MANITOBA PUBLIC UTILITIES BOARD

Re: MANITOBA HYDRO
2004 GENERAL RATE APPLICATION

Before Board Panel:
Graham Lane - Board Chairman
Lens Evans - Board Member
Robert Mayer - Board Member

HELD AT:
Public Utilities Board
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--- Upon commencing at 9:07 a.m.

THE CHAIRPERSON: Good morning everyone. We're a little bit after 9:00 now, so I think we'll get under way. Welcome back to day two (2).

Ms. Ramage, I understand you have some undertakings to file?

MS. PATTI RAMAGE: Yes, the first undertaking which is noted on the record is Undertaking Number 2, and found at page 206 of the transcript is the debt management strategy and I believe we are up to Exhibit Number 12, and I'd ask that that be entered as Manitoba Hydro Exhibit Number 12.

THE CHAIRPERSON: So entered.

--- EXHIBIT NO. MH-12: Debt management strategy.

MS. PATTI RAMAGE: The second document is noted as Undertaking Number 3 in the transcript found at page 214. It -- this is the updated IFF or it adds the 2002/2003 fiscal years to the -- to the chart.

THE CHAIRPERSON: Thank you. So, that'll be MH-13, then?

MS. PATTI RAMAGE: Yes, thank you.

--- EXHIBIT NO. MH-13: Updated IFF showing addition of 2002/'03 fiscal years

THE CHAIRPERSON: Okay, when we broke off last night, we were -- Mr. Peters was continuing with his cross-examination.

First of all, I'd say the Panel's very pleased to receive these two (2) undertakings so quickly. It'll help us in our deliberations and we continue to urge that the Corporation find a way to provide us with an updated forecast, because we have an obligation to not only consider the interest of the consumers but the health of the Corporation itself and it's difficult to work through the process without knowing the size of the loss and the makeup of it.

Mr. Peters...?

MR. BOB PETERS: Yes, thank you Mr. Chair. I wonder, also -- I'm not sure, Ms. Ramage, if that Exhibit 13 has been circulated to the Board members or to those assembled.

MR. ROBERT MAYER: We have it.

THE CHAIRPERSON: Yes, we have it.

MR. BOB PETERS: All right, we'll -- we'll catch that one at the break then.

THE CHAIRPERSON: Mr. Williams, when you

were out, Hydro provided two (2) undertakings, Number 12 and Number 13, the first one being a debt management strategy, the second one being an updated -- update of the projected operating statements that added the two (2) actual years that preceded the forecast period.

Mr. Peters...?

MANITOBA HYDRO PANEL RE REVENUE REQUIREMENT, Resumed:

CONTINUED CROSS-EXAMINATION BY MR. BOB PETERS:

MR. BOB PETERS: Thank you. Mr. Warden, when you and I chatted yesterday about the debt management strategy, I wasn't aware it was going to be quite the priority that it appears to have been.

MR. VINCE WARDEN: Manitoba Hydro always delivers.

MR. BOB PETERS: Can you tell me, sir, this -- this debt manament -- management strategy, has this gone to your Board of Directors?

MR. VINCE WARDEN: It will be going to the Board of Directors next week.

MR. BOB PETERS: And can you just outline the conclusions you reach and the strategy you have for management of debt in this document, recognizing that we'll have to read it after today?

MR. VINCE WARDEN: Well, Mr. Peters, it's really not too different than what we discussed on the record yesterday. It is stating that -- that debt is not a problem at Manitoba Hydro and that it is important, nevertheless, that we attain our financial targets for the prudent management of that debt.

The -- there are some details provided as to how that debt will be managed in the current and next fiscal year, as to what -- exactly what instruments will be used to manage that debt and to minimize the -- the cost of -- of carrying that debt over -- over its life.

So, it's a fairly simple document. I think it speaks to the issue but would be pleased to answer any question -- any specific questions on that.

MR. BOB PETERS: I may come back to that, sir. What I'd like to do at this time is turn to the substance of the application that you have before the Public Utilities Board, and we've talked about it in -- in many ways, but to focus our discussed marked as Exhibit Manitoba Hydro 1 is a letter dated January 29th of 2004 and is found at Tab 3 of the Book of Documents that I handed out yesterday.

Do you have that, sir?

MR. VINCE WARDEN: Yes, I do.

MR. BOB PETERS: This cover letter sent to

the Board with your application speaks to the increase that you talked about yesterday as Item A, correct?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And then the ex parte orders that are referenced deals with the surplus energy and the curtailable rates program orders as well as, I think it was Order 153 of '03?

MR. VINCE WARDEN: Yes, that's correct.

MR. BOB PETERS: And the extension of surplus energy terms and conditions of service is just to keep that program alive for another two (2) years is the request of the Corporation?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And just while we're on that Exhibit 1, item number (d), The Discontinuance of the Short Duration Intermittent Rate, that portion of the application has been withdrawn. Is that also correct?

MR. VINCE WARDEN: Yes. After we submitted the application we recognized the fact there's still a customer on that rate we -- we'll continue it for -- for a while yet.

MR. BOB PETERS: Can you tell the Board as to how long you want to continue to offer that rate?

MR. VINCE WARDEN: As long as that one specific customer requires it we will continue to offer it.

It -- so that would be indefinite as this point and time.
MR. BOB PETERS: All right. In addition to that there was a letter sent to the Board on March 18, 2004 dealing with flat rate water heating rates and I have that at Document 4 of the Brief that I submitted. This is also part of your GRA application request, is it Mr. Warden, for this Board to approve flat rate water heater rates?
MR. VINCE WARDEN: It is and these are rates that were formerly offered by Winnipeg Hydro but were not part of Manitoba Hydro's approved rate schedule so we're -- we're formalizing those rates at this point in time or at least requesting that these rates be formalized.
MR. ROBERT MAYER: Mr. Warden, I'm having a little difficulty understanding flat rate water heaters. I -- I have a water heater and it sort of seems to go on my electrical bill as with all the other electric utilities I have. How is it that you separate water heaters out?
MR. VINCE WARDEN: Well, this is goes back in history when customers had the option of having a fixed amount per month for water heating and as opposed to more modern times when a customer don't -- customers do not have that option. So, it's perpetuating rates that have been in existence for many, many years and we have -- the Company has chosen not to discontinue those until there are fewer numbers.

MR. ROBERT MAYER: When you say many, many years I do not -- I'm having trouble understanding the justification for it. I mean, I guess we can grandfather all kinds of things in and if you -- you just told us you're grandfathering a special rate for one customer, how many customers are we talking about? Is it -- this is a Winnipeg Hydro thing, I understand?

MR. VINCE WARDEN: Primarily, Winnipeg Hydro, yes.

MR. BOB PETERS: Perhaps, Mr. Warden, I can deal with that issue then further with the rates panel if that would --

MR. VINCE WARDEN: That would be good, yes.

MR. BOB PETERS: -- that would be appropriate. But just in terms of what this Board is being asked, I want them to be clear that not only, I think there were seven (7) different element sizes for which rates are proposed, that's as a result of we call it the Winnipeg Hydro anomaly, there are also other water heater rates that were approved in Order 153 of '03 which is found at Tab 5 of the book of documents that I had circulated.

And you're asking for those to be finalized as well; am I correct?

MR. VINCE WARDEN: That is correct, yes.

MR. BOB PETERS: Now, in this Order and --

and maybe this also should wait for the next Panel but while the Vice-Chair raised the question of what's a flat rate water heating rate, there's also controlled and uncontrolled water heater rates. Are you familiar with those?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: Could you just briefly explain that to the Board as to what's being requested?

MR. VINCE WARDEN: Yes, again it's -- it's related to the acquisition of Winnipeg Hydro. Manitoba Hydro did not have any controlled water heaters left on its system but ma -- Winnipeg Hydro did, even though those meters were not being effectively controlled.

So, at one -- at one point in time, hot water tanks were controlled as a means of man -- managing peak demand so at times at sys -- at system peak, the water heaters would be shut down by, kind of a master switch and the peak would be controlled on that basis.

That goes back again a number of years and is not being used -- utilized anymore and we eventually will bring these back into one rate schedule. It would involve, though -- if we did that immediately with this Application, it would involve rate increases to these customers that are on controlled rates which would be quite large and we decided this was not the appropriate time to do it. So, we'd rather do that at a time when we're not having rate increases.

MR. ROBERT MAYER: What kind of -- who uses this stuff? I mean, hot water is not generally a major portion of -- of a hydro bill, at least not for me. Who's using -- are these industrial plants or --

MR. VINCE WARDEN: No, the --

MR. ROBERT MAYER: -- are these home --

MR. VINCE WARDEN: -- these would all be residential in the inner core of Winnipeg, yes.

THE CHAIRPERSON: Do you know the -- the differential between sort of eliminating this particular approach and reverting to your normal approach and what's actually being billed now on an approximate annual basis?

MR. VINCE WARDEN: Yes, we -- and probably we can speak more specifically to this when the -- when the cost of service panel is up but the differential is approximately 7 to 8 percent, in that range.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Thank you. Mr. Warden, are you still making this rate option open for people or has it been closed as -- as a new rate option for anybody who wants to sign in?

MR. VINCE WARDEN: Yes, it's not available as a new rate option.

MR. BOB PETERS: So, those on it are simply,

I think the word was grandfathered?
MR. VINCE WARDEN: That's correct, yes.
MR. BOB PETERS: And Mr. Warden, the rates that you have sought approval for on the water heaters, not only do you want to approve them as a rate offering -- as a Manitoba Hydro rate offering but you also want them to be increased as a result of this General Rate Application?
MR. VINCE WARDEN: Well, they would be increased as part of the -- well, yes, as part of the Rate Application, yes, in accordance with the average increases that we're seeking with this Application.
MR. BOB PETERS: Mr. Cormie, the surplus energy rate program, is that one that you're familiar with?
MR. DAVID CORMIE: Yes, I am.
MR. BOB PETERS: And there are a significant number of interim ex parte orders that have been issued and they're listed in Volume I Tab 9 page 10 of your -- of your filing, if I have your notes correct, and you're asking for the Board to give those final approval; is that correct?
MR. DAVID CORMIE: Yes, we are.
MR. BOB PETERS: Can you briefly explain to this Board how it comes to be that you are seeking interim ex parte orders for surplus energy on such a regular basis?
MR. DAVID CORMIE: Each week Manitoba Hydro forecasts for the upcoming what the price of the energy will

be and we submit that to the Public Utility Board for approval before we charge our customers that rate and we come to the Hearing today to get final approval for those rates that were -- have been set over the last while.

MR. BOB PETERS: Would it be correct to say, Mr. Cormie, that rather than sell it on the export market you'll sell it to some of your industrial customers?

MR. DAVID CORMIE: Yes, we -- we price the electricity to the SAP customers in a fashion to holds Manitoba Hydro whole. We are indifferent to whether -- from a financial perspective, whether we are getting the revenue from our export customers or from our SAP customers. At the end of the day, Manitoba Hydro's financial position is expected to be the same.

MR. BOB PETERS: And is it only industrial customers that take up this offering?

MR. DAVID CORMIE: No, it -- there -- there are customers like those who are on propane like hog barns and -- and the like.

MR. BOB PETERS: So, customers will use this offering in substitution of other fuels?

MR. DAVID CORMIE: That's correct.

MR. BOB PETERS: And I suppose they would use this offering in substitution of other fuels if the price of the electricity was cheaper than their alternate source of

fuel?
MR. DAVID CORMIE: That's correct.
MR. BOB PETERS: Can you indicate to the Board approximately how many customers take up this offering presently?
MR. DAVID CORMIE: We have thirty-two (32) customers.
MR. BOB PETERS: Mr. Cormie, since your application was filed, the Board has continued to issue interim ex parte orders; is that correct?
MR. DAVID CORMIE: Yes.
MR. BOB PETERS: And could I ask of you then, sir, to update the list of orders for which you're seeking approval at some point during the course of this hearing, so the Board knows current -- up -- up to the current number which ones are being particularly sought for approval?
MR. DAVID CORMIE: We can do that, yes.
MR. ROBERT MAYER: Wouldn't we be better to have that number right at the end, so that we get all of them included rather -- rather than getting them piecemeal?
MR. DAVID CORMIE: Well, they -- they come weekly and it really doesn't matter. As soon as -- as the hearing process is over, we'll -- we'll be filing for them and there'll be another block at the next -- at the next hearing unless we change the process. So, we can do either.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Presently, Mr. Cormie, sorry, the -- the surplus energy program has been extended by this Board to March 31st of 2005.

MR. DAVID CORMIE: That's correct.

MR. BOB PETERS: And the terms and conditions under which it's been extended are the same as those this Board approved back in Order 90 of 2000?

MR. DAVID CORMIE: That's correct.

MR. BOB PETERS: And the extension to March 31st of 2005 will be found in that interim ex parte Order found at Tab 5 of the Book of Documents that I've prepared, which is Order Number 153 of '00.

Is that correct?

MR. DAVID CORMIE: That's correct.

MR. BOB PETERS: If I understand the -- the program, Mr. Cormie, the -- there's no rate increases sought under the Curtailable Rates Program?

I'm sorry, under the Surplus Energy Program, you're not seeking a rate increase because that's a matter that you will want to deal with on a -- on a weekly basis, based on the export prices?

MR. DAVID CORMIE: Yes, that's correct.

MR. BOB PETERS: Is it also correct, Mr.

Cormie, that there is no demand rate component for the Surplus Energy Program charges?

MR. DAVID CORMIE: That's correct.

MR. BOB PETERS: Why is that?

MR. DAVID CORMIE: I -- I think that question is best answered by Mr. Wiens when he's on the Panel.

MR. BOB PETERS: All right. Thank you for that.

MR. DAVID CORMIE: May -- maybe I can -- maybe I can try. Manitoba Hydro is going -- intends to take that energy to market either way, using the surplus capability that's on its system.

And -- and generally that would mean that we would forgo an export sale -- we forgo an export sale in the spot market to provide that energy to our customer and it's priced so that Manitoba Hydro has not incurred any additional costs or lost any revenues.

And -- and these opportunity sales don't include demand charges, so we're not trying to recover any forgone demand charges in the rate, just the pure energy cost.

MR. BOB PETERS: Has the Surplus Energy Program been revenue neutral over the past two (2) or three (3) years.

MR. DAVID CORMIE: Very close.

MR. DAVID CORMIE: Which side of the ledger has it come out on and how much is that on that side of the ledger?

MR. DAVID CORMIE: We'll have to get you that information, Mr. Peters.

MR. BOB PETERS: All right. Then if you could advise the Board either through your undertaking or when the next Panel comes on in its direct evidence, that would be satisfactory.

--- UNDERTAKING NO. 4: Surplus Energy Program revenue.

Under higher energy prices, does this program continue to be attractive to customers, Mr. Cormie?

MR. DAVID CORMIE: As each surplus energy customer has a backup available, the customer always has a choice to take service under the SEP program or to utilize his own backup fuel supply.

So, even under high -- under high prices the customer may be achieving a saving compared to his alternative; for example, if that were propane.

During periods when electricity prices are very high, propane may be a more attractive alternative.

MR. BOB PETERS: Does Manitoba Hydro get involved in making that determination for the customer or is

that entirely left to the customer?
MR. DAVID CORMIE: The customer makes that choice.

(BRIEF PAUSE)

MR. BOB PETERS: Would -- would I be correct then, Mr. Cormie, that Manitoba Hydro doesn't go looking for additional customers to put on that program? You wait for the customers to approach Manitoba Hydro?
MR. DAVID CORMIE: I -- I think Mr. Wiens is best capable of answering that question.
MR. BOB PETERS: All right. Thank you.
MR. VINCE WARDEN: We're of course always advising our customers as to their best energy options. So, the people in our customer service and marketing area work closely with customers and give them the best advice they can in that regard.
MR. BOB PETERS: Mr. Cormie, I think you also indicated in your direct to Ms. Ramage, that under the curtailable rates order -- orders that's an area that you have some responsible for?
MR. DAVID CORMIE: In -- in that it's my area that is responsible for requesting the curtailments.
MR. BOB PETERS: I note from Volume 1, Tab 9,

page 9, that there are only two (2) curtailable rates orders that were issued interim ex parte for which you want approval. Is that your understanding as well?

(BRIEF PAUSE)

MS. PATTI RAMAGE: Could I get that reference again, Mr. Peters?

MR. BOB PETERS: If it's helpful, Ms. Ramage, maybe I can wait for Mr. Wiens to -- his Panel to come if that would speed things along?

MS. PATTI RAMAGE: I think that would probably move things a little quicker. Mr. Cormie's responsible as he said for the curtailment aspect but I'm not sure if he's as familiar with the other aspects.

MR. BOB PETERS: So, Mr. Cormie, you are the -- Mr. Cormie, under the curtailable side, is it your group that makes the decision whether to curtail a customer?

MR. DAVID CORMIE: Our group establishes the rules under which curtailments take place and we instruct our control centre to follow those rules.

MR. BOB PETERS: And has there been a significant number of curtailments in the past year?

MR. DAVID CORMIE: In the summer of 2003, we had significant curtailments, yes.

MR. BOB PETERS: And what was the reason for that?
MR. DAVID CORMIE: One of the reasons for curtailment is to protect our planning reserves and during periods of very warm weather in Manitoba, air conditioning load increases the likelihood that we will be short in meeting our planning reserve obligations to the map generation reserve sharing pool.
And we curtailed last summer in order to ensure that we maintained adequate reserves on the power system.
MR. BOB PETERS: How many customers were affected by the curtailment?
MR. DAVID CORMIE: Four (4) customers.
MR. BOB PETERS: And if these customers are curtailed, Mr. Cormie, can they buy replacement energy at market price?
MR. DAVID CORMIE: No, they can't.
MR. BOB PETERS: And what options do they then have?
MR. DAVID CORMIE: They can make up production at other times if -- if their process will allow it under the -- under the normal rates.
MR. BOB PETERS: All right. Mr. Warden, I want to turn now to perhaps the -- the larger issue of your

request before the Board, and that deals with the rate increases.

We heard you in your direct evidence yesterday say that a rate increase of 3 percent starting effective April 1st, 2004 and 2.5 percent average general rate increase starting April 5th of 2005. Have I got that right?

MR. VINCE WARDEN: Yes, you have.

MR. BOB PETERS: And would it also be correct, sir, that the 3 percent number and the 2.5 percent number are based on the judgment of the Corporation?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And would I be correct in saying that the judgment stemmed from the management of the Corporation as recommended to the Board of Directors?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And you sit on that management team, do you Mr. Warden?

MR. VINCE WARDEN: Yes, I do.

MR. BOB PETERS: So, it became a matter where the management had to make a decision whether or not to recommend to the Board of Directors of Manitoba Hydro whether or not to seek a rate increase?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: Would I be correct that the rate increase that you're seeking for the first year is to

raise approximately $28 million dollars? And then commutatively in the second year of your request the total would be $51 million dollars for every year thereafter?

MR. VINCE WARDEN: That's correct, yes.

MR. BOB PETERS: And as the Board sifts through this -- the volumes of material, they're not going to find a direct correlation to any specific cost item or other item in your filing that's shows them the $28 million dollars, or the $51 million dollars that -- that gave -- that this is directly attributed to?

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

MR. BOB PETERS: So, it's not specifically -- specifically attributed or correlated to a specific cost amount?

MR. VINCE WARDEN: Right.

MR. BOB PETERS: Rather, a judgment had to be used to determine whether, under your financial circumstances, you could continue at existing rates, or whether you wanted to come to the Board to seek a rate increase?

MR. VINCE WARDEN: Yes, there was no question that a rate increase, given our circumstances, was required. It is a matter of judgment as to what was a reasonable amount to request at this time.

MR. BOB PETERS: Well, let's -- let's just

explore that for a few minutes.

To what does Manitoba Hydro attribute the requirement for a rate increase at this time?

MR. VINCE WARDEN: Well, I think we've stated publically that the drought has had a tremendous impact on our retained earnings; it's a direct hit on our retained earnings. And the drought was a primary driver for a rate increase at this time.

Having said that, there's been other increases in costs that have occurred since our last rate increase in 1997 and there's a limit to how much the Corporation can absorb those through export sales, profits from export -- export sales.

Been able to do that for a number of years but in the judgment of the Corporation, the time has come when our -- when a relatively modest rate increase is required.

MR. BOB PETERS: The drought that's the primary driver for the rate increase is over, is it not, Mr. Cormie?

MR. DAVID CORMIE: The -- the drought in our eastern water sheds is over, yes. In our western water sheds, we're still waiting.

MR. BOB PETERS: In your judgment that was used, Mr. Warden, if -- if rate shock or customer response wasn't a factor to be considered, and I appreciate it

probably was, what rate increase would Manitoba Hydro have been seeking?

MR. VINCE WARDEN: Well, I think as we indicated in our risk management document, there are a number of risks that the Corporation faces and ideally, to address all those risks, we would like to have a debt equity ratio of 75:25; that's our target.

So if rate shock was totally not a consideration, we would -- haven't even calculated what the number would be, but we would implement a rate increase that would get us there.

Of course, that's unreasonable, but it is reasonable, I think, to get there over a period of time.

MR. BOB PETERS: And the time period in which you want to get there, Mr. Warden, again, is a matter of judgement?

MR. VINCE WARDEN: It is. We're -- Manitoba Hydro's been around for a long time. We expect to be along -- be around for a long time in the future, so getting there gradually is -- is the right way to go in our judgment.

MR. BOB PETERS: And at the status update hearing, and I'm not sure if I recall Ms. Wray's evidence accurately from yesterday, but there was a view that the 75:25 debt equity target could be achieved by approximately, was it 2005, Ms. Wray?

MR. VINCE WARDEN: Well, sorry. Our original target was 2005/6. That was when the drought started affecting Manitoba Hydro though we modified that target to 2011/12.

So, the current approved date for attaining a debt -- a debt equity of 75:25 is still 2011/12.

