to get peak pricing for -- for all of that power, because your tie line capabilities are maxed out?

MR. HAROLD SURMINSKI: Yes. But you have to consider, at the time, that Manitoba load growth is -- can consume some of that additional power from these plants.

MR. BOB PETERS: No, I understood, but I'm just talking the export side.

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: Now, when we say "tie line restrictions," you've told us that you're restricted in -- in exporting to the United States, correct?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Yes, but our Canadian counterparties do not -- do not request a lot of power from us. So it's difficult to say whether it's -- it's a market limit or -- or a physical tie line limit that governs the Canadian counterparties.

MR. BOB PETERS: So the home of the Grey Cup Champions isn't lining up to buy our power?

MR. HAROLD SURMINSKI: No, that's right.

MR. BOB PETERS: Has Manitoba Hydro investigated why that's the case?

MR. HAROLD SURMINSKI: They have a lot of low-cost thermal coal generation. And it seems like they have a desire for self-sufficiency. They do not want to be dependent on external parties.

MR. BOB PETERS: And what about our -- our friends and neighbours to the east in Ontario? They're not asking for or offering to pay for additional interconnection capabilities?

MR. HAROLD SURMINSKI: That is the difficulty getting power from Northwestern Ontario to -- to the southern areas that -- that really require the power. So yes, it's the interconnection that's the difficultly.

MR. BOB PETERS: And last question, are there any capital costs in the IFF that are for upgrades or new interconnection capabilities with either the United States, Saskatchewan, or Ontario?

MR. IAN PAGE: No, there's no new interconnections in the IFF.

MR. BOB PETERS: Mr. Chairman, this might be the appropriate time for the morning break from my questioning if that suits the Board.

THE CHAIRPERSON: That is fine with us.

--- Upon recessing at 10:47 a.m.

--- Upon resuming at 11:13 a.m.

THE CHAIRPERSON: Okay, Mr. Peters.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Thank you, Mr. Chairman. A couple of matters to -- before I move on to a new topic of energy supply.

But Mr. Warden, I think it would be of -- of value to the Board if you could provide a chart -- and I sketched it out very roughly and left it on Ms. Ramage's chair -- that would contain the export sales information from the '06/'07 fiscal year on a cost per kilowatt hour as best the Corporation can determine and reveal, which identifies the categories of generation, transmission, water rentals, taxes, OM&A.

And then also show the Board the same information on a cost per kilowatt hour basis for Wuskwatim for the revenues as well as the expenses. And I would ask you to use the second year of Wuskwatim's production, which is the year that I understood from the witnesses was the first full year when it was going to produce one thousand five hundred and fifteen (1,115) gigawatt hours.

Is that something the Corporation could undertake to provide and advise the Board as to whether it's going to be able to calculate that?

(BRIEF PAUSE)

MR. VINCE WARDEN: Just for clarification, Mr. Peters, on the 2006/'07 export sales, you're only looking at the cost and not the revenue side, is that right?

So for -- for every kilowatt hour of sale -- or -- or sorry, every kilowatt hour that was exported, you're looking for what cost was included in that kilowatt hour in terms of generation transmission, water rentals, taxes?

MR. BOB PETERS: Yes, you're correct.

MR. VINCE WARDEN: And, similarly, then, for Wuskwatim, just comparable to what -- what was in 2006/'07. Yeah, I think we can -- I think we can do that.

MR. BOB PETERS: Thank you, and if there's any further questions or issues we can -- we can discuss that amongst counsel and --

MR. VINCE WARDEN: I'm -- I'm sorry, Mr. Peters?

MR. BOB PETERS: Oh, if there are any issues that arise, please notify your counsel, and we'll try to sort them out and advise the Board if there's any issues with that.

MR. VINCE WARDEN: Just for one (1) point -- further point, you're talking about actual costs, actual embedded costs.

MR. BOB PETERS: Correct.

MR. VINCE WARDEN: Yes, okay.

--- UNDERTAKING NO. 15: Manitoba Hydro to provide the Board with a chart that would contain the export sales information from the '06/'07 fiscal year, on a cost per kilowatt hour, which identifies the categories of generation, transmission, water rentals, taxes, OM&A. And also show the same information on a cost per kilowatt hour basis for Wuskwatim for the revenues, as well as the expenses using the second year of Wuskwatim's production

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Mr. Surminski, yesterday we had some discussion about the failures, the hypothetical failures of Bipoles 1 and 2. And I know you were going to be reviewing that further.

And I thought this might be of assistance to you, that if the Board would appreciate if you could provide the economic impact, and by that I mean on retained earnings in the IFF planning cycle, of the loss of Bipoles 1 and 2 for a four (4) month period in the summer and then also in the winter under the following three (3) different scenarios.

The first would be without having Bipole 3 available.

The second would be having Bipole 3 on the west side of the Interlake.

And the third scenario would be having Bipole 3 on the east side of the winter -- of the Interlake.

MR. BOB MAYER: Is there any possibility, Mr. Peters, you would want to consider the third option that is now, that at least appears to be being discussed, and that's under Lake Winnipeg? Under Lake Winnipeg.

MR. BOB PETERS: Well, I --

MR. BOB MAYER: I'm sure those projections haven't been done, but I -- I just like to keep that one out there.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Perhaps I could turn to Mr. Warden for assistance to the Board on -- and I believe this arises as a result of options being advanced by engineers and others who -- who are encouraging the Corporation to pursue that option of submerging the transmission cable for part of its journey from Northern Manitoba.

Can you update the Board at this time, Mr. Warden, as to where the Corporation is in consideration of the option of submerging the cable?

MR. VINCE WARDEN: Well, yes. Subsequent to the articles appearing in the Free Press, Mr. Brennan met with Mr. Ryan (phonetic), I believe it was.

And they concluded -- they had, apparently, a very productive meeting and they concluded that we would engage an outside consultant to have a closer look at this. So that's where it is.

MR. BOB PETERS: I won't include that in my undertaking, but thank you for the update on -- on that information.

Mr. Surminski, can you refresh the Board's memory on how long the Quebec's electrical system was out of commission after a major ice storm some approximate ten (10) years ago?

MR. HAROLD SURMINSKI: No, I -- I do not have that in my memory bank.

MR. BOB PETERS: And I -- I certainly was advised and notified by Ms. Ramage that Mr. Page would -- had to attend another matter this morning and will be away.

But Mr. Warden, are you able to indicate if Manitoba Hydro's economic forecast is going to be updated soon, and if so, when?

MR. VINCE WARDEN: Yes, the forecast is updated once per year, or at least once per year, and provided to executive committee for approval in either April or May of each year, with a further update just prior to the IFF being prepared. So we do get to look at it at least twice per year, and with the next one being April or May.

MR. BOB PETERS: Would you agree, Mr. Warden, that many of the assumptions or the -- much of the information contained in the current economic forecast appears to be incorrect, or at least outdated, as a result of events of the past year?

MR. VINCE WARDEN: No, I wouldn't necessarily agree with that. The -- the long-term outlook is pro -- probably still very relevant. And I don't expect it's going to change much from last year's.

The short-term, of course, events affect the short term -- they always do -- and probably more dramatically in the past year than they have in years gone by.

MR. BOB PETERS: A question that, probably, Mr. Page was the one I should have asked, but perhaps Mr. Surminski or Mr. Derksen can help the Board.

The Board looked at this morning the Wuskwatim Power Limited Partnership projected operating statement found at Tab 47, page 7 of the book of documents, and I had asked some questions about it.

Can -- can Manitoba Hydro confirm whether the assumptions in that operating statement are exactly the same assumptions that are derived from the IFF-07-1 that the Board has seen?

MR. VINCE WARDEN: Yes, we can confirm that with the one exception on the overhead rate that I think we talked about earlier.

(BRIEF PAUSE)

MR. BOB PETERS: The overhead rate, Mr. Warden, I'm -- I'm drawing a blank on that. What was the differences between the assumptions made?

MR. VINCE WARDEN: I think what we talked about was the -- the Manitoba Hydro employees that charge directly to the Wuskwatim project. There was a special overhead rate derived for that purpose which is different from the corporate overhead rate.

(BRIEF PAUSE)

MR. BOB PETERS: And, Mr. Warden, the provincial debt guarantee fee, which is one of the payments made to a government by Manitoba Hydro, that attaches to not only long-term debt but also to short-term debt?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And the short-term debt rate is approximately how much at this time? Are you aware?

MR. VINCE WARDEN: Well, we're currently borrowing short-term at approximately 3.5 percent.

MR. BOB PETERS: And in addition to that 3.5 percent, the provincial debt guarantee fee is added on top?

MR. VINCE WARDEN: Yeah, that's right.

MR. BOB PETERS: And it's one (1) full percentage point?

MR. VINCE WARDEN: Yes, it is.

MR. BOB PETERS: And the -- the provincial debt guarantee fee doesn't change whether it's short-term debt or long-term debt?

MR. VINCE WARDEN: That's right.

MR. BOB PETERS: Thank you.

(BRIEF PAUSE)

MR. VINCE WARDEN: Mr. Peters, maybe just a -- a point of clarification with respect to my last answer.

The calculation of the debt guarantee fee is based on March 31st balances of long- and short-term debt. Therefore, if we are borrowing short term within the year -- which we do. We borrow for one (1) month or -- or less. We often borrow just for a few days.

So if -- if those monies are borrowed at 3 1/2 percent and repaid within the year, then there will be no debt guarantee fee applied to that -- to that transaction.

MR. BOB PETERS: Okay, thank you for that clarification. And -- and, Mr. Warden, I'd understood from discussions about the Wuskwatim Power Limited

Partnership there was also some short-term borrowing, I thought it was sixty (60) days in duration.

But as long as that money is -- if it was borrowed and -- and then converted to long-term debt, there wouldn't be a provincial debt guarantee fee attached to it until it's on the books after a fiscal year end?

(BRIEF PAUSE)

MR. VINCE WARDEN: Yes, the way the -- the agreement is structured, the debt guarantee fee would be added each month to the outstanding balance at that time.

So on every advance there would be -- that's made, there would be a calculation -- the numbers -- the number of days that -- that advance is outstanding. And the debt guarantee fee would be added to that amount.

MR. BOB PETERS: All right. Because the way the provincial debt guarantee fee is calculated, being on a fiscal year-end balance, that -- that amount is charged whether it's outstanding as a short-term debt obligation or a long-term debt obligation on March 31st?

MR. VINCE WARDEN: That's right.

MR. BOB PETERS: And therefore, is it part of the strategy of the Corporation to minimize the short-term debt outstanding by the end of the fiscal year to minimize the short-term debt guarantee fee?

MR. VINCE WARDEN: Well we -- we do whatever we can to minimize that -- that cost, yes.

(BRIEF PAUSE)

MR. BOB PETERS: Thank you for that, Mr. Warden. I'd like to turn with the panel to energy supply. And at Tab 15 of the book of documents there's a copy of the -- some information from the power resource plan.

Can -- can you tell the Board how Manitoba Hydro defines "dependable flow"?

MR. HAROLD SURMINSKI: Dependable flow corresponds to our most extreme low flow period. And so dependable flow is -- is one (1) item, but dependable energy that corresponds to lowest flow is the -- the more critical item that shows up in these tables.

It's -- the dependable energy is based on not just the one (1) year, but it's based on several years and the storage that you have coming into that lowest flow year.

So it's -- it's a combination of previous flows and the storage that you have at that point where the lowest flow actually hits you.

(BRIEF PAUSE)

MR. BOB PETERS: In terms of gigawatt hours, Mr. Surminski, it's twenty-one thousand one hundred and twenty (21,120)?

MR. HAROLD SURMINSKI: Yes, that the total system hydraulic generation.

MR. BOB PETERS: But that's the -- is that also the dependable -- is that the dependable energy?

MR. HAROLD SURMINSKI: It is the dependable energy, yes, the lowest single year of energy production.

MR. BOB PETERS: Has that definition changed in the last five (5) years or that quantification changed?

MR. HAROLD SURMINSKI: Definition has not changed for many years, like, thirty (30) years.

MR. BOB PETERS: And in what year is this dependable energy come from?

MR. HAROLD SURMINSKI: I believe it's the

'39/'40 flow year.

(BRIEF PAUSE)

MR. BOB PETERS: You can, perhaps, help the Board, Mr. Surminski, that if we -- if we look at the twenty-one thousand one hundred and twenty (21,120) gigawatt hours in the Power Resource Plan -- and I think if we flip ahead to the next tab in the book of documents, Tab 16, and look at PUB/Manitoba Hydro First Round 85, there appears to be dependable energy showing up as nineteen thousand six hundred and ninety-nine (19,699) gigawatt hours. That would be on the second page of Tab 16 of the book of documents.

Can you reconcile those two (2) for the Board?

MR. HAROLD SURMINSKI: Yes. These are actually the generation in the lowest generation year in each of these load years.

As I mentioned just a few minutes ago, it's the storage in the year before that is a factor. And if we don't have to supply a particular target of energy -- like, if we're over-installed -- we do not have to use the full storage capability.

So we can actually have a lower generation in any year just because we did not -- we were not forced to -- we did not have to force our storage to be high and to be at maximum.

So dependable energy -- also, I guess, the further qualification of it is, whenever your system is tight to the point of generation being short, that's -- that's what dependable energy is calculated on.

So, for those tables -- the Power Resource Plan tables -- we assume that the load has grown to the point of just making the system tight in terms of demand, just being at the point where hydraulic generation can meet that load with maximum storage use.

So in these cases you see the -- the numbers actually go up over time, because the load is growing and making the system tighter in terms of supply.

MR. BOB PETERS: Does that same answer hold true when you flip to the fifth page at the book of documents, Tab 16, where another dependable flow number is nineteen thousand seven hundred and fifty (19,750) gilowat -- gigawatt hours?

MR. HAROLD SURMINSKI: I cannot find that page. Can you direct me, please?

MR. BOB PETERS: I have it as the fifth page in, and I apologize for not numbering. Unfortunately, the bottom right-hand corner refer --

references page 2 of 2 --

MR. HAROLD SURMINSKI: Yes, I have it, sir.

MR. BOB PETERS: -- page 2 of 2 of Manitoba Hydro First Round 85.

And, again, that number is different than the twenty-one thousand one hundred and twenty (21,120), Mr. Surminski, for the very same reason you gave in your last answer?

MR. HAROLD SURMINSKI: Yes, this was related to a particular load year that we were providing the information for, not a critical load year where supply is just sufficient to meet demand.

(BRIEF PAUSE)

MR. BOB PETERS: And when the Board looks at the Power Resource Plan here, Table 8.1 found at Tab 15 -- first page at Tab 15 of the book of documents -- it sees that Wuskwatim is coming in-service in 2012/'13.

And we've heard that that may or may not be correct, Mr. Surminski?

MR. HAROLD SURMINSKI: Yes. At the time we initiated the resource plan, it was assumed to be '12/'13. It was only later -- and this was earlier in the spring of '07. It was only in the summer of '07 that we had the possibility forwarded that plan could be earlier.

MR. BOB PETERS: And so now you're planning and protecting it to come on-stream earlier?

MR. HAROLD SURMINSKI: Yes, there is the possibility, depending on -- on the contracts.

MR. BOB PETERS: And also on this, it shows that Bipole 3 provides some positive resource gains. And I think Mr. Warden referred the Board to this yesterday but here's a quantification of it: Whereby putting Bipole 3 in-service there's actually a gain in the available energy that's coming of four hundred and forty-two (442) gigawatt hours, at least in 2017.

MR. HAROLD SURMINSKI: Yes, it is the loss saving.

