MANITOBA PUBLIC UTILITIES BOARD

Re: MANITOBA HYDRO
COST OF SERVICE STUDY

Before Board Panel:

Graham Lane	- Board Chairman
Robert Mayer	- Board Member
Kathi Avery Kinew	- Board Member
Len Evans	- Board Member

HELD AT:

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APPEARANCES

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--- Upon commencing at 9:08 a.m.

THE CHAIRPERSON: Right. Mr. Warden is away. That's correct.

MS. PATTI RAMAGE: Yeah. He's -- executive committee this morning. He -- he could walk in anytime, I'm not sure.

THE CHAIRPERSON: It sounds like an excellent reason to be away. Okay. We'll return now to Mr. Williams.

MANITOBA HYDRO PANEL:

VINCE WARDEN, Resumed
ROBIN WIENS, Resumed
CHIC THOMAS, Resumed
HAROLD SURMINSKI, Resumed

CONTINUED CROSS-EXAMINATION BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Thank you, Mr. Chairman. And good morning, Members of the Board.

Mr. Surminski, I think when we finished off yesterday at ten (10) after 4:00 we had -- were just discussing the relative impact of -- of dependable or -- or firm exports on system plan and investment decisions

versus the impact of opportunity sales.

Do you recall that discussion?

MR. HAROLD SURMINSKI: Yes, I recall that.

MR. BYRON WILLIAMS: And we agreed, I believe, that dependable or firm exports drawn from dependable power play a different -- a fundamentally different role in system planning and system investment than opportunity sales, which are drawn from surplus capacity; correct?

MR. HAROLD SURMINSKI: Yes, I agree with that.

MR. BYRON WILLIAMS: And in terms of that difference I wonder if you would agree that expansion of any long-term sale requires the availability of surplus capacity and dependable energy on the system, or may require the advancement and building of new capacity.

Is that a fair statement?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And that's why, in the view of Manitoba Hydro, sales from its dependable portfolio can legitimately be ascribed a share of existing or new capital costs.

Would that be correct?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: By contrast, opportunity sales are always made from the existing system capacity and, therefore, do no incur capital costs.

Would that be a fair statement?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And I neglected to note that Ms. Desorcy is -- is here.

THE CHAIRPERSON: I thought maybe we were getting another garage.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Two (2) more garages, no. Mr. Warden I thought might have scared it away, he had mentioned the word "derivatives," but apparently she's back, in any event.

Now, Mr. Surminski -- and you can just -- the last little while I've been using the words firm or dependable exports interchangeably, is that a misnomer or am I okay to -- to be using those terms interchangeably?

MR. HAROLD SURMINSKI: We have labelled it firm in our filing, as I had indicated earlier. It really -- firmness is a -- is a guarantee of delivery and that's really not a -- a characteristic of -- of these classes of sales.

MR. BYRON WILLIAMS: We -- I want to look at the -- again, still on the issue of cost causality, but I -- I want to look at the difference in terms of cost causality domestic, firm export and opportunity export sales from a bit of a different perspective. And namely, in terms of the reliability of the service.

Are you prepared to go down that discussion with me, Mr. Surminski?

MR. HAROLD SURMINSKI: Yes. We'll see where that goes.

MR. BYRON WILLIAMS: And let me start first -- and, again, I'll try not to step upon Mr. Peters' toes. There might be a little bit of that, but let me start with domestic sales.

Am I right in observing that there is a class of customers known as curtailable customers or I think another way to call it is GSL greater than 100 kV curtailable.

Is that right?

MR. ROBIN WIENS: Mr. Williams, we do have a class of service, curtailable service it is provided to customer who qualify for it and I believe they are both in the over 100 kV and 30 to 100 kV classes of general service large.

MR. BYRON WILLIAMS: And I used the word

"customer," and I should have used the word "service;" is that right?

MR. ROBIN WIENS: That's okay, Mr. Williams.

MR. BYRON WILLIAMS: Well you got a little picky yesterday, Mr. Wiens so -- some people did Mr. Mayer -- just following up the domestic curtailable customer or service, my understanding is that they're treated domestic firm customers, except for contractually limited curtailments that can be initiated by Manitoba Hydro for the purposes of maintaining capacity reserves, is that correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And just so I understand it, is that the only reason that that service can be curtailed for the purpose of maintaining capacity reserves?

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Williams -- we've -- I believe we've filed material which indicates the basis on which Manitoba Hydro would carry out curtailments.

We would carry out curtailments in order

to maintain Manitoba Hydro's planning reserve obligations within the map region. To re-establish Manitoba Hydro's contingency reserves and to protect firm Manitoba load when operating reserves are insufficient to avoid curtailing firm load.

MR. BYRON WILLIAMS: So just so I understand it's -- the curtailments may be in the case of protecting planning reserves, contingency reserves or firm load, is that correct, sir?

MR. ROBIN WIENS: That's correct.

MR. BYRON WILLIAMS: And I don't want to get into too much detail about this program because it certainly may be beyond my abilities, if not yours, but I understand that in terms of the contractual limits found in these programs that they can define the maximum number of curtailments that can be initiated in any year, the maximum hours per curtailment and the maximum total hours, is that correct?

MR. ROBIN WIENS: Yes, that is.

MR. BYRON WILLIAMS: And I understand there's a couple of options, I think one (1) is option (a) and is the other option (e).

MR. ROBIN WIENS: There's actually more options than that, Mr. Williams. We have an option (a) which, if you'd like, I can go through some of the

different terms and conditions that are involved in that.

MR. BYRON WILLIAMS: Just, we'll stick with (a) and the only thing I want to confirm about (a) is that it covers most of the curtailable load available to Manitoba Hydro, is that right?

MR. ROBIN WIENS: I believe that's correct.

MR. BYRON WILLIAMS: And the maximum amount of curtailment for that with regard to option (a) in terms of the whole year is sixty-three point seven five (63.75) hours would that be correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And just so I understand, other than these curtailments provisions, Manitoba Hydro is obliged to provide firm service to these customers up to 110 percent of their contract levels as long as the customer desires service, is that fair?

MR. ROBIN WIENS: Yes that's fair.

MR. BYRON WILLIAMS: And I understand that -- I understand that it's served by firm transmission, is that correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Just so I understand this -- what is mean by the term, firm transmission?

MR. ROBIN WIENS: That means that under all normal operating conditions, that transmission is available to provide service to that customer.

MR. BYRON WILLIAMS: Okay. And what's a transmission contingency event?

MR. ROBIN WIENS: Transmission contingency event is a situation in which the transmission is not available to provide service.

MR. BYRON WILLIAMS: Thanks for the curtailable, I want to just move a little bit sideways to domestic firm sales which are not curtailable. When I use the term domestic firm sales, my understanding is this includes firm power for which reserves are carried by Manitoba Hydro?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And that -- that power is delivered via firm transmission; is that correct?

MR. ROBIN WIENS: Correct.

MR. BYRON WILLIAMS: And in terms of the domestic firm customers, I believe in Manitoba Hydro's material they indicated that it would -- that would survive a single transmission contingency event; is that correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: So is that something that distinguishes it from curtailable power?

MR. ROBIN WIENS: Well, I think it means that the system is designed so that we can maintain firm service to customers in the event of a single transmission contingency. Curtailable customer is not really defined in terms of transmission availability. You will note that we don't describe -- we don't describe that -- well, actually I believe we could curtail a curtailable customer in the event of a transmission contingency if there was no other option.

But normally we're looking at -- at -- it has to do with generation reserves.

MR. BYRON WILLIAMS: Thank you. I appreciate that. And just to finish up on domestic firm, and we've gone through this before, but the energy sold to domestic firm customers is dependable energy in that it can be delivered under the most adverse historic water conditions; correct?

MR. ROBIN WIENS: The system is planned to do that.

MR. BYRON WILLIAMS: And just moving to export sales in terms of -- I'm going to use the term firm power in terms of a category of export sales; is that a term you're familiar with?