MR. BOB PETERS: And in the IFF that's been filed in this proceeding and at Tab 2 of the Book of Documents that I prepared, which is out of your filing, the attainment of the 75:25 debt equity target...

MR. ROBERT MAYER: While Mr. Peters is reviewing his notes, or getting his advice, I thought I heard Ms. Wray say yesterday that the debt equity ratio would remain at 87:23 till 2010. I can't believe that you can get -- go from 87:23 to 75:25 in one (1) year. Could somebody explain that to me, please?

MS. LYN WRAY: I'd just like to point out that when you're looking at what we'll reach in 2010 that's based obviously on what will happen between now and then and also we've got -- I'll use that word again, "place holder rate increases" in the years 2006/7 and on.

This forecast doesn't necessarily project an intention of what rate increases would be or, for that matter, turnarounds that may or may not happen in the export market. It's just simply a mathematical extrapolation of --

of what you get if you -- if you have the assumptions that we have in this particular forecast.

MR. ROBERT MAYER: Ms. Wray, I haven't looked at the transcript because this evidence just came up right now, but I could have sworn you said something to the effect you expect the debt equity ratio to remain at 72 -- sorry, 87:23 until 2010. I wrote that down.

I -- how can we now expect it to get to 75:25 one (1) year later?

MS. LYN WRAY: Sorry, I don't know where the 75:25 -- the 75:25 by 2011/12 is an approved target by the Manitoba Hydro Board.

In this forecast, obviously, we don't get there.

MR. ROBERT MAYER: So, this is, we don't expect to get to 75:25 by 2011/12?

MR. VINCE WARDEN: As Ms. Wray indicated and I think I mentioned a few minutes earlier, 75:25 is a Board approved target to be attained by 2011/12. Now, that was approved at the Board of Manitoba Hydro back in November of 2003.

So, we go to our Board once a year with an IFF. We'll be going there with an update to the IFF in November of -- possibly October of this year. At that time, we'll review the financial targets again.

If the Board deems it appropriate to change that target, we'll do that, but the Board approved target at this point in time is 2011/12.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: What you're telling the Board then, Mr. Warden, is that while your Board has approved a target of 75:25, and they've moved the achievement date of that from 2005/06 out to 2011/2012. Your forecasts right now don't -- don't meet that target?

MR. VINCE WARDEN: That's correct and it's based on the assumptions that are contained within a forecast and a forecast, especially in our business, that depends so much on the weather is subject to change and that's why we update it on a regular basis.

MR. BOB PETERS: And in fact, the -- the IFF03-1 which is found at Tab 2 of the book of documents that I've prepared, again taken out of your IFF file in these proceedings, you do not achieve the 75:25 debt equity ratio within the planning horizon of that IFF?

MR. VINCE WARDEN: That's correct, yes.

MR. BOB PETERS: Now, we were talking about what the impacts -- what was impacting the judgment of the Corporation for coming in for an increase and we talked about the drought being the primary issue and you said there were

other costs since 1997 that have en -- in -- that have increased. Have I got that right?

MR. VINCE WARDEN: Yes, normal inflationary type costs affecting our operating and administrative expenses, as I mentioned yesterday.

They've been very modest averaging over the past five (5) years only 1.9 percent per year which is equal to the rate of inflation but nevertheless those are -- those cost increases are real and have to be recovered at some point from ratepayers.

MR. BOB PETERS: All right. In addition to O&M costs, the debt equity ratio has also been impacted by things like the lower export sales which could be attributed to the -- to the drought but that's a factor that's been in there?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And higher import costs?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: Now, the higher import costs, do you attribute that to the drought or is that a market condition or how do you -- how do you analyse that?

MR. VINCE WARDEN: Well, it's -- and Mr. Cormie can expand on this but it is certainly drought-related, the fact that we're paying -- we have to import power, we pay the market prices to the extent that we

don't have fixed contracts on those purchases and those market prices are high.

And there -- there's a drought premium, I think he referred to that is being paid, as well. So he -- Mr. Cormie may want to expand on that.

MR. BOB PETERS: Let me try it with him, if he's not going to jump to the microphone.

Mr. Cormie, when Manitoba Hydro is experiencing a drought, does Manitoba Hydro expect the people who will sell it power are going to charge higher prices to it than they had previously?

MR. DAVID CORMIE: During -- during normal water years, Manitoba Hydro is supplying approximately 10 percent of the energy re -- electricity energy requirements of the State of Minnesota. During severe drought conditions, our production capability can be diminished such to the point that we're now a net purchaser of power and we're not able top fulfill our normal supplier role in -- in the State of Minnesota.

As a result, the -- the utilities in Minnesota have to operate more expensive generators to -- to meet the price of power -- to meet the -- to serve their customers. So, when Manitoba Hydro needs to purchase power, we are now purchasing power from more -- the more expensive generators that are now running.

So in that -- in that way, we are now purchasing electricity at a higher -- at a higher cost.

As Mr. Warden said, our -- our contracts for power purchases that we have in place are not fixed-price contracts and the power purchased has -- the price for the power purchased has to be negotiated at the time of -- of purchase and so we're exposed to market price variations.

In the last year, natural gas prices have gone up dramatically and that's affected the cost of -- of purchase power and Manitoba Hydro has had to pay proportionally more as a result of that.

So, we're -- we're purchasing power off generators that are running more often and we're exposed to the higher fuel costs. It's an open market for electricity and Manitoba Hydro has no choice except to pay market price.

MR. BOB PETERS: Mr. Cormie, just to talk about that for a minute.

The normal year, you say, you supply approximately 10 percent of the State of Minnesota's power?

MR. DAVID CORMIE: That's correct.

MR. BOB PETERS: Is the 10 percent of Minnesota's power that you supply, supplied under contract or on a spot market basis?

MR. DAVID CORMIE: In a normal year, about half of it is -- is been sold under long-term forward sales

contracts and about half of it is sold under short term or interruptible sale contract.

MR. BOB PETERS: Have you had a situation where to supply Minnesota with that portion of their fixed long-term contract, you have to import the power to sell to Minnesota?

MR. DAVID CORMIE: There are -- under -- under low flow conditions, not the lowest flow conditions, Manitoba Hydro will purchase lower cost electricity at night, allowing us to store water in our reservoirs in order for us to -- to return that to -- to deliver that energy to those customers in the United States during the daytime.

Under extreme drought conditions, we need to purchase low cost energy at night to serve Manitoba requirements and -- and there is no additional capability to transfer that purchase from the off peak into the on peak period.

And so, under the lowest flow conditions, like we've experienced in the last year, we need to go to the on peak market in the United States and purchase power to fulfill our on peak obligations in the United States.

MR. BOB PETERS: Thank you, Mr. Cormie. So, as I'm understanding the situation, if it is a normal year, Manitoba Hydro can supply 50 percent of the requirements to the State of Minnesota through long-term fixed contracts --

long-term contracts, correct?
MR. DAVID CORMIE: Yes.
MR. BOB PETERS: Is that price fixed in the contract?
MR. DAVID CORMIE: The -- the price is -- is generally -- it's -- it's determined through formulas, generally. But it is fixed by formula.
MR. BOB PETERS: All right. So, that's -- that's half of your commitment -- I'm sorry -- 5 percent of Minnesota's power then is under a fixed price arrangement with Manitoba Hydro?
MR. DAVID CORMIE: Approximately.
MR. BOB PETERS: And 5 percent of Minnesota's power is under, either a short term or a spot market arrangement with Manitoba Hydro in a normal year?
MR. DAVID CORMIE: Yes, in a normal year.
MR. BOB PETERS: In a drought year, or a low flow year, do you have any commitments to supply under short term or -- or spot market conditions?
MR. DAVID CORMIE: As we were entering into the most recent drought, Manitoba Hydro realized that it wasn't in a position to take on anymore short term export sale commitments and we ceased that activity in -- in the summer and the fall of 2002.
So, the only obligations that we had -- that

we've been delivering under the -- during the drought period, were those long-term firm sales that had been negotiated several years ago.

MR. BOB PETERS: All right. So, there was no -- there was no need for Manitoba Hydro to supply power in the drought year of 2002 to Minnesota under -- under contracts or spot market?

MR. DAVID CORMIE: Did you mean 2003? 2003 is the drought year.

MR. BOB PETERS: Yeah. Did -- did I -- I thought I said that. Sorry, 2003. I'm sorry.

MR. DAVID CORMIE: During 2000 -- during 2003, 2004, we had all our long-term firm obligations in place and we were required to fulfill those obligations.

MR. BOB PETERS: So, it was only long-term obligations in the drought year that you had with -- that you had to meet?

MR. DAVID CORMIE: Yes.

MR. BOB PETERS: All right. And now, as I understand what you told me, to meet some of those long-term fixed price arrangements, you had to go to the on-peak market to get the power and then sell it under your contract to Minnesota?

MR. DAVID CORMIE: Yes, and there -- there -- there are two (2) ways of doing that; going to a third party

supplier, purchasing that power and delivering it to the -- to the export customer, or the preferable way was to go to the export customer and settle financially with that customer so that he would self-supply.

MR. BOB PETERS: Just so that I'm clear on that, Mr. Cormie, and I'm going to use the example of Minnesota again, that you have a commitment to provide approximately 5 percent of the State's power under a contract that's fixed. What would be an approximate price of that fixed supply that you would be selling to them?

MR. DAVID CORMIE: The -- the prices that were paid were varied over the year. They depended upon the time in which the commitment was made and the market price, the -- the expectation of market -- the market price at -- at the time for the period of delivery.

Prices for on-peak power would vary between, these are in U.S. dollars, roughly between forty ($40) and ($80) dollars U.S. per megawatt hour.

MR. BOB PETERS: So four (4) to eight (8) cents per kilowatt hour in U.S. funds?

MR. DAVID CORMIE: Yes.

MR. BOB PETERS: And I'm having a little trouble correlating the -- your obligation to sell to Minnesota and then your requirement to go buy. It sounds like your contract with Minnesota is based on a formula but

that formula is not somehow tied to the spot market price I take it?

MR. DAVID CORMIE: No the -- you're correct. The -- the prices in the long-term contracts were the prices that were negotiated at -- at the time those contracts were entered into and are not connected in any way to the power that was purchased over the last year during drought.

MR. BOB PETERS: So, Mr. Cormie, to cut to the chase on an example and -- and then I'll just use hypothetical figures because you're not giving the actual and I can understand perhaps why.

You may have a contract where you have to sell to Minnesota at four (4) cents, but to get that money you have to go out and pay eight (8) cents for it?

MR. DAVID CORMIE: In -- In the year that you have -- have drought conditions so over a -- over a ten (10) period, Mr. Peters, we would expect that nine (9) years out of ten (10) we would be selling power to the U.S. customer at 4 cents generating it with our hydro power and -- and paying point four (.4) cents for the water rentals on that. So, nine (9) years out of ten (10) the margin is -- is very large on -- on that sale.

But we run the risk that in that ten (10) year period there -- there could be a period of drought like occurred last year. And so on average, one (1) year in ten

(10) you will face the risk of having to -- to purchase power or generate the power needed to serve the contract off Manitoba Hydro's thermal resources, either it's coal fired stations or it's natural gas stations.

MR. BOB PETERS: So, when you're assessing the risk, Mr. Cormie, you're expecting one (1) year in ten (10) that you're going to lose a significant amount of money on your export sale?

MR. DAVID CORMIE: When -- when we assess the risk, we look at the -- the cost of serving the sale over all possible flow conditions for the period of the contract. The -- the drought that we experienced last year was one that would occur once every thirty (30) years.

So, it was a relatively extreme event. But that -- that -- the possibility of that event occurring was -- would have been considered during the time that we entered into the long-term sale obligation.

MR. BOB PETERS: How do you come up with the nine (9) years our of ten (10) where you feel you'll have a strong margin?

MR. DAVID CORMIE: We -- we're just using that, Mr. Peters, as to represent nine (9) years -- most of the time we will have adequate water to meet our -- our obligations, one (1) year in ten (10) or one (1) year in twenty (20), or one (1) year in thirty (30) or in the worst

case, one (1) year in eighty (80) which is our worst rec -- drought on record one year in '85. You know, there will be some significant costs associated with serving those loads.

MR. BOB PETERS: Would I be correct in saying that's not a calculated number, it's a -- it's just a -- it's a comfort factor that the Corporation uses?

MR. DAVID CORMIE: It's a -- it's a way of -- of explaining that simply that -- that there's a -- you know, there's a small chance of -- around a 10 percent chance that we will not have the surplus hydro production on our system in that year.

Nine (9) years out of ten (10) or most of the time we'll be able to serve our export sale obligations with our -- with our hydro resources.

MR. BOB PETERS: While we've jumped around a little bit, Mr. Cormie, maybe we can turn ahead to a couple of tabs in the materials that have been prepared and just give an example to the Board so the Board can -- can use it in its deliberations.

I'm going to ask the Board members -- I'm going to ask the Board members to turn to the information request that was Tree-RCM-MH-1-16 found at Tab 12 of the -- of the Book of Documents, and if the Board members and those following can keep page 2 of 2 available of that information answer, and then turn to PUB/Manitoba Hydro 2nd round

Question 59, which is found at Tab 13 of the Book of Documents that I handed out, and also look at page 2 of 2.

Let me start, Mr. Cormie, by saying I'm -- I just want to get the -- the principle down and then we can talk the specifics.

MR. DAVID CORMIE: Mr. Peters, you -- you've provided this handout to us yesterday and, in reviewing that, we were checking the numbers on the second handout, the cost page, and we realized that for the last four (4) months of the table there was an error and we've corrected the error.

In addition, we have extended both the tables to the end of the fiscal year and we have these as handouts if -- if we could distribute them so that we're using correct and up to date information.

MR. BOB PETERS: That's a -- that's a good suggestion, Mr. Cormie. If that's available through your Counsel we could do it now.

(BRIEF PAUSE)

MR. BOB PETERS: Mr. Chairman, I thank Mr. Cormie for diligently providing the updated material. I'm going to suggest, with the concurrence of his Counsel, that we mark each of these documents as an exhibit and we can keep them in Tabs 12 and 13 of the Book of Documents if we so

choose, but I think we're on to Exhibit 14 which I would suggest be the update to the Tree RCM Manitoba Hydro First Round 16. And I would suggest Manitoba Hydro Exhibit 15 be assigned to the update to PUB/Manitoba Hydro 2nd round question 59 if that meets concurrence with my colleague and the Board Secretary on -- on those matters.

MS. PATTI RAMAGE: Yes, it does.

--- EXHIBIT NO. MH-14: Update to Tree-MH-I-16

--- EXHIBIT NO. MH-15: Update to PUB-MH-II-59

THE CHAIRPERSON: So entered.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: And, Mr. Cormie, I was just going to try to have the Board follow this material by way of an example. And I'd like to stick, for no -- for no particular reason, with August of 2003.

And, you've told the Board that's in the midst of our -- our drought year, correct?

MR. DAVID CORMIE: August 2003 was the drought year. Which table are you now referring to?

MR. BOB PETERS: Well, let's look at them both, sir.

MR. DAVID CORMIE: Okay -- okay.
MR. BOB PETERS: Starting with Exhibit 14, which is the update to the Tree RCM Manitoba Hydro First Round, Sixteen (16).
These are the export prices, as I understand the evidence; is that correct?
MR. DAVID CORMIE: These tables show the -- the -- only the price of the energy and they don't include the demand charges associated with the long-term firm contracts. So, the -- the demand charges are not -- have not been bundled into the average. This is just the average energy price.
MR. BOB PETERS: Are you prepared to indicate what the average demand charges would be?
MR. DAVID CORMIE: The -- the demand charge can be -- can be significant. For example, on our five hundred (500) megawatts sale, with NSP, that -- that over half the income comes as a fixed -- as a fixed demand charge and it -- and...
I -- I can't indicate what that number would be if we rolled in the demand charge, but it would be a -- a significant additional amount.
But, the -- but the example that you show here is that on average we were exporting -- the energy was being exported at a price of thirty-nine dollars and sixty cents

($39.60) Canadian and we were buying energy at sixty dollars and forty-three cents ($60.43) to serve those sales.

But, there is the additional income that is coming from -- from the demand charges which be in the order of almost $100 million dollars a year, that hasn't been included in this.

MR. BOB PETERS: Is the Corporation able to provide that average demand by month in a similar table, Mr. Cormie?

MR. DAVID CORMIE: We're -- we're reluctant to do that, Mr. Peters, because it would reveal a pricing component that we're not prepared to put into the public domain.

MR. BOB PETERS: Can you tell the Board that on your import prices, which in August of 2003, you've shown here on average as sixty dollars and forty-three cents ($60.43); is there any demand component that should be shown with -- with that table?

MR. DAVID CORMIE: During August of '03, there were no demand charges included in the import prices. This is just the -- we -- we were only purchasing energy during August.

MR. BOB PETERS: Are there demand charges for other months, Mr. Cormie?

MR. DAVID CORMIE: In order to secure a -- a

firm supply for the winter season, Manitoba Hydro entered into forward sales -- forward purchase contracts for which there were demand -- demand charges paid. And during the winter of '03/'04, there's a significant expense associated with the -- with those demand charges.

MR. BOB PETERS: When you -- you gave me the example that, in a normal year, Manitoba Hydro supplies 10 percent of the power to Minnesota, that would be 10 percent of Minnesota's power requirements, as I understood it. Would that be correct?

MR. DAVID CORMIE: That's correct.

MR. BOB PETERS: Can you indicate to me and correlate 10 percent of Minnesota's power would be equivalent to how much of Manitoba's power?

MR. DAVID CORMIE: In a -- in a normal year, Manitoba Hydro has total generation of approximately thirty thousand (30,000) gigawatt hours. We have domestic load requirements of approximately twenty-two thousand (22,000) gigawatt hours.

So, about eight thousand (8,000) gigawatt hours is made available to the export market. So, the majority of that goes into the United States and the majority of -- of that which goes in United States is consumed in Minnesota.

So, a rough guess would be in a normal year

Minnesota purchases five (5) -- 6 million megawatt hours or five (5) or six thousand (6,000) gigawatt hours.

MR. BOB PETERS: And therefore that would work out to about 25 percent of Manitoba's domestic requirement?

MR. DAVID CORMIE: Yeah, if you -- if you take the -- the six (6) and divide it by the twenty-two (22), you get approximately that number.

MR. BOB PETERS: And in terms of dollars, what would that equate to in a normal year?

MR. DAVID CORMIE: In dollars in Manitoba or --

MR. BOB PETERS: No, in terms of the export revenue recovered.

MR. DAVID CORMIE: Well, in our IFF we're showing the forecast of $461 million dollars of -- of export revenue this year. Is that what you're asking?

MR. BOB PETERS: I was going to try to be more specific to correlate it to the Minnesota sales. Are you able to provide that?

MR. DAVID CORMIE: I would think the vast -- the vast majority of the $461 million dollars will be from revenue to Minnesota Utilities and -- and co-ops, yes.

(BRIEF PAUSE)

MR. BOB PETERS: Mr. Cormie, why is it that Manitoba Hydro doesn't have its imports under a fixed price contract?

(BRIEF PAUSE)

MR. DAVID CORMIE: Manitoba Hydro, in negotiating its export contracts, recognized that -- that the supplying utility -- utilities have the capability to provide energy to Manitoba Hydro under low flow years as -- as was the case this year and was -- was able to negotiate the right to ask for the power at -- ask for the energy under low flow conditions.

And -- and we were successful in including those -- those obligations in the contract at -- at what we believe is relatively low cost. Because we were not asking for a fixed price right we believe that we -- we secured a supply without having to discount the sale price of -- of our export sale.

And -- and that was the basis on which the contract was negotiated. We -- we did not attempt to fix the price of power under -- under these energy call back provisions in the contract.

MR. BOB PETERS: I appreciate you're trying to make it understandable for myself and the Board Members on --

on those terms. If I might just have a minute.

MR. DAVID CORMIE: We -- we recognize that we were exposed to market prices under the contract and there would have been a significant premium -- a significant premium would have to be paid to lock-in fixed price power.

The -- the terms of these contracts give us the right to call on surplus energy that's available but it -- but it's -- it's -- it's only if it's available do we have the right to call on it.

It's not a firm power call.

MR. BOB PETERS: Just help me with that. For Manitoba Hydro to have purchase contracts with fixed prices you feel you would be having to pay a premium that would work against the Corporation financially?

MR. DAVID CORMIE: Yes. We would -- we would be paying that premium each and every year. Whereas, we recognize that on average only one (1) year in ten (10) that we would be calling on that energy guarantee provision of the contracts.

And -- and given the low probability of calling it, the premium would not have been worth the -- the advantage to the Corporation would have been offset by the discount that we would have to have negotiated in a lower export price.

MR. BOB PETERS: And so that's a risk that

the Corporation recognizes is out there when it's exporting?
MR. DAVID CORMIE: Yes.
MR. BOB PETERS: And that risk increases the more you export?
MR. DAVID CORMIE: The -- the more that Manitoba Hydro enters into long-term export sales increases the -- the price risk is -- is -- also can work to Manitoba Hydro's favour though because high prices in the market can occur due to natural gas prices during high water conditions as well.
So, the risk is offset by the upside during high water conditions. So, the -- the price risk is -- is symmetrical in that high prices in the market can work for or against the Corporation.
And although in droughts we may pay a premium due to high prices, we also recognize that high prices in more years work to the Corporation's advantage. And we've seen that in the last ten (10) years or so where very high market prices resulted in un-forecast increases in ex-provincial revenue.
And -- and so, yes, there is some risk but there's also an upside to -- to that as well.
MR. BOB PETERS: Is that upside one that flows if Manitoba are above medium flows or above average flows? What's the cut off point?

MR. DAVID CORMIE: I would think that for flows greater than 10 percentile we would be benefitting from the -- from the high market prices, yes. So, most of the time, high prices work to our favour.

MR. BOB PETERS: When you say "10 percentile", you're saying that 90 percent of the time high prices on the market work to Manitoba's advantage?