MR. BOB PETERS: And that's an interesting way to describe it. It's -- there is less transmission loss, lower transmission losses, as a result of three (3) Bipoles than if there was two (2)?

MR. HAROLD SURMINSKI: Yes, exactly.

MR. BOB PETERS: And that's simply a function of physics?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: All right. I didn't

mean to use the word "simply" in that question. Nothing is simple about that.

But in terms of the thermal production that is shown, again at -- in the book of documents, Tab 15, we get thermal production, if I add up those sources of four thousand two hundred and ninety-seven (4,297) and I get different values in Tab 16 of the book of documents, can you explain why that would be showing differently?

MR. HAROLD SURMINSKI: Yes. This is the maximum capability if each of these plants were running at -- at their maximum, independently.

MR. BOB PETERS: Are you saying that in terms of the power resource plant at Tab 15, that's the maximum, the four thousand two hundred and ninety-seven (4,297)?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: And -- and -- but then if you look ahead, please to Tab 16, in response to PUB/Manitoba Hydro First Round 85(a), on the second page, there appears thermal generation, and dependable -- dependable thermal is as high as -- is four thousand six hundred and ninety-seven (4,697) gigawatt hours in the '07/'08 year.

And I'm wondering why there's four hundred

(400) gigawatt hours of additional energy available from the thermal source?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Actually, I'd have to check on that. I -- we sometimes report at generation, as opposed to -- but I don't think that is the reason. I -- I would have to really take that back if you wanted an answer to that.

MR. BOB PETERS: If you could undertake to provide an explanation as to why the thermal generation figures in -- in the power resource plant aren't the same as they are in PUB First Round 85, the Board would appreciate that answer, Mr. Surminski.

--- UNDERTAKING NO. 16: Manitoba Hydro to provide Board an explanation as to why the thermal generation figures in the power resource plant are not the same as they are in PUB First Round 85. Also, explain why the dependable thermal generation quantity is

different from what's in the
Power Resource Plan

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: While we're still looking at the power resource plant at Tab 15, the Brandon coal plant surfaces yet again, and much of the forecast that the Board has seen terminate in the IFF after approximately 2018. Mr. Warden, the power resource plan shows that the Brandon plant stops after 2018/'19, and I think one of the witnesses earlier today said there are plans to run it indefinitely.

Can you explain why it wouldn't show up then on the power resource plan, indefinitely?

(BRIEF PAUSE)

MR. VINCE WARDEN: Mr. Peters, I think the earlier comment, with respect to Brandon running beyond 2018/'19, was referring to the physical capability of the plant itself.

Our expectation -- our best estimate at this point in time, is that 2018/'19 will be the final year of operation, But depending on conditions. And at that time physically, I believe it is possible for the plant to operate beyond that. But for purposes of forecasting, an assumption was made that 2018/'19 would be the final year of operation.

MR. BOB PETERS: I think, Mr. Surminski, corrected me earlier. While it may be the final year of operation, it will be at best mothballed but not decommissioned?

MR. HAROLD SURMINSKI: That would likely be the case, yes. We did it -- we had a similar mothballing of the Brandon Units 1 to 4. We -- we kept them for -- for several years before we decided what we would do with them.

MR. BOB PETERS: And what you're saying to the Board, Mr. Surminski, is by mothballing them you're keeping your options open, that you could use it again if needed?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: And if needed, say in a drought year, or say in an emergency situation?

MR. HAROLD SURMINSKI: Yes, although that would require maybe a -- a different approach in terms of -- of keeping it in -- in a state where it could be run on -- on a short notice as opposed to mothballing indefinitely.

You -- you would treat those two (2)

differently.

MR. BOB PETERS: Understood, and thank you for that.

Back to the gas turbines, Mr. Surminski. You've told the Board that they were -- while they were available to be run they probably weren't used for any production in 2007/'08 for the Corporation. And going forward again, you're simply indicating that they're available to be part of the dependable base load if -- if required.

MR. HAROLD SURMINSKI: Yes, these definitely are -- are maintained and in a state ready to operate for extended durations.

MR. BOB PETERS: Have you calculated, Mr. Surminski, what would have to be the cost of natural gas to make the coal plants financially economic to run?

MR. HAROLD SURMINSKI: I have not but, you know, could do an -- an approximate ratioing. With -- with gas in the six ($6) or seven dollar ($7) range it's a hundred dollars ($100) a megawatt hour. You would need half that in order to make it more like fifty dollars ($50) a megawatt hour, to be in the money.

MR. BOB PETERS: So you'd need natural gas at between three (3) and three fifty (3.50)?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Yeah. In order to -- to meet a market price of about fifty dollars ($50). but on-peak prices could be higher than that so it's -- it's -- but based on the assumption of -- of fifty dollars ($50) a megawatt hour or five (5) cents that we use as an average.

MR. BOB PETERS: Mr. Surminski, Indeed your assistance on the unit of measure of that approximation.

Is it three dollars ($3) to three fifty (3.50) a gigajoule for gas or is it a different measure?

MR. HAROLD SURMINSKI: It is that, yes.

MR. BOB PETERS: All right, thank you.

And, Mr. Surminski, you'll also see on again Tab 16 of the book of documents, the second page, the dependable thermal generation quantity gets up to five thousand seven hundred and sixty-four (5,764) gigawatt hours, which is again different from what's in the Power Resource Plan.

And when you respond to that previous undertaking, if you could maybe explain why those differences exist I think the Board would appreciate that.

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: It's not shown on the power resource plan, but it somewhere else in the materials -- if you'll take that subject to check, Mr. Surminski -- that your forecast of diesel generation for the four (4) northern communities was approximately thirteen (13) gigawatt hours.

Is that right for the -- for the '07/'08 fiscal year, if you can take that subject to check?

The Board will note that it increases -- it actually doubles over the planning horizon of out to twenty-six (26) gigawatt hours by 2026 and 2027.

Are you aware of that, sir?

MR. HAROLD SURMINSKI: I have not -- it's not part of our integrated system, so it's not in -- in my resource plan.

MR. BOB PETERS: And I appreciate the second panel may be better equipped to address that.

But it -- are you aware that there's a growth shown in the production from diesel in the remote diesel communities?

MR. VINCE WARDEN: Your question is -- there is, yes, absolutely.

MR. BOB PETERS: And -- and maybe -- I've tried to suggest to Mr. Surminski, and I'll -- I can pursue that further later, but if it's -- if it's doubling from '07/'08 all the way out to 2026/2027, what would be the Corporation's rationale for why the diesel-generated electricity in the four (4) communities that comprise presently the diesel zone would be increasing so significantly?

MR. VINCE WARDEN: There is a very high growth rate in those communities.

MR. BOB PETERS: That would be population growth rate or economic development?

MR. VINCE WARDEN: Yes, population growth rate.

MR. BOB PETERS: Does that indicate to the Board, Mr. Warden that in terms of power resources, the Corporation is not looking further at installing small hydro plants -- or what somebody taught me were called "run of the river plants" -- for those communities?

But rather, diesel will be the -- the fuel of source or the -- sorry, the source of the fuel of choice?

MR. VINCE WARDEN: Mr. Peters, it probably would be better to defer that question to the next panel, because we have people that -- that are closer to this than this panel is.

Various options have been looked at for providing alternate service to those communities, and they're in various stages of production.

At this time, again, to be the best of my knowledge that there's -- nothing has -- has been able to compete with diesel in terms of cost.

MR. BOB PETERS: All right. Well we'll have Mr. Thomas consider warned for that, and we'll -- we'll approach that with him in the next panel.

(BRIEF PAUSE)

MR. BOB PETERS: In terms of the wind generation, the Board's been told that St. Leon had ninety-nine (99) megawatts, but on terms of energy it was about three hundred and twenty (320) gigawatt hours, correct?

MR. HAROLD SURMINSKI: Yes, that average, that is the estimate.

MR. BOB PETERS: And that assumes that St. Leon is online approximately 30 percent of the time?

MR. HAROLD SURMINSKI: I think it's closer to 40 percent, thirty-nine (39).

MR. BOB PETERS: And in that situation Manitoba Hydro is purchasing electricity from a non-utility generator?

MR. HAROLD SURMINSKI: Yes, that's correct.

MR. BOB PETERS: Could that non-utility generator sell to any other counterparty other than Manitoba Hydro?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Yes, a non-utility generator can -- has the option of -- of seeking transmission service and -- and selling wholesale directly.

MR. BOB PETERS: Just help me with the mechanics of that, Mr. Surminski. A non-utility generator -- let's just say with wind production -- could then interconnect with Manitoba Hydro's transmission facilities and then sell it to another party outside of Manitoba?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Yes, they could. They could get transmission service to the border through our system.

MR. BOB PETERS: That non-utility generator could not sell retail within Manitoba? That's your understanding?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: And that's because of provincial legislation?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: But you're telling the Board that these non-utility generators could sell outside of the province, provided they paid the transmission to get it there?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: All right. Or they had the purchaser pay the transmission to take it away?

MR. HAROLD SURMINSKI: Yes. Somebody would have to cover that.

MR. BOB PETERS: Now I take it there's a -- a significant engineering feat to interconnect the wind generation to the -- to the Manitoba Hydro grid?

MR. HAROLD SURMINSKI: Yes, because they are a significant -- a significant, large entity that -- that just can't feed into some low-voltage areas. It has to be in an area that has transmission coming out of it. And it requires a substation, usually, to -- to tie into our system.

MR. BOB PETERS: Who pays for that substation?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Yes, the generator -- or the non-utility generator pays their -- their full share of interconnection costs.

MR. BOB PETERS: Is the full share of interconnection costs 100 percent of the interconnection costs?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Yes, it would be a full share of the incremental cost.

MR. BOB PETERS: Mr. Surminski, does Manitoba Hydro consider wind as a dependable resource?

MR. HAROLD SURMINSKI: No. It is -- it is very intermittent, and there's no guarantee that it will be available in any day or hour.

But over the period of a year, there is definitely a quantity of energy that -- that you could count on. So we consider it as a dependable energy resource over an extended time period, like a year.

But the capacity aspect -- the capability of supplying in any hour -- is -- is definitely not there.

So it is a dependable energy resource, but not a capacity.

MR. BOB PETERS: Thank you for explaining the difference.

What you're telling the Board is that over the course of a year, you have a fairly high comfort as to how many gigawatt hours will be produced through wind generation.

But, at any point in time, you can't be certain that that capacity is going to be on hand?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: And then do I take it whenever the wind is blowing and the -- the wind generators are turning, that Manitoba Hydro is not using water to generate an equivalent amount of electricity?

MR. HAROLD SURMINSKI: Not necessarily. It would be the case if we were limited in our tie line and -- but if -- if we could export all our hydraulic and at the same time export the additional wind energy, they could both go at the same time.

MR. BOB PETERS: But you've already told the Board that in your summer months, anyway, your tie lines are full with all of the electricity generated from your hydraulic sources, in terms of exports.

So if you had wind going at the same time, you couldn't export additional electricity?

MR. HAROLD SURMINSKI: I did not -- yes, I would say it's not all of the time, though, in the summer months that -- that we are -- are limited to that degree.

We often are generation limited also, so it's -- it's not necessarily the tie line that -- that's the limit. So during -- during these periods we do -- we can use the additional wind generation to supplement the Manitoba Hydro generation.

MR. BOB PETERS: How -- have you disclosed in the filing, Mr. Surminski, what percentage of the wind generation can be sold on-peak without -- with the savings, then, of hydraulic generation to -- instead of using water for the source, just export the wind?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: The wind energy supplies the integrated system. It's -- it's not really possible to -- to differentiate and -- and back-calculate what portion is exported and what hours, you know. We re-regulate our reservoirs, so it's -- it's really not -- not possible to trace exactly when -- when the energy is sold.

MR. BOB PETERS: Do you buy energy from wind generators classified as dependable energy?

MR. HAROLD SURMINSKI: Yes, we do. In fact, I just remembered why you were calculating, maybe, the 30 percent capacity factor is because the -- it's dependable energy that's being shown in these tables. And average energy is actually higher than that, 15 percent higher. So we assume dependable energy is about 85 percent of average.

MR. BOB PETERS: Mr. Surminski, available on the Internet is some information as to what prices were achieved from the sale of dependable energy as well as non-dependable prices.

Are you aware of that being in the public domain?

MR. HAROLD SURMINSKI: No, I'm not. But if you could tell me what the numbers are...

MR. BOB PETERS: I'll put them on the public record but once -- once they're out there -- it's from the Algonquin Power Income Fund, Annual Information Form, filed March 31st of 2006.

Mr. Chairman, I'm going to withhold that information until the break and maybe speak through counsel. I just want to be sensitive that if this information is thought by the Corporation not to be public and I make it public, that may be detrimental. So I'll -- I'll discuss that first before I do so.

Mr. Surminski, they -- the conceptual point I want to conclude on is that when the wind is blowing and the turbines spinning, there may not be the need for generation through other sources, correct?

MR. HAROLD SURMINSKI: Yes, correct.

MR. BOB PETERS: And if there's not the need for generation through other sources, Manitoba Hydro, from an operations point of view, would hold back water in one of its reservoirs?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: And therefore it's using hydraulic flows to back up the wind, correct?

MR. HAROLD SURMINSKI: Yes, correct. That's very much an advantage of integrating wind into a hydraulic system such as ours.

MR. BOB MAYER: That's what we call "firming and shaping"?

MR. HAROLD SURMINSKI: That term was used, yes, as you may remember.

MR. BOB MAYER: I was hoping to hear from that gentleman again this time, but I guess Byron's not calling him.

(BRIEF PAUSE)

MS. SUSAN PROVEN: I'm -- I'm just still left confused about how a private wind developer could sell this power without, I mean, obviously putting it on the transmission line. But he wouldn't have the backup of the hydraulics.

So he might have a day when there's nothing, right?

MR. HAROLD SURMINSKI: Yes, but in our evaluation of value to our system we -- we consider the ability that we have of -- of reducing flows, turning off a hydraulic unit, putting into reservoir storage or taking out of --

MS. SUSAN PROVEN: Right.

MR. HAROLD SURMINSKI: -- reservoir storage when they are not there.

MS. SUSAN PROVEN: Okay. All right.

MR. HAROLD SURMINSKI: So we actually charge, in -- in effect, we actually charge for this service that we provide. The wind energy by itself would be worth a lot less.

MS. SUSAN PROVEN: Mm-hm.

MR. HAROLD SURMINSKI: But we enhance the value by using our system.

MS. SUSAN PROVEN: Right. And they pay for that if they're doing a private sale?

MR. HAROLD SURMINSKI: Well, we just charge them less in the first place as compared to a fully dispatchable, dependable resource.

MS. SUSAN PROVEN: Okay.

MR. HAROLD SURMINSKI: A dependable resource would be worth more. We -- we --

MS. SUSAN PROVEN: Right.

MR. HAROLD SURMINSKI: -- what we accept or --

MS. SUSAN PROVEN: Okay.

MR. HAROLD SURMINSKI: -- what we pay is -- is less than we would for an alternative, more dispatchable type of resource.

MS. SUSAN PROVEN: Okay. Thank you.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Mr. Surminski, in Tab 46, page 3 of the book of documents that I hope you have a copy of, and your counsel certainly does, there's a -- a chart from Manitoba Hydro looking at the various flow years and the system in-flow as well as the hydraulic energy produced.

And you've told the Board that the dependable flow of hydraulic generation is twenty-one thousand one hundred and twenty (21,120) gigawatt hours.

I've got that correct?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: And when the Board will look at Manitoba Hydro answer to PUB Second Round Question 30, which is Tab 46, page 3, there are alternative scenarios where there's four (4) occasions where hydraulic generation was under the twenty thousand (20,000) gigawatt hours.