MR. HAROLD SURMINSKI: Yes, it is.
MR. BYRON WILLIAMS: And my understanding is that this category of sale is identical in terms of dependability to domestic sales; would that be fair?
MR. HAROLD SURMINSKI: In terms of our planning for it and having supply guaranteed for it, yes.
MR. BYRON WILLIAMS: And, in fact, Manitoba Hydro carries reserves and firms transmission to support a firm export sale; correct?
MR. HAROLD SURMINSKI: Yes, that's right.
MR. BYRON WILLIAMS: Now, my understanding is Manitoba Hydro has five hundred (500) megawatts of seasonal diversity sale that fall into this category; correct?
MR. HAROLD SURMINSKI: In the category of firm sales, yes.
MR. BYRON WILLIAMS: And again energy, we've gone through that, but the energy sold for this -- from this -- as part of firm export is dependable; correct?
MR. HAROLD SURMINSKI: Yes, that's right.
MR. BYRON WILLIAMS: And just to be clear, system participation power is similar to firm power but with the exception that the customer provides their own reserves; is that right?

MR. HAROLD SURMINSKI: Yes, that's right.
MR. BYRON WILLIAMS: And transmission for this power is firm as well; correct?
MR. HAROLD SURMINSKI: Yes, that's right.
MR. BYRON WILLIAMS: And as I understand it all of Manitoba Hydro's long-term firm export sales, other than that seasonal diversity sale are of this type; is that correct?
MR. HAROLD SURMINSKI: Yes, I believe that's correct.
MR. BYRON WILLIAMS: And again, the energy sold under this type of sale is dependable; correct?
MR. HAROLD SURMINSKI: Yes, it is.
MR. BYRON WILLIAMS: Now, turning to opportunity export sales and we've gone through this too many times, but they're made from surplus energy and excessive dependable energy; correct?
MR. HAROLD SURMINSKI: Yes.
MR. BYRON WILLIAMS: And they can range generally from an hour to a -- to a year; correct?
MR. HAROLD SURMINSKI: Generally. We mentioned even five (5) minutes.
MR. BYRON WILLIAMS: Yes. I think I even brought that up yesterday. I apologize for that. Now, I

want to be clear sometimes in some of Manitoba Hydro's material they use the word "system energy"; what does system energy mean? There's a reference to it in, I think, PUB --

MR. HAROLD SURMINSKI: Yes, I have the reference. But I'm not sure exactly --

MS. PATTI RAMAGE: Mr. Williams, perhaps you could help me out and give me the reference?

MR. BYRON WILLIAMS: Yes, I should have. It's from going off of memory but I believe it's Tab 20 the CAC/MSOS book of references and it's PUB/MH/II-25 and on page 2 of 3 under the heading "opportunity sales" there is a reference to system energy.

No, Mr. Mayer, I'm going down another line, it says "system energy."

Are you familiar with that term, Mr. Surminski?

MR. HAROLD SURMINSKI: No, I'm not. But it seems to be the -- the lowest priority of energy sales. It's a terminology our traders have used. So if you see on the last page, page 3 of 3, the domestic firm is the highest priority and the system energy sales are at the very lowest.

MR. BYRON WILLIAMS: And just perhaps -- and hopefully you can answer this. If not, perhaps you

can provide me with clarity at a later point in time. But am I correct in suggesting that all system energy sales are opportunity sales?

Would that be correct?

MR. HAROLD SURMINSKI: Yes, certainly, that would be the case.

MR. BYRON WILLIAMS: So just going to the reference that you noted on the -- on the -- the next page of this interrogatory response, in terms of curtailment, you mentioned a -- mentioned a priority of curtailment.

Is that correct?

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

MR. BYRON WILLIAMS: And I want to leave aside curtailable for a second, but the first to go is system energy sales, then system participation export sales, then firm power export sales, and then finally domestic firm load.

Is that correct, leaving aside curtailable?

MR. HAROLD SURMINSKI: Yes, that is the correct order.

MR. BYRON WILLIAMS: And just so I understand, in terms of curtailable, if there's curtailable or curtailment available under the contract,

they follow only system energy in terms of ranking in terms of curtailment.

Is that correct?

MR. HAROLD SURMINSKI: Yes, it is.

MR. BYRON WILLIAMS: So they're the second to go?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: If there's curtailment available?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: However, if you've reached the maximum number of curtailments, then they're treated the same as domestic firm; correct?

MR. ROBIN WIENS: Yes, that's correct.

MR. BYRON WILLIAMS: So if you reach the maximum they're at the -- the bottom of the list in terms of curtailment?

MR. ROBIN WIENS: They'll be treated the same as any domestic firm load.

MR. BYRON WILLIAMS: Just so I understand -- and I'm not -- in a year of median water flows, let's take that customer from the option (a) category, would they expect to -- to reach their maximum number of curtailments, being sixty-three point seven five (63.75) hours?

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Williams, in a -- in a year of - well, water flows are not the primary determinant of whether or not we're going to carry out a curtailment. In a year of -- whether it's median or low water flows, it's an issue of whether or not the system can -- has the capacity to continue service.

MR. BYRON WILLIAMS: Thank you for that clarification. It's a capacity issue; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Just for a moment I'd like to compare and contrast the curtailable class versus opportunity sales. Just going back over what we've discussed.

And in the case of generation my understanding is that curtailable load must be served except under certain specific circumstances and then it can be cut only for the period defined in the contract; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: By contrast, opportunity sales are only made when there's sufficient surplus generation available; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And we've also agreed previously that curtailable is served by firm transmission; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Just going back to our discussion yesterday of the significance of power source from dependable power for system planning, operations and investment, I'm correct in assuming that curtailable clients are considered to be sourced from dependable supply and, therefore, from your perspective, it's appropriate to allocate to them a -- to the curtailable class a share of the fixed and operating costs of both generation and transmission; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And your -- and for those who might argue that the costs assigned to the curtailable class should resemble the costs assigned to the opportunity class of export sales, you'd argue that that is wrong; correct?

MR. ROBIN WIENS: Yes, that's correct.

MR. BYRON WILLIAMS: And that's wrong because curtailable power serves -- puts very real demands upon the system in terms of system planning demands and investment, whereas the -- the real incremental impact of opportunity sales is on variable

costs, would the be fair?

MR. ROBIN WIENS: That would be fair.

MR. BYRON WILLIAMS: Mr. Surminski and you may have been asked this question by Mr. Peters before by way of an undertaking, so if you have you'll clarify that for me.

But, in terms of firm exports whether those are seasonal diversity sales or system participation power sales, I wonder if you can indicate under what circumstances such sales could be interrupted without penalty to serve domestic load?

MR. HAROLD SURMINSKI: Yes, but I'd have to look it up. We have about four (4) different provisions in our responses. Would you want me to look that up?

MR. BYRON WILLIAMS: I don't need it right now, if you could just provide it for me at a later date, it's more for Mr. Harper's benefit, frankly, than my own. Would you be able to provide that by way of an undertaking?

MR. HAROLD SURMINSKI: Yes I could do that.

--- UNDERTAKING NO. 9: Indicate under what circumstances seasonal

diversity sales or system participation power sales could be interrupted to serve domestic load without penalty and if there are penalties, the nature of those penalties.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: And while you're doing that, and maybe I should have asked this first, if there are penalties, I wonder if you can indicate for each type of firm sale the nature of those penalties, would you be able to do that?

MR. HAROLD SURMINSKI: Yes, but, I believe there are no penalties.

MR. BYRON WILLIAMS: Okay. Thank you.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: I'm going to be turning for a brief period of time to the PUB book of references, Tab 13, which is the response to PUB interrogatory first round 22, the response from Manitoba Hydro sub (c).

And I want to explore the issue of reliability a bit more in terms of -- do you have that Mr. Surminski, it's the PUB book of documents that I'm referring to. The pile in front of you seems to resemble the pile in front of me but -- do you have that Mr. Surminski?

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

MR. BYRON WILLIAMS: And I -- really I'm looking at the opportunity exports and I'll be getting to a particular reference to the drought years, parts of 2002 through 2004.