MR. DAVID CORMIE: On -- yes, in -- in electricity, yes.

MR. BOB PETERS: And 10 percent of the time it works to our disadvantage?

MR. DAVID CORMIE: That's correct.

MR. BOB PETERS: And is that measured statistically or is that just your estimate of -- of what would occur?

MR. DAVID CORMIE: Well, recognizing that if we have flows above the 10 percentile level Manitoba Hydro does not need to purchase power in the on-peak markets to serve its obligations.

And -- and so high prices -- the market price may be high but Manitoba Hydro does not need to purchase power in the on-peak so we're not exposed to high purchase prices.

We are a seller and -- and we will -- we may be purchasing but we would purchase, say, off-peak power and

selling into a high on-peak market and capturing the differential.

So, with favourable flow conditions, anything greater than 10 percentile flows, high prices result in increased margin for Manitoba Hydro.

MR. BOB PETERS: And it's only the 10 percent time when the flows are lower in the bottom 10 percent that Manitoba Hydro expects to have to purchase on-peak and run into the situation where it's buying power on-peak at costs greater than what it has, under it's export contracts?

MR. DAVID CORMIE: Yes, that -- you -- you've summarized that correctly.

MR. BOB PETERS: All right, just to conclude on this area, maybe before the break.

Mr. Warden, the Corporation has experienced this drought year and these financial results, has this caused the Corporation to alter its -- its strategy on the export market?

MR. VINCE WARDEN: No. I -- certainly, the past year was an experience that, as I indicated earlier, is unprecedented in Manitoba Hydro's history. And there has been a lot of review of the past year to convince ourselves that we've done the right things in terms of how we managed the -- the drought situation.

But, going forward, there's nothing in that

review that would suggest that we should have done anything differently or that we should do anything differently going forward.

MR. BOB PETERS: You're taking this past year then as a normal cost of doing business, Sir?

MR. VINCE WARDEN: Well, it's hard to describe the loss that we experienced as a normal -- it -- certainly it isn't normal. And as Mr. Cormie indicated, that it's a one (1) in thirty (30) year event.

We do expect to experience a drought approximately once every -- every ten (10) years, but not to this order of magnitude.

MR. BOB PETERS: Can you tell the Board what type of review was done with respect to what occurred last year?

MR. VINCE WARDEN: Well, a lot of presentations by Mr. Cormie and company. I should say that David, being a professional engineer -- David Cormie being a professional engineer, much better working with graphs and charts then he is before the mic, but we -- not that he isn't good before the mic, but...

MR. DAVID CORMIE: I can dance too.

MR. VINCE WARDEN: But, we've had a -- had a lot of reviews at executive committee and Board of -- of the situation and we're -- we're totally satisfied that the

situation was handled appropriately.
MR. BOB PETERS: And nothing in my question should lead to any suggestion of the otherwise, but I was wondering if, as a result of your reviews, those reviews you've indicated have only been internal reviews, I take it?
MR. VINCE WARDEN: They have, yes.
MR. BOB PETERS: Nothing external?
MR. VINCE WARDEN: That's correct.
MR. BOB PETERS: Would that also mean nothing independent? Nothing -- there's no independent review of this matter within Manitoba Hydro?
MR. DAVID CORMIE: Mr. Peters, the -- the issue that we've faced in the last year has been the -- when -- when we've -- we've experienced drought simultaneous with other adverse effects, high market prices, and, you know, these coincident risks are -- are something that we are trying to evaluate now.
And what's the likelihood that you'll have drought, and high prices, and adverse foreign exchange movements, and adverse weather, and -- and the probabilities of all these events occurring simultaneously?
We have been working with a consultant to help develop our modeling capabilities so that we can better understand the likelihood and -- and severity of these events occurring in the future to better define our risk profile.

And so, we have been working with and seeking the advice of an outside consultant in the -- in the development of -- of the models necessary to -- to look at the -- this issue.

That modeling effort is still underway and we will take the model when it's completed and -- and begin to study the -- the probabilities of these events occurring and -- and we will be advising the Corporation on -- on the outcomes.

So, we have been -- we have been seeking outside advice on -- on this issue.

We've also sought advice on -- on hedging the risks of drought as we were going through the drought period on -- on the timing and the purchase of power and natural gas and -- and how we would best manage the risk of drought.

It was obvious to me that last spring that Manitoba Hydro's risk of drought was heightened and the Corporation was faced with potentially very, very catastrophic event, financially and that there was some risk to the supply in Manitoba and that -- that risk needed to be managed.

But, it's very important that we do not overreact and this was the experience in the spring of the previous year when we were faced with drought conditions. And we all went home one Friday morning in June thinking that

we were facing a severe drought. And we came back to work the following Monday having had eleven (11) inches of rain in southern western -- southeastern Manitoba.

What was a drought condition on Friday became a flood condition on Monday. And so hedging Manitoba Hydro's drou -- drought risk has to be gradual and it has to be calculated. And so, we did seek advice from outside experts on -- on our strategy and -- and did some review with them just to make sure that we were not off base.

And we carried out our -- our hedging program in -- in a manner that they judged was prudent and -- and ultimately I -- I believe was a very wise way to operate because we did get through the year, we did -- we did not have to interrupt our customers and we did manage the risk of drought -- financial risk of drought.

Although the results were very alarming, there was much more risk -- power prices could have been doubled, gas prices could have doubled. And our -- our activities in the forward markets protected the Corporation from what I consider to be a catastrophic loss and kept them within the ca -- the ability of a Corporation to -- to manage.

MR. BOB PETERS: Who was the consultant, Mr. Cormie, that you used to review that situation?

MR. DAVID CORMIE: We were working with Risk Advisory out of Calgary.

MR. BOB PETERS: And from what I gather, they -- they provided you with a report?
MR. DAVID CORMIE: The -- the work that we did with them was -- was staged. They provided us with an initial review of the risks and they reported on that. They have yet to finalize the second portion of the work which is the -- the model.
MR. BOB PETERS: Could you file the Phase 1 portion of that review with the Board for the -- for this proceeding?

MR. DAVID CORMIE: We can do that.
MR. BOB PETERS: Thank you.

--- UNDERTAKING NO. 5: Copy of Phase 1 portion of Risk Advisory Report.

CONTINUED BY MR. BOB PETERS:
MR. BOB PETERS: Mr. Warden, the results that Mr. Cormie is talking about from his perspective deal with the modeling of how to essentially operate the import and export side of Manitoba Hydro, is that correct?
MR. VINCE WARDEN: Yes.
MR. BOB PETERS: And is it management's decision at Manitoba Hydro that the long-term sale contracts

that they presently have should now be amended to provide for market prices going forward rather than fixed prices?

MR. VINCE WARDEN: No.

MR. BOB PETERS: Why is that?

MR. VINCE WARDEN: Maybe I'm not totally understanding your question, Mr. Peters, if you could elaborate on why you -- I'm not sure how you would come to that conclusion.

MR. BOB PETERS: Well, I -- I'm just asking the question, that if -- if there is a concern that the adverse financial circumstances could repeat themselves, Manitoba Hydro appears to be held captive by the market prices at the time of Manitoba Hydro's low water flows, would it not be in Manitoba Hydro's best interest to have a -- a market price provision in its export contracts because that's what you're going to have to pay on your import side under those low flow conditions and those situations where the financial results are very unfavourable.

MR. VINCE WARDEN: Well no, in negotiating long-term contracts as we have with Northern States Power or Excel (phonetic), we -- we have to look at probabilities. And prices we can derive from a firm contract are higher than they would be under unfirm conditions.

So it's still to our advantage to -- to have a fixed price on those contracts.

MR. BOB PETERS: Have you compared what your contracts would be worth under -- under fixed price as you presently have them compared to what they would be if it was market prices?

MR. DAVID CORMIE: Mr. Peters, we -- in -- in making an ex -- in negotiating an export sale, generally we are responding to a request for proposals. We're competing in the open market. We offer a fixed price product.

The purchaser is -- has gone to many companies and received proposals. Offering a customer a market price is something that he can get any day of the week and it would be of no value to him. The customer -- the purchaser wants price certainty. Manitoba Hydro has to offer price certainty.

We ensure that when we establish that price, that that price covers Manitoba Hydro's costs on average, recognizing that there will be low flows and that there will be high flows and we ensure that there's significant -- there's sufficient margin in the price to cover off those types of risks, as well as that there is -- there is profit in there for Manitoba Hydro. And -- and we offer that price to the customer and the customer either accepts or rejects the price.

MR. BOB PETERS: Mr. Warden and Mr. Cormie, am I to take from those answers that when Manitoba Hydro

negotiates its long-term power sales under a fixed price contract, you try to build into that fixed price contract the adverse financial results that you expect to occur once every ten (10) years, maybe once every thirty (30) years?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: I would just also like to add on -- on the idea of portfolios. We desire a diverse portfolio of export products so by -- by leaning to a heavy weighting of fixed or opportunity, it does not add to diversity. So, it is our desire. We have an export marketing strategy that -- and we consider what portion of our export portfolio should be fixed long-term versus -- versus market and opportunity.

So, that's part of our overall evaluation of our export strategy is diversifying and -- and having part of our long-term portfolio and long-term so we are guaranteed revenues in the long-term.

MR. BOB PETERS: Thank you, Mr. Surminski. I take that adds to what Mr. Cormie and Mr. Warden have said and as I conclude on that, and you can tell me if I'm right or wrong, when you planned your long-term export contracts that are going to be fixed-price in nature, you try to incorporate -- after studying the probabilities of various

water flows and pricing conditions, you try to incorporate and accou -- and take into consideration there may be some -- some years in which the financial results will be unfavourable?

MR. HAROLD SURMINSKI: Yes. And that's it -- that is part of our evaluation process. We consider the possibilities of extended drought periods, cycles of low flow, cycles of -- of higher flows and -- and what the value of that contract is in the long-term.

MR. BOB PETERS: Would you agree with me, Mr. Surminski, then that the financial results that we saw in 2003 then were not unexpected from the Corporation because they had built that into their export pricing models and prices?

MR. HAROLD SURMINSKI: Yes, that is correct.

MR. BOB PETERS: Mr. Chairman, perhaps at this time it would be appropriate for the morning break.

THE CHAIRPERSON: Yes, we will. I have one last question for Mr. Warden, if you don't mind.

We're now into June. In June 2004 are we back with positive net flow as a result of the export arrangements?

MR. VINCE WARDEN: We're -- we were not forecasting to have a positive bottom line at this point in the year. So, April and May typically aren't profitable

months and so our forecast -- our actual results for the first two (2) months of the fiscal year are in accordance with our forecast.

So, moving towards our forecasts for the year of $40 million dollars we're, at this point in time, right on track.

THE CHAIRPERSON: Thank you. We'll have a break now.

--- Upon recessing at 10:30 p.m.
--- Upon resuming at 10:50 p.m.

THE CHAIRPERSON: Mr. Peters, Ms. Ramage, are we about ready to go again?

MS. PATTI RAMAGE: I believe we are.

THE CHAIRPERSON: Before we start, I just want to indicate that we're fortunate to have our Albanian guests back again. And, again, as I said yesterday, particularly for the benefit of some others that are now with us, we're particularly pleased to welcome a number of observers from Albania's regulatory commission.

Most notably, the Chairman, Mr. Dema. Mr. Dema, if you wouldn't mind just standing again. Very pleased to have you.

Several of his colleagues and his support

staff, including the Director of tariffs, the Head of Legal, engineers, economists and others are with us and we hope that they will enjoy the experience again today. Thanks again for coming.

Second, we're -- we now have Mr. Michael Anderson of MKO with us and Mr. Anderson wasn't able to be with us yesterday but we'll just extend him the courtesy if he would like to make a few introductory remarks. Mr. Anderson...?

MR. MICHAEL ANDERSON: Good morning, Mr. Chair. Thank you for the introduction. And, yes, I would like to make a few remarks.

Of course, all MKO citizens who are holders of electrical accounts are customers of Manitoba Hydro. Manitoba Hydro is the sole provider now of retail electrical services in the prov -- province of Manitoba including to all of the MKO First Nations.

By way of background, of course, MKO represents the thirty (30) northernmost First Nations in Manitoba. And some fifty-three thousand (53,000) Treaty First Nations citizens; as I indicated, are customers of Manitoba Hydro.

There's a very close relationship between our First Nations, the MKO First Nations and Manitoba Hydro that goes beyond the basic relationship of that of the service

provider and customer in that all of the existing major hydro electric stations and most of the major transmission systems in Manitoba Hydro are within the MKO Region.

If we looked at it geographically within the confines of the provincial -- present political boundaries of the Province of Manitoba the traditional territories combined of the MKO Region covers some three-quarters of the province.

The operations of Manitoba Hydro affect almost every major watershed in the MKO region, including the Saskatchewan River, the Saskatchewan River delta, the Loon/Laurie River system, the Churchill River, Southern Indian Lake, the Rat and Burnt Wood Rivers, the Nelson River and Lake Winnipeg.

The significance of this is, in addition to being customers of Manitoba Hydro, MKO's citizens are physically located along the developed waterways creating an especially close relationship between our communities and the Corporation.

And in having these two (2) dimensions create a very keen interest in the operations and activities of the Corporation, particularly rate increases. It goes without saying that even though these rate increases may be described as modest, they do represent increases to the costs incurred by our citizens.

These costs are also passed on by services and

corporations providing services as well as basic foods to our communities so they have an additional effect.

In addition to this basic relationship on the developed waterways, which began to be initiated in the early 1960's and carried on through the last project constructed on the Nelson River with the Limestone coming on stream in the early 1990's.

Is as has been discussed a bit this morning, by Mr. Peters and in the evidence yesterday, there has been an increasing reliance of the Corporation, as its system has matured on the operations for export purposes, which also have effects, not only on creating additional risk to the Corporation in terms of its revenues, which we've discussed this morning as being a substantial matter sufficient to engage an outside consultant to advise the Corporation.

But it also affects the way the waters themselves are being regulated in response to drought related conditions and these risks.

Because of our relationship, when Manitoba Hydro changes the way it operates its water systems and its reservoirs, it affects our communities directly.

So, Manitoba Hydro's reaction to risk in terms of stabilizing its revenues in order to stabilize its rates have two (2) affects on our citizens.

One (1) is in terms of physical affects on

waterways and ways of life and second is on rates.

So, Mr. Chair, with that I'd like to say we're keenly interested. We've -- we're looking at the seventeen (17) binders plus of materials and the comments that have been made.

Our pre-asked comments we'd like to pursue. We also have questions to pursue through examination of -- of Manitoba Hydro's witnesses.

And with that, I thank you and again, good morning to you and to the Members of the Panel. Thank you.

THE CHAIRPERSON: Thank you, Mr. Anderson. We will return now to the Hearings. Mr. Peters ...?

MR. BOB PETERS: Yes, thank you, Mr. Chairman.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Mr. Cormie and Mr. Surminski, when we were talking before the break, you indicated that, in doing your modeling and your building up your strategy for your export contracts, not only do you build into it the probabilities of low water flows, but you also include in that fixed price contract, consideration for the costs that Manitoba Hydro is going to incur to meet that contract.

Have I got that right?

MR. DAVID CORMIE: Yes, you do.
MR. BOB PETERS: And in terms of the costs that you consider at that time, Mr. Cormie, do you consider the fixed costs that the Corporation will have to meet the contract and embed that in the contract price?
MR. DAVID CORMIE: To date, Manitoba Hydro has -- if there were any fixed costs associated with the -- with the sale, we would include those.
MR. BOB PETERS: Are there typically fixed costs associated with sales, Mr...
MR. DAVID CORMIE: A good example, Mr. Peters, is the five hundred (500) megawatt sale extension contract with Northern States Power that we negotiated -- we were awarded the contract in the summer of 1999 and delivery start this -- in May of 2005 and goes for ten (10) years.
That sale will be made out of existing resources. So, there are no additional fixed costs associated with making that sale. So, there were -- there would be no fixed costs associated in that analysis.
The only costs would be lost opportunity costs and additional fuel and power purchases necessary to serve that sale.
MR. BOB PETERS: When you say there will be -- that -- that sale will be met from existing resources, you're telling the Board that you don't have to incr --

introduce new generation to meet that?
MR. DAVID CORMIE: Right. We wouldn't have to construct any new facilities in order to -- to deliver that power to Northern States.
MR. BOB PETERS: So, the -- the Wuskwatim project is not expected to contribute to that contract in any way, shape or form?
MR. DAVID CORMIE: That's correct.
MR. BOB PETERS: And what about then the variable costs? Do I take it that you consider -- what -- what variable costs do you consider when you're pricing your export contracts?
MR. DAVID CORMIE: The variable costs are, water rentals, additional coal generation at -- at Brandon, additional natural gas-fired generation at Brandon and Selkirk, additional off-peak purchases from the market and additional on-peak purchases from the market.
MR. BOB PETERS: Do you know in advance whether you're going to in fact need off-peak or on-peak purchases, Mr. Cormie?
MR. DAVID CORMIE: We -- we know that our analysis looks at all possible flow conditions and that under lower flow conditions of power, off-peak power purchases are required. As conditions worsen, on-peak power purchases are required to the extent that they're less expensive than

firing our natural gas stations.

And finally we get to the point where we are no longer able to import or purchase to serve the sale and we run our most expensive generation at our gas -- at our gas plants.

MR. BOB PETERS: Can you tell the Board, sir, whether the variable costs will include things like transmission losses?

MR. DAVID CORMIE: They -- they do consider transmission losses but only to the extent that those transmission losses are -- are common whether we have the sale or not. So, if -- to the extent that they -- they -- they increase transmission losses, yes, they are included.

MR. BOB PETERS: Well, would not all export sales increase transmission losses, Mr. Cormie?

MR. DAVID CORMIE: In a normal water year, energy is -- there is -- where -- we have surplus energy available to sell and so that surplus energy is going to -- is going to go to market and will incur transmission losses.

Under the firm sale contract situation, energy that had been previously sold under -- as a -- as a surplus sale or as a spot market sale would now be sold as a firm sale, so the losses would be identical.

If we have a five hundred (500) megawatt surplus and it's not sold under a contract, that five hundred

(500) megawatts will incur fifty (50) megawatts of losses, for example but there were going to be fifty (50) megawatts of losses because that energy will go to market as a spot market sale.

So, the losses would be common. Whether they -- whether -- whether you call it a firm sale or whether you call it a spot market sale, if there's five hundred (500) megawatts going to market, those -- the losses will be common.

MR. ROBERT MAYER: Mr. Cormie, I heard at the other place that every extra kilometre you add to the transmission costs significant amounts of money. We had that discussion for quite some time over the routing of the transmission lines.

So, it would be fair to say, would it not, if you are moving power to somewhere in the northern states, the very fact that you're moving it that extra distance would increase your -- your transmission losses?

MR. DAVID CORMIE: Yes, that's -- that's a good point, Mr. Mayer. Is the -- the difference could be that the -- the sale of a spot market sale may be to a customer who is closer than the sale of power to a customer who is at a -- at a greater distance and so there would be some -- potentially some incremental -- incremental losses.

I -- for example, if we have a customer in

Chicago versus a customer in Minneapolis, there would be an extra 10 percent approximately in losses. But -- but that's just a hypothetical.

Most of the power goes into downtown Minneapolis and whether it goes there as a firm sale or as a spot sale, I don't believe that there's a significant difference in incremental transmission losses. To the extent that there are, they are included in the analysis.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: So, for the most part you don't take into account that your spot customer could be closer to the border than Minneapolis, you treat it all the same in terms of assuming the transmission losses would be identical under -- under spot sale or a contract sale?

MR. DAVID CORMIE: Yes, but there are situations, for example, a sale to Ontario where we would be selling the power to a customer at a much greater distance. Transmission losses -- incremental transmission losses need to be included in order to get the proper economic result.

MR. BOB PETERS: All right. Other than the -- the fuel purchases and the import costs and water rental fees, are there any other items from your Cost of Service that you take into account in preparing your long-term fixed contracts?

MR. DAVID CORMIE: I -- I don't believe that there are any other items, Mr. Peters.
MR. BOB PETERS: And just to go back a question, Mr. Cormie; in a firm sale there would be no discrete allocation for transmission losses unless you have some reason to believe those transmission losses would exceed what would happen if it was a spot market sale?
MR. DAVID CORMIE: The -- the analysis is done with and without the sale. So, the analysis without the sale calculates associated losses. The analysis with the sale includes the losses and the difference includes the incremental change in losses associated with the sale.
MR. BOB PETERS: But that incremental change in losses has to then decide is the spot customer in Minnesota or is the spot customer in Illinois; is that correct?
MR. DAVID CORMIE: To date we don't have access to Illinois so it's only a hypothetical situation. And, as I said, if that were to occur we would -- we would adjust for that.
MR. BOB PETERS: But I'm just not quite -- and I'm probably not asking the question very well and I apologize for that, but when you're -- when you're preparing your long-term contracts and trying to consider all of the variable costs, I'm gathering that you do not add any

variable costs for transmission losses because you assume you would have those if it was a spot market sale as well? Is my understanding correct?

MR. DAVID CORMIE: We don't have to make the assumption. It falls out of the analysis. We do it with and without both -- both analyses include the cost of losses. To the extent that the sale increases losses, they are included in the analysis. I -- I think we're doing what you're asking us to do. I think the analysis is complete.

(BRIEF PAUSE)

Mr. Peters, one factor is that -- that most of our sale obligations are at the border between Manitoba and -- and Minnesota so our obligation to supply is at the border and -- and -- and then the customer is responsible for losses on the U.S. side of the interface.

And because that's the only thing that we could control is -- is the loss costs in Manitoba. And so I think that probably simplifies the analysis.

MR. BOB PETERS: Okay. Thank you, for that clarification.

MR. DAVID CORMIE: And -- and one final thing is that the -- the -- it -- at times we have a responsibility to provide a delivered price and that may require Manitoba

Hydro to incur some transmission charges in the U.S.. And to the extent that we incur those costs, we include those in the pricing of the product in our -- in our cost estimate of making the sale.