And, if that's the case, why aren't those years the dependable flow limitation years, as opposed to the twenty-one thousand one hundred and twenty (21,120)?

MR. HAROLD SURMINSKI: Again, this particular table was derived for a particular load year, which is not 2010/'11, actually, it -- as described in the test. It is not the -- a critical load year in terms of supply. Like it -- 2020 or '21 would be the -- the critical year in which load grows to the point of requiring the system to be run harder in order to -- to maximize the use of the hydraulic energy.

But I think also -- maybe I should correct

-- I believe I said the worst -- there were the -- the dependable year was '39/'40. In fact, it's 1940/'41.

MR. BOB PETERS: Thank you, Mr. Surminski.

Mr. Chairman, this might be an appropriate time for the lunch recess, and I'll pick it up right after lunch.

THE CHAIRPERSON: Sounds good. Okay, we'll see you back at 1:15. Thank you.

--- Upon recessing at 11:59 a.m.
--- Upon resuming at 1:19 p.m.

THE CHAIRPERSON: Okay, Mr. Peters, any time you're ready.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Thank you, Mr. Chairman.

I want to complete my questions, panel, on -- on wind aspects of Power Resource Plan.

Mr. Surminski, is wind valued by Manitoba Hydro as a replacement of imports in peak hours?

MR. HAROLD SURMINSKI: No, it is not.

MR. BOB PETERS: How does Manitoba Hydro value wind?

MR. HAROLD SURMINSKI: In the long term, wind was valued by -- by considering what -- what could be achieved, in terms of integrating it into the Manitoba Hydro system. We go through an evaluation using our simulation analysis of all flow conditions. We create the -- the dependable portion of the wind has the ability to create a new long-term export sale, and the remaining opportunity part is evaluated as being sold on the market.

In addition, there is all the consideration of -- in lower flow conditions the wind energy supports. It could be used to offset import and thermal.

In high flow conditions, it has, you know, different roles in -- in terms of being available for export.

MR. BOB PETERS: In the Power Resource Plan, sir -- it's Tab -- sorry, it's Appendix 45 of this application, and particularly on page 15 is where I'm looking. I don't have it in the book of documents, sir.

There's an indication that the levelized benefit of each incremental one hundred (100) megawatt block of wind compared to meeting the same loads with import ranges from fifty-seven dollars ($57) to fifty-nine dollars ($59), per megawatt hour.

Are you familiar with those numbers?

MR. HAROLD SURMINSKI: This is -- these are numbers in our Power Resource Plan document?

MR. BOB PETERS: Yes, sir.

MR. HAROLD SURMINSKI: Yes, I recall those.

MR. BOB PETERS: Doesn't that suggest to the Board that Manitoba Hydro is valuing wind the same as it would import energy?

MR. HAROLD SURMINSKI: Oh, I'll need -- yes, if import energy has that value. It's coincidental that -- that the two (2) values may be identical.

MR. BOB PETERS: But you'd agree with me that in absolute terms wind energy is not as valuable as import energy, because it's not as dependable?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: And it's probably one-third (1/3) as efficient, even if it was available.

MR. HAROLD SURMINSKI: One third (1/3) as efficient as?

MR. BOB PETERS: As an import opportunity.

MR. HAROLD SURMINSKI: It's difficult to -- to answer that by -- what do you mean by efficiency?

MR. BOB PETERS: Maybe put another way,

if the wind is available 30 percent of the time -- the wind energy's available 30 percent of the time, it may be that you only need it in Manitoba Hydro system 30 percent of the time, but those two (2) 30 percent time intervals don't often overlap.

MR. HAROLD SURMINSKI: No, I do not understand what you mean by the two (2) 30 percent time intervals.

MR. BOB PETERS: Wind isn't always available when you want it --

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: -- and, therefore, when it is available, you have to alter your resource planning to take advantage of it, when it is available.

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: And in some instances if it's too windy, you can't use the wind.

MR. HAROLD SURMINSKI: Yes, it depends on -- on your hydraulic supply in your system.

MR. BOB PETERS: No, I meant if the wind gets over 72 kilometres an hour, you've got to shut down the turbines.

MR. HAROLD SURMINSKI: That's not -- yes, that's not our concern, it's the proponent in that case. We're not -- we're not -- there's nothing for us to buy in that case.

MR. BOB PETERS: And likewise if it's too cold, the proponent can't sell to you.

MR. HAROLD SURMINSKI: Yes, that's right.

MR. BOB PETERS: Turbines are shut down when it gets cold.

MR. HAROLD SURMINSKI: Yes, extremely cold.

MR. BOB PETERS: Can you tell the Board, Mr. Surminski, and I'm not gonna use actual numerical values, but is Manitoba Hydro buying wind energy and paying more for it than Manitoba Hydro can get by selling that same energy on the export market?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: In our evaluation we had -- we had included a risk premium to be built into -- into the whole value. And I think we -- we have basically lost that -- that cushion we had, but I think in the end what we actually are getting is -- is breakeven. We had -- we wanted really a higher value with a risk premium built in, but currently we could say that it's a breakeven.

MR. BOB PETERS: And what does that tell

Manitoba Hydro and this Board in terms of what you're going to do with the next three hundred (300) megawatts that you're seeking to purchase? How are you going to price that?

MR. HAROLD SURMINSKI: All indications are that it should be priced higher than the existing.

MR. BOB PETERS: And in terms of your proposals, you currently do have proposals out for supply of additional wind energy?

MR. HAROLD SURMINSKI: Yes, we do.

MR. BOB PETERS: And in that situation is Manitoba Hydro offering a price as to what it will pay for the energy?

MR. HAROLD SURMINSKI: No. No, it was a request for proposals. Prices will be negotiated depending on -- on the responses.

MR. BOB PETERS: so you're asking the proponents to indicate what price they would be prepared to sell to Manitoba Hydro?

MR. HAROLD SURMINSKI: Yes, that's right. As well as interconnection costs, location in the system, other variables also.

MR. BOB PETERS: And once you get the price from the proponents then you're saying that's subject to a further negotiation with Manitoba Hydro?

MR. HAROLD SURMINSKI: Yes, that's right.

MR. BOB PETERS: Would it be fair to say then that the proponents don't have any certainty as to how much they're going to get for their product at this point in time?

MR. HAROLD SURMINSKI: Yes, that's right.

MR. BOB PETERS: Did you indicate earlier, Mr. Surminski, that wind would have a different value to the Corporation in times of mean flows perhaps, compared to times of median flows?

MR. HAROLD SURMINSKI: Yes, although it's -- it's the more extreme. Median and -- what was the other -- was it minimum you mentioned?

MR. BOB PETERS: I think I said mean or -- or median but --

MR. HAROLD SURMINSKI: Yeah, mean and median are almost identical. It's -- it's more the low and the high that is the -- where the differential lies.

MR. BOB PETERS: Put another way, when the water flows are at their lowest, the wind value -- wind is valued at its highest?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: Does Manitoba Hydro value wind at more or less than it does the Wuskwatim energy?

MR. HAROLD SURMINSKI: It values it in

exactly the same way, given the characteristics of the product. They are not equal products at all, the wind being not dispatchable, not dependable, so it's given appropriate weight in determining its value.

MR. BOB PETERS: All right, thank you. We've covered a number of capital expenditures, I'm not going to repeat those discussions. There was a question answered in the Information Request process but probably struck Manitoba Hydro's as curious.

If there had been a media report that Manitoba Hydro was investing in a -- the capital cost of the construction of a hospital in Grand Rapids -- Mr. Warden, to your knowledge that's not happening?

And that is an Information Request Second Round 86 that was asked of the Corporation, and the answer was: The Corporation had no direct investment in the construction of a hospital at Grand Rapids.

MR. VINCE WARDEN: Yes, I agree with that response.

MR. BOB PETERS: All right. Is Manitoba Hydro indirectly contributing to a hospital in Grand Rapids?

MR. VINCE WARDEN: Not to my knowledge, no.

MR. BOB PETERS: So if it's from --

MR. BOB MAYER: Can you tell me where that -- where that's coming from, Mr. Peters? I have my suspicions but --

MR. BOB PETERS: I think it was in an airplane information brochure that flies to Northern Manitoba, Mr. Mayer. And we'll -- it struck me as unusual and I kind of filed that and I thought I better make sure I was asking it the right way.

MR. BOB MAYER: I -- I would want to be looking at what kind of deal Mr. Brennan cut with Chief Mercredi when they wanted to get that water flowing back down the old pipe.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Okay. Mr. -- Mr. Warden, Manitoba Hydro not only has the hydro-lines it also now has telecommunications lines, as I understand it from the filing.

You have a fibreoptic system that goes up Interlake.

MR. VINCE WARDEN: We do.

MR. BOB PETERS: And do you know the approximate capital cost of that -- of that system? Does anybody in the panel have that information?

(BRIEF PAUSE)

MR. VINCE WARDEN: I think, Mr. Peters, I prefer to take that as an undertaking rather than try to find that immediately. Rather than give you an approximate we'll -- we'll get the exact number.

MR. BOB PETERS: All right, that's fair.

--- UNDERTAKING NO. 17: Manitoba Hydro to provide the Board with approximate capital cost of the fibreoptic system

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: This is a -- it's own communications network that Manitoba Hydro has installed?

MR. VINCE WARDEN: Yes, it is.

MR. BOB PETERS: And is it for anything other than telephone communication?

MR. VINCE WARDEN: It goes beyond telephone communication, Mr. Peters.

MR. BOB PETERS: To include what, sir?

MR. VINCE WARDEN: I was afraid you were going to ask that.

MR. BOB PETERS: Well, data? Is it

television? Is it an Internet service?

MR. VINCE WARDEN: It -- it would be all of those. And maybe when I get the capital cost number, I'll -- I'll be more precise with that answer, if I could?

MR. BOB PETERS: Okay, and would that communication system be -- be only available to Manitoba Hydro?

Or is it - is it allowing subscribers access to it, other than Manitoba Hydro?

(BRIEF PAUSE)

MR. VINCE WARDEN: Part of the -- the major part of -- of the communication system is dedicated to Manitoba Hydro. I believe -- again, subject to check -- there are some, what we call, dark fibre that is leased out to others. But that would have to -- again, I'll -- I'll confirm that.

MR. BOB PETERS: All right. The capital amount would be appreciated, if you could provide that.

MR. VINCE WARDEN: I will.

MR. BOB PETERS: Thank you.

In turning to the book of documents, Tab 19, we get into the corporate -- the corporate debt situation. And perhaps that's why Mr. Rainkie has left the room, although I wondered if he was bring more good news to Mr. Warden. But I didn't hear any this morning, so we'll assume that Mr. Warden's latest estimate is the one that the Board should consider at this time.

But, in terms of the long-term debt of the Corporation, here's the debt of the Corporation, Mr. Warden.

It's grown from $5.8 million, in terms of long-term debt, up to thirteen point seven (13.7) over the planning horizon, correct?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And, of that 13.7 million at the far end of the horizon, new generation is going to make up approximately $8 billion of that amount, and Bipole 2 will be -- billion with a "B" would be, if I misspoke -- sorry -- 5.8 billion escalating to 13.6 billion.

Is that right, Mr. Warden?

(BRIEF PAUSE)

MR. BOB PETERS: I'm looking at the 1999 long-term debt closing balance.

MR. VINCE WARDEN: Yes, Mr. Peters. I

think you referenced new generation making up a component of that, and I was just looking for that reference.

MR. BOB PETERS: Maybe on the next page, this coming from PUB/Manitoba Hydro Second Round 46(a).

MR. VINCE WARDEN: I don't think the time frames are identical on that -- that second page.

So -- so maybe if you could ask your question, I'll -- I'll try to respond.

MR. BOB PETERS: All right, well, let's then turn to the second page at Tab 19 of the book of documents.

In terms of the new generation and major transmission, going out to 2017/'18, appears to be about $8 billion planned of the total of $13 billion?

(BRIEF PAUSE)

MR. VINCE WARDEN: Mr. Peters, I'm just attempting to reconcile the first schedule with the second. The numbers are identical though; the thirteen (13) -- well, not -- not 100 percent identical. We are talking different time frames in those two schedules.

But as indicated on the schedule on page 2, the total over the period 2003/'04 through to 2017/'18, 13.4 billion, of which 8.1 billion is new generation and major transmission.

MR. BOB PETERS: And just so the Board sees the -- the big picture, and even though it's not presented -- I think it was in the -- the MIPUG pre-filed evidence, that there's a potential for $5 to $10 billion more for projects in the three (3) years beyond the cycle that ends in 2018.

And that would include Keeyask, Conawapa, as well as the Bipole or other transmission?

MR. VINCE WARDEN: That's right.

MR. BOB PETERS: When the Board looks at the spending, sir, by project on the third and last page under the book of documents, Tab 19 -- the last page, again, taken from PUB Second Round 46(b) -- it's broken down by projects.

And I think we had a discussion that Manitoba Hydro has not committed one way or the other as to whether the next major generation past Wuskwatim will be Conawapa or Keeyask, correct?

MR. VINCE WARDEN: Correct.

MR. BOB PETERS: Does that mean, sir, that the expenditures under these line items would be foregone expenditures -- or we'll call them stranded costs -- at least until the plant would be resurrected, if the Corporation went with Keeyask instead of Conawapa, for example?

There'd be 3. -- or $2.2 billion of expenditures that wouldn't be necessarily required?

MR. VINCE WARDEN: No, the 2.2 billion takes us out to 2017/'18. So we -- we'd only look at the actual expenditures incurred to the end of 2007/'08 in the case of Conawapa. So it would be the total of, starting in 2002/'03, going from the .5 million up to and including 32.6 million under 2007/'08.

(BRIEF PAUSE)

MR. BOB PETERS: And from Manitoba Hydro's accounting practice, sir, if a decision was made to advance one (1) of those over the other, the one (1) that was not being advanced would end up being capitalized and kept capitalized until a decision was made on bringing that plant in-service?

MR. VINCE WARDEN: No, and I -- I just want to make clear that it's not a necessarily a tradeoff, one (1) for the other. Both could proceed, in which case there wouldn't be an accounting issue with respect to how those costs are handled.

But under the assumption that -- that you're using -- that Conawapa is the one (1) that doesn't proceed, then those costs would be transferred back to our -- our planning -- what we call planning studies and amortized over a period of fifteen (15) years.

MR. BOB PETERS: They'll be deferred and amortized?

MR. VINCE WARDEN: Exactly.

MR. BOB PETERS: All right. Related to the long-term debt, Mr. Warden, is an obligation on the Corporation to maintain a -- a sinking fund?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And there's been a suggestion in these proceedings that there may be some benefit to having Manitoba Hydro request the government to remove the obligation to contribute to the sinking fund?

MR. VINCE WARDEN: Well, I think that suggestion was probably made by us, by Manitoba Hydro. We -- we've been looking at that for some time.

The sinking fund has served a purpose in the past. And going forward, that purpose is probably not as -- as useful as it was in the past. And we -- we would look at the potential for either eliminating or -- or drawing it down to an absolute minimum.

MR. BOB PETERS: What was its -- what do you believe its useful purpose was in the past?

MR. VINCE WARDEN: Well, we did to the extent that we had a statutory requirement to make a -- a payment into the sinking fund every year, we used that as part of our exposure management program for -- for managing foreign currency risks.

MR. BOB PETERS: And that's the -- the purpose that you don't feel is needed as much going forward?