But, just for clarity purposes, my understanding is that on a going forward basis, before we turn to this table, projecting five (5) years into the future Manitoba Hydro's expectation is the split between dependable or excuse me, firm export sales and opportunity export sales, will be approximately 55 percent for firm and 45 percent for drought, is that right?

MR. HAROLD SURMINSKI: Yes that's right.

MR. BYRON WILLIAMS: Excuse me, drought, I'm getting ahead of myself, Mr. Surminski you should be as picky as Mr. Wiens. That would be 45 percent for opportunity, is that correct?

MR. HAROLD SURMINSKI: Yes I was hearing what I thought I wanted to hear.

MR. BYRON WILLIAMS: I do a lot of that in these proceedings. I want to turn your attention now, though, to the year of 2003/04 and you'll see that firm exports for that year are about fifty eight hundred (5800) gigawatt hours whereas opportunity exports are about somewhere between eleven and twelve hundred (1100-1200) gigawatt hours, is that right, sir?

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

MR. BYRON WILLIAMS: And so in the drought year, opportunity sales accounted for only about 17 percent of export sales, in terms of gigawatt hours, correct?

MR. HAROLD SURMINSKI: Subject to checking an exact number, but it looks approximately correct.

MR. BYRON WILLIAMS: I think it's a bit less than 17 percent, but that's fine. And so in essence, looking at this year, in particular, opportunity export sales were drastically curtailed in response to the drought, is that fair?

MR. HAROLD SURMINSKI: Not necessarily curtailed, they were just not negotiated.

MR. BYRON WILLIAMS: Excuse me, exactly,

they were not negotiated. And that to a certain degree emphasizes the point that in times of limited energy opportunities, opportunity sales are often the first -- when there's limited energy supply opportunity sales are the first to go, is that correct?

MR. HAROLD SURMINSKI: First not to be there.

MR. BYRON WILLIAMS: Now, you're getting more precise and you're helping me out. I appreciate that. And I think Mr. Wiens has already implicitly answered this question, but in the drought year would I have expected the curtailment of curtailable service to -- to be materially different?

Would I have expected that to be significantly different than the -- than normal years?

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Williams, these things are never as absolutely clear cut as you've imagined them to be. The records that I'm looking at show that during the drought year we did, in fact, have more hours or curtailment than we've had in the subsequent years although not -- not of an order of magnitude of difference, simply higher.

And I don't have the information in front of me to be able to explain precisely why but there's been a suggestion that perhaps if drought is associated with heat there are capacity implications as well.

(BRIEF PAUSE)

MR. ROBIN WIENS: In this case I think we've determined that most of these curtailments occurred during the month of August which I do recall myself was an extremely hot month. One of the hottest in recent history and that would affect the availability of capacity.

MR. BYRON WILLIAMS: And I may have missed this on the record, Mr. Wiens, but the material that you have in front of me, can you give me a source for that -- where that is on the record?

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Williams, it's probably not on the record of this proceeding but this is reporting that we do on an annual basis in respect of our curtailable service program.

MR. BYRON WILLIAMS: Would it be for the

years of 2002/03 and '04; or would it be possible to get a report on that for the -- perhaps a few years, let's say from 2000 to 2004/05 in a fairly easy fashion, Mr. Wiens?

(BRIEF PAUSE)

MR. ROBIN WIENS: Yes, we can do that.

MR. BYRON WILLIAMS: Okay, and I don't want to put you to too much work so -- but perhaps for the years 2000/01 through 2004/05; would that be fair? You'll undertake to do that?

MR. ROBIN WIENS: Yes, we will.

--- UNDERTAKING NO. 10: Provide curtailment reports for the years 2000/01 through 2004/05.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Thank you. Staying on PUB/MH/I-22(c), when I look at the export volumes quoted by Manitoba Hydro, Mr. -- I'm not sure who to put this to, but are seasonable -- seasonal diversity exports included in those export sale volumes?

MR. HAROLD SURMINSKI: Yes, they are.

MR. BYRON WILLIAMS: Now, are seasonable

-- excuse me, seasonable -- are seasonal diversity imports included in Manitoba Hydro's reported purchase power dollars and/or megawatt hours?

MR. HAROLD SURMINSKI: Yes, they are.

MR. BYRON WILLIAMS: And where would I see those captured; under imports?

MR. HAROLD SURMINSKI: Under imports, yes.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: I want to turn briefly to the subject of judgment in the cost of service process and you may have covered some of this ground with Mr. Peters but I'll try, again, to travel upon new territory.

As I understand in interpreting the results of a cost of service study they indicate the degree to which the rate class or sub-class revenues recover allocated costs; is that fair?

MR. ROBIN WIENS: Yes, when you compare the forecast revenues with the forecast allocated costs, that is the information that you obtain.

MR. BYRON WILLIAMS: And you'd agree with me that all the -- although the study has the appearance

of exactness, it doesn't disclose the actual costs of serving a particular customer or group of customers, it only provides an approximation?

MR. ROBIN WIENS: Yeah, and not with absolute precision. We -- we believe it's approximately correct.

MR. BYRON WILLIAMS: And it's only approximately correct because there are many judgements involved in the process of classifying and allocating costs.

Is that correct?

MR. ROBIN WIENS: Yes. It's safe to say that there are judgments on some of the key matters affecting the allocation of costs.

MR. BYRON WILLIAMS: And perhaps the most important of those matters is capital investment; correct?

MR. ROBIN WIENS: Yes, that's correct. The -- the common costs which are not directly allocable to any particular customer or class of customers.

MR. ROBERT MAYER: Mr. Wiens, following up just briefly on that question. A number of times there's been a fairly clear suggestion, and I think fairly obvious to everyone involved in the hearings, that this process of assigning costs requires a significant

amount of judgment, hopefully judgment well reasoned but still, a significant amount of judgment and some amount of imprecision.

That being the case, and I know this Board has, on a number of occasions, expressed the desire to bring all classes to unity.

Firstly, is that possible having regard to the imprecision of the numbers?

And secondly, is it even reasonable to try to get your numbers any closer than plus or minus five (5)?

MR. ROBIN WIENS: To answer the first part of your question, it is possible. One can simply say, we accept without reservation the results of a particular cost of service study and we will set rates such that each customer class provides, on a forward looking one (1) year basis, test year basis, 100 percent of its costs. So that is possible.

Is -- is it reasonable to say that you're 100 percent precise? Mr. Chairman, I don't believe that it is. And that's why we talk about a zone of reasonableness, to -- to try and -- to try and put a less precise bracket on that assignment of costs.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Just to follow up on Mr. Mayer's question, if you could confidently directly assign costs then we wouldn't need a -- a zone of reasonableness because we'd have a -- a fair degree of confidence that class RCC's were accurate; correct?

MR. ROBIN WIENS: If we could confidently directly assign all of the costs to serve our customers, I -- I don't think we'd be here today, Mr. Williams.

MR. BYRON WILLIAMS: I'd be a much happier man. But just --

MR. ROBIN WIENS: You might not be, but you would be a more certain man.

THE CHAIRPERSON: I recall some of the other comments earlier in these proceedings, we must also remind ourselves that the costs can be defined differently by different people. And, as well, there's the old matter of to what degree does the COSS determine the final rates.

MR. ROBIN WIENS: All of that is true, Mr. Chairman.

CONTINUED BY MR. BYRON WILLIAMS:

Mr. BYRON WILLIAMS: Just in terms of -- just a brief follow-up again to the -- the question posed by the Vice-Chair.

In terms of some of the limitations of costs of service, not in a pejorative sense but in a realistic sense, one of the limitations is we can't directly assign all costs with any degree of confidence.

Would that be fair?

MR. ROBIN WIENS: Yes, that would be fair.

MR. BYRON WILLIAMS: And, again, you've already identified the issue of joint costs and the difficulty particularly as they relate to capital investments as a difficulty in -- in the confidence that we ascribe to classification allocation; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And another issue would be that the characteristics of each utility are somewhat unique. So while there may be some approaches that work well in other jurisdictions, they may not be applicable as well to our jurisdiction.