MR. BOB PETERS: That would really be the spot market type sales or the less than one (1) year firm contracts?

MR. DAVID CORMIE: No. These would be in -- in -- in all contracts. A customer wants a delivered price at, you know, for example, in Minneapolis and he's -- he's asking all bidders to bid on that basis.

And if Manitoba Hydro would have to purchase firm transmission service to make that happen, we would include that -- that cost.

MR. ROBERT MAYER: But, not the loss occasioned thereby?

MR. DAVID CORMIE: The purchaser of the firm transmission may have to -- owns the transmission and has to pay the costs of taking service which would include the cost of the losses.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: I'm going to refine the question because I'm -- I'm sure when I read the transcript I'll have a better understanding, Mr. Cormie.

But you're helping me here. You've explained that many of your sales occur at the U.S. border but in doing those sales do you include in your analysis of the price, what are the transmission losses within the Province of Manitoba?

MR. DAVID CORMIE: We assume that the losses to make the export sales are the -- are the same loss costs associated with serving Manitoba load in the province.

So, losses are allocated to sales on a non-discriminatory sys -- we -- we average the lost costs and we assign the same costs to losses for export customers as we did to our domestic customers.

MR. BOB PETERS: All right, thank you. Mr. Cormie, the -- let's assume we don't have a drought year, however you define that. But would you acknowledge that opportunity sales have a potential to aggravate drought conditions by lowering their reservoir levels, for example?

MR. DAVID CORMIE: There -- there are -- opportunity sales are discretionary sales and they are not -- they are not included in the analysis that is done to determine what reserves must be kept in reservoir storage to ensure that the supply in Manitoba is reliable.

And so, opportunity sales have no effect on reser -- on reserve requirements. Opportunity sales do affect reservoir operations in that we use our reservoirs to

transfer water from period of low prices to high prices in response to the price signals that the market is sending.

MR. BOB PETERS: Do I understand from that answer, Mr. Cormie, that you will take opportunity sales as long as they don't draw down on the reservoirs at all?

MR. DAVID CORMIE: I think opportunity sales, by definition, have no affect on our reserve requirements.

MR. BOB PETERS: I'm just not sure that's the question I asked. And I'm --

MR. DAVID CORMIE: Well, we -- yeah.

MR. BOB PETERS: I'm just trying to understand that --

MR. DAVID CORMIE: We only enter into opportunity sales from surpluses that we are confident are -- that exist. And to the extent that the surpluses are not there, from -- from the hydro system, the surpluses are -- are coming from our non-hydro resources.

And if a customer wishes to purchase power priced at the cost of our natural gas generation, we will offer him a price based upon the cost of operating those non-hydro assets and -- and -- so, opportunity sales can come from hydro as well as the non-hydro resources.

MR. BOB PETERS: When you say you'll make opportunity sales out of your surplus, is that surplus the surplus energy you're able to generate or is that the surplus

water that you have?
MR. DAVID CORMIE: Water conditions can -- can be such that it's not necessary for us to run our thermogenerating station so their production capability is surplus to the needs of Manitoba.
And -- and we will enter into sales contracts that recognize that they may need to be served out of our hydro resources as well as our thermo resources and the price for that product will inclu -- will be a blended price recognizing that some hours of the day we don't have to run our gas-fired generators, and some hours of the day we do.
And so, to the extent that -- that there are costs associated with the sale, they are included in -- in the pricing.
MR. BOB PETERS: Can you tell the Board whether you've ever had an opportunity sale where you've lost money?
MR. DAVID CORMIE: Yes, we have.
MR. BOB PETERS: Under what conditions were those?
MR. DAVID CORMIE: Those sales would have occurred when weather conditions have become adverse and the -- the -- in order to serve the -- to serve the sale, we had to operate more expensive generating resources than we had assumed when had priced the sale.

MR. BOB PETERS: So, there is uncertainty associated with -- with the source of supply and when we evaluate the exp -- we evaluate the cost of making the sale, we look at the cost over a range of possible conditions.

And on average, we calculate an average cost of supply. We add a margin to that pri -- to that price to determine the price that we will offer and -- and we know that there are sets of circumstances built into that average price that Manitoba Hydro could -- could potentially lose money but also we know that there are circumstances when it will cost us significantly less.

And so you can make a -- a good decision on the sale and have a bad outcome because you ended up with a set of circumstances that -- that cause supply costs to be higher than the revenue.

MR. BOB PETERS: It sounds that for there to be a loss of -- well, you lose money on an opportunity sale, you're assuming you have surplus energy available generated cheaper than what you're going to sell it at; is that correct?

MR. DAVID CORMIE: Well, we -- we enter into the sales when -- over the -- over the average of all expected conditions that the pro -- the sale will be profitable. Under -- under average conditions, if the sale wasn't profitable, we wouldn't enter into it.

MR. BOB PETERS: How quickly do you enter into these contracts? Are these -- are these by the hour, by the day, by the week? How much advance notice would you be given?

MR. DAVID CORMIE: We enter into sales over all those time-frames.

MR. BOB PETERS: And your opportunity sales go for a maximum period of notice of how much time?

MR. DAVID CORMIE: The opportunity sales are -- are entered into just for the -- for the short term, less than a year because it's only within the year that we have any assurance -- any ability to know whether there's a surplus.

For example, we in -- in February fo -- of a particular year, we don't necessarily know whether the water conditions in that year will be low or high, so we do not enter into opportunity sales in February for the -- for the upcoming year. We can only sell out of our dependable supplies and -- and because we don't know yet whether there is a surplus available.

MR. BOB PETERS: But I was -- I'm just not sure I understand your answer that you can sell at a loss when there's a relatively short term involved here in terms of arranging the contract. So, if Minnesota phones you up and wants power next week, a certain amount, are you saying

that between today and next week the circumstances may change that while you thought you were selling it at a profit, it'll end up being sold at a loss?

MR. DAVID CORMIE: No, I was -- the example that I gave there was a Minnesota customer in September wants to purchase power for December delivery. And when we do the evaluation on the cost of serving the sale, we look at the possibility that the winter will be a mild winter when Manitoba Hydro has extra surplus.

We also look at the possibility that under an extreme winter when it's very cold and the demands for power in Manitoba are very high that the sale may trigger high cost generation. So, you don't yet know -- don't yet know what the whether conditions for December are.

You know there's a possibility of having high loads or low loads in Manitoba and -- and when you do the evaluation of the cost of the sale, you are looking at their -- you know, several possible outcomes. And in calculating on average that there'll be margin there but knowing in that average that there'll be some circumstances where we will incur some losses but on average, we will -- we will make money.

MR. BOB PETERS: So, again it comes down to probabilities and you're working out what you think is average -- average safe position?

MR. DAVID CORMIE: Yes, we have very extensive simulation models that -- that look at the incremental costs of serving the -- the sale and look under the full range of possible conditions.

And under -- under all conditions, we can't ensure that the sale will be possible but on -- on average we only enter into those sales when -- when the expected outcome of the sale decision is -- is a profitable one.

As I said, we can enter into -- we can -- we can make good sales decisions and still have a set of circumstances that -- that are unusual but we know under those circumstances that we've -- that we -- that we could lose money but we've -- we've taken -- taken a calculated risk knowing, that on average, that the sale will be profitable.

MR. BOB PETERS: All right, I understand that point. Do I then also understand from a previous answer that when you make these opportunity sales, they will not aggravate any drought circumstances because you only use surplus energy?

MR. DAVID CORMIE: That's correct. And -- and the example was, over the last year, we were not serv -- we were not serving any opportunity sales with the power purchases that we made.

MR. BOB PETERS: Another matter that was

mentioned before the break that I want to just clear up is that foreign exchange is always a risk for the Corporation, I understand.

MS. LYN WRAY: It is a risk but it's a risk which we've substantially mitigated through our exposure management program whereby we try to balance off cash out-flows and in-flows denominated in U.S. dollars. We have U.S. debt as well as U.S. revenues so, over a -- a long time period we are pretty well balanced under expected conditions.

MR. BOB PETERS: In the drought year of fiscal '04, was foreign exchange a factor that contributed to the negative financial results for the net income line?

MS. LYN WRAY: It's actually mitigated the -- the impact of the drought because we were a net importer last year and because of the decline of the U.S. dollar at that time, we paid less for imports then we otherwise would have expected to do.

That was a year obviously where there was unhedged U.S., as it turned out in this case, costs rather than revenues because of the unexpected conditions but it worked fortuitously to our favour.

MR. BOB PETERS: And you acknowledge it was only fortuitous, it wasn't -- there was -- there was no design or strategy in that?

MS. LYN WRAY: Right. There's always some

element of -- of exposure just because events don't work out the way you expect. Having said that, over the long-term, we are fairly well hedged.

MR. BOB PETERS: Your -- your hedging though is not by way of financial instrument, it's by the fact that you have U.S. bills to pay and U.S. revenue received.

MS. LYN WRAY: Yes, in the short term, we might from time to time use financial instruments to bridge between one (1) period and/or another. But, by and large, the hedging is done by virtue of the fact that we have U.S. debt and over a period of time, U.S. revenue in-flows.

MR. BOB PETERS: Have there been significant hedging losses on the foreign exchange in recent years, Ms. Wray?

MS. LYN WRAY: Not to my knowledge.

MR. BOB PETERS: If anyone would know, you would know, right?

MS. LYN WRAY: I hope so.

MR. BOB PETERS: All right. It's just when you said, not to my knowledge, I wasn't sure if that was a...

MS. LYN WRAY: I -- I was just referring to the fact that I took over the post of treasurer in December 2002 but I -- I think --

MR. VINCE WARDEN: I can -- actually I was around before that time. And I can confirm that, there were

no significant losses on the foreign exchange market prior to that time.

MR. BOB PETERS: And in the -- in the fiscal '04 year, the $355 million dollar shown on the -- on the forecast financial statements, none of that is attributable to a foreign exchange loss?

MS. LYN WRAY: No.

MR. BOB PETERS: When, Mr. Cormie, you were helping the Board with Exhibits 14 -- Manitoba Hydro Exhibit 14 and Manitoba Hydro Exhibit 15, these were average prices on imports and exports as well as the -- the quantity exported or imported. You brought to the Board's attention that there's a -- a piece missing in the puzzle because we don't have the revenue from the demand charges. Is that correct?

MR. DAVID CORMIE: That's -- that's correct.

MR. BOB PETERS: And you also indicated that in a -- in a typical year, you could have as much as $100 million dollars paid to Manitoba Hydro for the demand charges.

MR. DAVID CORMIE: It could be as high as that, yes.

MR. BOB PETERS: Is that $100 million dollars only from the one contract with NSPXL or is it -- is it from all exports?

MR. DAVID CORMIE: There -- there a few contracts that have demand revenue associated with it.
MR. BOB PETERS: And in aggregate how much is that in terms of demand charges that the Corporation receives?
MR. DAVID CORMIE: As I indicated it could be as high as $100 million dollars.
MR. BOB PETERS: Sorry, that was an aggregate then?
MR. DAVID CORMIE: Yes.
MR. BOB PETERS: Sorry, I misunderstood your answer, I apologize. The -- the contracts that you have on export, do you know whether or not you file those with the National Energy Board?

(BRIEF PAUSE)

MR. DAVID CORMIE: I believe we do, yes.
MR. BOB PETERS: And do you also believe that those documents then become a matter of public record at the National Energy Board in Calgary?
MR. DAVID CORMIE: I'm -- I'm not certain of this but I believe the prices are held confidential.
MR. BOB PETERS: And then speaking of matters held confidential, is the Corporation prepared to file with

this Board in confidence, the average demand charges for the months shown on Manitoba Hydro's Exhibit 14 and Manitoba Hydro Exhibit 15?

MR. DAVID CORMIE: Would it help, Mr. Peters, if we for the last year included the demand charge and roll it up into the energy charge to show you the aggregate average price including the demand charge? Just for the last year, would that --

MR. BOB PETERS: That would be helpful and that --

MR. DAVID CORMIE: -- so that you could see the affect of the demand charge on the revenue? It would help us a lot if we didn't have to go back this many years because that would involve quite a bit of work if -- but although I think we could show you the -- the effect of demand charges for the last year.

MR. BOB PETERS: That -- that would be actually quite helpful, Mr. Cormie, and there is no need necessary to go back to -- to the beginning of those charts but that would include your -- your entire fiscal 2004 year, is what you're offering?

MR. DAVID CORMIE: We can do that, yes.

MR. BOB PETERS: All right. Thank you for that then, sir.

MS. PATTI RAMAGE: Just to confirm, Mr.

Peters, that will be filed with Board counsel alone or -- how will we deal with that?

MR. BOB PETERS: In -- in terms of logistics, my experience in other tribunals, Mr. Chairman, that might be helpful is if the Corporation files it on and I'm experienced with -- with blue coloured paper, and labelled confidential and file it only with -- with the Board's secretary and not with Board counsel or other advisors.

MR. MICHAEL ANDERSON: Mr. Peters, without -- excuse me, Mr. Chair, without intending to interfere with your examination, I did undertake -- understand that there was still a -- an uncertainty in fact as to whether the price information and the filed NRB contracts was made public or not.

The witness wasn't able to answer that question and so I'm hoping that having determined that it may provide some comfort to the parties that they are in fact public documents. Thank you.

--- UNDERTAKING NO. 6: The average demand charges for the months shown on Manitoba Hydro's Exhibit 14 and Manitoba Hydro Exhibit 15.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Let me pick from Mr. Anderson's suggestion to me as polite as it was. That perhaps Mr. Cormie you can determine whether or not the pricing information is in fact a matter of public record at the National Energy Board or whether it is held in confidence?

And if it is a matter of public record, then we would appreciate it being filed here. If it is not a matter of public record, then the request for the confidential information still stands in -- in any event. Would that be satisfactory to you, sir?

MR. DAVID CORMIE: I can advise that all contracts are not filed with the National Energy Board because all sales contracts are not with U.S. customers. And -- and we only file with the National Energy Board those contracts that are for export outside of Canada.

And so, for those contracts that are within the country we still are bound by our confidentiality agreements with these customers. And so there may be some information that may or may not be confidential at the National Energy Board but what you're asking me to is tell you our position and -- and because we have those confidentiality obligations I'm -- I can -- I can confirm our position with the National Energy Board but I still believe that it's best to -- to roll it all up and show it to you in

this way so that it can't be dis-aggregated.
MR. BYRON WILLIAMS: Mr. Chairman, just in terms of the process for receiving this material confidentially to the Board, I just want to reserve the right. I'd like to talk about whether my clients have any comments on this as well as with my expert.
So just -- we may not have any concerns with the process but we -- I will consult with my clients and also with my consultant on that. And if we have anything else we'll get back to the on that matter.
We're not raising a concern at this point. I'm just reserving the right to do so.
THE CHAIRPERSON: Well, we're going to reach a conclusion on this matter before we receive it. Because if we do receive it in confidence then it'll be held in confidence. Mr. Peters...?
MR. BOB PETERS: All right. Thank you.
MR. BYRON WILLIAMS: If there's any questions from -- from Manitoba Hydro's counsel we can address that and if it changes my request on the record, then we'll put it on the record. But I think it should be relatively straightforward and I do appreciate Mr. Cormie's clarifications and his assistance.
MR. BOB PETERS: Mr. Warden -- oh no, sorry. Still with Mr. Cormie.

THE CHAIRPERSON: Excuse me, Mr. Peters, are you going to address a similar matter with respect to Exhibit 15, rolling in the costs for the winter of '03/'04?

MR. BOB PETERS: Yes, I thought my question included both Exhibit 14 and Exhibit 15, Mr. Cormie; did you understand it to do that?

MR. DAVID CORMIE: Yes. We'll include all -- all fixed costs in these prices.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: This morning, Ms. Wray filed Manitoba Hydro Exhibit 13 through her counsel which was a request that I made of her late yesterday to add the 2002 and 2003 actual results to the IFF statement, Manitoba Hydro 03-1; have you that, Mr. Cormie?

MR. DAVID CORMIE: Yes.

MR. BOB PETERS: And I take it the line that most interests you from a operations point of view is your responsible there for that extra provincial line which in 2002 shows $588 million dollars of revenues as a result of exports?

MR. DAVID CORMIE: That line interests me, yes.

MR. BOB PETERS: And, in fact, you are largely responsible for getting the number on that -- getting

that number on that page?
MR. DAVID CORMIE: I wish I had that power but that is under my area of responsibility, yes.
MR. BOB PETERS: All right. And what we note here is that the export sales in 2002 were $588 million dollars and that's considered on a gross basis by the Corporation; is it, Mr. Cormie?
MR. DAVID CORMIE: Yes.
MR. BOB PETERS: And I think yesterday Ms. Wray was pointing out that you could bring that down to how Manitoba Hydro considers a net export revenue by just subtracting the water rental expenses and the fuel and power purchased expenses; is that correct?
MS. LYN WRAY: Maybe I could just elaborate a little bit here. It is true that we have the tradition of subtracting water rental expenses, fuel pur -- fuel and power purchased expenses from the gross export revenue and we get a number that we call "net export revenue".
That, however, is not a -- a very precise number. We have yet another version of what net export revenues might be as I alluded to yesterday in the cost of service study. And in that particular case there's a further refinement in which only the water rental fees attributable to export volumes is subtracted.
One could go a further step which we haven't

done because of the complexity of it and this gets to a question that Mr. Mayer asked yesterday, and that would be to try and determine all of the operating and administrative expenses and other such expenses that might be attributable to export revenues.

So, I just wanted to caution that we don't actually have a very precise number that you could say is net export revenues. What we've presented in our material is something of a convention.

MR. BOB PETERS: Ms. Wray, that begs the question as to why you calculate it differently for different purposes; is there a -- is there a rationale for that?

MS. LYN WRAY: It's just a matter of convenience, I guess, that Mr. Cormie's area gathers the information on export revenues and also on import costs, thermal costs and water rentals. They all appear in a report or information that the Corporation receives.

Now, as to the cost of service study, Mr. Wiens could speak more to that but I -- I think they're -- they're following more precise rules and indeed that methodology in the Cost of Service study could vary the -- the manner in which the net export revenues are calculated.

For example, if -- if we were to use the methodology in the NERA report, it would be -- there would be embedded costs that would be attributed.

MR. BOB PETERS: We may come back to that later, Ms. Wray but for this purpose, Mr. Cormie, in 2002 the extra provincial revenue for Manitoba Hydro was $588 million dollars. Is that correct?

MR. DAVID CORMIE: Yes.

MR. BOB PETERS: Can you tell the Board that in earning that $588 million dollars, was any of that earned by having to use power imports?

MR. DAVID CORMIE: I -- I believe so, yes. The -- the majority of the $71 million dollars would have been power that was purchased to -- to support the export sales.

MR. BOB PETERS: When you say -- and you're getting that $71 million dollars from the line item called -- on Exhibit 13 known as fuel and power purchased, correct?

MR. DAVID CORMIE: Yes, I understand though that the $71 million dollars also includes diesel fuel for our -- our isolated diesel sites. So I -- I cannot -- I'm not responsible for the entire $71 million dollars.

MR. BOB PETERS: All right. But you -- can you explain to the Board just again on a higher level as to why you would import power in a year where your exports are of record magnitude?

MR. DAVID CORMIE: There -- there are times when there is insufficient water available to run all of the

hydro-generators during the day time and -- and Manitoba Hydro can go to the off-peak market and buy low cost electricity and in effect, save water in its reservoirs at night so that it now has sufficient electricity or sufficient water to run all those generators during the day time.

So, we would buy low cost power at night, let's say at a price of -- of twenty dollars ($20) and sell it in the day time at a price of forty dollars ($40) and so we incur a twenty dollar ($20) expense in order to make a forty dollar ($40) sale and that's -- that's arbitraging the off-peak on-peak price differential.

And so we would -- we would incur -- I would expect that the majority of that $71 million dollars was off-peak power that was purchased in order to sell into a higher priced on-peak office and -- and make significant margin on those transactions.

During the winter time, it's difficult to get water out of Lake Winnipeg down to the generating stations because -- on the Nelson River because of the ice effects at the north end of Lake Winnipeg and so we -- we -- it's more economical for us to purchase power to serve those export sales than it is to change our reservoir operations to capture that -- that opportunity and there's better -- more margin to be made by purchasing than to changing the reservoir operations.

So, that's -- that's what drives those op -- those purchases and -- and the majority of those purchases would occur in the fall and in the winter time.

MR. BOB PETERS: Do I take from your answer that you don't plan in advance for those arbitrage opportunities because you don't know what those are going to be?

MR. DAVID CORMIE: We -- we do plan in advance for those because we have an expectation of what prices will be in the off-peak during the winter period and what they are in the on-peak.

And, for example, this winter we believe that power prices in the United States, at night, might be in the twenty-two ($22) or twenty-three ($23) dollar range and the on-peak prices might be in the sixty ($60) dollar range.

So, we know that there's a forty ($40) dollar spread there that -- and so we would want to buy as much of the -- of the low cost power at night in order to generate margin in the daytime.

And so, our computer models are -- are capable of identifying those opportunities and we build that mar -- that revenue into our next provincial forecast and we also build in any associated expense and that all forms part of the IFF.

MR. BOB PETERS: If I understand your answer

then, of that $71 million dollars of fuel and power purchased, I think your words were, the vast majority is attributed to off-peak purchases to support exports.

MR. DAVID CORMIE: I'm -- I'm just reminded that in addition to that, our generating station at -- at Brandon, the coal-fired station, is -- was probably operated during that year.

Again, the cost of running Brandon relative to market prices is attractive. And so we will generate energy at -- at that station, again, to take to the more lucrative on-peak market.

So, there -- there's a cost both of coal and -- and power purchases which would make up the majority of that expense.

MR. BOB PETERS: And does it follow then that approximately, let's say, 10 percent of your total extra-provincial revenue was sourced through power purchases and -- and buying at cheaper prices and selling at higher prices? You needed at least $60 million dollars of additional costs to -- to do that?