MR. VINCE WARDEN: No, with the -- with the changes in the accounting standards that were effective this year, the -- the sinking fund doesn't play as large a role as it did in the past in terms of the hedging program.

(BRIEF PAUSE)

MR. BOB PETERS: Mr. Warden, if I recall correctly, Mr. Page indicated that there was a sinking fund established relative to the Wuskwatim Power Limited Partnership debt.

Did you understand him to be saying that?

MR. VINCE WARDEN: It's not specifically, related to the Wuskwatim Power Limited Partnership debt. To the extent that Manitoba Hydro borrows on behalf of the limited partnership, that just forms part of the long-term debt on which the sinking fund calculation is based. But it's not specifically related to the Wuskwatim Power Limited Partnership.

MR. BOB PETERS: And you're not -- you're not treating the debt for Wuskwatim Power Limited Partnership any differently you are -- than you are for the rest of the corporate debt?

MR. VINCE WARDEN: That's right.

MR. BOB PETERS: In Tab 20 of the book of documents there were some documents related to the finance expense of the Corporation. And in terms of finance expense interest on debt this chart shows, Mr. Warden, that it's growing from $470 million in the 1999 fiscal year, out to $859 million in 2018, correct?

MR. VINCE WARDEN: Yes, that's the -- the gross interest number on long and short-term debt.

MR. BOB PETERS: And that's a function of many of those capital expenditures that we have talked about and that are contained in the capital expenditure forecast?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: The growth in the provincial guarantee fee is a growth simply based on the increase in debt but not an increase in the rate of the provincial debt guarantee fee?

MR. VINCE WARDEN: Well, there were some changes. The last time the provincial debt guarantee fee increased was, I believe in 2000 -- April the 1st, 2005. It went to 1 percent, but it was the lesser percent before that.

MR. BOB PETERS: From point .95 percent?

MR. VINCE WARDEN: One point nine five (1.95) and then point seven zero (.70), previous --

MR. BOB PETERS: Right.

MR. VINCE WARDEN: -- to that.

MR. BOB PETERS: Okay, sorry. Thank you for that correction. But from the year we're in now going forward the debt guarantee fee remains at 1 percent of the outstanding corporate debt, as of March 31st of the previous fiscal year?

MR. VINCE WARDEN: That's the assumption going forward, yes.

MR. BOB PETERS: And it's still the assumption of Manitoba Hydro that by having the provincial debt guarantee fee, debt is still cheaper than if it had to find debt on a stand-alone basis?

MR. VINCE WARDEN: Yeah, there's no question of that. Yes.

MR. BOB PETERS: On the schedule that we're looking at in Tab 20 of the book of documents, the second page in, which is the schedule attached to PUB/Manitoba Hydro First Round 43, there's a line item called "Capitalized Interest" and can you explain that to the Board, sir.

MR. VINCE WARDEN: Yes, capitalized interest is charged to all projects during the construction phase, until such time as that project comes into service. So the monies that are borrowed to finance any capital project are capitalized as a part of the cost of that project and are depreciated over the life of the project after the project comes into service.

MR. BOB PETERS: So that interest will have to be paid but it will be paid sometime in the future?

MR. VINCE WARDEN: Yes, it will be paid or -- so to speak, or it will be included in rates in the years in which the youthful life of that asset is amortized.

MR. BOB PETERS: It's not in rates currently?

MR. VINCE WARDEN: The capitalized portion is not in rates currently.

MR. BOB PETERS: But it's continuing to attract carrying costs?

MR. VINCE WARDEN: The interest is

continuing to attract --

MR. BOB PETERS: Additional carrying costs?

MR. VINCE WARDEN: Well, interest is compounded, if that's what you mean, yes.

MR. BOB PETERS: So while the total finance expense will increase when a plant comes in-service, the offset is any additional revenues that are sourced from that asset coming in-service?

MR. VINCE WARDEN: That's correct.

MR. BOB PETERS: And to the extent that the revenues don't offset the financing costs, there's a revenue requirement or deficiency that needs to be met --

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: -- by some other source?

MR. VINCE WARDEN: Yes.

(BRIEF PAUSE)

MR. BOB PETERS: Back to Bipole 3 and Tab 18 of the book of documents. Looking at this capital project, Mr. Warden, as I've understood the purpose and justification from the evidence, Number 1, it would be for reliability purposes at -- at a minimum?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And if you did have additional northern generation, it would be necessary to bring the electricity from the North down to Southern Manitoba?

MR. VINCE WARDEN: Additional to Wuskwatim, after Wuskwatim, yes.

MR. BOB PETERS: Yes. It would be addition to the Bipole 1 and 2 that you currently have, you would absolutely need Bipole 3 to bring down additional generation?

MR. VINCE WARDEN: After Wuskwatim.

MR. BOB PETERS: Yes?

MR. VINCE WARDEN: Yes. We're agreeing.

MR. BOB PETERS: Okay. I'm not sure I have and I'm not sure I should ask this question, but you filed your answers to some of the Board questions using routing on the east side and the west side.

Has a final decision been reached on that matter?

MR. VINCE WARDEN: Yes, Manitoba Hydro is proceeding on the basis that the routing will be down the west side.

MR. BOB PETERS: And not even under the middle of Lake Winnipeg, submerged, even though it's doing a study on that?

MR. VINCE WARDEN: Well, as I mentioned earlier, we are doing that review. And that could affect the outcome of the -- of the routing.

But at this time we're -- we're not waiting for that. We are -- there's a lot of preliminary work that has to be done, and we are moving ahead on the west side routing.

(BRIEF PAUSE)

MR. BOB PETERS: Can you explain to the Board the major escalation in costs from when this first surfaced in Capital Expenditure Forecast 03-1, and the Bipole was shown to be is $346 million, or approximately $360 million, to where it escalates to $2.2 billion?

MR. VINCE WARDEN: Yes, Mr. Peters. I think -- well that -- that very tab that you referenced, PUB/Manitoba Hydro Round Two 47 under Tab 18, references an article that we filed with this proceeding entitled "Sticker Shock." And it does point to some of the dramatic cost increases that we've experienced over the last number of years.

So in addition to the change in the route of the transmission line, which is longer and more costly, the -- the prices that we've experienced for --

for steel and other input costs have risen quite dramatically.

(BRIEF PAUSE)

MR. VINCE WARDEN: Mr. Peters, I -- I'm informed that although we've referenced the article, "Sticker Shock," and we have made reference to excerpts from that article here and there in our filing, the article itself has not yet been filed.

But we do have now the permission of the authors to file that, and we could -- we could certainly undertake to do that if --

MR. BOB PETERS: Is that from the Fortnightly Magazine?

MR. VINCE WARDEN: Yes, it is.

MR. BOB PETERS: All right. I think it would be beneficial if you did file it. I do believe, probably, many people have already referenced it either in paper or online. But you could file that at your next opportunity would be fine.

MR. VINCE WARDEN: We'll do that.

MR. BOB PETERS: And, Mr. Warden, I take from your answer there will be throwaway costs related to the planning and the studies done on the east side of the

Interlake that will no longer now be required?

(BRIEF PAUSE)

MR. VINCE WARDEN: Mr. Peters, just before I answer your more recent question, I was reminded that the early estimate for -- for the transmission line at Bipole 3 eastside did not include converter equipment.

So the original estimate -- estimate did not -- was the line -- transmission line only. And the more recent estimates have been -- have included the converter equipment, which is a significant increase -- reason for the increase in costs as well.

MR. BOB PETERS: And -- and just before we proceed further, Mr. Warden, my understanding was that that converter stations that you reference that'll be added to the west side costs were costs that may not be initially needed if the line was on the east side.

MR. VINCE WARDEN: That's true. We would be installing the converter equipment earlier than we otherwise would have if -- if the transmission had been on the east -- the line had been on the east side.

But it was only -- really only a timing matter though. Converter equipment would have been required ultimately.

MR. BOB PETERS: It would have been required -- it was advanced but not necessarily incremental?

MR. VINCE WARDEN: Yeah, when we were -- were originally planning on building a transmission line it was solely for reliability purposes, but as we get closer to new generation that converter equipment will be required to support that new generation.

MR. BOB PETERS: And it may assist the Board and the panel, Mr. Chairman, at Tab 22 of the book of documents, there was some -- some Bipole costing.

And, Mr. Warden, that converter station is $1.2 billion as I understand it, and it contains two (2) converter stations: one (1) in the north that converts it from alternating current to direct current, and then one (1) in the south that will again invert that from DC to AC.

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And on the east side that converter station could have waited until, or if Conawapa was built and, therefore, it has to be advanced if it's gonna be put on the west side.

MR. VINCE WARDEN: Yes, either Conawapa or Keeyask.

MR. BOB PETERS: And it's an engineering

reason as to why you would need a converter station when you go on the west side, as compared to the east? It's ...

MR. VINCE WARDEN: That is correct.

MR. BOB PETERS: But the $1.2 billion needs to be spent immediately -- the $1.2 billion needs to be spent immediately if the converter station goes on to the west side, when the line goes down the west side.

MR. VINCE WARDEN: I'm just looking for your reference to one point two (1.2).

MR. BOB PETERS: If you look in the book of documents, Tab 22, and look in approximate middle of page under "Estimated Capital Cost", there's a capital cost of converters.

MR. VINCE WARDEN: Oh, yes, I'm -- I'm sorry. You're referring to the converters alone. So, yes, that would have to be spent immediately, that's right.

MR. BOB PETERS: The question that I asked and that I've almost forgotten, I hope you haven't, was whether or not there were throwaway costs or expended costs for your studies on the east side that are now going to be no longer necessary.

MR. VINCE WARDEN: Mr. Peters, if there are any such costs, excuse me, they are very minimal. We didn't spend a lot of money on investigations into the east side, or negotiations on the east side, so the costs that were incurred would be quite small. I don't have an immediate number for that. I -- again, I can get that number but it would be quite minimal.

MR. BOB PETERS: If the Corporation could undertake to provide that information to the Board it would be helpful.

MR. VINCE WARDEN: Okay.

--- UNDERTAKING NO. 18: Manitoba Hydro to indicate to Board whether or not there are throwaway costs or expended costs for your studies on the east side that are now going to be no longer necessary

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: And while I'm comparing or compiling the list, Mr. Warden, from -- from Tab 18 of the PUB book of documents, it appears the capital cost of the line is $410 million more, at the time this answer was prepared, down the west side than the east side.

You'd agree with that?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And in addition the line losses are greater when the line runs on the west side by about $107 million of additional losses?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And Mr. Surminski is going to provide an answer to an undertaking some time -- that also deals with the question of whether there are capacity limitations, as to whether the line is routed on the west side, that it wouldn't have if it was on the east side, that would become operative in the event that the Bipoles 1 and 2 were not operational. So we'll wait for that answer.

(BRIEF PAUSE)

MR. BOB PETERS: And I'm not sure, Ms. Ramage may -- may direct you on this, but there was a request to provide a report that had been commissioned by Manitoba Hydro, in terms of the routing on the east side or the west side. I believe it was a CMC Consulting report, which I now understand is also posted on the Corporate internet.

MR. VINCE WARDEN: That's right, Mr. Peters.

MR. BOB PETERS: All right. Mr. Warden, if you went for a lunch walk, you probably walked in the shadow of the new Manitoba Hydro headquarters.

MR. VINCE WARDEN: As a matter of fact, I did.

MR. BOB PETERS: How's your office looking?

MR. VINCE WARDEN: I had to change a few things around while I was there.

MR. BOB PETERS: Mr. Warden, this -- this new headquarters probably has a fair bit of excitement within the Corporation. It also has some financial implications that this Board needs to -- to ensure it understands.

When you and I first talked about this headquarters, and it was a gleam in your eye, you introduced a new word to me called "placeholder." And it was a $75 million placeholder you put in the capital expenditure forecast.

Do you recall that?

MR. VINCE WARDEN: Yes, I do recall that.

MR. BOB PETERS: And that was for a small 400,000 square foot bungalow that you were contemplating, but didn't -- didn't know where it was going to be sited, correct?

MR. VINCE WARDEN: At the time of the 75 million, that's -- that's correct. We didn't know where it was going to be sited and -- sited, and we expected the -- or the size to be approximately 400,000 square feet.

MR. BOB PETERS: And, in any event, that 75 million doubled shortly thereafter, once -- once things became serious. And then that $150 million even increased to two hundred and fifty eight (258) in the CEF-06-1 that this Board, I think, last saw.

MR. VINCE WARDEN: Yes, Mr. Peters. The -- the doubling was just in recognition that the 75 million was, by far, understated. We had, by no means -- when we doubled it, we still did not have any real conception what the building was going to look like at that point in time.

MR. BOB PETERS: That's fair. And by the time you did have some parameters and you were talking to architects and designers and the like, the number 258 million was a bit more refined and used in one of the capital expenditure forecasts.

MR. VINCE WARDEN: Right.

MR. BOB PETERS: That 258 million grew to 268 million in May of 2007 when you were before the Board at your gas hearing. And that 268 million is now 278 million in the Hydro capital expenditure forecast.

Would that be correct?

MR. VINCE WARDEN: Actually, I -- I thought it went from two fifty-eight (258) to two seventy-eight (278) at one time. I do not recall referencing a two sixty-eight (268) number.

MR. BOB PETERS: Okay, thank you. I man be incorrect in -- in my memory on that, but I do have a little scribbled note here: "Public Utilities Board Centra [looks like] 146(c)." I don't know if we would have asked that many Information Requests, but we can check that if it becomes an issue.

In any event, it's now planned to be a 695,000 square foot office tower in downtown Winnipeg?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: You've updated the Board on some good news and bad news in the Corporation, in terms of escalation costs.

Is the $278 million number still a valid number?

MR. VINCE WARDEN: Yes, it is.

MR. BOB PETERS: It's not expected to be beyond that with any cost overruns?

MR. VINCE WARDEN: No, we're still satisfied that two seventy-eight (278) is a good number.

MR. BOB PETERS: In Tab 24 of the book of documents, you're ex -- you're explaining to the Board how this building is going to be paid for, and while you may have provided some information to the Board and some panel members at a -- at a gas hearing, I see also included in Tab 24 of your book of documents -- will be an Information Response the Corporation gave at Centra's 2009 GRA. I wanted you to have that with you as well.

The upshot of it is the Corporation expects it will be able to construct this tower without having any impact on consumer rates.

Have I got that right?

MR. VINCE WARDEN: Yes. Our expectation is the -- the cost -- it will be cost-neutral to the Corporation.

MR. BOB PETERS: And in terms of being cost-neutral, I think at the gas hearing, you were expecting it could cost as much as -- financing costs of $21 million a year, but in this hearing, in the IFF-07-1, those -- those financing costs are down to 18.75 million or $18 million a year.

Is that still your expectation?

(BRIEF PAUSE)

MR. VINCE WARDEN: Yes, Mr. Peters, the 21 million -- a bit of a different calculation here. The 21 million was simply the amount amortized a -- a debt of $278 million over sixty (60) years at 7 1/2 percent.

If you look at the schedule provided on the first page under Tab 24, the finance expense was calculated at eighteen point three (18.3) but you would have to add to that the 4.6 million of depreciations so -- to make them rough -- roughly comparable.

MR. BOB PETERS: So can you tell the Board how Manitoba Hydro expects to pay for this new head office without having to come to this Board for additional revenue in consumer rates?

MR. VINCE WARDEN: Yes. What we've -- our position on this is that we will reduce the current lease costs that we're incurring but in addition to that there will be significant productivity improvements by having all of the staff working together in one (1) location, rather than dispersed as we are today. Or the majority of the staff. Not all the staff, but the majority of the staff will be in one (1) location.