Would that be fair?

MR. ROBIN WIENS: That would indeed be fair.

MR. BYRON WILLIAMS: And I guess another complicating factor would be that when you're trying to understand for which purpose an investment was made that purpose may, in fact, change over time to a certain

degree; would that be fair?

MR. ROBIN WIENS: Yes, I think that's fair as well.

MR. BYRON WILLIAMS: And I -- I -- I probably misspoke. I used the word purpose but I should have said the word the use of that investment -- the purpose to which it's used over time may change; correct?

MR. ROBIN WIENS: That can happen. Yes.

MR. BYRON WILLIAMS: And I think an excellent example of that, certainly you don't need to turn to it, but is the unit -- the coal-fired unit number 5 at the Brandon Generating Station.

And you'll agree with me that originally its original role was to provide energy support to the predominantly hydraulic period -- hydraulic system during periods of drought; correct?

MR. ROBIN WIENS: It had a number of purposes, Mr. Williams, but that was definitely one of them.

MR. BYRON WILLIAMS: And it was, in fact, a very important role initially for this -- this unit; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And you know that it had a number of other purposes and some of those purposes

in the early days -- early time of that was also to support export sales; correct?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Yes, it would. It's a resource that we would not have expected to use often but it was there in the one (1) in ten (10) year low flow period.

MR. BYRON WILLIAMS: And I guess since the mid-1990's export prices have increased significantly and therefore the use and the operation of that Unit Number 5 to support export sales has also correspondingly increased; would that be fair?

MR. HAROLD SURMINSKI: Yes, that's what I had indicated earlier.

MR. BYRON WILLIAMS: And I guess that just goes back to the point that the use for which it was put over time has changed, not in absolute terms, but in relative terms; would that be accurate?

MR. HAROLD SURMINSKI: Relative to what?

MR. BYRON WILLIAMS: Let me try it again. In the old days you used it less for export -- supporting export sales and it was there more for reliability purposes; today it's operating all out to support export

sales; correct?

MR. HAROLD SURMINSKI: Yes. But not operating all out actually. We're -- we're not operating all out. We're operating at a reduced level but -- but many hours in the week.

MR. ROBERT MAYER: I realize that this is somewhat -- well, it's not off the topic but the coal-fired unit in Brandon; from where do you purchase the coal?

MR. HAROLD SURMINSKI: It's the Powder River Basin, Wyoming and that area. It's a cleaner quality coal so that's why we go further afield to purchase that coal.

MR. ROBERT MAYER: And do you have any special equipment on that generating unit to further scrub the coal?

MR. HAROLD SURMINSKI: Yes. There is a filter that removes a large percentage of the particulates, I think 95 percent or so.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Just to finish up on this -- this area of judgment, I want to turn to the issue of system load factor for just one moment and you'll agree with me, Mr. Wiens, that at best when we're

looking at cost causality, the use of system load factor at best provides a directionally correct link; would that be correct?

MR. ROBIN WIENS: It -- yeah, it is directionally correct.

MR. BYRON WILLIAMS: You'd agree with me though, that it cannot be considered to provide a very accurate tracking of the relative costs incurred to provide customers' capacity versus energy requirements; would that be fair?

MR. ROBIN WIENS: Well, it's difficult, Mr. Williams, in a system like Manitoba Hydro's to -- to find such a -- such a determinant -- most of the plants in the Manitoba Hydro system are designed to serve both capacity and energy unlike perhaps in some other systems where you could define types of plants that are available and used very, very few hours of the year.

So we've historically had this issue with how do you -- how do you define what is legitimately incurred to provide capacity and which is the -- which -- what part of our investment is incurred to provide -- to provide energy.

So the system load factor has been a proxy that has been used for a long time during the past because it was convenient and simple to do so.

MR. BYRON WILLIAMS: And I appreciate the substance of your answer, but just in terms of the direct question that was asking which is, that system load factor can not be considered as providing an accurate tracking of the relative costs incurred to provide for customers' capacity versus energy requirements, you would agree with that?

MR. ROBIN WIENS: Yes, generally I'd agree with that.

MR. BYRON WILLIAMS: And you've mentioned that it's been used for a long time for reasons of simplicity and convenience and presumably for want of something better in the Corporation's experience, to date there wasn't something that could do the job better, is that fair?

MR. ROBIN WIENS: Well, yeah I would say generally that's fair, yes.

MR. BYRON WILLIAMS: And just so I'm clear and I won't go into this in any great detail, but in this proceeding you're recommending that the Board consider something in terms of the marginal weighting of embedded costs, something that you think would be more and of greater assistance and accurately reflecting cost causation with regard to generation costs, would that be fair?

MR. ROBIN WIENS: That would be fair. I think it's fair to say that the marginal costs which are determined in a free and open market provide reasonably current price signals that we can use to say what energy is worth or what the output of a generator is worth, at a particular point in time.

And a process whereby we would take those signals and average them over a reasonably long recent period of time, may not capture as precisely as -- you know, current costs and the distinction between marginal costs and different hours of the year, it provides a good indicator and provides some stability, as well.

MR. BYRON WILLIAMS: So in your view while the new recommended proposal is not a perfect proposal it's a -- in terms of accurately measuring cost causation regarding generation it's likely to be more accurate and more representative than the system load factor, would that be correct?

MR. ROBIN WIENS: Yeah, it has the potential to maintain more accuracy over time.

MR. BYRON WILLIAMS: I'm going to be leaving this area fairly soon, but perhaps to take us towards the break, we've already talked about the Corporation's views in terms of the relative weight that should be assigned to firm versus opportunity export

sales in terms of embedded costs. I want to turn to the question or -- or an exploration of the issues between domestic sales and dependable or firm exports, in terms of their responsibility for embedded costs.

And in terms of the impact upon system design, Mr. Surminski, I wondered if you would agree with me that one (1) potential difference between domestic sales and firm export sales is that Manitoba Hydro is obliged to serve domestic load as it materializes while the decision to enter into an arrangement for dependable exports or firm exports is discretionary and subject to whether a business case could be made, is that one (1) fundamental difference?

MR. HAROLD SURMINSKI: Yes, I agree with that.

MR. BYRON WILLIAMS: And both you and Mr. Wiens yesterday, I believe, in your discussion with Mr. Peters expressed the opinion that, although it's not quantifiable, the incremental cost of generation and transmission associated with export is much lower -- would have a much lower unit cost than average embedded cost, would that be fair?

MR. HAROLD SURMINSKI: Yes that's right.

MR. BYRON WILLIAMS: And recognizing, as we've just discussed, that the allocation of joint

embedded costs of generation and transmission is hardly an exact science, I wonder if it would be your view that if anything, allocating a full share of generation and transmission costs to the dependable export class, might somewhat overstate its cost responsibility.

MR. ROBIN WIENS: I think we'd agree with that.

MR. BYRON WILLIAMS: Now, you've reviewed the evidence of Mr. Harper on behalf of CAC/MSOS, Mr. Wiens?

MR. ROBIN WIENS: Yes, I have.

MR. BYRON WILLIAMS: No doubt it's -- forms bedtime reading for you much as Mr. Bonbright's tome does.

MR. ROBIN WIENS: Well, it sits underneath Mr. Bonbright's tome, Mr. Williams.

MR. BYRON WILLIAMS: I use it as a pillow myself. And you're aware that Mr. Harper has expressed the view that in terms of the allocation of costs, the recommended methodology of Manitoba Hydro probably somewhat overstates the amount allocated to the export class and probably somewhat understates the amount one -- of generation transmission you might allocate to the opportunity class, but that overall it's a reasonable compromise.

And I wonder if you have some thoughts on the -- the tome that lies under Mr. Bonbright's bed -- or Mr. Bonbright's tome.

MR. ROBIN WIENS: Mr. Williams, yeah, we've provided our thoughts on -- on that particular tome and we filed them with this Board and with Intervenors.

MR. BYRON WILLIAMS: Just on that point though, let's go back to that point. Harper says probably a bit too much for -- allocated in terms of generation and transmission to the export class and probably not quite enough in terms of the opportunity class but given the limits of this -- this approach, that's a reasonable result.