MR. DAVID CORMIE: If -- if you're saying, from the seventy-one (71), if you were -- if you were just to say 60 million of that was purchases for re-sale, there will be at least $60 million dollars of -- of extra provincial revenue to off-set that expense.

And it would be my estimate that it would be significantly more. The margin from on-peak to off-peak is -- is -- can be two (2) to three (3) to one (1). It -- it's a very lucrative activity.

MR. BOB PETERS: Recognizing it's a lucrative activity, do I gather from a previous answer you gave me that you can predict that up to a year in advance?

MR. DAVID CORMIE: We make an estimate and -- and we build that in. So, that -- that's one (1) of the reasons that there is variability in the outcome of our financial forecasting because the market doesn't always do what we anticipate it.

MR. BOB PETERS: For you neither, I guess.

MR. DAVID CORMIE: So, those -- those kind of opportunities are -- we -- we deem those to be very low risk. They're -- those off-peak purchases are generally made in real time. We buy at night and sell in the daytime.

And they're -- we -- we don't need to purchase that power in advance. They -- they take advantage of the opportunities that are available in -- in the -- day ahead in the real-time markets. And we capture most of that with very little price risk.

MR. BOB PETERS: I'm trying to gain a sense as to whether then that approximately $60 million dollars of this import was planned in advance of that -- in advance of

that year. And I'm sensing it probably was. Am I correct on that, Mr. Cormie?

MR. DAVID CORMIE: We -- we plan on making off-peak purchases for on-peak resale. And we do that in the short term and in the long-term, recognizing the hydraulic -- the ability of our reservoirs to move power from the off-peak to the on-peak.

MR. BOB PETERS: You also take advantage of very short term opportunities that exist, maybe arbitrage opportunities as well?

MR. DAVID CORMIE: Yes, in that we may find a seller in the market who is selling below market. We would buy from that seller and -- from that seller and -- and re-sell it at the -- the simultaneous transaction. So, there are those kind of arb -- arbitrage opportunities that are -- that are buy and immediate resells.

MR. BOB PETERS: But, by and large, most of your system planning and the use of imports to support exports is done by design, from what you're telling the Board?

MR. DAVID CORMIE: They're anticipated, yes.

MR. BOB PETERS: And how -- in relative terms, how much happens by your design and how much is just fortuitous in light of the conditions of a day or a short term opportunity that you could find?

MR. DAVID CORMIE: We -- we go through a -- an operation planning process that involves preparing an operating plan for the power system as much as a year long. And we update that plan weekly.

And weekly updates are necessary because the power system conditions are constantly changing, rainfall, markets, maintenance, contracts are being negotiated.

And so the -- this update to the operating plan is a continual process and that operating plan is -- is generated using computer models that maximize the profit of the Corporation over the planning period.

And that involves the use of reservoirs to move water from one (1) season to the next, recognizes the ability of our reservoirs to move, purchase off-peak and resell it in the on-peak.

And so that process is continually maintained and updated and takes full advantage of our capability in the market place.

MR. BOB PETERS: When you're telling the Board that part of your plan includes power purchases to support export transactions; are those power purchases at prices that are somehow tied to your export prices or are they strictly market prices?

MR. DAVID CORMIE: Those will be at -- at market price.

MR. BOB PETERS: Market prices for which you have an estimate as much as a year in advance?
MR. DAVID CORMIE: Yes. We have a forward price view of both the on-peak and the off-peak market that reflects our -- our -- the historical behaviour of the marketplace, as well as the -- the -- the factors that drive the prices to change, such as the natural gas price.
MR. BOB PETERS: On these fuel and power purchase expenses, particularly the power purchase expenses, when there are short term ones to support power, you've told us before that you can lose money on them, and those ones are often entered into in -- some months in advance; is that correct?
MR. DAVID CORMIE: That's what I said, yes.
MR. BOB PETERS: So that tells the Board that you enter into the power purchase arrangement on a short term basis because you feel the market will be favourable but between the time that you commit to it and the time it happens, circumstances have turned against you?
MR. DAVID CORMIE: Are you referring to power purchase agreements or the export sale contracts?
MR. BOB PETERS: No, just the power purchase agreements?
MR. DAVID CORMIE: I think I indicated to you that we have lost money on a -- an export sale commitment. I

didn't indicate that we made an off-peak purchase, that we lost money on it.

MR. BOB PETERS: All right. So on off peak purchases you don't have any circumstances where you will -- will have lost money?

MR. DAVID CORMIE: I -- I can't think of one (1), no.

MR. BOB PETERS: Do you enter into any hedging transactions with respect to power purchase arrangements?

MR. DAVID CORMIE: Last year we -- we -- we had quite an extensive hedging program to hedge both the supply and the price risk associated with our power purchase activities.

MR. BOB PETERS: And was this hedging -- hedging program through the use of financial instruments?

MR. DAVID CORMIE: No. It was all physical delivery.

MR. BOB PETERS: Can you just briefly explain to the Board members how that works?

MR. DAVID CORMIE: The difference between a -- a financial transaction is that your counter-party is going to keep you whole financially that -- that if you -- if the conditions of the contract require the seller to pay out, he will -- you will receive some income and that will be used --

that will -- that will be a flow to the Corporation.

A financial transaction is -- or a physical transaction is when we actually need the power and we want -- and want and will take delivery of the electricity. And -- and so we'll enter into a forward purchase contract where we recognize that we need the power, the lights have to stay on.

We don't just need to have -- to be -- to have a cheque coming to the bank and so we need to lock in a supply. We need to arrange for the transmission so that that supply can be delivered and we need to have that at a fixed price.

And so we're hedging not just the financial risk associated but the risk of -- of having delivery. We actually need the electricity rather than just the price protection that is afforded by a financial instrument.

MR. BOB PETERS: Mr. Cormie, moving on Exhibit 13 forward to the drought year of 2004, the Board will note that your extra provincial sales on a gross basis were $394 million and your fuel and power purchased was $480, correct?

MR. DAVID CORMIE: That's correct.

MR. BOB PETERS: And can you indicate to the Board, of the fuel and power purchased, how much of that was to support exports?

MR. DAVID CORMIE: Manitoba Hydro was a net -- net purchaser of electricity, so a portion of those purchase

costs were necessary to serve the -- to serve the domestic load but the majority of those costs would have been incurred to serve our export obligations.

MR. BOB PETERS: And the export obligations would have only been long-term fixed contracts and no opportunity sales?

MR. DAVID CORMIE: That's correct.

MR. BOB PETERS: And when you say the majority of the four hundred and eighty (480), can you be more precise with that number?

(BRIEF PAUSE)

MR. DAVID CORMIE: I -- not at thi -- not at the present time, I can't.

MR. BOB PETERS: Is that a number that you could consider and get back to me by way of an undertaking?

MR. DAVID CORMIE: We can -- we can estimate it for you, Mr. Peters, yes.

MR. BOB PETERS: All right. Thank you for that.

--- UNDERTAKING NO. 7: More precise calculation of what portion of the $480 million of fuel purchases were allocated to

each domestic service and to serve export obligations.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Mr. Warden, in the few minutes before the lunch recess, maybe you and I can cover off just a couple of other areas. We -- we started talking this morning about why Manitoba Hydro needs to come to this Board for a rate increase and you've -- you've given some explanations. You tied it primarily to the drought; we've already talked about some of those issues.

Would you agree with me, sir, that it is the reduction in your retained earnings that is -- that is ultimately the factor that leads you to come forward to the Board?

MR. VINCE WARDEN: As a result of the drought, yes.

MR. BOB PETERS: Well, I appreciate you've qualified it; my question didn't. So when you're retained earnings dropped, if I go back to Tab 2 of the book of documents that we circulated, when your retained earnings dropped...

(BRIEF PAUSE)

MR. BOB PETERS: The retained earnings and I don't have it here on page -- the page number 33 included in Tab 2, but it was sitting about $1.2 billion or somewhere in that neighbourhood and I know it's in the materials but I don't have it at my mater -- my fingertips.

MR. VINCE WARDEN: $1.2 billion was the right number at the end of 2003, yes.

MR. BOB PETERS: All right. So it went from 1.2 billion and then in your drought year you're sitting at $759 million in retained earnings, correct?

MR. VINCE WARDEN: That's correct, yes.

MR. BOB PETERS: And it may be a higher level review with slightly different numbers found at Tab 1 of my book of documents, which was the actual and forecast net income and retained earnings statements from your filing.

I'm asking if you'll agree with me, Mr. Warden, that it was the precipitous drop in retained earnings that was the overriding factor for the Corporation to come forward with a Rate Application before this Board?

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

MR. BOB PETERS: And would you then also agree that the factors that contributed to that reduction in rate -- in retained earnings all contributed to your decision to come forward for a rate increase?

MR. VINCE WARDEN: In fiscal year -- the factors that contributed in fiscal year '03/'04, are you referring to, Mr. Peters?

MR. BOB PETERS: Just any factors that led to the decline in your retained earnings, or factors in the overall decision to come forward to this Board for a rate increase.

MR. VINCE WARDEN: Well, I -- I wouldn't necessarily agree with that. I think that as we all know, there was a reduction in retained earnings the year previous because of the payment to the Province. And we indicated that that would not precipitate a -- a rate increase and that's still our position.

MR. BOB PETERS: No, I -- okay, I accept that. But it's not -- is there -- is there just one (1) factor that contributed to the reduction in your retained earnings that brings you before the Board? Or are there a multitude of factors?

MR. VINCE WARDEN: Well, absent the drought in 2003/'04, we -- we would have had a -- a small increase to retained earnings. So, it was the -- certainly, the factor, the one (1) factor that caused retained earnings to decrease in that year, yes.

MR. BOB PETERS: All right, and now Mr. Cormie is telling you the drought is over and does that give

you comfort?
MR. ROBERT MAYER: It's half over.

CONTINUED BY MR. BOB PETERS:
MR. BOB PETERS: I'm being corrected here. Mr. Cormie, the -- the eastern water sheds, you're saying, it is over. Is that correct?
MR. DAVID CORMIE: I -- I think, Mr. Peters, the -- the point is that -- that we're exposed to drought risk next year. There's no guarantee that we are going to achieve the results that are forecast in the IFF next year, or the year after, or the year after. That there's drought risk in each and every year.
All we know that, this year, is the drought risk has been, essentially it's gone away because we're in a -- in a period of high flows. So, you know, it's over for now and it will be back. The question is, will it be back next year, or the year after, or the year after?
MR. BOB PETERS: Well, let's be clear. The Vice-Chair wants to be clear. Is it over? Is it half over? Or whereabouts are we at with the?
MR. DAVID CORMIE: Well, it's half over this year.
MR. BOB PETERS: Because the year is half over?

MR. DAVID CORMIE: No, because half our water sheds are still in drought.

There -- there is still about 6 million megawatt hours of uncertainty associated with our forecast. And because we know we're only in June and the year has another nine (9) months to go.

If it stops raining tomorrow, we will not generate 6 million megawatt hours of hydro-production and -- and we will have to incur some expense to -- to cover off the costs associated with serving load if it stops raining tomorrow.

So, we are still exposed to some uncertainty this year. It's much less than the uncertainty that we faced last year. And we're facing water sheds in Western and Northern Canada that have yet to see the rainfall that we've experienced here in Winnipeg.

So, there is risk. It's not clear -- it's clearly not the risk that we had last year and so I think Mr. Mayer's correct. It's -- it's over in this part of the world. It's not over in other parts of the world and we face drought risk down the road.

MR. BOB PETERS: And, Mr. Warden, in terms of the requested rate increases, will you acknowledge that these requested rate increases are not designed to achieve any specific financial target in the -- in the test years?

That is, you're not seeking a rate increase in '05 or '06 to reach any specific financial target in those two (2) years?

MR. VINCE WARDEN: No, that's -- that's correct. Our financial targets are set. Let me back up on that.

Our -- our debt equity ratio target is set over the long-term; however, the capital coverage -- interest coverage targets our short term. So we are still striving to retain those annual targets but recognizing that the rate increase that we've requested will not get us totally there.

MR. BOB PETERS: And you don't have a specific level of reserves or retained earnings that you're using as a target at this point?

MR. VINCE WARDEN: For the fiscal year '04/'05 and '05/'06, no.

MR. BOB PETERS: Thank you. Mr. Chairman, in light of the hour, this would be a good time to --

MS. LYN WRAY: Excuse me, Mr. Peters, could I just add one (1) thing on this debate about how retained earnings have been affected by drought.

One (1) of the things we've noticed is that the impact in 2002/3 has been somewhat overlooked. We did start seeing a drought in that year and if we use this rather simplified method of -- of looking at export revenues minus

water rentals minus net import costs, the impact in that year was something in the order of $67 million dollars off our retained earnings.

That's just from those factors without taking into account the interest effect, and there would have been one (1). And then for the 2003/4 year, again, if you look at the change in our net exports, so defined, you would be in around $503 million dollars hit on our retained earnings.

So taking those two (2) together it was, for the two (2) years, a $540 million dollar drain on our retained earnings without taking into account interest effects.

Very simply, the interest effects on an annual basis, going forward as well, are at least $40 million dollars a year. And this is also without taking into account the somewhat higher loss or perhaps significantly higher loss that we'll be looking at for the current year.

So, what -- whichever way you cut it, you're looking at an impact on our retained earnings in excess of $600 million dollars plus ongoing interest costs. I think that's important to -- to look at in terms of why we think we need a rate increase going forward.

MR. BOB PETERS: Thank you, Ms. Wray. This would be a good time, from my perspective, Mr. Chair, subject to the Board's questions, to adjourn for lunch.

THE CHAIRPERSON: Yes, thank you very much. We'll stand adjourned until two o'clock.

--- Upon recessing at 12:02 p.m.
--- Upon Resuming at 2:02 p.m.

THE CHAIRPERSON: Mr. Peters...?
MR. BOB PETERS: Thank you, Mr. Chairman. Good afternoon.

CONTINUED BY MR. BOB PETERS:
MR. BOB PETERS: In terms of the starting point for Manitoba Hydro's planning for energy requirements, does Manitoba Hydro start with a load forecast?
MR. HAROLD SURMINSKI: Yes, that's correct, Mr. Peters.
MR. BOB PETERS: And Mr. Surminski, can you give us a very high level brief overview as to how that's done?
MR. HAROLD SURMINSKI: I'm sorry, do you mean the load forecast itself?
MR. BOB PETERS: Yes, sir.
MR. HAROLD SURMINSKI: Mr. Kuzcek, who will be on the next panel is directly responsible for the load forecast and it would be most appropriate for him to give you

that description.
MR. BOB PETERS: All right and then in terms of questions specifically involving the load forecast, those questions should also, Ms. Ramage, from your panel's perspective, be deferred to the next panel?
MS. PATTI RAMAGE: That's correct.
MR. BOB PETERS: Mr. Mayer's wish is being granted, we're moving along quicker than anticipated.

(BRIEF PAUSE)

CONTINUED BY MR. BOB PETERS:
MR. BOB PETERS: Mr. Chairman, I'll defer those questions that I had on the load forecast and supply to the next panel with the exception of one (1), Mr. Surminski, if you could take it back and perhaps Mr. Kuzcek and you could come up with an answer by way of an undertaking.
In the booklet of materials that I've prepared, there's a Tab 6 and I'm not sure if you've had a chance to review it or not but it's a monthly schedule of net firm energy. It's Table 13. It was found at Volume II Appendix 6.1 Page 38 of the materials, for reference.
Do you have that, sir?
MR. HAROLD SURMINSKI: Yes, I have looked at it previously also.

MR. BOB PETERS: And if you did look at it previously, you will see that for the year ending 2003, there's an actual number of twenty-one thousand nine hundred and forty (21,940) gigawatt hours of energy, correct?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: And that represents the actual -- the actual domestic load?

MR. HAROLD SURMINSKI: Yes, it does -- I believe these numbers do not include the station service in our system but it is our domestic load.

MR. BOB PETERS: And when you say station service, can you explain that please?

MR. HAROLD SURMINSKI: Station service is -- is the power required by our generating facilities themselves. The power consumed by the facilities like lighting, heating, et cetera.

MR. BOB PETERS: Can you advise me as to whether the number 4 fiscal '04 will be known at this point because it appears as a forecast right now at twenty-two thousand one hundred and seventy-one (22,171)?

MR. DAVID CORMIE: We know what that number is now, Mr. Peters.

MR. BOB PETERS: And that's my question, if you could provide that. Do -- do you know it right now?
MR. DAVID CORMIE: I can get it for you.
MR. BOB PETERS: By way of undertaking or --
MR. DAVID CORMIE: Yes.
MR. BOB PETERS: All right. Then thank you for that.

--- UNDERTAKING NO. 8: Domestic load number for the fiscal year 2004.

MR. ROBERT MAYER: That doesn't include exports at all?
MR. DAVID CORMIE: That doesn't include the exports or the losses on the system associated with the exports or the energy used by our surplus energy program customers.

(BRIEF PAUSE)

CONTINUED BY MR. BOB PETERS:
MR. BOB PETERS: Mr. Surminski, in your direct evidence through to your Counsel you had indicated that Manitoba Hydro had been of the view that the -- if the worst drought on record reoccurred, it could have financial

consequences of $1.1 billion dollars to the Corporation.
Is that correct?
MR. HAROLD SURMINSKI: Yes, that's correct.
MR. BOB PETERS: And wh -- when did that worst drought on record occur? Was that the 1998 through to 1992 years?
MR. HAROLD SURMINSKI: It was '87 to '88 to '91, '92.
MR. BOB PETERS: Are you using fiscal years when -- when you speak?
MR. HAROLD SURMINSKI: Yes, we generally are because the water year generally begins in -- however the significant water in -- in April of the year.

(BRIEF PAUSE)

MR. ROBERT MAYER: Mr. Surminski, somebody also said that, that could -- that number could go as high as $2 billion in future forecasts.
MR. HAROLD SURMINSKI: Yes, I -- I gave that as an estimate in my direct.

CONTINUED BY MR. BOB PETERS:
MR. BOB PETERS: In the -- in the worst drought on record years, that you've talked about, from '88

to ’92, if that was to reoccur starting in 2004, is that the Corporation’s estimate as to where the $1.1 billion would -- would derive?

MR. HAROLD SURMINSKI: Yes, I believe that’s correct. We could refer to -- to the information that you had provided in your package.

MR. BOB PETERS: Before I do that, can you turn to document number 11 which is a response to a PUB-MH-II-IR-39, found at Tab 11 of the booklet of documents that I prepared?

MR. HAROLD SURMINSKI: Yes, I have it.

MR. BOB PETERS: Under the year 2004, there was forty-five point four (45.4) thousand cubic feet per second, as I understand it, in-flows available into Lake Winnipeg. Is that the correct reading?

MR. HAROLD SURMINSKI: Yes, 44,400 cubic feet per second average for the twelve (12) month period, April to March.

MR. BOB PETERS: Are you able to provide similar data for the years 1929, ’30 and ’31? Does the Corporation have that in similar format?

MR. HAROLD SURMINSKI: We do. We supplied it in similar format in response to an interrogatory. I don’t have it at my fingertips right now.

MR. BOB PETERS: Did that interrogatory also

include all the years to current?
MR. HAROLD SURMINSKI: It was the period 1912 to 1997, which is the eight-six (86) year period that we use in our simulation forecasting. So that -- that was the reason we responded to the -- to the interrogatory in that way. Because that was the -- the period we used in our simulation studies.
Further, I do have the interrogatory. It was PUB-MH-I-IR-29(B). And it does have the 1929.
MR. BOB PETERS: In document number 14, which is attached, in the book of documents, It's a response to PUB-MH-I-IR-63 and this is the Corporation's calculation of the $1.1 billion impact for a repeat of the worst drought on record. Correct?
MR. HAROLD SURMINSKI: Yes, correct. And -- and I note, the -- the first year is the 2005/6, coinciding with the flow-year 1988 and '87/'88.
MR. BOB PETERS: All right, so that's a correction on the question I'd asked previously.
MR. HAROLD SURMINSKI: That's right.
MR. BOB PETERS: Thank you for that. Does this table incorporate climate changes?
MR. HAROLD SURMINSKI: No, we do not consider specific aspects of climate change in -- in our flow forecasts.

MR. BOB PETERS: Does it include consideration to whether the Province of Saskatchewan reduces their water flows that come through to Manitoba?

MR. HAROLD SURMINSKI: Yes, we have considered flow reductions, consumptive uses on the Saskatchewan River.

MR. BOB PETERS: And what's the basis of your information for including that in your forecast?

MR. HAROLD SURMINSKI: Well, we have -- we have information that consumptive uses have been increasing over the years. There are greater demands for water in the South Saskatchewan River, over from Alberta into Saskatchewan. Irrigation, other consumptive uses have been increasing over time so we -- we investigated this probably close to ten (10) years ago now.

It was a special study of the South Saskatchewan River and we used -- it was a Federal, partly Federal, study. And we used results from that study to -- and that -- study predicted and gave estimates of further reductions of consumptive uses up to the period of 2020.

So, we used the results from that study in the future predictions of flows and how much the reduction should be on the -- on the Saskatchewan River coming into Manitoba.

MR. BOB PETERS: Mr. Surminski, can the impact of a five (5) year drought, as you've recorded it

there in Document Number 14, can that still happen starting -- starting this year based on the precipitation we've had?

MR. HAROLD SURMINSKI: Well, not to the extreme of the '87/'88 considering where we are right now.

MR. BOB PETERS: Just so I'm clear, we've distanced ourselves from the -- from the drought year sufficiently now that we would have to start all over again for a new five (5) year cycle of the worst drought on record to start?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Yes. I think that's right. We -- with our storage situation and our reservoir storage being normal and above normal, we pretty well start again and -- and go into -- into a whole new cycle of a drought if we were to -- according to -- to this pattern.

MR. BOB PETERS: The whole premise, Mr. Warden, of -- of showing the impact of five (5) year drought would be to try to draw to the Board's attention that the -- that the reserved or retained earnings that have been built up could be wiped out by a continuation of adverse weather.