MR. BOB PETERS: And it'll take $18.75 million of incremental revenue a year to -- to pay for the building?

(BRIEF PAUSE)

MR. VINCE WARDEN: Mr. Peters, could you just give me your reference to the $18.7 million?

MR. BOB PETERS: Yes. Second page in Tab 24 of the book of documents.

(BRIEF PAUSE)

MR. VINCE WARDEN: Mr. Peters, I think all this PUB Second Round 42(d) is referring to is the difference between an earlier estimate at 7.5 percent, versus the updated rate of 6.6 percent.

So a reduction in interest rates resulted in -- in a reduction of the amount that would be required to extinguish that debt of 278 million over that same time period.

MR. BOB PETERS: When -- the expectation now is that it'll take $22.8 million a year to attend to the cost and cover the costs of a new tower?

MR. VINCE WARDEN: Including all of the operating costs of the building, yes, that's correct.

MR. BOB PETERS: And that $22.8 million is incremental monies that the Corporation has to find, and you're hoping to find it primarily through productivity improvement?

(BRIEF PAUSE)

MR. VINCE WARDEN: Yes, Mr. Peters, that's fair to say, that the twenty-two point eight (22.8) is incremental.

MR. BOB PETERS: And you're not asking this Board, and you won't ask this Board, to recover that incremental money in consumer rates?

MR. VINCE WARDEN: Based on our assumption of productivity increases, that's correct.

(BRIEF PAUSE)

MR. BOB PETERS: And in rough terms, $20 million a year is the potential productivity savings that the Corporation expects on a $200 million payroll, related to that tower?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: In general terms can you explain to the Board how it is -- how it is productivity will increase by moving to downtown Winnipeg from 820 Taylor?

MR. VINCE WARDEN: Well, we do base this

on the experience that a lot of it, somewhat anecdotal perhaps, but the experience of others that have gone through similar amalgamation exercises with staff, bringing staff together so they're working in closer proximity. They aren't having to travel every day to meetings, that they -- they can -- can meet with -- with each other on a regular basis, working in a more efficient environment than we are today.

So the information that we've been provided is that we can expect productivity savings between 10 and as high as 20 percent.

So we -- we are relying on that to cover the costs of -- of -- the incremental costs of the building.

MR. BOB PETERS: In -- in addition to the productivity savings you're also indicating potential cost reduction factors of up to 10 percent, if I understand the evidence both in this Hearing and the last -- in the gas hearing.

Is that your understanding, sir?

MR. VINCE WARDEN: No, the cost reductions that we referenced, I believe, Mr. Peters, are one and the same.

MR. BOB PETERS: All right, thank you. Are there any update to those figures, Mr. Warden?

Or they remain the same?

MR. VINCE WARDEN: They remain the same at this time, yes.

MR. BOB PETERS: And does the Corporation have any written reports or analysis verifying the attainability of those numbers?

MR. VINCE WARDEN: We do have some documentation that -- that does provide the experiences of others that have gone through similar exercises that does provide us with some information to go on, yes.

I might also mention too that I was talking earlier about attraction/retention of staff as being a major issue going forward. We do see the new building as being key for attracting and retaining staff at Manitoba Hydro that want to work in a professional environment.

(BRIEF PAUSE)

MR. BOB PETERS: When property taxes were last discussed on this new tower, Mr. Warden, there seemed to be some uncertainty, if I can.

Is that a more certain number that you've put forward in the book of documents, Tab 24, the first document?

(BRIEF PAUSE)

MR. VINCE WARDEN: Mr. Peters, my understanding is the property taxes are still somewhat uncertain. They are still under negotiations, so it's -- it's the best information we have available at this time.

MR. BOB PETERS: Mr. Warden, at the gas hearing, if I read the Board order correctly -- Order 99/07 -- the Board basically gave Centra two (2) options, in terms of how to deal with the new office, on the understanding that there would be no incremental costs attributed to the gas side of the business.

Has the Corporation concluded as to how it will proceed on -- on that side, in terms of demonstrating to the Board that no additional incremental costs are being added to the gas side?

MR. VINCE WARDEN: Yes, we -- we know what's being incurred today for space costs for gas-related operations. And we have committed to not increasing those costs on the gas side of the business beyond what they are today.

MR. BOB PETERS: And when it comes to tracking the costs -- excuse me.

When it comes to tracking the costs on the electric side, how will Manitoba Hydro demonstrate to this Board the next time you are before it that it is paying this $22.8 million out of improved efficiencies?

MR. VINCE WARDEN: Well, we do have within the information that has been filed in this proceeding, we do have charts of accounts that break down our costs into various categories. I would expect the Board and -- and Manitoba Hydro, as well, to be scrutinizing those costs in the future and making sure that they don't go up beyond or don't go up for reasons of the new building that can't be explained with offsets and -- and productivity.

MR. BOB PETERS: So Manitoba Hydro will be keeping track of the costs and demonstrating where the productivity is?

MR. VINCE WARDEN: Yes, we would expect to do that. We would expect we would have to demonstrate at a future proceeding that we have met our productivity targets.

MR. BOB PETERS: Does this include the Corporation establishing a baseline out of the OM&A costs that it incurs?

MR. VINCE WARDEN: That would seem reasonable, Mr. Peters.

MR. BOB PETERS: And approximately 75 percent of the Corporates OM&A is related to payroll or labour costs, is it not, Mr. Warden?

MR. VINCE WARDEN: It is.

MR. BOB PETERS: And you did indicate earlier that the Corporation has some challenges in attracting or filling positions that are becoming vacant.

Does the efficiencies attributed to the head office include a reduction in equivalent full-time positions?

MR. VINCE WARDEN: Compared to what they would otherwise be, yes.

MR. BOB PETERS: Okay, let me understand that. How many vacant EFTs do you have currently? You'd given that number before, I think.

MR. VINCE WARDEN: Yes, close to two hundred (200).

MR. BOB PETERS: And will any additional positions become vacant that will not be filled just to find the efficiencies related to the new building?

(BRIEF PAUSE)

MR. VINCE WARDEN: Well, kind of difficult to answer that question in a -- in a general way. We -- we are looking at all functions. The functions that different divisions, different departments that are moving into the new head office, some will be experiencing growth for a number of different reasons.

For example, the power supply business unit will be experiencing quite significant growth because of the new generation projects -- new generation projects that are being planned. So the growth will occur naturally in that area.

Having said that, there will be productivity improvements by power supply people working together in one (1) location so that the increases in EFTs will not be as great as they would otherwise be. So we really do have to look at each division and determine where the productivity savings will be relative to, as you indicated earlier, a baseline that will be established.

MR. BOB PETERS: You -- are you in a position to indicate to the Board how many fewer EFTs there will be in the Corporation when the new building opens compared to how many there are today?

MR. VINCE WARDEN: Well the $20 million in productivity savings equates to approximately two hundred (200) EFTs. So we are talking about two hundred (200) equivalent full-time employees.

MR. BOB PETERS: And, in terms of these two hundred (200) full-time employees, is there any plans for a -- a voluntary termination incentive package, or is this a matter of attrition?

MR. VINCE WARDEN: Attrition is -- is probably more of a problem for us than -- than it is an opportunity. So, there will not be a problem in terms of identifying two hundred (200) positions or meeting that two hundred (200) position target.

MR. BOB PETERS: And would any of those two hundred (200) positions in the target be left vacant in any event?

MR. VINCE WARDEN: The -- the two hundred (200) positions that are vacant today are, to some extent, not being filled in -- in anticipation of moving in to the new head office.

Some others, though, are -- are urgently required to be filled, and we are -- we are attempting to fill those as quickly as possible.

MR. BOB PETERS: Thank you. I'd like to turn with the panel to some discussion on OM&A or operating, maintenance, and administrative costs -- administration costs.

And Tab 25 of the book of documents contains a schedule where the operating costs have been functionalised.

(BRIEF PAUSE)

MR. BOB PETERS: And it shows a total functionalised operating costs of $658 million.

MR. WILLY DERKSEN: Yes, we have that, sir.

MR. BOB PETERS: And that's only for the electric operations, Mr. Derksen?

MR. WILLY DERKSEN: Yes, that's correct.

MR. BOB PETERS: What you're answering when you say that is that, as I've discussed with Mr. Warden, there's an opportunity for the Corporation to incur OM&A costs.

But it either assigns or allocates some of those costs over to the subsidiaries, including Centra Gas, for example?

MR. WILLY DERKSEN: It certainly does allocate some of those costs to its operating subsidiaries, yes.

MR. BOB PETERS: And, Mr. Derksen, in the last PUB Order 99/'07 related to the gas side of the business, the Board requested Centra propose terms of reference for a review of cost development and allocation as between Hydro and Centra.

Do you recall that?

MR. WILLY DERKSEN: Yes, it did sir.

MR. BOB PETERS: And do you know the status of where that report is or how it's being considered?

MR. WILLY DERKSEN: I would expect that we would have the terms of reference proposed to the Board later on this month. It is under -- it's being worked on right now, sir.

MR. BOB PETERS: And in the -- in the GRA that's before this Board, you're not proposing any change in terms of allocating costs to the subsidiaries than what was proposed in the gas hearing?

MR. WILLY DERKSEN: That's correct.

MR. BOB PETERS: In the IFF, back on Tab 10 of the book of documents -- and that was page 38 -- the O&A -- OM&A costs were around $360 million, Mr. Derksen.

I'm wondering if the items that have been cir -- circled on the page in Tab 25 are the items that would be removed to come to the approximate $360 million shown on the IFF?

MR. WILLY DERKSEN: Sir, this -- the representation in Tab 25 is a cost allocation rate design approach to looking at costs. And it's not consistent with an operating cost view of -- of the same company.

So, the 360 million and the 657 million are essentially apples and oranges. They are not comparative.

(BRIEF PAUSE)

MR. WILLY DERKSEN: Just to add to that, sir, like, in the total of $657 million there are things like water rental costs and depreciation costs and fuel costs and those sorts of things.

MR. BOB PETERS: And I was suggesting you -- you remove those from the functionalised list and you'd end up with the $360 million that you show on your IFF, but that's not how you would go about preparing it?

MR. WILLY DERKSEN: No, sir, that wouldn't be it.

(BRIEF PAUSE)

MR. BOB PETERS: All right. If we flip ahead to Tab 27 of the book of documents, Mr. Derksen, we see another spreadsheet containing some operating and administrative costs by element.

MR. WILLY DERKSEN: Yes, sir.

MR. BOB PETERS: And I had said earlier

to Mr. Warden that the labour costs were about 74, 75 percent.

And that's borne out in this information as the -- by far the -- the highest percentage of costs incurred in OM&A?

MR. WILLY DERKSEN: Yes, sir.

MR. BOB PETERS: And in terms of capitalized OM&A we see that down near the bottom quarter of the page, capitalized order activities and capitalized overheads.

Can you explain to the Board what that represents?

MR. WILLY DERKSEN: Yes, sir. The capitalized activities represents the cost of company employees working directly on capital construction activities.

So, for example, if we have people working on the Wuskwatim Generating Station and they spend, let's say, in one (1) time period, one hundred (100) hours working on that, we calculate an activity rate. And that is intended to cover all of the costs of -- of that, employees working for the company. And we multiply the hours worked on Wuskwatim -- on that Wuskwatim facility -- times that activity rate to determine capital activities.

MR. BOB PETERS: And are those capitalized OM&A expenses presently recovered in rates?

MR. WILLY DERKSEN: Once the related facilities go into service, they -- costs are then recovered through rates through financing expense and through depreciation expense.

MR. BOB PETERS: But until then, they're not?

MR. WILLY DERKSEN: That's correct.

MR. BOB PETERS: In Tab 26 in the book of documents there's some graphical depictions of the OM&A expenses from the various IFFs of the Corporation. And the source data is listed.

And, Mr. Derksen, does the Corporation take any issue with the way those matters are depicted? And subject to the numbers coming from the IFFs, you're satisfied that they're appropriately depicted?

MR. WILLY DERKSEN: I -- I believe they're correct, yes.

MR. BOB PETERS: And it does show that the IFFs are -- are tren -- are trending the OM&A costs upward?

MR. WILLY DERKSEN: Yes. And we have discussed that in our materials at this Hearing, that there are a number of -- of cost pressures that are causing that to happen.

MR. BOB PETERS: And I believe it was Mr. Harper who had indicated that the compounding of OM&A escalation appears to be in the neighbour -- in the neighbourhood of 4 percent from 2003 through to 2007.

And you don't disagree with that?

MR. WILLY DERKSEN: No, I agree with that.

MR. BOB PETERS: And in terms of the pressures that you talk about, it's primarily wage and overtime pressures that deal with 75 percent of the costs?

MR. WILLY DERKSEN: Well, there are other things as well, but certainly wage and overtime pressures are significant factors for us. But it's not only wages.

I might add, that we are increasing the amount of work that's required out of the company in that same time frame. For example, the power supply unit has added substantial numbers of employees to deal with extra provincial requirements, as has T&D. There are also additional environmental monitoring requirements, and there's new facilities being placed into service.

All of these do require more staff than had originally been contemplated. So the wage pressures are both related to higher wages and also to additional work requirements.

MR. BOB PETERS: Mr. Derksen, MIPUG will certainly speak for themselves with their counsel, but there was a recommendation contained that the OM&A expenses could be filed in a format that allows consideration by function -- that is, OM&A by generation by transmission distribution, customer service and administration.

MR. WILLY DERKSEN: We do provide that information.

MR. BOB PETERS: And in providing that, it will allow this Board, then, to follow it over the years in terms of how the trends are proceeding?

MR. WILLY DERKSEN: Well we have been providing that all along, Mr. Peters. We -- we provide that in our schedules and our application and in various schedules throughout the -- throughout the Information Request process, because the company is broken up into business units which generally provide that information.

MR. BOB PETERS: And in terms of forecasting it for the future, though, Mr. Derksen?

MR. WILLY DERKSEN: It is provided that way as well.

MR. BOB PETERS: And how far out into the future?

MR. WILLY DERKSEN: It -- this application provides that until 2008/'09 but not beyond that point.

MR. BOB PETERS: Is the Corporation capable, though, of filing that forecast out to the same duration as the IFF?

MR. WILLY DERKSEN: I -- I think if we did that, sir, it would just be a very simple extrapolation. I think our IFF, in terms of operating expenses, has presumed that the escalation of operating expenses will be similar to CPI over the further years, with -- with in addition to that it would include significant known additional operating items. For example, the -- when the Wuskwatim generating station goes into service, there will be additional operating requirements at that point in time.

So on a consistent basis, I would think extrapolating the business units by that 2 percent, except adding most of the additional costs for Wuskwatim into the power supply area, would be -- what -- the response that you'd get out of that.

(BRIEF PAUSE)

MR. BOB PETERS: In the breakdown of OM&A by cost element found at Tab 27 of the book of documents, Mr. Derksen, there's a line item on contingency planning.

Mr. Warden spoke to the Board about this earlier on in some answers to some questions I posed, but contingency planning only gets added for the '08 and the '09 years in the forecast.

Is that related to the cost pressures that you weren't otherwise able to reflect in the escalation rate?

MR. WILLY DERKSEN: Yes, that would be correct.

(BRIEF PAUSE)

MR. BOB PETERS: At the time you set them up, are you able to identify which other cost element they will relate to?

MR. WILLY DERKSEN: No, sir. It's part of process, I guess, that we have and other utilities have as well, where we do top-down budgets in the fall. And the targets are set at that time by EC and approved by the Board of Directors.