And what's your view on his opinion?

MR. ROBIN WIENS: Well, I think he's viewing it from a pretty similar perspective to the way that -- that we viewed it when we put it forward, which is, as -- as I believe I've -- I've commented in response to Mr. Peters, you may be able to put a -- a finer desegregation in place at considerable cost in terms of resources and time spent in studying it.

But we think it is -- it is a reasonable compromise and -- and it is within -- within a group of -- of recommendations on this and related matters that we've put forward in our recommended method that I think

is a reasonable compromise and -- and allows for a reasonable margin of safety in terms of the impact on all of our customer classes.

So that would be my comments on that.

MR. BYRON WILLIAMS: I appreciate that.

Mr. Chairman, I have a few questions that might properly be put to Mr. Warden and there's also a question -- because I note that Ms. Hunter is here -- in terms of the order that our -- our cross-examination may proceed. I just want to -- and I wonder if I could step down -- I'm not sure when Mr. Warden is expected to be back.

MR. ROBERT MAYER: Mr. Warden just walked by --

MR. BYRON WILLIAMS: Ah, okay.

MR. ROBERT MAYER: -- about five (5) minutes ago.

MR. BYRON WILLIAMS: So I wonder if we might step down just a bit early. I -- I'm mindful of time constraints for today.

THE CHAIRPERSON: There's no problem. Okay. We'll have our break a little early. We'll come back at ten (10) after 10:00.

MR. BYRON WILLIAMS: Okay. And I'm not promising I'll be up next. It may be my colleague, Ms.

Bowman, and I may return.

THE CHAIRPERSON: That's fine.

--- Upon recessing at 9:53 a.m.

--- Upon resuming at 9:55 a.m.

THE CHAIRPERSON: Welcome back, Mr. Warden.

MR. VINCE WARDEN: Thank you Mr. Chairman.

THE CHAIRPERSON: I hope you made some money for the people of Manitoba while you were away.

MR. VINCE WARDEN: We're always trying.

THE CHAIRPERSON: Mr. Williams, are you recommencing or is your colleague?

MR. BYRON WILLIAMS: My Friend Ms. Bowman is.

THE CHAIRPERSON: Very good, please proceed.

MS. PATTI RAMAGE: Before Ms. Bowman jumps in, I just thought because I've spoken with My Friends from CAC/MSOS and they've advised me of the topic of their next area of cross, so I thought it might be timely to introduce a new member of our back row, who I suspect we will see the front rows backs a few times,

while they consult with Mr. Bill Hamlin who is Manitoba Hydro's energy policy officer.

I also thought I should introduce -- we have brought next to Ms. Fernandez, our new articling student who this is her first day of work, she graduated last week from law school. So we're having her jump right into administrative law and that's Ms. Theresa Vandean is in our back row, also.

THE CHAIRPERSON: Welcome to both of you.

MS. MYFANWY BOWMAN: Thank you Mr. Chairman, members of the Panel. I'm hoping everyone can hear me.

CROSS-EXAMINATION BY MS. MYFANWY BOWMAN:

MS. MYFANWY BOWMAN: I have some questions dealing with the implications of Mr. Lazar's report. And I will be, I hope, blessedly brief.

The first question I have is, can someone on the Panel, and I'm not going to direct my questions to anyone specific as I'm not sure who deals with what, but hopefully can give me a sense of what proportion of Manitoba Hydro's generation is associated with some kind of material CO2 emissions? I assume that that would be diesel and natural gas coal, but there may be other things too.

MR. HAROLD SURMINSKI: On average in an average flow year, less than 3 percent of our generation would be from those sources.

MS. MYFANWY BOWMAN: And are there factors or system changes or whatever that might be inclined to make that percentage go up or down?

(BRIEF PAUSE)

THE CHAIRPERSON: Ms. Ramage's prediction is being realized.

MR. HAROLD SURMINSKI: First of all, are you limiting it to Manitoba Hydro generation as opposed to import energy?

CONTINUED BY MS. MYFANWY BOWMAN:

MS. MYFANWY BOWMAN: Let's talk about Manitoba Hydro generation to start with?

MR. HAROLD SURMINSKI: Yes, Manitoba Hydro during drought conditions, lowest -- low water conditions, we depend on our non hydro resources so our thermal plants, so gas fire generation and coal fire generation. So that could be three thousand (3000) gigawatt hours, I'm going off the top of my head, out of thirty thousand (30,000) so it could be up to 10 percent.

MS. MYFANWY BOWMAN: Would export prices be a factor that might affect Manitoba Hydro's emissions in terms of the frequency, for example, with which you might run Brandon?

MR. HAROLD SURMINSKI: Yes, we had indicated that favourable export prices are the cause of running Brandon more frequently, Brandon coal as opposed to natural gas.

MS. MYFANWY BOWMAN: Now, my initial questions related to CO2, are there other emissions that Manitoba Hydro produces through its generation? And I'm a hydro neophyte, so you'll have to bear with me.

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Yes, we produce noxious, oxo-noxious, nitrogen oxides, sulphur dioxide and mercury, as well as particulates.

THE CHAIRPERSON: Ms. Bowman, just before you continue and before the thought leaves my mind. You were speaking a minute ago about the preference, if you like, of coal over natural gas because of the spike in natural gas, could you correct my misunderstanding if I do misunderstand it, natural gas prices have fallen back substantially from the peaks where I understand coal is

still substantially high relative to the past; is that true, or not?

MR. HAROLD SURMINSKI: Yes, the costs of the fuels, but the generating plant that we have, our combustion turbine is very inefficient in converting gas into energy. It's a single cycle. It's not a combined cycle, so the very low efficiency causes it to be costly to generate electricity economically.

THE CHAIRPERSON: So even if natural gas prices have fallen by say, spot market 60 percent from the peak in December and coal remains double what it was a year or so ago or two years ago, that comment still remains as it --

MR. HAROLD SURMINSKI: Yes, the efficiency of burning coal through the steam process, is much higher than gas through the single cycle process.

THE CHAIRPERSON: Thank you. I apologize Ms. Bowman.

MS. KATHI AVERY-KINEW: Ms. Bowman, can you move your mic closer, please?

MS. MYFANWY BOWMAN: I'll try and speak up too.

THE CHAIRPERSON: You're doing fine.

MS. MYFANWY BOWMAN: Thank you.

CONTINUED BY MS. MYFANWY BOWMAN:

MS. MYFANWY BOWMAN: With respect to Brandon, how does -- I'm assuming Manitoba Hydro does take Brandon emissions into account when deciding whether or not to run that particular facility.

Can you tell me how Hydro takes that into account?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Before we dispatch the operation, means operate the plant -- we had put an adder on and it's approximately two dollar ($2) a megawatt/hour for environmental considerations. So we -- we consider the environmental factors as a penalty and -- and don't dispatch just for, you know, a single or very little profit. We allow a little adder in -- in the decision.

MS. MYFANWY BOWMAN: Am I correct in understanding that's a notional adder, you're not actually adding that on to anyone's bill.

Am I right?

MR. HAROLD SURMINSKI: No, that's right. That's only in making the decision when we turn on the coal plant.

MS. MYFANWY BOWMAN: Okay.

(BRIEF PAUSE)

THE CHAIRPERSON: Ms. Ramage, if it would be more efficient, we could always swear the gentleman in and move him up to the front row along with the rest of you.

MS. PATTI RAMAGE: That's exactly what we were thinking. We were just wondering if Ms. Bowman could give us an idea how -- how many more questions she has in this area and if it is going to bog us down that much, maybe we'll bring Mr. Hamlin up to the front row.

MS. MYFANWY BOWMAN: There might be a few.

MS. PATTI RAMAGE: Come on up, Bill.

MS. MYFANWY BOWMAN: Get comfortable, Bill.

THE CHAIRPERSON: Mr. Barron, would you spring into action, please.

THE CHAIRPERSON: It's not quite a promotion, Mr. Hamlin, so don't rejoice.