Do you agree with that?

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

MR. BOB PETERS: Can you explain to the Board in principle, why a Crown Corporation such as Manitoba Hydro should even have a reserve?

MR. VINCE WARDEN: Well, if the -- if the future was perfectly predictable, there would be no reason for a reserve. The reserve is only there to provide protection to ratepayers against unforseen events and that, as we've talked about, the major unforseen event is -- is drought. One (1) of the major unforseen events.

Who knows what's out there that we don't know about, but certainly we do know that drought will occur, on average, about once every ten (10) years and we have to provide for -- for that event.

If it were not for drought, and if we could predict the future perfectly though, there's no reason for retained earnings.

MS. LYN WRAY: Just to add to what Mr. Warden said, there's also an advantage to taxpayers as well as ratepayers in having reserves. Because if we did run into a circumstance that completely depleted our reserves and we had 100 percent debt ratio, it's possible that the -- probably likely that credit rating agencies would no longer regard Manitoba Hydro's debt as self-supporting for purposes of evaluating the province's credit rating position.

And that, depending on other circumstances,

could have an adverse impact on the provincial credit rating and raise the cost of debt.

MR. BOB PETERS: What was the highest debt percentage, Ms. Wray, that you recall the Corporation having?

MS. LYN WRAY: Just from recollection I think it was about 95 percent many years ago.

MR. VINCE WARDEN: Yes, I agree with that answer. It was 9505.

MR. BOB PETERS: And when it was 9505 was the province's debt downgraded by bond rating agencies?

MR. VINCE WARDEN: Well, it has been -- the province's debt has been upgraded in recent years and whether or not Hydro had an impact on that we don't know for certainty.

However, we do know that the bond rating agencies take a very close look at Manitoba Hydro and have always taken comfort from the fact that Manitoba Hydro has the lowest rates in North America and therefore has the capacity to increase rates should that need occur in the future.

So, if we went back to a 95:05 temporarily with the low rates we have today and the future was predictable, absent the drought as I said earlier, there wouldn't be the need for the retained earnings that we're striving for now. We do know though the reality is that

drought will occur and -- and the impacts of that drought are even greater than we had forecast in the past.

MS. LYN WRAY: Yet another advantage of retained earnings are that even if you had complete predictability there would still be some variability in our costs. One (1) of the benefits of reserves is that they allow rate increases to be relatively smooth and predictable rather than up one (1) year, down the next.

MR. BOB PETERS: Was there ever a circumstance where as a result of having as high a debt percentage as 95 percent, that the -- that the Province had to infuse cash into the -- into the Corporation?

MR. VINCE WARDEN: No.

(BRIEF PAUSE)

MR. BOB PETERS: If, Ms. Wray, help me do the quick math on the fly here. If -- if you got to a 75:25 debt equity ratio, does that translate through to having a reserve of $2.5 billion?

MS. LYN WRAY: It depends on what year you get there and what the -- the capital structure would be at that time. Which year were you thinking of?

MR. BOB PETERS: Well let’s take it out to your -- your planned scenario of 2011/12.

MS. LYN WRAY: I'm not sure I can do it on the fly just because the sinking funds aren't evident on our balance sheet and you have to subtract them. But we could very quickly, I'm sure, get that number for your. I don't think it would be as high as $2.5 billion. But I could be wrong about that.

(BRIEF PAUSE)

MS. LYN WRAY: Doing my sort of back calculation and looking at 2012, if 15 percent equity equates to one one two three (1123) plus two five two (252) being the retained earnings and contributions in aid of construction, then if you had 25 percent equity I think it would be total of one point eight seven one (1.871).

And then if you subtract the contributions in aid of construction you would be looking at retained earnings of $1.6 billion, I think.

MR. BOB PETERS: That's why I asked you to do it. I was just taking the assets and multiplying it by 25 percent going forward.

MS. LYN WRAY: We can -- we can take a double check on that.

MR. BOB PETERS: All right. Let's --

MR. VINCE WARDEN: One (1) -- one (1)

indicator, Mr. Peters, that we could probably give you is the IFF '02, when in fact we did reach 75:25 by our target date of 2012. Retained earnings at that point and time were $2 billion.

MR. BOB PETERS: And Mr. Surminski, you also said that if the stars aligned in the worst case scenario, you could paint a picture where Manitoba Hydro's risk could be $2.2 billion, did you not?

MR. HAROLD SURMINSKI: Yes and in -- in an extreme case of the factors all being adverse.

MR. BOB PETERS: But that's not the basis on which the planning goes forward at this point in time?

MR. VINCE WARDEN: Sorry, would you repeat that question?

MR. BOB PETERS: You're not -- you're not using Mr. Surminski's absolute worse case assumptions in doing your -- your planning, going forward, for what the impact can be on the corporation?

MR. VINCE WARDEN: Well, every time we update our financial forecast we take current information into account. So, I would expect when we go to the -- back to our Board in the fall of 2004, that we'll -- we certainly will take into account the -- the $2 billion number, and perhaps revise our -- our estimate at that point in time.

MR. BOB PETERS: In terms of the thermal

plants that you have, Selkirk was converted from coal to natural gas in approximately June of 2002, is that correct?

MR. HAROLD SURMINSKI: That is correct.

MR. BOB PETERS: Is it fully functioning?

MR. HAROLD SURMINSKI: It is.

MR. BOB PETERS: And what was the approximate cost of -- of conversion?

MR. DAVID CORMIE: We'll have to get that for you, Mr. Peters.

MR. BOB PETERS: And in Brandon, you've installed a gas turbine also in 2002?

MR. DAVID CORMIE: We've installed two (2) simple cycle combustion turbines, yes.

MR. BOB PETERS: And what was that total cost?

MR. VINCE WARDEN: We located the costs for the -- the Selkirk conversion was 29 million, and I believe Selkirk was one eighty-six (186).

MR. DAVID CORMIE: Brandon was one sixty (160).

MR. VINCE WARDEN: Or Brandon, I'm sorry.

MR. DAVID CORMIE: 160 million.

MR. VINCE WARDEN: One eighty-seven (187) was -- is the actual number.

(BRIEF PAUSE)

MR. BOB PETERS: That had the capacity addition of about two hundred and fifty (250) megawatts?

MR. DAVID CORMIE: Approximately, yes.

MR. BOB PETERS: Can you indicate to the Board why Manitoba Hydro thought it necessary to -- to bring on the gas turbines?

MR. DAVID CORMIE: The -- the gas turbines were justified in the -- they increased the dependable capability of Manitoba Hydro's power system. That allows Manitoba Hydro to sell more energy in the -- in the forward markets, capturing the premiums that are had from long term firm sales, and -- and that was the reason it was justified, based upon our ability to make extra long term firm sales.

MR. BOB PETERS: What's the approximate cost per kilowatt hour that Manitoba Hydro is incurring as a result of the turbine generation?

MR. DAVID CORMIE: The cost of energy produced at the generating stations is a function of the cost of natural gas. The heat rate on those machines is approximately twelve (12) and a half decatherms per megawatt hour. And a decatherm of natural gas is a little bit smaller than a gigajoule of natural gas, but -- but it's approximately the same.

In the market today, natural gas is about six dollars ($6) US per decatherm, with a twelve (12) and a half

heat rate, that would be approximately seventy-five dollars ($75) US per megawatt hour, plus the cost of start up, which would put it in the eighty dollar ($80) per megawatt hour US range.

If the price of natural gas were to jump to ten dollars ($10) a megawatt -- ten dollars ($10) a decatherm, then we would be talking of power prices from the combustion turbines in the order of a hundred and thirty (130) to a hundred and forty dollars ($140) a megawatt hour US.

MR. BOB PETERS: Are those turbines running today?

MR. DAVID CORMIE: No, they're -- they're not running today. It's -- it's very likely at the time that they would ever be considered as a source of power, that we could go to the market and buy electricity at a lower cost.

So, the -- the role of the -- the stations -- the gas turbines at Brandon is one (1) of -- of a backup, to ensure that there is a supply. However, it will be very expensive to produce electricity there. But we can count on that electricity being there.

MR. BOB PETERS: Do I take from that answer then, that these plants are seldom run because the cost is -- is higher than -- than other market sources of energy?

MR. DAVID CORMIE: Yes, and that was

exemplified very well this last winter where we -- we -- we assumed that they would operate. They gave us the comfort that they would -- we would be able to produce electricity there.

But each day when we determined how best to serve our requirements, almost 99 percent of the days last winter we were able to go to market and buy lower cost power. But our -- our -- our supply assurance was -- was known because we had the capability in Manitoba and we were prepared to run them if interruptible power purchases were not available.

And -- and -- or if the price in the marketplace was higher than our cost of running the combustion turbines, we have a hedge against prices higher than the cost of generation.

MR. BOB PETERS: When Manitoba put in the combustion turbines into Brandon, what was Manitoba Hydro expecting the cost of gas to be?

(BRIEF PAUSE)

MR. DAVID CORMIE: I believe at the time Manitoba Hydro's long term forward price view was natural gas prices in the three (3) to four dollar ($4) range. US per decatherm.

MR. BOB PETERS: All right. And now you've told the Board that that has, essentially, doubled?

MR. DAVID CORMIE: Well, natural gas prices fluctuate based upon market conditions. Prices are in the -- in the six dollar ($6) range now. Our view in the long term is that this price is not sustainable and that -- that lower prices can be expected.

So, yes, today the prices are much higher than we assumed. But what the prices will be a year or two (2) years or three (3) years in our expectation that they will come off slightly.

MR. BOB PETERS: Is there -- is there any expectation by Manitoba Hydro that the price will go up to ten dollars ($10) a decatherm?

MR. DAVID CORMIE: There's always a -- a risk that short term natural gas prices could reach ten dollars ($10). When we were looking at the risks associated with our supply requirements last summer for winter delivery, -- natural gas prices in the fourteen dollar ($14) range per decatherm were -- were indicated at the 98 percent confidence interval.

So, the average -- the expected price although it was around six dollars ($6) but there was some small chance that prices could be as high as fourteen dollars ($14).

And -- but conversely, there was a possibility that prices would be lower than that.

MR. BOB PETERS: Can you indicate, Mr. Warden or Ms. Wray, what is the dollar value of the net assets on the balance sheet associated with these gas turbines at Selkirk and Brandon?

MR. VINCE WARDEN: Well, the -- the numbers we just gave would be the -- essentially the value of the net assets. There would be some small depreciation that had occurred since the units were installed.

But $187 million at Brandon and $29 million at -- at Selkirk.

MR. BOB PETERS: Mr. Warden, recognizing that their use is -- is, at this point, questionable in light of market gas costs, has Manitoba Hydro considered writing down these assets?

MR. VINCE WARDEN: Oh, no. They're still -- they still have the value that they had before when they were installed. And it should point out too that high natural gas prices overall are positive for Manitoba Hydro from the electricity side of the business on the export market because that means there's high prices on the export market.

So, although it's bad for consumers on the gas side of the business, nevertheless because gas prices are the marginal cost of generation and the export market, that has a

benefit to us when we're selling electricity there.
MR. ROBERT MAYER: Mr. Warden, it is my understanding that you can't talk about Selkirk and Brandon in the same breath; we're talking apples and oranges here, are we?
MR. VINCE WARDEN: Yes, that's right.
MR. ROBERT MAYER: It's my understanding that the -- the -- alls you did at Selkirk is replaced natural gas as the fuel for the -- the thermal plant when it used to be coal?
MR. VINCE WARDEN: Correct.
MR. ROBERT MAYER: And at Selkirk you've got the simple cycle combustion turbines?
MR. VINCE WARDEN: At Brand -- at Brandon, yes.
MR. ROBERT MAYER: Brandon. And those things can literally be started up and fired up immediately. They can be used both to -- used to deal with your reserve requirements. And also as I understand it, it's a reliability factor for domestic use?
MR. VINCE WARDEN: Absolutely, yes.
MR. DAVID CORMIE: Mr. Mayer, the -- from an efficiency perspective though, they are equivalent. They both consume the same amount of natural gas to produce a unit of electricity.

MR. ROBERT MAYER: I understand that, but how quickly could -- if you have your Selkirk unit shut down or not in use, how long does it take before it can actually efficiently supply power.

MR. DAVID CORMIE: Oh, you're correct there, it takes, you know, twelve (12) hours to bring Selkirk up to speed, we can have the combustion turbines in Brandon up to speed and generating electricity within half an hour.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Thank you. And turning to some of the risks that we've -- we've talked about. Included in that book of materials that has been prepared, is a copy of the Information Request that MIPUG asked of Manitoba Hydro in the First Round Number 3, for various risk scenarios?

You'll find that at Tab 15.

(BRIEF PAUSE)

MR. BOB PETERS: In terms of these scenarios, Ms. Wray, was it you who ran them?

MS. LYN WRAY: Yes, Financial Planning Department ran them.

MR. BOB PETERS: And I'm not going to go through them all in depth, but I want to make sure the Board

will understand them on -- on review of the record.
When you ran a risk for the worsening of the drought, it showed that retained earnings would fall from $708 million down to $256 million, if I read your -- your analysis correctly?
MS. LYN WRAY: Subject to check, yes.
MR. BOB PETERS: All right. And then similarly for the other risks that were listed. You ran the same scenario, and you incorporated into it the -- the variable that was requested in the question?
MS. LYN WRAY: Yes.
MR. BOB PETERS: And, Ms. Wray, would you agree with me that the worsening of the drought was the only significant risk of those ones that -- that was analyzed in light of the results on the retained earnings?
MS. LYN WRAY: Well, it was certainly the most significant, and within the parameters that we adjusted for the other risks, you know, for example, a 1 percent variation in inflation, and a 1 percent variation in interest. We ran some other ones I believe, but by far the largest impact on retained earnings was drought.
MR. BOB PETERS: And you come to that conclusion, Ms. Wray, the same way I did, and that was by comparing what would be the impact on the retained earnings over the planning horizon?

MS. LYN WRAY: Yes, I should say of course that this was not a comprehensive list of risks, inasmuch as the combination of price and volume -- water volume that Mr. Surminski alluded to, is not on that table.

MR. BOB PETERS: All right, but does the Corporation acknowledge that importing of energy at higher prices, than their export prices available, is another significant risk than -- than you face?

MS. LYN WRAY: Could you repeat the question please?

MR. BOB PETERS: Yes, if the Corporation has to, as it apparently did, import energy at prices higher than it can export energy, that in itself creates another significant risk for the company?

MS. LYN WRAY: Well, I think if you were in a low water condition, then you'd have to become a net importer, and that coincides with a period of high import prices, then that certainly compounds your financial impact.

MR. BOB PETERS: All right. Have you modeled that scenario in any way, in terms of whether the magnitude would be similar to the continuation of the drought, or whether it would be worse?

MS. LYN WRAY: If we were to model it on the financial statements, we would use the numbers that Mr. Surminski had alluded to, and I would imagine that instead of

the initial impact being in the order of $1.1 billion over five (5) years, it would be $2 billion, plus compounded interest. We haven't run that scenario, but obviously it would deplete our retained earnings.

MR. BOB PETERS: Mr. Surminski, in the -- in the drought year that I talked with Mr. Cormie of -- of 2004, how much of the loss that occurred in that year do you attribute to the drought?

And how much do you attribute to the high energy prices for imports, that you had to -- had to purchase?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: I'm not quite sure of -- of your question. We lose, in a drought year, first of all, we lose a good portion of our export revenues. So, that's one (1) side of the equation.

And then, on the other side of the equation, we have to import significant quantities. So, I'm not sure how I could divide up those two (2).

MR. BOB PETERS: Well, I -- I gathered from a previous answer that you had -- you had studied all the various risks and I wondered if you could break down the 2004 year in terms of the impact of the risk of drought which

occurred, and also the risk of high import prices which appeared to also incur -- be incurred?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: We -- we haven't done that analysis, Mr. Peters. Except that when we put the IFF together in the Spring of -- or in the Summer of -- of '03, we were looking at natural gas prices in the three dollar and sixty cent ($3.60) -- three dollars and seventy cent ($3.70) U.S. per decatherm.

And -- and prices have come in this year around -- around six dollars ($6) a decatherm, U.S. And so we've -- we've seen higher prices and -- and -- but not nearly as -- as low of the volumes that could have occurred under a worst case drought scenario.

But we -- but we haven't broken down the -- the costs of drought, or the $600 million that Ms. Wray had indicated was -- has occurred since the summer of 2002 into how much of that was price driven and how much of that is volume driven, compared to the assumptions that we made in the IFF use -- using our long-term price view and median flows.

MR. BOB PETERS: All right. Thank you for that answer. Ms. Wray, would it be possible to run a new

scenario in the -- in the same manner you did under MIPUG-MH I-(3)? But the -- the variable this time would be to have import prices equal to export prices?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: We need a clarification of what you mean by -- by import prices equal to export prices. Export prices at -- at current prices being high? Is that what you mean?

MR. BOB PETERS: When you ran -- ran the scenarios, you made an assumption for import prices and also an assumption, I take it, for export prices. Would that be correct?

MS. LYN WRAY: My understanding is that, broadly speaking, movements in one (1) are -- are the same as movements in the other. So, in a broad sense, whatever happens to export prices would also, in our runs, happen to import prices.

For -- for example, I think we did do a -- a run where we looked at -- I guess we didn't this year, but we've done one (1) in previous IFF's, where we've taken a 20 percent change in export prices. We've followed that through on the import side and vice versa.

MR. BOB PETERS: Am I correct though, Ms.

Wray, that you would have used an assumed value for import prices and also an assumed value for export prices?

MS. LYN WRAY: Well, we get our inputs for our model runs from Mr. Surminski's and Mr. Cormie's area. It's just that if you're asking us to do a sensitivity in which prices go up or down, when we're doing our financial modeling runs, we always apply the same percentage increase to whatever we've received on both imports and exports.

MR. BOB PETERS: Would it be possible, Ms. Wray, for you to equate the import prices to the export prices in the model?

MR. DAVID CORMIE: Mr. Peters, I think they're already done that way. We make assumptions on -- on natural gas prices. Natural gas prices, like Mr. Warden indicated -- natural gas prices like Mr. Warden indicated are the -- it's a marginal cost of generation.

So, if natural gas prices go up, power prices go up and our export revenues will go up nine (9) years out of ten (10). In the one (1) year out of ten (10) when we are exposed to drought costs and we have to make power purchases, there's going to be increased costs associated with those power purchases.

And -- and so you really can't disconnect import prices from export prices. They're linked through the cost of -- of carbon based fuels, whether they're coal or

natural gas.

So our --our forecasting is all driven by our long term economic outlook that says this is our view of -- of fuel prices. Fuel prices drive the export market and they also drive the cost of purchase power and -- and natural gas and coal at our generating stations.

So, you have to -- you can't give us a scenario that says, do this and do this at the same time. They have to be -- you can only make one (1) assumption on where fuel costs are going. Those are driven by -- by -- by our long term view.

MS. LYN WRAY: I don't know if it would be helpful, Mr. Peters, but if you're trying to get a sense of the order of magnitude that prices would have played in the variation in 2003/4, there is an interrogatory that we responded to PUB/MH-II-20. Where the question was asked, you've shown us, typically speaking, what the difference would be between revenues under low flow conditions and revenues under median flow conditions, and you've shown us that that's $109 million.

But the difference that the extra provincial loss in fiscal 2004 was 165 million. Why is there a difference between this hundred and nine (109) and a hundred and sixty-five (165)? And I believe our answer said that we believed that the majority of the difference would have been

attributable to prices rather than flow volumes.
So, if you're looking for an order of magnitude, that might give you some indication.
MR. BOB PETERS: Ms. Wray, I'll check that then at the break and let you know if there's anything further on -- on that. Thank you.
I understood you to -- to say, Mr. Surminski, or Mr. Cormie that the IFF was based, after at least the current year, on median flows. Have I got that right?
MR. HAROLD SURMINSKI: After the current year, '04, -- the current year, '04/'05 and '05/'06 --
IFF '03 is the first year which is '03/'04, is based on current conditions. '04/'05 is based on median flows and '05/'06 and thereafter is based upon our weighted average costs and revenues, considering all flow conditions.
MR. BOB PETERS: Does that assume, then, when you -- when you prepare that, that 50 percent of the time you'll have to purchase additional power?
MR. DAVID CORMIE: No, it doesn't, because the '04/'05 estimate based on -- it was just based on pure median flow conditions.
And under median flow conditions, no -- the only purchases that are in the forecast are those that are purchased off-peak for resale in the on-peak to capture the on-peak/off-peak differential.

From ’05 and ’06 and thereafter, we estimate the costs -- assuming that each of the historical flow years can occur. And we -- we calculate the average cost of all power purchases in those eighty-five (85) flow years and that’s the cost that goes into the fuel and power purchase.

And the average of all our export sales is going into the -- into our ex-provincial revenue. I’m sorry, that’s eighty-six (86) years rather than eighty-five (85) years.

MR. BOB PETERS: Ms. Wray, regardless of the methodology to calculate net export revenue, you explained to me, I think before lunch, that there were -- were different ways that it was done for -- for different reports that you prepared, correct?

MS. LYN WRAY: Yes, we haven’t really had the need until recently to calculate that number. We have recently, I believe, done a calculation, which Mr. Wiens can elaborate on, for the cost of service study.

MR. BOB PETERS: All right. So maybe then I’ll make a note of that to -- to speak to him on but does -- do you -- are you aware of -- as to what other costs were netted against the gross export revenues under Mr. Wiens’ study?

MS. LYN WRAY: I think he would be best to talk to that.

(BRIEF PAUSE)

MR. BOB PETERS: Who on the panel will speak to the capital expenditures?
MR. VINCE WARDEN: I think we all might.
MS. PATTI RAMAGE: Not me.