Subsequently, detailed budgets are sorted out later on in the year. And to the extent that some of these cost pressures are -- are better known at that point in time, they will embed themselves into plans and therefore into the appropriate related cost elements.

MR. BOB PETERS: Turning the page in that -- in that Tab 27, Mr. Derksen, is it correct that the capitalized OM&A costs are approximately 40 percent of the -- the total?

MR. WILLY DERKSEN: It looks to be about right, sir, yes.

(BRIEF PAUSE)

MR. BOB PETERS: And so for what you answered just a few minutes ago, for every dollar you spend on OM&A, you're also spending an extra forty cents ($.40) that will be capitalized and recovered at some future date?

MR. WILLY DERKSEN: I -- I think that's a little bit simplified. The capital requirements and the OM&A requirements are really dealt with quite separately. Capital requirements would be based upon the capital program that was in place at the time. So year over year, those things could change and that relationship could change.

For example, Wuskwatim and other new

generation will increase the requirements for capital construction EFTs, but it will not have any current impact on the operating requirements. So to say that for every dollar we spend on operating we'll spend forty (40) cents on -- on capital would not hold true in the long run.

MR. BOB PETERS: You want the Board to be aware that it would be project specific?

MR. WILLY DERKSEN: That's correct.

MR. BOB PETERS: Turning to Tab 28, when we look at the EFT analysis, I didn't refer this to Mr. Warden earlier, but based on the equivalent full-time positions the Corporation has reported in the materials -- I think it's PUB/Manitoba Hydro Second Round Question 5 -- the business units in the Corporation were reporting on their employee levels.

And, Mr. Warden, do these levels reflect a reduction in what was otherwise expected due to the difficulty in recruiting people and the number of retirements that are forth -- forthcoming?

MR. VINCE WARDEN: That's right, Mr. Peters.

MR. BOB PETERS: These are a net number?

MR. WILLY DERKSEN: Mr. Peters, I think the numbers that you're shown in here are not directly taken from our responses. The numbers in here are the total EFTs less, I believe, the Centra direct EFTs calculated in a different IR. And so they are a manufactured set of numbers that we're not specifically familiar with.

And as -- as well, as I think we responded in an Information Request -- to an Information Request, the Centra direct calculations would not be performed on an equivalent basis to the total EFT numbers, because the Centra direct calculations would be the hours worked on Centra activities -- the direct hours worked -- divided by nineteen hundred and sixteen (1,916).

And so if we had a -- an employee that was focused on Centra activities and we paid them for nineteen hundred and sixteen hours (1,916), they would be one (1) EFT on the overall corporate statistics. But because of things like vacation and sick time and statutory holidays and administrative time and training time, they might only spend fourteen hundred (1,400) hours working on Centra activities. And so they would only be represented as fourteen-nineteenths (14/19ths) of an EFT in that particular schedule.

MR. BOB PETERS: You're saying then that when we derived the schedule, we didn't give enough weight to the EFTs that are assigned Centra duties?

MR. WILLY DERKSEN: That's correct.

MR. BOB PETERS: Do you have suggested revisions, or is that criticism one that we'd have to go back and analyze further?

MR. WILLY DERKSEN: Well, depending upon your -- your -- the representation that you're trying to make, I think it would be best to look at the total employees of the company.

(BRIEF PAUSE)

MR. BOB PETERS: Put another way, Mr. Derksen, you're not accepting that there were five thousand six hundred and ninety-five (5,695) EFTs on the electric side at year ending 2007?

MR. WILLY DERKSEN: That's correct.

MR. BOB PETERS: And you're saying the -- the numerical calculation is flawed, because it didn't give full weight to the hour -- to the services provided on the gas side?

MR. WILLY DERKSEN: That's correct.

(BRIEF PAUSE)

MR. BOB PETERS: Do you forecast EFTs,

Mr. Warden, on the electric side as compared to the gas side?

(BRIEF PAUSE)

MR. VINCE WARDEN: Inasmuch as we have integrated operations, EFTs are forecast in total for the Corporation.

MR. BOB PETERS: All right. And we have those numbers, so thank you for that.

In terms of OM&A growth, found at Tab 29 of the book of documents, there were a couple of plot-lines developed, Mr. Derksen, based on OA and expense from IFF-07-1. And that's compared with CPI on the -- the bottom line. Whether it's red -- I'm not sure if it's in colour.

And then a five (5) year trend line has been just superimposed on top of the -- the last five (5) years of what we believe actual data to show.

And does this represent an accurate depiction of the OA -- OM&A expenses, relative to CPI first of all?

MR. WILLY DERKSEN: Well, I note the caption on this one says, "OM&A Per Customer Based on CPI," and I just want to clarify that this calculation takes the electric OM&A, increases it by CPI, and then divides it by an increasing number of customers.

So it's not the OM&A per customer increased by CPI, it is having a base 1999 OM&A that increases by CPI, but then divided by an increasing number of customers. When, in fact, the OM&A per customer is increased by a much lower amount than CPI in this chart.

So there are some concerns we have with that as well.

I think in the response to Appendix 12-12, we provided a chart that showed our OM&A per customer increasing by the level of CPI over this same timeframe. And, at the end of the day, the -- over this same time period, I think the OM&A per customer at year 2017 was something higher than our forecasted results.

Let me just see if I've got my numbers here.

Yes, it shows seven hundred and forty-two (742) in this chart for our actual number. And if you increased OM&A per customer by CPI, you would come up with seven hundred and fifty-two (752) at the end of 2017.

And so, the -- the flaws or the differences that I might find in this is that it doesn't take into account some of the real cost pressures, again, that have been incurred, especially in -- in the past few years and right now. And so, we've talked about things like fuel costs doubling and -- and other things, and those are not taken into consideration here.

MR. BOB PETERS: In terms of the numbers coming from your data, Mr. Derksen, with the sources listed on the page, you don't disagree that the data was provided by Manitoba Hydro?

MR. WILLY DERKSEN: Yes, the data was provided, but I think, upon reflection, if we would have known how it was going to be used to compare, we might have provided some qualifications as to what this data is telling you and -- and how -- what cautions should be used when using this -- the data prepared in this manner.

(BRIEF PAUSE)

MR. BOB PETERS: You've now put those qualifications on the record, Mr. Derksen?

MR. WILLY DERKSEN: Yes, sir.

MR. BOB PETERS: All right, thank you. Mr. Chairman, I would like to turn to demand-side management questions, and this might be an opportunity for an afternoon recess, if it suits the board.

THE CHAIRPERSON: Very good, Mr. Peters.

--- Upon recessing at 2:40 p.m.
--- Upon resuming at 3:01 p.m.

THE CHAIRPERSON: Okay, Mr. Peters.

MR. BOB PETERS: Mr. Chairman, a couple of housekeeping matters, one (1) by Ms. Ramage, one (1) by myself just to alert the parties that my intention is to stop questioning by 3:55 p.m. today, complete next Monday morning before I hand the microphone over to my colleague Mr. Williams.

And with that, Ms. Ramage has another undertaking she would like to have marked as an exhibit.

MS. PATTI RAMAGE: Yes, Mr. Warden referenced earlier, I believe this afternoon, the sticker shock article. We've distributed that article and I would suggest it be identified as Exhibit MH-10.

--- EXHIBIT NO. MH-10: Sticker shock article

MS. PATTI RAMAGE: Also on day 1 of the Hearing an undertaking was provided by Mr. Surminski at page 239 of the transcript and he's able to put that answer on the record right now, if we could -- if I could just turn the mic over to him.

THE CHAIRPERSON: Sure.

MR. HAROLD SURMINSKI: I could reference the book of references, Tab 12, the NEB prices, National Energy Board prices.

The question -- the undertaking was to explain why import prices were high in those summer periods, particularly June to September.

And if we go the second page of that tab and -- and the answer, for example, at the bottom right-hand column: Imports US dollars in June five point seven (5.7), and then it goes to thirteen point one dollars ($13.1) -- or cents per kilowatt hours -- seven point five (7.5) cents and nine point three (9.3) cents.

All those import prices seem like they're very high numbers. We have investigated and can explain why these numbers are this high.

There are two (2) components that make up these imports. One (1) is emergency calls. There are times when we were short of energy and we had to call what we -- what they're -- in the market they're called emergency calls for power and we pay the cost, whatever it is at the time. There were probably sales, on-peak sales, that we had to make and we needed this power to --

to meet our obligations.

And these calls are cost based and they could also include startup costs of -- of the energy that we're purchasing. So they could be very extremely high.

For example, July had a cost of a hundred and thirty-five dollars ($135) a megawatt hour for -- for this emergency call. So it's a portion of that total.

So the emergency calls are a portion of the total imports. The other portion is imports at market prices. So there's a weighting taking place of these high cost emergency calls and imports at market prices. And other months also had a hundred dollars ($100), hundred and ten dollars ($110) a megawatt hour for these emergency calls.

And volumes are very small, in the order of two hundred (200) megawatt hours to four hundred (400) megawatt hours. It's -- it's like four hundred (400) megawatts for one (1) hour, so it's really small volumes for short periods of time but high cost.

And because we were in good flow conditions our total imports were -- were not very large. So all this -- all these imports are based on small volumes and weighted heavily by these emergency calls.

THE CHAIRPERSON: Thank you.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Thank you, Mr. Surminski, you just conceptually help the Board understand if you are in good flow conditions, why would you be needing these emergency calls?

MR. HAROLD SURMINSKI: For those particular hours there were -- there could have been outages, there could have been specific reasons that we were short of -- of the capacity and the energy and those short-term hours.

MR. BOB PETERS: You may have sold opportunity -- made opportunity sales and therefore didn't have it available?

MR. HAROLD SURMINSKI: Yeah. We had obligations. It could have been opp -- the combination of opportunity and long-term.

MR. BOB PETERS: In that instance if it was an -- if you had opportunity sales that you had committed to and your choice would be either to make the emergency call or to cancel the opportunity sale, would it be cheaper to cancel the opportunity sale?

MR. HAROLD SURMINSKI: Yeah. We -- we don't always have that option to cancel an obligation that we made, a day ahead.

MR. BOB PETERS: You have the opportunity to buy your way out of it though?

MR. HAROLD SURMINSKI: That's in fact what this is. At the last hours we find out we don't have it so we -- we put out the call and pay whatever is required to get out of it.

MR. BOB PETERS: All right. Thank you.

Mr. Derksen, I am going to ask you and me -- you to be brief with me here. Looking on Tab 29 of the book of documents, I sensed your concern with the -- with the chart that was presented, and I wonder if we could start with the red line. And I'm not sure if it's colour on yours, I think it is.

The bottom line, the OM&A per customer based on CPI. That's information that the Corporation provided?

MR. WILLY DERKSEN: Yes, it is.

MR. BOB PETERS: And you don't take issue with it demonstrating an inflation of the CPI -- I'm sorry, inflation of OM&A by CPI per customer?

MR. WILLY DERKSEN: I do take issue with that. What it does is inflates OM&A itself and then divides it by the number of customers which keep on going up. So the OM&A per customer is not inflated by CPI in this depiction.

MR. BOB PETERS: I'm having trouble

understanding that because the OM&A is inflated by CPI sequentially, is it not, in this exa -- in what you've provided?

MR. WILLY DERKSEN: I'll try to be short-winded. If we started with a -- a cost per customer of, well, let's say we had ten thousand dollars ($10,000) of costs and a thousand (1,000) customers, that would be ten dollars ($10) per customer. And if we had a very high inflation factor of, let's say, 10 percent, the OM&A per customer, if that was inflated by 10 percent, it would go from ten dollars ($10) to eleven dollars ($11).

But -- but if in the second year we had a high inflation of -- of that 10 percent but we also increased our customers, and I'll exaggerate on this one by, let's say, 50 percent, we would have eleven hundred (1,100) in operating costs, but we would have a hundred and fifty (150) customers, so it would give you a cost per customer in the order of seven dollars ($7), rather than eleven dollars ($11).

So instead of -- of showing a cost per customer increase of going from 10 -- plus 10 percent equals eleven (11), it would go from ten (10) down to seven dollars ($7) or something like that in this depiction. Now, of course, that's an exaggerated view, but that's what's happening throughout this period.

MR. BOB PETERS: All right. I think I now understand your concern. When we deal with the -- with the blue line or the OM&A expense actual or forecast in IFF-07, do you have any concerns with the way that is depicted?

MR. WILLY DERKSEN: No, sir, that is our information.

MR. BOB PETERS: And you would expect then that the bottom OM&A per customer, based on CPI, would -- would track a bit closer to -- to the blue line than what I have depicted here?

MR. WILLY DERKSEN: That's right. And in fact by year 2017 it -- it goes above the blue line.

MR. BOB PETERS: And maybe for the record, just to conclude on this point, PUB/Manitoba Hydro Second Round Number 7 was a chart that was provided by the Corporation and it demonstrates what you've just indicated to the Board, that by 2017 or actually 2015 the -- the lines would again converge?

MR. WILLY DERKSEN: Yes, sir, that's correct.

MR. BOB PETERS: I think we've got your point.

The other point is in terms of the trend line, that's simply an indication of the last five (5) years, approximately, of where the OM&A is trending. And you're indicating to the Board in the IFF that you think that's going to level off. But in the last five (5) years, it hasn't.

MR. WILLY DERKSEN: Yes, sir. That's our evidence, that we expect it will level off in the future.

I might also add, the way that it's depicted here with the base axis starting at five hundred (500), it exaggerates the -- the slope of that line.

If it were done with an axis of zero, it would be a much gentler line, but --

MR. BOB PETERS: All right, that's a fair comment as well.

(BRIEF PAUSE)

MR. BOB PETERS: Thank you. Mr. Kuczek, if we can talk some demand-side management in the time we have this afternoon. Suffice it to say, in terms of the two (2) sides of the electricity consumption equation, I guess there's a supply side, which we've talked about, where millions and billions of dollars can be spent on generating stations and, perhaps, transmission to meet the load.

And, on the other side, there can be

initiatives to control the demand and try to influence consumer behaviour so as not to consume as much electricity, correct?

MR. LLOYD KUCZEK: Correct. or, in our case, we -- our primary objective is to pursue the efficient use of energy.

MR. BOB PETERS: And pursuing the efficient use of energy includes incenting customers to make choices of using less electricity.

MR. LLOYD KUCZEK: Correct.

MR. BOB PETERS: Why don't consumers reduce consumption voluntarily, without the inducements or incentives?

MR. LLOYD KUCZEK: Some actually do.

MR. BOB PETERS: All right. other than Dr. Miller, why don't people voluntarily reduce their consumption?

MR. LLOYD KUCZEK: There's -- there's a variety of reasons. I think I went through this once before, and I was somewhat reluctant to use my family to explain it, but it -- it seemed to have worked last time, so I'll go through that again.

But my -- my parents are in their late 70s, so their incentive to spend money on something that may have a payback period of eight (8) years or longer isn't -- isn't too exciting for them.

I have a fairly wealthy brother, and he really isn't too concerned about energy efficiency either. He's -- he's more interested in just enjoying his life.

And I have a sister that's a low-income Manitoban, and she is interested, but she doesn't have a lot of money to spend on these sort of initiatives.

And, so, then there's me, and I'm very efficient.

So there's all sorts of people out there. So the problem is you need -- through the use of incentives, you can encourage some of these individuals to use these energy-efficient technologies.

MR. BOB PETERS: In your, we'll say, hypothetical family example, Mr. Kuczek, the motivation for each is financial or economic, correct?

MR. LLOYD KUCZEK: No, there -- there's -- the motivation varies. As I mentioned, my rich brother -- I can't entice him with incentives.