MS. PATTI RAMAGE: This would be the time to negotiate.

WILLIAM HAMLIN, Sworn

THE CHAIRPERSON: Ms. Bowman, over to you.

CONTINUED BY MS. MYFANWY BOWMAN:

MS. MYFANWY BOWMAN: Were you wanting to clarify the answer regarding the CO2 adder for Brandon? I -- I noted there was a lot of discussion.

MR. WILLIAM HAMLIN: The -- there are circumstances upon which that could be a real cost. If -- if our emissions exceed our commitment levels under our voluntary commitment, our corporate voluntary commitment, and/or our Chigaco Climate Exchange commitment.

But to date we have remained in a surplus position under both of those commitments. So there has been no requirement to purchase offsets for those emissions.

MS. MYFANWY BOWMAN: Is -- is there technology available that would permit us to retrofit Brandon to make it -- to produce fewer emissions? Is that possible? Does that technology exist?

MR. WILLIAM HAMLIN: Is your question specific to greenhouse gas emissions or -- or other emissions?

MS. MYFANWY BOWMAN: Well, Mr. Surminski had mentioned that there's already a filter for particulate matter, so I don't know if we can do better with respect to particulate; but anything, whatever Brandon is giving off, is there anything we can do about it?

MR. WILLIAM HAMLIN: They -- there are technologies to further mitigate emissions of particulates. You can go from electrostatic precipitator, which is what we have now, to something like a bag house which reduces it from something on the order of 95 percent efficient to 98 or 99 percent efficient at taking out those particulates.

There are additional scrubbing technologies that could remove sulphur dioxides or a portion of the sulphur dioxides. There are theoretical technologies for mercury, although there's still a great deal of discussion about what technologies might be practical to mitigate those emissions.

But for -- and for greenhouse gas it's the focus of a great deal of research in terms of how you could best strip the CO2 emissions out of the exhaust stream and sequester those in an underground fashion. It's probably -- it would probably never be cost-effective for Brandon 5 because it's a relatively small

plant.

MS. MYFANWY BOWMAN: Just out of curiosity, what do you do with it once it's underground?

MR. WILLIAM HAMLIN: And then it's -- it's -- it's thought to be permanently sequestered much as natural -- much as natural gas is -- is stored in reservoirs in continuity.

MS. MYFANWY BOWMAN: So as I understand it there's some technology that is or potentially might be available down the road. And am I correct in assuming that for the benefit that would be derived, Manitoba Hydro doesn't feel that that's an efficient use of resources?

MR. WILLIAM HAMLIN: Yes, that it would probably never be economic to retrofit a plant for those -- for that technology. It may become economic in the -- in the broader North American context to build new plants specifically to -- for that purpose.

MS. MYFANWY BOWMAN: Is that something that's on Manitoba Hydro's horizon right now?

MR. WILLIAM HAMLIN: It -- it's not part of our -- our current planning context other than to -- to monitor the -- the progress and status on an ongoing basis.

MS. MYFANWY BOWMAN: Now, as I understand

it because of the cost of natural gas fuel the gas-fired units at Brandon, and I assume Selkirk, are not being used very much?

MR. WILLIAM HAMLIN: Correct.

MS. MYFANWY BOWMAN: And are they being used at all?

MR. HAROLD SURMINSKI: They are not used for generation purposes but they are used for training -- staff training and testing of the equipment. Staff have found that it is necessary to keep up their skills so there are something like one (1) or two (2) days a month that testing takes place.

MS. MYFANWY BOWMAN: In its decisions not to run the natural gas-fired facilities, does Manitoba Hydro take into account greenhouse gas emissions from those facilities?

MR. WILLIAM HAMLIN: It -- it's a consideration, as we said, for Brandon but it -- it's not a significant consideration. It's dwarfed by the -- the -- the cost dispatch question.

MS. MYFANWY BOWMAN: What would be the consequences, and I suspect they would be wide ranging, but what would be the consequences of choosing not to use the -- the Brandon coal unit, first of all, for export purposes; to reserve it simply for domestic need should

the need arise. Has anyone considered that?

MR. WILLIAM HAMLIN: Well, the -- the environmental consequences, when we talk about greenhouse gas policy, we talk about leakage and if not everybody is playing by the same set of rules the economic opportunity and emissions migrate to somewhere where they're less constrained.

So, that is our expectation, if we put arbitrary constraints on our dispatch of -- of Brandon 5 we would lose the economic opportunity to -- to use that generation and it would migrate to anywhere outside of our control, the Dakotas or Saskatchewan, somewhere where they haven't imposed such a constraint upon themselves.

MS. MYFANWY BOWMAN: Would there be -- I assume there would have to be some kinds of financial consequences for Manitoba Hydro if it were to make that kind of a choice, as well. Can anyone comment on that?

(BRIEF PAUSE)

MR. WILLIAM HAMLIN: Those resources play a very important role within our system, while on average we are -- generation becomes 97 percent typically from hydro power, that thermal resources plays an important niche role. And if it wasn't there, it would come --

it's removal would be at significant economic cost.

We would not only lose the opportunity sales that come from the dispatch of those units, but also the capability to back up the firm sales with the dependable energy.

We haven't got an estimate of what kinds of costs would come at their loss but it is considerable.

MR. ROBERT MAYER: I'm assuming, sir, that those units are part of your 12 percent reserve that we read about?

MR. HAROLD SURMINSKI: Yes, on the capacity side, the reserve is for capacity.

CONTINUED BY MS. MYFANWY BOWMAN:

MS. MYFANWY BOWMAN: And they would also presumably be part of your firm energy on the basis of which you can then enter into -- sorry, your dependable energy on the basis of which you can enter into firm contracts and so on and plan your system, in general, is that right?

MR. HAROLD SURMINSKI: Yes they're central to our planning, it's something thirty-two hundred (3200) gigawatt hours of energy, 10 percent of our supply is from thermal resources.

MS. MYFANWY BOWMAN: So even if you don't

use it, having it is important?

MR. HAROLD SURMINSKI: Yes.

MR. LEN EVANS: Excuse me, just for a matter of clarification, I'm very interested in the Brandon plant. For many years I used to look out of my living room window and watch the Brandon plant operate.

Since then they put a row of housing when I lived right on Pembina Way in Brandon East. But, my understanding that historically this plant and the Selkirk plant were used for peak purposes. In other words, if it was a time of peak demand and water was perhaps lower at that time of the year; and that was essentially a seasonal function.

Now, I'm just trying to clarify in my own mind because of the changing market conditions in the United States, higher prices, it's now economic to run these plants throughout the year and whatever, including the exportation of that power, for the net economic benefit of the hydro system.

Is that a correct understanding?

MR. HAROLD SURMINSKI: Yes, that is correct. And as earlier testimony had indicated export prices were one and a half (1.5) cents a megawatt hour, fifteen (15) years ago and coal wasn't greatly different from what it is today. So you could easily see -- and

the cost of generation is in the order of twenty or twenty-five dollars ($20-$25) a megawatt hour, so fifteen dollars ($15) and one a half (1.5) cents.

That fifteen dollars ($15) a megawatt hour with the value of exports and the cost of generating by coal was pretty well the same. So it was not -- it was not economic to generate for export.

But now with the value of export rising to fifty dollars ($50) a megawatt hour and -- and cost being twenty-five dollars ($25), or in that order, you can see there is a -- a quick profit to be made on that.

MR. LEN EVANS: Just as a subsequent -- would any of the power in January, February peak time be considered -- I know this is very complicated to figure out, but would you consider part of that being dedicated to meet your peak load as well as any exportation?

MR. WILLIAM HAMLIN: The -- our thermal units play a variety of roles and even -- even going back historically, probably one of the -- one of the biggest roles is the energy guarantee against drought, but they are also dispatched to meet peak needs and -- and also fill roles as such regional voltage support and -- and a variety of other roles.

MR. LEN EVANS: Thanks.

CONTINUED BY MS. MYFANWY BOWMAN:

MS. MYFANWY BOWMAN: So just to go back to the question I had asked about the consequences of not using Brandon for export.