(BRIEF PAUSE)

MR. BOB PETERS: From the materials provided in the filing, it appears that in your capital expenditure, 03-01, there's approximately $6.1 billion in forecast expenditures in the planning cycle.
MR. VINCE WARDEN: Over the ten (10) year planning cycle, yes.
MR. BOB PETERS: And that ten (10) year planning cycle, Mr. Warden, is from 2004 to 2014?
MR. VINCE WARDEN: Yes.
MR. BOB PETERS: And in the capital expenditure forecast that was done before the one (1) that's now filed with the Board, capital expenditures were $1.56 billion lower than the new numbers.
Is that correct?
MR. VINCE WARDEN: I believe that's the number. I don't have it in front of me but that sounds

right, yes.

MR. BOB PETERS: All right. This increase of $1.56 billion is also approximately, I suppose, 38 precent of additional expenditures on the capital side from one (1) year to the next in their forecast planning cycle.

Do you agree with that?

MR. VINCE WARDEN: Yes, and we go into the reasons in our capital expenditure forecast. It was filed as to why that occurred, primarily due to the addition of Wuskwatim into that -- into that cycle, I believe.

MR. BOB PETERS: Could you explain to the Board why Manitoba Hydro would approve a 38 percent increase in its capital expenditures forecast when it knows it's going to incur losses of 355 million which may be now or which are now more than $400 million in 2004?

MR. VINCE WARDEN: Well, you know, we're -- I indicated before, we're here for the long term. We have to plan for the long term and Wuskwatim is one (1) of those expenditures that begins over that planning horizon.

So every year we have to look at if we go out ten (10) and -- years and beyond and look at our requirements and it was time for -- to add the Wuskwatim generating station and other capital expenditures into the -- into that forecast.

MR. BOB PETERS: Are you telling the Board

that Hydro couldn't find capital projects to postpone or cancel to reduce its expenditures at this time?

MR. VINCE WARDEN: Well, we go through an exercise every year to postpone expenditures that are unnecessary. That is -- well -- or -- or that may not be necessary in the immediately -- upcoming year or years.

So capital expenditures -- the cap -- the capital program is somewhat fluid and new capital items are being added as the need arises and others are being deferred to make way for those new items as -- as required.

Because of the -- the drought situation we did go through an extensive review of capital to see which items could be further deferred from -- from the process that we've always followed, that is to only include in our capital expenditure program those items that are essential. And the ones that could be further deferred were -- turned out to be relatively minimal.

MR. BOB PETERS: What dollar amount were deferred?

MS. LYN WRAY: I think it's provided in my PUG-17-B. It looks to be in the order of about $30 million in total subject to check.

MR. BOB PETERS: And that was over the planning horizon, was it not?

MS. LYN WRAY: These were 2003/04 reductions.

MR. BOB PETERS: Mr. Warden, can you indicate if the approval by Manitoba Hydro on these capital expenditures is on a stand-alone basis for each project?

MR. VINCE WARDEN: Yes, it is. It's on a complex ba -- what we refer to as a complex, so a number of projects -- a complex could be comprised of a number of projects.

MS. LYN WRAY: That number is 28.5 million.

MR. BOB PETERS: Who at Manitoba Hydro makes the final decisions, Mr. Warden, on the capital projects?

MR. VINCE WARDEN: Well, the capital expenditure forecast is taken to our Board at least once a year for revision. And the Board has the ultimate authority as to what the capital program will be. During the year however, there are projects that are -- are recognized that will be added to the capital expenditure forecast at the next revision.

So it's the -- the executive committee reviews on a -- on a weekly basis pretty much, capital -- new capital items or revisions to existing capital items. And modifies the capital expenditure forecast on an ongoing basis which is always subject to final approval by the Board when it goes to the Board in the -- in the fall of each year.

MR. BOB PETERS: In terms of the impacts of these capital expenditures, I have a document at Tab 18 which

is PUB-MH-I-IR-50, Ms. Wray, maybe you can just briefly explain to the Board what you are demonstrating by answering this question, relative to the increase in capital expenditures from -- from 2003 to 2004?

MS. LYN WRAY: I believe what we did was run the forecast as if it had previous forecasts capital expenditures in it which would have omitted the approximate $1.6 billion new items that appeared in IFF-03.

And as a consequence of that there were changes primarily to interest expense and depreciation. Although in a few cases we were able to estimate some revenue impacts as well.

MR. BOB PETERS: What you're showing the Board though, is that there's a -- a negative on the net income of the Corporation as a result of the additional capital expenditures from your 2003 to the -- from the 2002 forecast to the 2003 forecast?

MS. LYN WRAY: What it shows is the -- the amount that would be charged to depreciation, interest net of revenues thereby affecting that income.

MR. BOB PETERS: In addition to that, Ms. Wray, it would -- it would also erode the debt/equity ration?

MS. LYN WRAY: I'm not sure that's the case because to the degree that we're adding assets there's -- there's an inter-relationship between adding to debt, so I

would have to check that. But I would -- I would think that that's the case given the current outlook.

MR. BOB PETERS: Would you also think that would strain the interest coverage ratio?

MS. LYN WRAY: Well, you're increasing the denominator of the interest coverage ratio, which by the way, I -- I misspoke yesterday, it should have been net income -- the numerator should be net income plus interest payments over interest payments.

So to the degree that interest payments and their denominator is higher, you would have -- that would have an impact on the interest coverage ratio, yes.

MR. BOB PETERS: And it would also -- this increase in capital would also reduce the capital coverage ratio?

MS. LYN WRAY: Yes. Again, though, I would make the caveat that we haven't in all cases identified revenue impacts for some of this capital. And we do know that, for example, investment in Wuskwatim and other projects that would generate export revenues will eventually more than repay any increase in debt/equity ratio.

MR. BOB PETERS: Does that answer indicate, Ms. Wray, that you haven't put any Wuskwatim revenues in the IFF?

MS. LYN WRAY: I would have to double check

and see if we -- I -- I would think we probably have got some Wuskwatim revenues in the IFF, it's just that they're very much at the front end.

If it comes into service in 2010, you're only going to get a couple of years of revenues flowing in, but our more extended analysis that we presented at the CEC hearings showed that after, I think it's something in the order of six (6) years, the debt ratio starts to improve quite markedly.

(BRIEF PAUSE)

MR. BOB PETERS: Sticking with capital expenditures, there is -- by the way, what is the planned now in-service date in the forecast for Gull? Is -- have you got that at hand?

MS. LYN WRAY: I believe it's 2012/13.

(BRIEF PAUSE)

MS. LYN WRAY: I -- I'm sorry, in the IFF-03 the -- there's no assumption that Gull would be advanced and accordingly, it would be in the forecast 2022/23 for domestic purposes only.

MR. BOB PETERS: In the capital expenditure,

there appears to be some expenditures planned for wind generation. Is that correct?

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

MR. BOB PETERS: And is the -- is the -- the load forecast showing two hundred and fifty (250) megawatts of planned wind added capacity?

MR. HAROLD SURMINSKI: Our resource plan indicates two hundred and fifty (250) megawatts by 2010.

MR. BOB PETERS: And is that -- and the capital expenditure forecast is based on two hundred and fifty (250) megawatts by 2010, Mr. Surminski?

MR. HAROLD SURMINSKI: Yes, but the capital costs are not for the entire two hundred and fifty (250) megawatts. Part of the two hundred and fifty (250) megawatt target is -- is going to be -- provided by purchased from non-utility generation, from -- from private generation.

MR. BOB PETERS: That's approximately a hundred (100) megawatts from non-utility generation?

MR. HAROLD SURMINSKI: That's correct. We had a hundred (100) megawatts in that plan. A further fifty (50) megawatts was -- was to be a joint venture.

MR. BOB PETERS: All right.

MR. HAROLD SURMINSKI: And -- and the remaining hundred (100) megawatts could have been Manitoba Hydro development or -- or purchase.

MR. BOB PETERS: But that joint venture is now off the table?

MR. HAROLD SURMINSKI: That's correct.

MR. BOB PETERS: And what about the hundred (100) megawatts of Manitoba Hydro development, has that been postponed?

MR. HAROLD SURMINSKI: That's -- that will take place only if it proves to be economical to do. We -- we will -- we expect costs of wind generation to -- to keep decreasing and based on -- on such predictions, it -- it may become economical. And so Manitoba Hydro will only develop on its own if -- if the costs are -- are proven to be economic.

MR. BOB PETERS: By what year will that be known as to whether or not they're economic?

(BRIEF PAUSE)

MR. DAVID CORMIE: Mr. Peters, while we're waiting for that, I have the response to two (2) undertakings that might be appropriate now.

With regard to our filing of our export contracts with the National Energy Board, we do that, but we do that with our all -- all price information blacked out. So, the contracts may be available in the public realm but

the price information is not.

The second question that you asked us to look into, you had on Tab Number 1 indicated -- it wasn't Tab 1, it was -- it was on the IFF on Tab Number 2 where you had -- we have shown fuel and power purchases of $480 million. And the question was, what portion of that was associated with our exports -- firming up of our export activities.

I can report that of the 480 million, 5 million of that is due to diesel costs, so there's $475 million associated with fuel and power purchases for serving domestic and ex-provincial load.

15 million of that 475 million is associated with serving the domestic load and the balance of the 475 million which would be 460 million is the forecast cost of -- of serving the export market.

So, the -- the great proportion of that $480 million is the cost of firming up -- of supplying the export market. This was based upon a forecast of hydraulic generation of twenty thousand, eight hundred (28,000) gigawatt hours.

Hydraulic generation actually came in at around eighteen thousand, five hundred (18,500) gigawatt hours, so there was significantly less hydraulic generation in the year. And as a result, the cost of replacement power would be much more -- to serve the Manitoba load would be

much more than the $15 million, but we haven't done that calculation.

Just to indicate that -- that -- this was the ratio at the time the IFF was prepared last August, actual results were far worse than that indicated because we did purchase more fuel and power.

The incremental was, according to this calculation method, would be chargeable to the domestic load. Does that answer your question?

MR. BOB PETERS: I believe it does, thank you very much, Mr. Cormie.

MR. VINCE WARDEN: Just -- just before Mr. Anderson gets too excited, I'd like to double check the -- the number -- the diesel fuel number is too high. That -- it isn't $5 million. I'm not sure where -- what the source of that was, but the total cost of operating the diesel communities is around $5 million, which is -- of which diesel fuel's a part, but it's not the total amount.

MR. BOB PETERS: All right, well subject to check then, we will --

MR. DAVID CORMIE: Yeah, all I can say is that of the four hundred and eighty (480) -- four hundred and seventy-five (475) came from my budget. Someone else is responsible for the other five (5). So, I'll leave that to Mr. Warden to wrestle with.

MR. BOB PETERS: All right, thank you for that. Bob could we take five (5) minutes?

THE CHAIRPERSON: Yes. We'll take the afternoon break at this time, thank you.

--- Upon recessing at 3:10 p.m.
--- Upon resuming at 3:25 p.m.

THE CHAIRPERSON: Should we -- we don't have a lot of time to go, so I think we'll start. By the way, I received some representations, that we shorten our lunch hour, if everyone's agreeable, tomorrow we'll come back at 1:30, if that's okay.

Okay, Mr. Peters...?

MR. BOB PETERS: Yes. Ms. Ramage has wanted us to mark some undertakings and some revised answers to an Information Request as the next two (2) exhibits.

And I believe we are on Exhibit number MH-16, Mr. Chairman, and I would suggest that Manitoba Hydro's Undertaking number 5 be marked as Manitoba Hydro Exhibit 16. And then I would also suggest that the revised response to PUB-MH-II-55, be given the exhibit number of Manitoba Hydro Number 17, subject to the concurrence from My Friend opposite.

THE CHAIRPERSON: Noting is set, we're fine.

--- EXHIBIT NO. MH-16: Answer to Undertaking Number 5.

--- EXHIBIT NO. MH-17: Response to PUB-MH-11-55.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Mr. Surminski, before the break, you and I were talking wind power, and I believe you were going to just check on a couple of matters. Have you done that?

MR. HAROLD SURMINSKI: Yes, I have checked on some information, I'll see what I can do on it.

MR. BOB PETERS: Please go ahead.

MR. HAROLD SURMINSKI: The -- first of all, the two hundred and fifty (250) megawatts that we have in our resource plan, consist of a hundred (100) in 2005, followed by fifty (50) megawatts in each of the next three (3) years. In '06/'07, another fifty (50), '07/'08 fifty (50) and '08/'09 a third fifty (50) megawatts.

And -- and for the breakdown it was somewhat confusing with the joint venture we have. I'll start with two hundred and fifty (250) megawatts total target and total that we have in our resource plan.

A hundred (100) megawatts is the Bison Wind -- the NUG purchase that we have. That leaves a hundred and fifty (150) megawatts that we should allocate.

A hundred (100) megawatts of that hundred and fifty (150) was intended to be the joint venture with Shell that we had planned.

So, Manitoba Hydro had fifty (50) megawatts of that hundred (100). So, Manitoba Hydro was responsible for the capital costs of only fifty (50) megawatts and that is the fifty (50) megawatts that's in -- in our capital expenditure forecast. It's half of the Shell joint venture cost of a hundred (100).

That leaves the remaining fifty (50) megawatts and that was intended to be Shell on their own or -- or any other developer on their own.

So that -- since Shell is out of the picture entirely now, the hundred and fifty (150) megawatts now, is -- is open to -- to either Manitoba Hydro development or -- or other private developers.

MR. ROBERT MAYER: Mr. Surminski, technically speaking, I understand, that would be hundred and fifty-one (151) megawatts because the tax implications for the NUG require that they can go to a maximum of ninety-nine (99) megawatts.

MR. HAROLD SURMINSKI: That's correct. Technically it's -- it's ninety-nine (99) in our -- in our applications and our licenses, et cetera.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: And I understood from the previous answers that Manitoba Hydro is -- has not committed to expending and -- and -- expending the full amount on the capital to proceed on that wind generation at this point because you have not yet determined if it's economic.

MR. HAROLD SURMINSKI: That's correct. We have not -- we do not have firm plans to do this. The capital expenditure again has funds as -- as a placeholder for -- for -- it's -- it's expected. We do expect the -- the wind costs to -- to continue decreasing and making wind economic.

In fact, our analysis of a two hundred and fifty (250) megawatt block of wind -- this is a separate two hundred and fifty (250) megawatt block, indicates for 2009, with the assumptions of 2.5 percent per year reductions in capital costs, so that's a cumulative 16 percent reduction by 2009, that the -- the economics are marginal at -- with an internal rate of return of about 9 percent.

MR. BOB PETERS: I take it you're not prepared as a Corporation to change the capital expenditure forecast, but you've decided to leave those items in there, and I think your word was, as another placeholder. Is that right?

MR. HAROLD SURMINSKI: That's correct.

MR. BOB PETERS: On the Kanawapa Project, is there an update you can provide to the Board, Mr. Warden, in terms of your discussions and studies with Ontario and the prospect of Kanawapa?

MR. VINCE WARDEN: Not really. No. Discussions are ongoing but there's nothing firm that can be reported at this time.

MR. BOB PETERS: In term -- was there a time-line set on those discussions with Ontario to either make a go/no go decision on the Kanawapa Project?

MR. VINCE WARDEN: Well, there's been some time-frame set out that I think are somewhat flexible.

MR. BOB PETERS: Is there a time-line you could tell this Board by which time Manitoba Hydro will be in a position to advise as to whether it will proceed on that project, or not?

MR. VINCE WARDEN: I would think the most recent time-line that I am -- am aware of was the end of this calendar year.

MR. BOB PETERS: And can you indicate to the Board whether Bi-Pole 3, or is that also known as the Hindi-Reil (phonetic) line?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: Is that -- is that Bi-Pole 3, a certainty at this point?

MR. VINCE WARDEN: No.
MR. BOB PETERS: Is there -- is it a certainty as to location if it gets built?
MR. VINCE WARDEN: Well, it's a certainty as to requirement. And Manitoba Hydro certainly wants to proceed with -- with the building of that line. It's a question as to routing.
MR. BOB PETERS: Is it only a question of routing or is it a question of whether or not Conawapa and -- and Gull proceed?
MR. VINCE WARDEN: Yeah, it's not dependant on the other stations, it's strictly a question of -- of routing.
MR. ROBERT MAYER: Mr. Warden, but it is correct that you can't -- or that it would be no sense to build either Gull or Kanawapa without Bi-Pole 3. I understand although Bi-Pole 3 isn't dependent upon the building of the other stations, the other stations are dependent upon the building of Bi-Pole 3?
MR. VINCE WARDEN: Absolutely, yes.

CONTINUED BY MR. BOB PETERS:
MR. BOB PETERS: In the capital expenditures forecast, Mr. Warden, why does Manitoba Hydro not limit its capital expenditures to -- to say depreciations for non-major

new construction and transmission?

MR. VINCE WARDEN: Would you mind repeating that question?

MR. BOB PETERS: Let me rephrase it. Presently from the answers you've given me, the only -- the only restriction on the capital budget is the yes or no decision of the management of the Corporation.

Would that be fair?

MR. VINCE WARDEN: Well, no, we still go through I mentioned the Board of Manitoba Hydro. I mentioned, I think, in my opening remarks the Crown Corporation's Counsel, the role they play in reviewing our capital expenditure program, Treasury Board at the province, we have to make sure we get Loan Act authority for our capital program.

So there's a number of processes that must be followed before we can spend capital dollars.

MR. BOB PETERS: I wasn't trying to -- to minimize those other -- those other agencies or bodies that have some involvement in the capital but the decision on whether or not to include a project in a capital forecast or not appears to rest with Manitoba Hydro and the executive, more particularly, of Manitoba Hydro ultimately as approved by the Board?

MR. VINCE WARDEN: Well, in terms of coming up

with the list of capital projects as we see them at any one point in time, yes, and this is our -- what we -- what we filed in our capital expenditure forecast CEF03, I believe, it's labelled, is our best estimate of what the future holds in terms of capital expenditures but recognizing that it is subject to almost continual update.

MR. BOB PETERS: There is no objective limitation on the amount that you will spend for capital related to non-major new generating stations from what I can tell?

MR. VINCE WARDEN: No, the -- the capital coverage ratio does give us some guideline as to whether or not the -- we're meeting our funding target for -- that is for funding capital expenditures from internal funds but for the most part, our capital program is driven by -- by need -- by need, whether it be for safety reliability, customer service, load growth. Those are -- those are the main drivers of our -- of our capital expenditure fore -- forecast.

MR. BOB PETERS: But the capital coverage ratio is not a driver to limit the capital expenditure forecast -- or the capital expenditure budget, is it, Mr. Warden?

MR. VINCE WARDEN: Well, realistically it can't be, no. It's just an indicator of the extent to which

those capital pro -- expenditures -- expenditures are being funded with funds internally but no, it's not a limiting factor.

MR. BOB PETERS: Why don't you use it as a limiting factor?

MR. VINCE WARDEN: Well, as I just indicated, the -- the capital program is driven by safety, reliability, customer demand. So if we were going to place limits, we'd have to put limits on those factors and -- and it's just not something we -- we can do realistically.

MR. BOB PETERS: Do you acknowledge that this methodology that Manitoba Hydro employs, exposes consumers to risks of high rates by continuing to spend money on capital in excess of the rates that the assets are being paid off or depreciated?

MR. VINCE WARDEN: Well, no, all of our capital assets are included in rate base. So, obviously if we spend capital dollars, it's -- it's going to work its way into the -- into the rates, and that's why we have a -- what we refer to as the integrated financial forecast, because the projected operating statement fully reflects the impacts of those capital expenditures.

So, yes, we're fully aware of the impact on rate -- on consumers.

(BRIEF PAUSE)

MR. BOB PETERS: When I reviewed with Ms. Wray, the document, I think number 18, in the book of documents from PUB-MH-I-50, I had understood there to be an impact on consumers because the net income was negative as a result of the capital expenditures, so that there is a short term impact presently on -- on consumers. There would also be a long term impact?

MS. LYN WRAY: Well, it's an impact on net income, and therefore on retained earnings, and would be one of many factors that would be considered when we seek a rate increase. But we've had increases to our capital expenditures over the last seven (7) years, and we haven't asked for rate increases.

So, it's not always the case that by spending capital dollars you have a rate increase.

MR. VINCE WARDEN: You know, an example of that would be the building downtown. We do have a capital amount in the capital program that would be reflected in -- in the numbers in -- at Tab 18.

And yet we haven't, I'm sure subject to Ms. Wray -- Ms. Wray confirming this, it's unlikely that we incorporate the savings that will result from bringing all the people together in one (1) location in this analysis.

That analysis -- that work on that has been done, but I don't believe it was incorporated in -- in this particular analysis.

(BRIEF PAUSE)

MS. LYN WRAY: I don't think there's anything other than the $75 million dollars for the head office building.

MR. BOB PETERS: And what you're say --

MR. VINCE WARDEN: So, that basically confirms what I just said. There -- there are -- this -- this shows that there is a negative impact on net -- net income, but we haven't picked up the positive impacts of expenditures, such as the -- such as the example that we just gave.

MR. BOB PETERS: And it doesn't also though, Mr. Warden, incur -- include the other costs that will be necessary to -- to complete the project and bring all these people together?

MR. VINCE WARDEN: Well, I -- I think, you know, we did indicate earlier that the $75 million dollar number is something of a place holder and we'll be updating that this -- this fall.

MR. ROBERT MAYER: Mr. Warden, the portion of those capital expenditures, and I think I've asked about this

before, are supply side enhanced?
MR. VINCE WARDEN: For the most part, yes.
MR. ROBERT MAYER: And again, from something I heard in the other place, those supply side enhancements are just what they say, and they are expected, as I understand it, to produce in some cases, significant extra revenue by upgrading some of your -- your turbines, to produce more power.
Each of them has a -- at some point in time, a positive impact on the balance sheet, if I understand the issue of supply side enhancement correctly?
MR. VINCE WARDEN: Well, you do. And that -- that is certainly what -- the point we're trying to make here, in looking at this one (1) item in isolation, probably misrepresents what the impact of those capital expenditures will be.