MR. BOB PETERS: Well, that's what I'm saying, is that each of the family members will have their own economic or financial reasons as to whether they do or they do not partake of energy efficiency.

MR. LLOYD KUCZEK: Correct.

MR. BOB PETERS: Your wealthy brother would rather burn it in the fireplace than spend it on the insulation.

MR. LLOYD KUCZEK: I don't even want to talk about where he spends his money.

MR. BOB PETERS: All right. All right. Well, thank you for that levity.

The -- the DSM that we're going to talk about is promoted, not only by Manitoba Hydro, but also by the Federal Government, the Provincial Government, and perhaps other organizations, correct?

MR. LLOYD KUCZEK: Yes. There's many of us.

MR. BOB PETERS: And all of that can make it confusing for the consumer to figure out where to go to -- to get on this energy efficiency initiatives?

MR. LLOYD KUCZEK: Yes.

MR. BOB PETERS: And in the book of documents at Tab 30, there's a -- a chart that was copied from the Power Smart Review from Appendix 9.2 of page 60, of Manitoba Hydro's filing. And the dark green line -- again, it may have come out almost blue, I guess, in the -- in the production.

But the -- the dark green parts of the bar graphs represent the incentive savings that are going to assist in getting energy efficiency, sir?

MR. LLOYD KUCZEK: The dark green and dark blue in my case is the -- it's what we've achieved to-date and also what we plan to achieve to-date through our incentive based programs.

MR. BOB PETERS: All right. I'm looking at -- it should say in the top "Exhibit 4.4.2-C", and I'm just not sure if that's the first or second page in your book of documents, sir.

MR. LLOYD KUCZEK: I have it.

MR. BOB PETERS: And on 4.4.2-C, the incentive based efficiency gains are those that are going to be paid for by Manitoba Hydro?

MR. LLOYD KUCZEK: Not quite, actually. To capture those incentives, measures have to be into place. We offer incentives but that is only a portion of the cost of implementing the measure.

The other part of the cost is paid for either just by the participating customer or possibly by other grants available, such as through the Federal Government's eco-energy grants.

MR. BOB PETERS: Okay. Thank you for that clarification. What you're indicating is that over and above Manitoba Hydro's incentives, there's either additional incentives or costs incurred by the participant?

MR. LLOYD KUCZEK: Correct.

MR. BOB PETERS: When we get to the -- the lighter shading of the -- the graph, the bars, it represents in mine light green, maybe yours light blue, it's the codes and standards.

Can you explain to the Board what you're meaning by energy efficiency through codes and standards?

MR. LLOYD KUCZEK: Yes. I can explain that. We -- we do a number of things to try to transform the market to use energy more efficiently, and one of the areas that we work on is through efforts to try to incorporate these measures being implemented through codes and standards.

And so -- the -- these efforts are a little more difficult to claim per se, because usually they're the result of an aggregate group of individuals or entities that are working towards making these changes. It's more of a national effort.

And so what we're re -- we're reporting here is the results of four (4) efforts -- the results of four (4) efforts that Manitoba Hydro made an investment towards achieving, and those are the results that we're achieving in the marketplace, due to the implementation of codes and standards associated with those four (4) initiatives.

MR. BOB PETERS: It's not a question of who gets credit for it though is it, Mr. Kuczek? It's just who's participated perhaps in the final achievement of the efficiency?

MR. LLOYD KUCZEK: All we're doing with the codes and standards is reporting it.

MR. BOB PETERS: But you do also participate in the formation of the codes and the standards and the discussions and perhaps you influence where those codes and standards are approved?

MR. LLOYD KUCZEK: We definitely have an influence, yes.

MR. BOB PETERS: And those codes and standards are predominantly governmental approve -- regulated or approved standards?

MR. LLOYD KUCZEK: Codes and standards are a -- a government -- fall under government authority, yes.

MR. BOB PETERS: On the codes and standards, at some point don't they -- don't they plateau or maximize? Why -- why do you show them and depict them as ever increasing?

MR. LLOYD KUCZEK: We're reporting what we think is happening as a result of the -- the codes taking place. And as there's more and more of these measures implemented as you move out in time, there's more savings that eventually result due to these -- the implementation of those codes and so that's why it increases over time.

MR. BOB PETERS: But at some point, doesn't it plateau? Everybody's got the energy efficient washers, dryers, refrigerators.

MR. LLOYD KUCZEK: The marketplace is growing, I guess is the -- the reason for that. Growing.

MR. BOB PETERS: Just wondering, Mr. Kuczek, if the -- if there's any other reason other than population growth?

MR. LLOYD KUCZEK: Replacement growth, as well. As you move out into the future there's more and more replacements of the specific technologies.

MR. BOB PETERS: And again at some point it just -- you don't see it plateauing? Not everybody's got the energy efficiency, the latest...

MR. LLOYD KUCZEK: Yeah, due to the replacement that eventually plateaus.

MR. BOB PETERS: All right. If we flip to the last page in Tab 30 of the book of documents, sir, we again have some graphical depictions of the efficiency aspects. And what's of interest is this T12 lighting, which appears to be a -- a fairly significant, it's supposed to be the lightly shaded just above the darkest shaded portion of the -- of the graph. And I'm not sure it came out very well for most people.

But T12 lighting is the major energy efficiency offered to commercial premises?

MR. LLOYD KUCZEK: That's correct.

MR. BOB PETERS: And it represents 60 percent of the energy savings for commercial customers as you forecasted?

MR. LLOYD KUCZEK: I'll -- I'll take your word for it, that that's the number.

MR. BOB PETERS: Would you agree with me, Mr. Kuczek, that there are energy efficiencies being developed for both codes and standards as well as on the incentive side?

There's -- what I mean by that is, both Manitoba Hydro is incenting people to buy energy efficient appliances and then on the codes and standard side there are energy efficiencies being mandated for the same appliance.

MR. LLOYD KUCZEK: We don't offer incentives for technologies or appliances that are coded.

MR. BOB PETERS: Okay, let me understand that. If there is -- if -- if a -- an appliance is the subject matter of the latest code or standard, there would be no incentive available on that appliance?

MR. LLOYD KUCZEK: That's generally how we apply -- offer our programs, yes.

MR. BOB MAYER: Somebody was buying back old refrigerators. That sounds like an incentive.

MR. LLOYD KUCZEK: Are you talking in Manitoba?

MR. BOB MAYER: I thought so.

MR. LLOYD KUCZEK: That would have been in the '90s, I think. I was selling power in the '90s.

MR. BOB PETERS: There also was a -- I'll call it a pilot project as opposed to a promotional project that Manitoba Hydro, as reported in page 5358 of their annual report, where they had a refrigerator contest to see who had the oldest operating refrigerator. And one of Byron Williams neighbours from Souris was the ultimate winner. That may be what the Vice-Chair is referring to. I doubt I'll locate it quickly, but --

MR. BOB MAYER: Roger suggested it was my refrigerator, but...

MR. LLOYD KUCZEK: Nonetheless we did have a little contest not that long ago.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: All right. And -- and it is page 58 of the annual report.

But it's -- but that was simply a promotional campaign or a pilot, I guess where two thousand (2,000) contestants came forward and Manitoba Hydro was trying to prove an efficiency point?

MR. LLOYD KUCZEK: Yes. Educational and awareness, as well.

MR. BOB PETERS: If you could turn with the Board and myself, Mr. Kuczek, to Tab 31 of the book of documents, you've shown here -- and again I -- I don't enjoy apologizing for the quality of the production, but there's some numbers in red that traditionally have an -- a minus sign in front of them, which makes Mr. Rainkie and Mr. Warden very nervous.

But this is a -- this is showing how the Power Smart Plan changed from when the Board last saw it, correct?

MR. LLOYD KUCZEK: Well, it certainly is a change from the '04/'05 plan to the '06 plan and I -- I just don't recall the last plan that the Board's seen.

MR. BOB PETERS: All right, fair enough. For example, under "Energy Star Appliances" you're showing the Board that there's going to be some reduction in expenditures related to the various programs. And in that one in particular it looks like $21 million.

MR. LLOYD KUCZEK: That's correct.

MR. BOB PETERS: Can you explain why that's the case.

MR. LLOYD KUCZEK: When we developed the '04/'05 plan, we were ramping up a number of our programs. It was right after we did the market potential study to see what -- what opportunities were available in the marketplace.

We were ramping up the -- or hire -- increasing the number of resources working on our programs. We decided to pursue all those opportunities. We did need more resources, and those resources were required to assess the market and design programs and implement those programs.

At the time of developing the '04/'05 plan, we didn't have all those resources yet in place, and we -- and in some areas we did, but well they didn't have time -- the time to do the detailed market analysis. So some programs that with -- estimates for the savings as well as the costs, were fairly high level, and this would have been one (1) of them.

And so the reason for the change was during that -- that period of time when the two (2) plans were developed, we had time to do more market research and we got better information and that was reflected into the updated plan.

MR. BOB PETERS: On a net basis, the bottom right-hand corner shows that your expenditures on a cumulative basis will go down $17.8 million as a result of your revision to the Power Smart Plan?

MR. LLOYD KUCZEK: That was our best estimate at the time, yes.

MR. BOB PETERS: And does it remain that?

MR. LLOYD KUCZEK: I believe we might be lowering it more, as well.

MR. BOB PETERS: Can you indicate in which areas, over and above those depicted here on Table 1, found in Tab 31 of the book of documents.

MR. LLOYD KUCZEK: Again, it's an aggregate of some pluses and minuses, but it's a refinement of the -- what we think the -- the best estimate of what the cost would be to achieve our planned targets.

MR. BOB PETERS: All right. Just picking on a couple of the programs, Mr. Kuczek, the geothermal heat pump project also has been downsized, correct?

MR. LLOYD KUCZEK: Yes.

MR. BOB PETERS: And the annual gigawatt hours of efficiency gains is down -- it looks like 14.6

gigawatt hours on an annual basis?

MR. LLOYD KUCZEK: Correct.

MR. BOB PETERS: Is that due to Waverley West being downsized?

MR. LLOYD KUCZEK: No, I don't believe so. I don't believe we had Waverley West in the '04 plan, so it wouldn't have been due to that.

MR. BOB PETERS: And it was never added to the '05/'06 plan?

MR. LLOYD KUCZEK: I do recall it being in the plan. I just -- I've not seen it identified here in the -- in the '06 plan, so...

MR. BOB PETERS: Can you explain, then, if we move down to the Hard To Reach Program, what that is and why -- why that's changed from what was previously presented in the '04/'05 Power Smart Plan.

MR. LLOYD KUCZEK: Again, you know, it really comes down to the same reason that we -- that I mentioned before for some of the changes. The Hard To Reach Program was really a placeholder. Probably even with the '06 plan, we were trying to develop -- we were working on developing plans, and it was at the preliminary stages at that point.

I think with the '06 plan, there was a Federal Government low-income program that had been announced. It was fairly aggressive and we thought we could achieve energy savings by piggybacking with that program.

And so that was included in the '06 plan, but that certainly wouldn't have been in the -- I don't believe it was in the '04 plan.

MR. BOB PETERS: All right. thank you. If we turn to the second page in book of documents, Tab 31, what you're telling the Board on this page is that the cumulative expenditures planned by the Corporation for demand-side management activities will be $401 million over the next eleven (11) years?

MR. LLOYD KUCZEK: That was the plan in -- that was the numbers in the '06 plan, yes.

MR. BOB PETERS: And when do you do the '07 plan, or did you do one?

MR. LLOYD KUCZEK: We did do an '07 plan.

MR. BOB PETERS: And you'll be doing an '08 plan, as well?

MR. LLOYD KUCZEK: We're trying to work on it currently.

MR. BOB PETERS: What is the date of the '07 plan?

MR. LLOYD KUCZEK: We developed an interim -- in-house working document for the '07 plan.

And it's not a public document, it's just a working document that we're using, which is a refinement to the '06 plan.

MR. BOB PETERS: And it's not filed in these proceedings, is it, sir?

MR. LLOYD KUCZEK: It's not an approved document.

MR. BOB PETERS: All right. And when was it prepared internally, or what was the completion date?

MR. LLOYD KUCZEK: Well, it was being worked on from the summer of '07, and we kept holding off because we were hoping to finalize our low-income program and include it in that document, but we -- the final version actually was -- has a date of January '07 -- January '08 on it.

But most -- most of the work had been done prior to May of that year. It was just a couple of programs that we refined.

MR. BOB PETERS: And then going forward, maybe we can turn the page to Schedule A -- A5, which should be in the top right-hand corner in Tab 31 you'll find Schedule A5.

MR. LLOYD KUCZEK: Correct.

MR. BOB PETERS: And it's either the last or the second last document in the book of documents for you.

Would the Board be correct in interpreting this document is to show them that in the '08/'09 test year, the Corporation plans to spend $38.3 million on demand-side management activities?

MR. LLOYD KUCZEK: That was our plan at the time.

MR. BOB PETERS: All right. And -- and your answers to me, sir, are suggesting that that plan is no longer the corporate plan.

MR. LLOYD KUCZEK: We -- we've made some minor revisions, and I -- I say minor because I'd have to look at what the current numbers are exactly to see what they are in that year. But we have made some changes since then.

MR. BOB PETERS: Can you check right now to see how that $38.35 million number changes, if at all?

(BRIEF PAUSE)

MR. LLOYD KUCZEK: For '08/'09 -- and this will be in '07 dollars now -- the number I have is 34 million or -- '08/'09? Sorry, it's 43 million.

MR. BOB PETERS: So it's approximately $5 million more than what's in the Schedule A5 or --

MR. LLOYD KUCZEK: Yes, and the subsequent year is actually lower by about 4 million, so we've made some adjustments in terms of the timing of the programs, I see.

MR. BOB PETERS: And, Mr. Warden, I suppose over to you, that if -- if Mr. Kuczek is indicating that the program expenditures may be $5 million more, that doesn't change your request before this Board in terms of the rate increase being sought, does it?

MR. VINCE WARDEN: No, actually the $5 million more -- the $43.1 million that Mr. Kuczek referred to in '08/'09 is the number that's in the capital expenditure forecast that's before this Board.

MR. BOB PETERS: But on a program by program for the DSM concepts, it's -- it's not been updated? Looking at Tab 31, Schedule A5.

MR. VINCE WARDEN: Well I think Mr. Kuczek said that he has updated that now to a -- to a higher number for '08/'09 and a lower number for '09/'10.

But those numbers are consistent with what's in the filing.

MR. BOB PETERS: All right, thank you.

And then on a cumulative basis, Mr. Kuczek, the Board will see that the Corporation plans to spend $571 million cumulative to 2017?

MR. LLOYD KUCZEK: Correct.

MR. BOB PETERS: And one of your answers suggested to me that you -- do you report these in constant dollars, or do you inflate them?

MR. LLOYD KUCZEK: They're in -- in '06 dollars.

MR. BOB PETERS: So, for every year they're in constant '06 dollars?

MR. LLOYD KUCZEK: Correct.

MR. BOB PETERS: All right. When we look at Tab 32 of the book of documents, there's some information taken from the DSM reporting by program, and it would appear that the commercial program is the beneficiary of the greatest expenditure going forward from 2003 onward.

Would that be correct, Mr. Kuczek?

MR. LLOYD KUCZEK: You can characterize it that way. We are spending more money in the commercial sector, yes. And we're also ramping up in the residential.

MR. BOB PETERS: Not to say other ones aren't ramping up, as it were, but the residential increased from .3 million to 8.3, and the commercial went from 3.4 million up to 20.4 million, correct?

MR. LLOYD KUCZEK: That's correct.

MR. BOB PETERS: And -- and why is it that the commercial one is increasing greater than the other ones?