Can I assume then that if, for example, Manitoba Hydro were to choose to decommission Brandon, the consequences would be the same or that much greater?

MR. WILLIAM HAMLIN: Could you repeat the question.

MS. MYFANWY BOWMAN: You had talked about the consequences, both environmentally and economically, of not using Brandon, the coal facility, for export purposes.

If Manitoba Hydro were to decide not to use that facility at all, I assume that the consequences would be the same or -- or greater.

That's a safe assumption?

MR. WILLIAM HAMLIN: Yeah. Or greater.

MS. MYFANWY BOWMAN: And in addition to the consequences we talked about, Manitoba Hydro would probably then have to look at things like advancing generation -- other generation projects, Wuskwatim or something else.

MR. WILLIAM HAMLIN: It would have to look at advancing hydro generation or building additional

new fossil fuel generation or increasing our reliance on imports.

MS. MYFANWY BOWMAN: And, in the same vein, if Manitoba Hydro were to decide not to use its natural gas fired facilities, again the consequences would be similar. You're not really using them a lot right now but having them is important in terms of -- of the other activities you can then undertake.

Is that right?

MR. WILLIAM HAMLIN: The -- the energy guaranteed benefit is significant.

MS. MYFANWY BOWMAN: So -- so there would be similar consequences if -- if Manitoba Hydro were to choose not to use those facilities?

MR. WILLIAM HAMLIN: Yes.

MS. MYFANWY BOWMAN: Okay. Thank you.

How does Manitoba Hydro take into account emissions, either of CO2 or other pollutants, in terms of making resource planning decisions? And I'm sure it's a complicated answer.

MR. WILLIAM HAMLIN: I'm struggling to try and figure out a way to make it simpler.

We -- we look at the emissions associated with resources. We factor in costs for those resources in planning exercises, costs for those emissions. Those

costs are -- are based on what we're seeing forecasted in -- in the US marketplace for various emissions, for the non-greenhouse gas emissions and for greenhouse gas emissions.

We are coming up with assumptions for what would -- what would be in place in the Canadian marketplace. And those costs are included in -- in the various resources and compared with other resources that don't have those emissions.

So they're internalized as costs.

MS. MYFANWY BOWMAN: And that would obviously be simply for the purposes of making decisions as opposed to actually passing on those particular costs to somebody.

MR. WILLIAM HAMLIN: Correct. Correct. Those are considered too so that we've given due consideration so that if those things -- if those costs evolve as we expect they will we will have fully considered them and not have made decisions in error.

MS. MYFANWY BOWMAN: Now, we've talked about the Brandon facility particularly, is there anything we need to add to that answer if I ask you about how Manitoba Hydro takes emissions into account in making operations decisions for the system more broadly or is the answer the same?

You talked about the -- sort of the CO2 adder that you use notionally for Brandon.

MR. WILLIAM HAMLIN: I'm sorry, I got lost. Could you try one more time?

MS. MYFANWY BOWMAN: I asked you a few minutes ago about how Hydro makes decisions about whether or not to use Brandon at any given time. You had mentioned that there was a CO2 adder that you used notionally in making that decision.

If we look beyond Brandon to the system as a whole, is there anything other than that that Manitoba Hydro does to take emissions into account when making decisions around what to run and what not to run at any given time?

MR. WILLIAM HAMLIN: The -- the consideration of emissions in the dispatch of units are restricted to those units that have emissions so there wouldn't be considerations beyond the Brandon and Selkirk.

(BRIEF PAUSE)

MR. WILLIAM HAMLIN: Brandon is two-thirds (2/3) of the total thermal generation.

MS. MYFANWY BOWMAN: So -- so really the

issue is the same?

MR. WILLIAM HAMLIN: Yeah. Yes.

MS. MYFANWY BOWMAN: That factor, the CO2 adder, is that taken -- treated any differently if you're making a decision to generate for export purposes as opposed to domestic purposes or is the process the same regardless?

MR. WILLIAM HAMLIN: The consideration for the adder is the same regardless of whether it's domestic or export.

MS. MYFANWY BOWMAN: Manitoba Hydro purchases power on a reasonably regular basis from other utilities; is that right?

MR. WILLIAM HAMLIN: Correct.

MS. MYFANWY BOWMAN: Where does Manitoba Hydro tend to purchase its power from? I don't need an exhaustive list, just a general idea would be sufficient.

MR. WILLIAM HAMLIN: Predominantly from -- from the US marketplace.

MS. MYFANWY BOWMAN: Do you know how much of that purchased power is generated in a fashion that would be associated with materials emissions?

MR. WILLIAM HAMLIN: What, we would consider is that all the units with low dispatch costs are already -- are already dispatched so -- so it is

predominantly a mixture of coal and natural gas high -- higher operating cost generation that we would be relying on to import.

MS. MYFANWY BOWMAN: So the majority of the imported power would be generated in that fashion, you would expect?

MR. WILLIAM HAMLIN: We would expect, yes.

MS. MYFANWY BOWMAN: And as I understand it most of Manitoba's power purchases, on average, would be for export or resale purposes as opposed to for domestic use; is that right? Or in a very unusual year?

MR. HAROLD SURMINSKI: Yes. Depending on the flow year. So in normal water conditions it would be for export purposes. But the one (1) in ten (10) lower flow year would be for domestic security.

MS. MYFANWY BOWMAN: Does Manitoba Hydro do anything in terms of taking into account emissions when deciding whether to purchase power? Or where to purchase, for that matter?

MR. WILLIAM HAMLIN: For -- for the types of purchases that -- that we do, no, we wouldn't -- we don't -- we consider those -- well, indirectly we do -- we do consider those. When we quantify our global impact on greenhouse gas emissions we consider our net exports.

So we -- we factor in the emissions reductions that could be displaced by our exports but we reduce those by the amount we import.

So there is an indirect consideration when we assess global -- the global impacts of our total operations. But, no, there isn't a consideration like the -- like for the dispatch of the -- of our own units.

MS. MYFANWY BOWMAN: So just to make sure I understand you, when you're for example, reporting on or making decisions about Manitoba Hydro's global greenhouse gas emissions, you would consider emissions from imports.

But when you're making a decision on Tuesday morning, we're going to purchase some power today, you don't factor it in at the level, am I right?

MR. WILLIAM HAMLIN: That's correct.

MS. MYFANWY BOWMAN: Okay. But to some extent when you're deciding whether to purchase power as opposed to, for example, run Brandon it's factored in for Brandon because you're applying, sort of the shadow greenhouse gas premium for Brandon but not for the import, is that also right?

MR. WILLIAM HAMLIN: That's correct.

MS. MYFANWY BOWMAN: We've talked about emissions for a little while, so let's talk about

something new.

MR. ROBERT MAYER: Before we leave that--

MS. MYFANWY BOWMAN: Okay.

MR. ROBERT MAYER: -- I've been wanting to ask this since we had the first answer.

When you were asked about emissions you indicated sulphur dioxide and nitrous oxide, I understand those are basically producers of acid rain, am I correct?

MR. WILLIAM HAMLIN: Correct, those are constituents of acid rain.

MR. ROBERT MAYER: And what surprized me is when you put mercury on that list, I understood that sometimes we would leach mercury out in the fore bays and that would eventually -- because that was a natural process.

Where are we producing mercury in our gas fired equipment?

MR. WILLIAM HAMLIN: There's no mercury in our natural gas fired generation, but there is mercury as a constituent of the coal.

MR. ROBERT MAYER: I understand mercury to be relatively heavy, what happens to it?

MR. WILLIAM HAMLIN: You may be going beyond my expertise. I understand that it's expressed in -- in two different forms, an organic form and inorganic

form. But --

MR. ROBERT MAYER: It goes out the stack.

MR. WILLIAM HAMLIN: It goes out the stack, yes.

MR. ROBERT MAYER: Thank you.

MR. LEN EVANS: I wonder if I could ask a supplementary question before we get off the emissions topic. Greenhouse gas emissions essentially come from Selkirk and Brandon, these are the two points for Manitoba Hydro?