CONTINUED BY MR. BOB PETERS:
MR. BOB PETERS: Thank you. Mr. Surminski, let's see if we can use our time remaining today, to -- to deal with power supply issues. And you are in that part of the corporation that's responsible for the preparation of the power resource plan, am I correct?
MR. HAROLD SURMINSKI: Yes, that's correct.
MR. BOB PETERS: And can you tell this Board

what's -- what is the purpose of the power resource plan?

MR. HAROLD SURMINSKI: Well, one (1) of the primary purposes is to -- is to indicate and to provide funds for -- for studies of future generation options we protect. And by protect we -- we mean we study future generation options in enough detail so that we have reasonable cost estimates, reasonable estimates of the capability, of the generation capability of a facilities.

So, we -- we look at the -- at the load forecast in the future, look at our supply side resources that we have, our demand side, our DSM.

By looking at the combination and then looking at the net result of -- of when load keeps growing to the point of meeting or of using up all our surplus generation, that determines the in-service date of new generations.

So, one of the purposes is to determine the in-service date, the estimated in-service date of next generation of resources, purely for Manitoba Hydro requirements or domestic requirements.

And this would not be advancement of generation for export sales but just what would be required in the more of a business as usual approach, in the way we used to develop our system, just to install plants whenever we needed for -- for domestic requirements.

MR. BOB PETERS: On a shorter term basis, Mr.

Surminski, you also look at a power resource plan and prepare that, to figure out how you're going to meet the load in the current year or in the following year; is that correct?

MR. HAROLD SURMINSKI: Could you repeat the question, Mr. Peters?

MR. BOB PETERS: Well, is another -- is another purpose of your power resource plan to determine how you're going to meet the load in -- in the next year, as opposed to going down to when a new generation would be needed?

MR. HAROLD SURMINSKI: Generally the next year is -- is not of -- of concern, because we have been in an oversupply situation. So, the immediate term is -- is not usually a concern in -- in a power resource plan.

MR. BOB PETERS: And when you bring on new generation, you may -- you bring it on in very large blocks, which allows you to use the surplus for other purposes, such as those that Mr. Cormie has told us about?

MR. HAROLD SURMINSKI: Yes, for export sales.

MR. BOB PETERS: When you plan the resource plan for the domestic market, do you start with dependable flow conditions as the base for your hydraulic component?

MR. HAROLD SURMINSKI: Yes, in order to ensure security of supply, we -- we count on dependable, which is our lowest flow on record. It is something that we can

guarantee to be available.
MR. BOB PETERS: And your lowest flow on record was out of that 19 -- is it 1940/41 year?
MR. HAROLD SURMINSKI: Yes, that's correct.
MR. BOB PETERS: And it looks like I didn't put the right chart necessarily in the book, under Tab 8, but under the same Interrogatory, MIPUG-MH-I-17, you use a number under your hydraulic generation to meet the load of twenty-one thousand one hundred and say seventy (21,170) gigawatt hours. Is that -- is that the number that you're using for the dependable energy flow?
MR. HAROLD SURMINSKI: Yes, that's correct, that is the number for the year 2005/6. It does decrease slightly over time.
MR. BOB PETERS: Why does it decrease?
MR. HAROLD SURMINSKI: What -- what I spoke about earlier was the -- in response to your question about the Saskatchewan River, so really it's reflecting a deplete -- the depletion of river flows on the Saskatchewan River, over time.
MR. BOB PETERS: When you look at dependable energy, does that assume that your reservoirs are full?
MR. HAROLD SURMINSKI: Dependable energy assumes full reservoirs at the -- at the onset of a drought cycle, so it's not full at the beginning of the year,

’40/’41, it’s full at the beginning of that drought cycle period, which occurs in ’39 or -- or even before.

We -- we run a continuous sequence -- chronological sequence of the flows, in order to determine dependable energy.

MR. BOB PETERS: When we talk of your reservoirs, which ones are you relying on mainly?

MR. HAROLD SURMINSKI: Reservoirs under Manitoba Hydro control are -- are Lake Winnipeg the largest, Grand Rapids second and Southern Indian Lake are -- are three (3) reservoirs directly under our control.

MR. BOB PETERS: It sounds like there might be others as well?

MR. HAROLD SURMINSKI: We -- Stevens Lake does not contribute anything in terms of long term storage. Stevens Lake is -- is there for weekly. So, it’s -- it’s not significant at all in terms of long term storage.

MR. BOB PETERS: What about Lake of the Woods, Mr. Surminski?

MR. HAROLD SURMINSKI: Lake of the Woods is -- is somewhat considered but it’s not under the control of Manitoba Hydro. It’s under the control of the Lake of the Woods Control Board which -- on which Manitoba Hydro has representation. But we do not -- we do not count on -- on control of that at all. We -- we accept whatever we’re given

of the control by that Board.
MR. BOB PETERS: You also have in your method to meet the load, plans to import power. Is that correct?
MR. HAROLD SURMINSKI: Yes, we do have -- we do count on -- on firm imports of power in the long term.
MR. BOB PETERS: And you build into your -- your resource plan at least 10 percent or -- no, I'm sorry, no more than 10 percent being met by import. Is that correct?
MR. HAROLD SURMINSKI: Yes. We -- we had established a criteria many years ago that -- that we would limit ti the quantity of import energy that we would count on and the 10 percent was the -- was the limit.
MR. BOB PETERS: Why do you import energy to meet your resource plan?
MR. HAROLD SURMINSKI: Because it's an economic thing to do as long as -- as we can be guaranteed that we have that supply. It's a -- it compliments our -- our hydraulic system when -- because most of the time we do not need that quantity.
We -- we do have surplus flows above dependable in most years so a thermal guarantee of -- from the a thermal system which -- which -- where imports come from.
We always assu -- we -- it is assumed and it's

known that most thermal systems do have excess energy. They have capacity there for -- for their peak requirements and -- and they have their fuel there is coal or -- or gas is -- is there for pretty well 100 percent of the time. So, we can always count on -- on thermal energy imports from neighbouring systems.

MR. BOB PETERS: Are you telling the Board that these thermal imports are cheaper than your own cost of generation?

MR. HAROLD SURMINSKI: They are -- are not cheaper on a unit price basis but because we count on them very infrequently, like we talked about earlier. We do not -- do not have firm contracts and we do not have to pay any -- any cost, any demand charges and any to reserve these -- these imports.

We only count on -- on their availability when we need them and once in ten (10) years or -- or less frequently when -- when we actually need the quantities. The economics definitely make it attractive.

MR. BOB PETERS: These import arrangements you tell us are -- are not under contract as I understood your last answer. Is that correct?

MR. HAROLD SURMINSKI: We have energy guarantees, what we call energy guarantees with our counter parties to export sales. So, for example, the expired NSB

500 sale, we had fifteen hundred (1500) gigawatt hours of energy guarantees where, in adverse flow conditions in the Manitoba Hydro system, we -- we would designate our system in adverse flow and -- and we had the right to call on fifteen hundred (1500) megawatts -- fifteen hundred (1550) gigawatt hours of energy.

Similarly with diversity contracts, we had similar energy guarantees where -- where we could request the counter party to provide -- to provide this import energy.

So in a way they are -- they are contractual commitments but they're only if available in -- in their system.

MR. BOB PETERS: Is the price under contract or is it a market price?

MR. HAROLD SURMINSKI: It is market price.

MR. BOB PETERS: So you wouldn't know in advance necessarily whether it's going to be cheaper to import or to generate your own when you're doing your power resource plan?

MR. HAROLD SURMINSKI: Well, as I indicated earlier, it's -- the frequency -- the relatively infrequent quantity end and the times that we have to do -- we have to undertake imports makes the whole transaction economic.

So it's not economic when you actually have to do it one (1) in ten (10) years but -- but the other ten (10)

years, you more than make up for -- for those costs.

MR. DAVID CORMIE: Mr. Peters, I think the alternative to having interconnections would be to build more natural gas or coal fire generating stations in Manitoba. And if we -- and if we were to do that, we would have to incur the carrying costs of those facilities.

And -- and that's what's saved by relying on the surplus energy production capability of a neighbouring utility. They -- they're -- they have surplus production capability and they ma -- they make that available to us at no additional charge.

Now, the issue of what the price for the energy will be when you take delivery is no different whether you're purchasing the power or you're generating it yourself. You're exposed to the market price of natural gas or coal at the time you make the purchase.

So what you do is you save the carrying costs and the capital investment by relying on -- on a neighbour and -- but -- but you're still exposed to the actual fuel cost at the time that -- that the drought occurs, whether it's a fuel cost incurred through a power purchase or the fuel cost incurred through fuelling our own stations.

And -- and in our experience in negotiating these energy guarantees as part of an export sale, we've -- we believe that we, in effect, get a free call on energy.

And it's -- although at market price, the -- the option is at market price to build a facility in Manitoba.

So the risk is the same as if -- the price risk is the same as if we were having our own asset in place here in the province.

MR. BOB PETERS: Why do you then prescribe a 10 percent limit on your power resource plan to -- for imported power?

MR. DAVID CORMIE: We are -- these -- these energy guarantees, as Mr. Surminski said, are -- are -- are -- the supplying utility makes the energy available to them that is surplus up to a quantity that's capped.

Now, if they need that energy for their own -- their own use, it -- it won't be available to -- so there's no certainty that there is a supply there.

The supply is only there up to the amount that is in the contract. In order to limit our exposure to this type of risk, we've decided to cap that at that -- at that -- at that 10 percent as -- as a prudent way of managing the supply risk associated with not owning the asset.

MR. BOB PETERS: Mr. Surminski, you had told the Board in your direct comments through your Counsel that Manitoba Hydro is exposed to a shortage premium.

Is that correct?

MR. HAROLD SURMINSKI: In -- whenever Manitoba

Hydro is in a position of requiring large quantities of import energy, yes, the shortage premium -- it's a price/volume type of relationship. When you have a low volumes of imports, prices -- you can import in off-peak periods and -- and generally prices are low.

It's whenever you're getting into large volumes that there is -- is a risk that the shortage premium kicks in. Your counter parties know that you're in a short position and they'll just up their prices during that time.

MR. BOB PETERS: Does that happen more often than this one (1) in ten (10) year drought period?

MR. HAROLD SURMINSKI: It's directly related to -- to Manitoba Hydro's drought. Manitoba Hydro influences the market during -- whenever it needs large quantities, suddenly the -- the price of this energy increases significantly.

MR. BOB PETERS: Well, in 2004, for example, Manitoba Hydro had to pay one (1) of these shortage premiums on -- on many of its export arrangements. Would that be correct? On many of its import arrangements, I mean.

MR. DAVID CORMIE: The shortage pricing occurs in -- on stock market transactions, Mr. Peters, so that normally what you would see is that power prices in the northern United States are relatively uniform. If you were pricing power in Chicago or in Minneapolis there's very

little difference that you would see across -- across the northern US.

But when Manitoba Hydro is a large purchaser, there are transmission limitations that limit the extent to which Manitoba Hydro can reach out into the market and bring power to Winnipeg.

And so it's only those utilities who are closest to Manitoba Hydro in Minnesota and in North Dakota that actually can be effective suppliers because they're -- there's -- there's not enough transmission for us to bring power in from -- from -- you know, deep into the United States.

So then we are now -- they are now only a very few sellers who can serve Manitoba Hydro's needs and -- and Manitoba Hydro is in -- not in a very good position to negotiate prices. We are -- we've become a price taker and in that -- that we lose the ability to negotiate.

We can't go to Chicago, we can't go to other places in the United States and buy our power. We can only buy it from those utilities who have surplus power available.

And that -- that loss of leverage or that -- that leverage that they have, gives them the ability to charge a -- a premium.

Last winter the power prices in northern MAPP, on average were ten dollars ($10) a megawatt hour higher than

-- than the prices for an equivalent supply of power if we had bought it in Chicago.

Normally that basis spread would be zero.

MR. BOB PETERS: What was the total cost to Manitoba Hydro, then, in 2004 on account of this shortage premium?

(BRIEF PAUSE)

MR. DAVID CORMIE: I -- I -- I can only estimate that number using the -- the ten dollar ($10) spread and it would -- it would -- it could be as high as sixty (60) or $70 million. I'd have -- I'd have to do some calculations in order to determine what that would be.

The -- Manitoba Hydro is not -- the transmission system in the United States is not overloaded during the off- peak hours, so we can reach out farther into the market in the off-peak hours, so there's less risk in the off-peak as in the on-peak.

So of the eight thousand (8,000) gigawatt hours that we purchased, assuming that half of that was in the on-peak, that four thousand (4,000), and assuming that, let's say half of that was -- or a third of that was bought in the spot market, you know that might be fifteen hundred (1,500) gigawatt hours at a ten dollar ($10) premium.

Fifteen hundred (1,500) gigawatt hours that's -- you know, that's -- that's $15 million but it -- it -- it could be significantly higher than that.

But it's -- it -- it's many millions.

MR. BOB PETERS: Well, if you could refrain -- refine that, I'm not sure if your answer was sixty (60) to 70 million or only 15 million or was it a combination of the two (2)?

MR. DAVID CORMIE: One (1) of the -- one (1) of the risks that we were trying to manage through our forward power purchases last summer, was the risk of going to the spot market for a thousand (1,000) megawatts on a day ahead basis.

In -- in that situation, clearly we would be at a tremendous disadvantage and so -- in order to manage that risk, it was necessary for us to lock into fixed price contracts.

The ten dollar ($10) spread that I -- I indicated was -- was just on the spot market activity.

If -- if we hadn't hedged and made these forward power purchases, I -- I would estimate that -- that the price premium or the shortage price premium would have been significantly higher than that.

So I'm not sure on what assumptions you want us to make the estimate of -- of -- of -- of the quantity.

It -- it -- with no -- with our complete forward power purchase requirements hedged under long-term contracts, there would be no shortage pricing because we wouldn't be in the spot market.

If the forward purchases were not hedged at all, and we went to the spot market, it might be -- instead of being ten (10) dollars, it might be fifty (50) dollars. We don't know. We didn't want to go there. We didn't want to expose ourselves to that risk. So, it would just be speculative on my part. It's -- it's a -- when you -- when you need to by 8 million megawatt hours, it's prudent to hedge them, not to expose yourself to that risk. And that's what we did.

MR. BOB PETERS: All right, understood. Just maybe the last question in line before we adjourn for the day. In -- in looking at the PUB Manitoba Hydro Second Round Question Fifty-Nine (59) as found at Tab 13 of my book of documents. And I appreciate you giving me a -- a revised sheet.

But the import prices from September '03 to February '04, Mr. Cormie, you appear to come in around four (4) cents a kilowatt hour that was paid by Manitoba Hydro; and that appears to be significantly lower than the spot market off-peak prices which I understand were more in the range of six (6) to twelve (12) cents a kilowatt hour. Is

that generally correct? Do you recall?
MR. DAVID CORMIE: Are you referencing an Exhibit, Mr. Peters, that I could look at?
MR. BOB PETERS: The -- I was looking at -- at the revised Exhibit that you gave me this morning. I think it was Manitoba Hydro Exhibit Number 15.
MR. DAVID CORMIE: Yes.
MR. BOB PETERS: I was just looking at that from September '03 to February '04 and thought that the import prices were more in the range of four (4) cents a kilowatt hour, which seemed to be significantly lower than what the spot market prices were from what I understood. Which were maybe as high as six (6) to twelve (12) cents a kilowatt hour.
MR. DAVID CORMIE: Well, what you're looking at here is the average price for on and off-peak power purchases. So you'll -- in -- in -- the off-peak prices would have ranged in -- in -- about half the energy would have been bought at off-peak prices in the twenty (20) dollar range.
And so you can imagine that the other half would have to be in the sixty (60) dollar range in order to average out to somewhere around the forty (40) dollars that you're seeing here.
In addition to that, there is the demand

component that hasn't been shown in here. The demand component probably will add -- could be another fifteen (15) dollars. Ten (10) to fifteen (15) dollars per megawatt hour that's -- that's not shown and that would be -- that's the premium that we pay to lock into an on-peak fixed price supply.

So, it -- maybe it's -- would be a little bit clearer if we end up taking that evidence when the demand charge is -- is you'll see that the average has gone up and then if you remember that off-peak prices we -- we didn't have to -- there's no demand component on the off-peak prices. But if you consider them to be in the twenty (20), to twenty-five (25) dollar range, you can then apply from that what the on-peak prices might be.

MR. BOB PETERS: Can you indicate to the Board whether Manitoba Hydro did any forward purchasing in fiscal '04?

MR. DAVID CORMIE: Fiscal '03/'04?

MR. BOB PETERS: Yes.

MR. DAVID CORMIE: Yes, we did. In the Spring of -- in the Summer of -- of 2003. As we entered into the drought, we -- we purchased power for winter delivery as a -- as a prudent hedge against price and supply harvest.

MR. BOB PETERS: What was the net effect of that?

MR. DAVID CORMIE: The net effect of that was to give us a fixed price supply of assured energy to meet our load obligations during the winter. To -- and to avoid catastrophic price increases had we gone -- had we left our self exposed to the spot market.

MR. BOB PETERS: Can you quantify what the savings were to Manitoba Hydro by buying that forward electricity contracts?

MR. DAVID CORMIE: We can't do that because we don't know what prices would have gone to if we had left ourselves naked to the market for a thousand (1,000) megawatts of power in the real time market. We don't know what that would have done to the Northern Map price.

MR. BOB PETERS: Just to conclude on the -- just a second please?

(BRIEF PAUSE)

MR. BOB PETERS: Do you not weigh your actual purchases under the advanced contracts to what the spot market would have been, had you bought at the time you needed the energy?

MR. DAVID CORMIE: And that's the issue is that we don't know what the spot market price would have been driven to, had we not -- had we left ourselves fully exposed

to the spot price.
MR. BOB PETERS: And why wouldn't you just use the actual spot market that was available at the time?
MR. DAVID CORMIE: What -- the question is, what's that price, is it a hundred dollars ($100) a megawatt hour, or five hundred dollars ($500) a megawatt hour?
MR. BOB PETERS: Is there not a published spot market price out of say, Chicago, that would give you an opportunity to --
MR. DAVID CORMIE: But the Chicago market doesn't relate to northern map prices, because there's inadequate transmission to bring power from Chicago to Manitoba.
MR. BOB PETERS: All right. Just on that -- on the surcharge questions that we were talking about. You suggested that in times of Manitoba Hydro being in drought, your suppliers know that you're in need, and then they add on this shortage premium. Do you agree with that?
MR. DAVID CORMIE: The sellers of power charge what the market will bear.
MR. BOB PETERS: And when -- when they know that you're needing it, they know that you're prepared to pay more for it, because you need it?
MR. DAVID CORMIE: That sounds fair.
MR. BOB PETERS: And -- and is it also fair

that Manitoba Hydro would then include a premium of their own, or a surcharge of their own in the -- in the sales that it makes back to some of these jurisdictions?

MR. DAVID CORMIE: Manitoba Hydro charges whatever the market will bear.

MR. BOB PETERS: And you're telling me then that that would include what -- what would be the same type of premium in return, depending on what the market is on the day that this happened?

MR. DAVID CORMIE: Absolutely.

MR. BOB PETERS: The --

MR. DAVID CORMIE: Mr. Peters, an example of that is this summer. Manitoba Hydro, once it realized that water conditions were improving, we went to the forward markets, we sold our power at market prices for this summer, in the eight hundred dollar ($800) a megawatt hour range, because the market was willing to pay that.

And although our costs of generation will be the cost of our water rentals, that's -- that's the way the power industry operates, we charge market prices. And -- and that the -- the advantage that we have is nine (9) years out of ten (10), we will be able to charge market prices. One (1) year out of ten (10) we might have to pay market prices.

MR. BOB PETERS: And your fixed price contracts do not embed any -- any premium, would that be

correct?

MR. DAVID CORMIE: The -- the fixed price contracts are -- are generally indexed to some escalator, it could be the US GDPE inflator, the CPI that reflect long term real -- the long term real value of electricity. We have no long term contracts that are locked in at a single price. I believe that they're all indexed to -- at least to inflation.

Some of them are a bundled index tied to inflation and to natural gas prices. So, if natural gas prices skyrocket, we're able to capture some of that value through the gas price indexing that's a part of the formula that sets the price.

There are contracts where 50 percent of the price is tied to the escalation of natural gas prices, and 50 percent of the escalation is tied to the change in the US GDPE inflator, which is like the US CPI index.

And so as -- as energy prices move, then Manitoba Hydro is able to capture some of that increased value. However, some of our contracts aren't -- are not tied to natural gas, we were -- we were happy with negotiating an index that's just tied to inflation.

MR. BOB PETERS: What you're telling me is that while your fixed contract or your firm contracts have some formulas in them, they're not -- they're not market priced at the time that you deliver the electricity?

MR. DAVID CORMIE: They -- they may or may not be in sync with the annual variations in market price. But over the long term, because they are tied to the index, they reflect over the long term increasing value of -- of electricity, or the changing value of electricity.

One of the objectives of our customers, and they negotiate it, is to -- is to look for price certainty and gradualism in the price

the long term, the increasing value of -- of electricity, of the changing value of electricity. They don't want to be hit with price changes and market prices. They have to go to their regulators, as Manitoba Hydro does, and explain these -- these power price changes that they and their customers face.

So, one (1) of their objectives is looking for a long term, stable, predictable price of power. And so that's why they don't -- we -- we never talk to them about market price, that's not something that they're interested in. They -- they need something that they can -- that -- that either reflects the cost, the long term cost of electricity, or the long term inflation rate, or something that -- that gives them stability.

MR. BOB PETERS: Thank you. With that answer, Mr. Chairman, recognizing the time, I'd be prepared to start

tomorrow at nine o'clock.

THE CHAIRPERSON: Thank you, Mr. Peters. Thank you, everyone. We'll see you tomorrow at 9:00.

--- Upon adjourning at 4:13 p.m.

Certified Correct,

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Wendy Warnock, Ms.