MR. LLOYD KUCZEK: The -- the dollars that are allocated -- we usually do a bottom-up approach and we look at the opportunities and what it -- what we judge as the -- the proper design for each program, regardless of whether it's in either sector.

And then we get the -- we pursue those opportunities based on that. And when you add them up, the result was that the commercial sector is -- has a higher expenditure than the residential sector.

MR. BOB PETERS: Is it that the greatest efficiency gains are made from the commercial sector at this point in time?

MR. LLOYD KUCZEK: There is -- I think, based on the '06 plan, if I recall, there is double the opportunities there.

MR. BOB PETERS: Maybe put another way in the vernacular and not meant to be derogatory, but it's the low-hanging fruit that's easiest to get at, at this point in time?

MR. LLOYD KUCZEK: Generally speaking, that's true; moving from the industrial sector to the commercial to the residential sector.

MR. BOB PETERS: The industrial sector is largely self-motivated to find demand-side management improvements?

MR. LLOYD KUCZEK: I think that's true.

MR. BOB PETERS: And that's because it affects their bottom line perhaps to a -- to a higher degree than it would on some of the residence customers?

MR. LLOYD KUCZEK: Yeah. Business is generally driven by economics and so if there was economic benefits, and usually they are significant there for them, they would be pursuing them.

MR. BOB PETERS: On a previous schedule -- I think it was A-5, found at Tab 31 -- Mr. Kuczek, you indicated that approximately half a billion dollars will be spent on demand-side management over the planning horizon to 2018, correct?

MR. LLOYD KUCZEK: Sorry, where are you at?

MR. BOB PETERS: Well, I just -- the total that you were going to be spending on demand-side management programs up to 2018 was about half a billion dollars -- $571 million, --

MR. LLOYD KUCZEK: Correct.

MR. BOB PETERS: -- to be exact? And one

(1) of the reasons you expend that amount of money is to, perhaps, give the Corporation flexibility in terms of delaying the bringing into service certain generating assets, correct?

MR. LLOYD KUCZEK: That would be one (1) of the benefits, yes.

MR. BOB PETERS: Can we conclude from this that even though there's a half a billion dollars being spent DSM, it will not delay the in-service date of Wuskwatim?

MR. LLOYD KUCZEK: Can you repeat for Mr. Surminski?

MR. BOB PETERS: Certainly.

Mr. Surminski, from our previous discussions, what year is it now that Wuskwatim has planned to come in-service?

MR. HAROLD SURMINSKI: It's either 2011 or 2012, depending on when the contracts can be secured.

MR. BOB PETERS: Initially, it was planned to be 2012, was it not?

MR. HAROLD SURMINSKI: That's right.

MR. BOB PETERS: And the Corporation is prepared to advance the in-service date of Wuskwatim if it can?

MR. HAROLD SURMINSKI: Yes. It was

actually the contractors who -- who provided us the opportunity. They found efficiency in -- in speeding up the construction.

MR. BOB PETERS: But you don't have a contractor.

MR. HAROLD SURMINSKI: Yes, that was the -- the former contractor we had.

MR. BOB PETERS: All right.

But from where I'm headed here, Mr. Surminski, you were thinking of Wuskwatim for 2012, you are now thinking you'll protect 2011, you'll bring it forward.

Your bring it forward is not because it's needed for domestic energy consumption, correct?

MR. HAROLD SURMINSKI: With our -- we actually do have requirement for domestic and contract purposes earlier than in the past. The load forecast is -- in '07 was -- was a significant increase, and we showed dependable energy deficits in those early years and they probably show up on our -- our resource plan tables.

MR. BOB PETERS: But you were demonstrating to the Board in those tables, Mr. Surminski, not only firm requirement domestically, but also for export -- export load, correct?

MR. HAROLD SURMINSKI: Yes. That's correct.

MR. BOB PETERS: Would it be parsing words to say that Wuskwatim's coming in-service earlier would be primarily motivated by export opportunity?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Mr. Peters, are we talking about the advancement to 2011 only, or advancement from, say 2020 to 2012?

MR. BOB PETERS: Let's start at the far end and keep working back towards the current time, Mr. Surminski.

Advancement from 2020 coming back to 2012 would be for what reason?

MR. HAROLD SURMINSKI: It was for export purposes at the time that the decision was being made.

MR. BOB PETERS: And then from -- from 2012 to, possibly, 2011 would be an advancement for what reason?

MR. HAROLD SURMINSKI: It -- it would be an advantage to Manitoba Hydro, but it was also an advantage in the construction process to -- to get it on earlier, just in shortening the construction schedule and taking extra measures to -- to speed up the in-service date.

MR. BOB PETERS: Certainly, and if it could be done cheaper, there might be a reason to do it earlier, even if it's not needed for domestic use?

MR. HAROLD SURMINSKI: Yes, certainly.

MR. BOB PETERS: And then if it was done a year earlier, you may as well use it, so you would use it for export purposes?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: All right. And Mr. Page and I had some discussion, and I see you and I probably did, about the Power Resource Plan at Tab 15 of the book of documents where Wuskwatim is shown as coming on in-service in 2013.

But that's no longer accurate, as far as you're concerned?

MR. HAROLD SURMINSKI: Fully on in 2013/'14, is that what you mean?

MR. BOB PETERS: No. The first units were going to come in on 2013, not 2012, under the Power Resource Plan.

(BRIEF PAUSE)

MR. VINCE WARDEN: Mr. Peters, maybe I'll just jump in here.

I think we indicated earlier that the best estimate we have now for Wuskwatim first power in-service is May 2012, which is consistent with the '12/'13 date shown in this schedule.

MR. BOB PETERS: All right. Thank -- thank you, Mr. Warden. I understand you're saying the first units will come in, and the last units will come in the following year?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: Can I take from -- from the answers we've had, Mr. Surminski and Mr. Warden, that new generation has not been delayed due to DSM?

MR. HAROLD SURMINSKI: Yes, that's correct. Our -- our generation has been determined by -- advancement of generation has been determined by economics, and it was an advantage to advance generation. We didn't need a resource until 2020.

MR. BOB PETERS: And in -- in theory, that economics is that when you spend money on DSM, you are helping the consumer save money, but freeing up electricity for the Corporation to export and gain additional revenues.

MR. LLOYD KUCZEK: Yes. And I -- I'm not

sure if you mentioned it, but there's the benefits of deferred transmission and distribution costs as well.

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Mr. Peters, just to -- to clarify further. There's a difference between when Wuskwatim was committed, when -- when we had surpluses on the system, and now with a new load forecast the deficiencies do show up.

And as you see in 2011 there is a deficiency -- it would have been a larger deficiency in 2012 as load is growing and Wuskwatim is -- is helping to -- to meet our domestic require -- domestic and firm export.

MR. BOB PETERS: It's a combination of exports as well? If you didn't have those firm exports, you may have that deficiency, correct?

MR. HAROLD SURMINSKI: That's correct.

MR. BOB PETERS: All right. And when we look at the cost per kilowatt hour for the demand-side management savings, I turn back to Tab 31 of the book of documents and see that there's $571 million going to be expended, and it appears that the total savings to-date, also from Tab 31 but schedule, I think it's A3, we do the math of thirty-thousand nine hundred and forty-three (30,943) gigawatt hours, it comes out to a cost per kilowatt of about a dollar eighty-five ($1.85), Mr. Kuczek.

Do you take issue with that?

MR. LLOYD KUCZEK: I'd have to do my own calculation to feel comfortable with that. What -- what did you use for energy saved?

MR. BOB PETERS: I used the information you provided in Schedule -- sorry, from the book of documents, number 30, the gigawatt hours of savings from 1989 to 2006. So six thousand nine hundred and forty-seven (6,947).

And then from Table A3 in thirty-one (31) of the book of documents, I took another twenty-three thousand nine hundred and ninety-six (23,996) gigawatt hours, added them together, and divided them into the $571 million of expenditures.

MR. LLOYD KUCZEK: And the number you came up with?

MR. BOB PETERS: One point eight five (1.85) cents per kilowatt hour.

MR. LLOYD KUCZEK: Usually we do a levelized cost for determining what it's costing us for -- to get the savings and the -- I'm comfortable with a number that's between one (1) and two (2) cents so I -- I know you're in the range. Whether or not that's the right number or not I'm not sure.

MR. BOB PETERS: The number that I've given you is from 1989 DSM savings brought forward, and con -- and contains a lot of that -- we'll call it the "low-hanging fruit."

MR. LLOYD KUCZEK: Right. But are you just using the energy that you saved in one (1) particular year and -- when you get energy savings, you get energy savings for the life of the product so it's an aggregate, so that's why we use a levelized calculation to determine what the cost is. You make the expenditure usually once to get that measure so...

MR. BOB PETERS: All right. In -- in fairness to your position if we look at Tab 33 of the book of documents, we'll find a levelized cost calculation coming in at about one point one (1.1) cents, up until -- I guess for 2005?

MR. LLOYD KUCZEK: That calculation was done for that year I believe, yes -- or up to that year.

(BRIEF PAUSE)

MR. BOB PETERS: When we're looking at

that -- that year's specific results does that indicate that the cost to get a kilowatt hour of savings from a new home is seven point two (7.2) cents?

MR. LLOYD KUCZEK: Yeah, one has to use these numbers with caution. We've had some discussion about how we should report these numbers. For programs that are just launched you have your -- your sunk costs, your design costs -- upfront costs, I guess would be the way to put it.

So the trouble with doing this analysis the way we're doing it and reporting it right now, is that it shows a very high levelized cost for programs that have just been launched. Those costs really need to be allocated across the entire life of the program.

And so what you see for the New Homes Program there is seven point two (7.2) cents but the -- the -- well, there's two (2) issues with that particular program, but one (1) is it hadn't -- it had been recently launched and also it wasn't quite as successful as we had hoped.

The following year that number will drop down to four point five (4.5) cents, just to illustrate my point. And if you look at the other one, the LED lighting program, that one had just been launched as well, and it has a high cost of six point six (6.6) cents, and the -- the evaluation in the following year will -- that number will drop down to two point six (2.6) cents.

So I caution you with the use of those numbers.

MR. BOB PETERS: All right. Well, thanks for the explanation on that.

And if we turn to the next document, still in the same tab, there's a chart and it's taken from Appendix 9.1, page 6.

It's a chart showing approximately 20 maybe 25 percent of Manitoba Hydro's future growth is offset by a total DSM.

Would that be a correct interpretation by this Board?

MR. LLOYD KUCZEK: Correct.

MR. BOB PETERS: So that as the Corporation goes forward, the demand-side management programs that it has in place will reduce future growth by approximately 20 percent?

MR. LLOYD KUCZEK: Correct. That's the effect of it.

MR. BOB PETERS: In Tab 34 of the book of documents, there's an indication from PUB/Manitoba Hydro First Round 88 of some of the tests that your programs had to -- had to pass.

I didn't plan to spend much time on them. I know some participants have gone through them at some length. But you run, as a primary test, the total resource cost test to see if a program is -- is even worth implementing.

Would that be correct?

MR. LLOYD KUCZEK: It's to see if it's cost effective.

MR. BOB PETERS: And what you try to figure out is if you have certain marginal benefits and you divide those by the total costs, you want the benefits to exceed the costs.

MR. LLOYD KUCZEK: Yes, regardless of who pays.

MR. BOB PETERS: And -- all right, regardless of who pays, and you want the ratio to be greater than one point zero (1.0).

MR. LLOYD KUCZEK: Well if the ratio's greater than one point zero (1.0), we -- we think it's economic to do, and so those are the opportunities that make sense. Now we just have to figure out how we can get those opportunities implemented in the marketplace.

MR. BOB PETERS: You have to determine who's going to pay for some of the -- some the efficiencies?

MR. LLOYD KUCZEK: Yeah, the benefits are greater than the cost. Now we've just got to figure out how -- how we move forward from there.

MR. BOB PETERS: When you look at marginal benefits, are you figuring out what the benefits are to the Manitoba Hydro, are you looking at benefits to the consumer, or both?

MR. LLOYD KUCZEK: That's the tough one. When we look at the benefits in this calculation, we're using avoided cost, which is the -- the benefits to Manitoba Hydro and -- yeah, so -- so that's -- that's what's being used, but -- but the -- yeah.

MR. BOB PETERS: You assume that if there's a benefit to Manitoba Hydro, there will also be a benefit to your consumers?

MR. LLOYD KUCZEK: If there's a benefit to Manitoba Hydro, the consumers will ultimately benefit through lowering our costs. Or those benefits eventually get realized through -- through reduced rates or rates that might not be as high as they would otherwise be, yes.

MR. BOB PETERS: The other measure that you -- you run your DSM program through is the rate impact measure test as a secondary test, correct?

MR. LLOYD KUCZEK: Yes.

MR. BOB PETERS: And you want to see if rates to consumers will increase or decrease with the expenditures planned by Manitoba Hydro for the initiative?

MR. LLOYD KUCZEK: Yeah. We're a little careful on how we say that though. What the measure does is give you an indication of whether or not the im -- the particular program where the result of the program will have a positive or negative impact on rates.

It doesn't mean necessarily rates will be higher or lower, but it is an indication of either putting positive or negative pressure on rates and the magnitude of that pressure.

MR. BOB PETERS: And so when we see some of the rim test scores, on the document in Tab 34, are below one point zero (1.0), those programs are, in essence, needing to be cross-subsidized or they're putting negative pressure on rates.

MR. LLOYD KUCZEK: That's correct.

MR. BOB PETERS: Lastly -- if I still have a minute or two (2) of the Vice-Chair's time -- on the next page in Tab 34, you list some discontinued or completed programs on Exhibit 4.3.1A.

Have you found those, sir?

MR. LLOYD KUCZEK: I believe I have them.

MR. BOB PETERS: Why do you discontinue a program?

MR. LLOYD KUCZEK: We discontinue a program -- well, it could be for a few different reasons. One (1) is that it might not be economic to pursue the program.

Another reason might be we have the market transformed already and, so, if it's transformed, there's no need to continue offering incentives for those particular measures in the marketplace.

MR. BOB PETERS: And I think you were correct here, Mr. Kuczek, we might have to end on that happy note that the refrigerator/freezer buyback pilot program was back in 1990/'90 -- sorry -- '91/'92, and it lasted for two (2) years.

MR. LLOYD KUCZEK: Yes.

MR. BOB PETERS: None of your programs here seem to last fifteen (15) years, do they?

MR. LLOYD KUCZEK: I'm happy if they don't last fifteen (15) years.

MR. BOB PETERS: But you spread your costs out of those programs over fifteen (15) years, don't you?

MR. LLOYD KUCZEK: Well, the -- the

benefits that result from the programs last longer than -- when the -- than the duration of the program. So if you're looking at when the benefits are realized from the programs, it -- you have to look at what you're achieving.

For example, if you're achieving insulation being put in a home -- higher level of insulation -- you'll realize the benefits from that for fifty (50) years or more.

MR. BOB PETERS: But you don't measure, once you discontinue the program, its effectiveness going forward, do you?

MR. LLOYD KUCZEK: No, we usually measure the effectiveness of a particular program at the time the program is either being considered, being implemented or terminated.

MR. BOB PETERS: Thank you.

THE CHAIRPERSON: We will have to call a halt to it now.

MR. BOB PETERS: Thank you, Mr. Chairman.

THE CHAIRPERSON: Thank you, Mr. Peters. Thanks to the panel. We'll see you all on Monday. Thank you.

(WITNESSES RETIRE)

--- Upon adjourning at 3:56 p.m.

Certified Correct

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Cheryl Lavigne