MR. WILLIAM HAMLIN: That's correct.

MR. LEN EVANS: Do you have any idea of what percentage of total emissions, greenhouse gas emissions in Manitoba come from these sources? I know I've seen a figure somewhere produced by the Manitoba Department of Energy which estimated 35 percent of greenhouse emissions come from motor vehicle operations on our roads.

That's one figure that sticks in my mind. But I didn't remember seeing any number related to the Selkirk and Brandon operations of hydro, but I would imagine it would be fairly small?

MR. WILLIAM HAMLIN: I haven't got those numbers. I can -- I can undertake to find them for you, but they are a small portion of Manitoba's total

emissions, subject to correction I believe they're less than 5 percent. And compared with other utilities as a portion of their generation, it's extremely small.

MR. LEN EVANS: If you could get that information, it would be very useful.

MR. WILLIAM HAMLIN: I will.

MR. LEN EVANS: Thank you.

--- UNDERTAKING NO. 11: Provide information on the percentage of greenhouse gas emissions that come from Manitoba Hydro

MS. MYFANWY BOWMAN: I'll thank the Board because you reminded me of something else that I had intended to ask.

CONTINUED BY MS. MYFANWY BOWMAN:

MS. MYFANWY BOWMAN: We've talked about Selkirk and Brandon, but, there's also your diesel stations. And they would presumably be responsible for some emissions, would that be fair?

MR. WILLIAM HAMLIN: Yes, they are not -- but they are relatively small compared with our total emissions and are not considered in the same fashion as

the resources that are connected to our integrated system.

MS. MYFANWY BOWMAN: What does that mean?

(BRIEF PAUSE)

MR. WILLIAM HAMLIN: Twelve (12) gigawatt hours a year as opposed to three thousand (3,000) for our other resources, demonstrates that it's -- it's a very small piece of the picture.

They're not -- I'm not sure what the -- the process is for considering the implications of those -- those resources, but they're not part of the considerations of emissions in terms of the -- the dispatch criteria and those other things that we've discussed.

MS. MYFANWY BOWMAN: Because there aren't any alternatives in those -- in those communities; is that right?

MR. WILLIAM HAMLIN: Yes.

MR. ROBIN WIENS: That's correct.

MS. MYFANWY BOWMAN: Okay.

THE CHAIRPERSON: The proper way of expressing that may be, I'd offer, there's no other economical options.

MR. ROBIN WIENS: Well, in the long -- the longer term, perhaps that's correct. In the short term, there are no other options, period.

MS. MYFANWY BOWMAN: That was -- that was the point I was trying to get at.

MR. ROBIN WIENS: They're what other places we call must-run plants.

CONTINUED BY MS. MYFANWY BOWMAN:

MS. MYFANWY BOWMAN: And would it be fair to say that in determining whether to maintain diesel generation in those communities or to look at other options such as connecting into the grid, greenhouse gases may be one (1) of the many factors that Hydro would consider?

MR. WILLIAM HAMLIN: I think that's correct.

MS. MYFANWY BOWMAN: And -- and if I understand -- if I take anything from all of this, would it be fair to say that there are a lot of complex issues that go into this decision-making process -- all of these decision-making processes that we talked about, and greenhouse gas emissions are one (1) factor among many?

MR. WILLIAM HAMLIN: Correct.

MS. MYFANWY BOWMAN: Moving on then to --

to something other than greenhouse gases, just for a change.

Are there other environmental impacts related to Manitoba Hydro's generation transmission distribution of power?

MR. WILLIAM HAMLIN: So you're talking about implications coming from all of our system?

MS. MYFANWY BOWMAN: Yeah. For example, yes, the dams and those kind of generation stations, transmission lines, all of that, the whole system.

MR. WILLIAM HAMLIN: There are --

MS. MYFANWY BOWMAN: An overview is fine.

MR. WILLIAM HAMLIN: There are environmental implications with every human activity. I don't know where to -- to start but there are implications for -- for all of our resources.

MS. MYFANWY BOWMAN: Can you give us a very brief summary of the highlights, how would that be? Very brief.

MR. WILLIAM HAMLIN: Resource by resource?

MS. MYFANWY BOWMAN: If that's what makes sense of you, yes. Perhaps you can talk about hydro generation as a start. I believe flooding is something I've heard something about.

(BRIEF PAUSE)

MR. WILLIAM HAMLIN: It just so happens I was reviewing a Canadian Electricity Association pamphlet this morning that dealt with this.

THE CHAIRPERSON: It's nice to know you're not plagiarising, Mr. Hamlin.

MR. WILLIAM HAMLIN: Demand side management options have no direct air emission, greenhouse gas emissions, water use impacts or extraction implications, but can have disposal implications if -- depending on what they're made of and if there are hazardous materials.

Resev -- hydro power has no criteria. Air pollutants, no direct greenhouse gas emissions, can have implications due to flooding, flow pattern changes, implications for habitat, but doesn't have any significant extraction or waste implications.

It can have both positive and negative implications for recreation activities. It can have implications for fishery resources. Natural gas generation has lower air criteria pollutants than coal and medium levels of greenhouse gasses.

It can have thermal discharge implications from the cooling water and -- and water demands

associated with the cooling. It does have resource extraction issues associated with the collection of the natural gas. But no -- no waste issues.

Conventional coal has high levels of criteria air pollutants, high levels of greenhouse gas, the thermal discharge and cooling water requirements that -- similar to natural gas.

It has mining extraction type issues associated with getting the coal and it has wastesa left over after the combustion that must be disposed of. Are those the kind of implications --

MS. MYFANWY BOWMAN: Precisely, yes. It was a delightfully succinct summary.

THE CHAIRPERSON: No reference to wind, Mr. Hamlin?

(BRIEF PAUSE)

MR. WILLIAM HAMLIN: Wind power has no direct air criteria pollutants. No direct greenhouse gas emissions. No implications on water use. Doesn't have a fuel that needs to be extracted and any residual wastes that are left over.

There could be implications for birds and bats in certain circumstances. And going beyond this

some of the things that we would think of is visual disturbance, flicker effect which is another form of visual disturbance and noise implications.

CONTINUED BY MS. MYFANWY BOWMAN:

MS. MYFANWY BOWMAN: And are there any significant environmental impacts related to transmission or distribution?

MR. WILLIAM HAMLIN: There -- there are implications in terms of you're changing -- you may be changing a habitat from -- from one type to another so instead of forest there may be a low bush or a grassland type habitat. A conversion of habitat.

And there are considerations that must be taken for -- it's just creating a linear disturbance and do those have any -- any important impacts.

MS. MYFANWY BOWMAN: Forgive my naivete but what's a linear disturbance?

MR. WILLIAM HAMLIN: Does -- does the bisection of a habitat like putting this strip of a different type of habitat down the middle of it cause any implications for the habitats on either side.

MS. MYFANWY BOWMAN: Thank you. And would it be fair to say that Manitoba Hydro tries to take all of these different considerations and probably others

into account when it makes decisions about system planning?

MR. WILLIAM HAMLIN: We strive to factor in all of those considerations to the best of our abilities.

MS. MYFANWY BOWMAN: Would it be fair to say that that's a fairly complicated process?

MR. WILLIAM HAMLIN: Yes. Yes.

MR. LEN EVANS: Yes, sort of a corollary question. I gather the question -- line of questioning is the impact of Hydro and its operations on the environment of Manitoba and everyone's concerned to minimize negative implications, even the bats and the birds.

But there's another consideration and I don't know whether it's adequate or fair for a provincial jurisdiction but another consideration is that the large and growing amount of exports, at least from time to time from Manitoba to the mid-western United States is a major contribution to environmental protection in North America because what we're doing is essentially using hydro power to replace thermal generation in the upper Mid-Western United States.

And that to me is a very significant contribution of Manitoba Hydro to the environmental

problems we face in North America. Am I right in that observation?

MR. WILLIAM HAMLIN: I would agree with that.

THE CHAIRPERSON: Do your American counterparts place any monetary value on that contribution?

MR. WILLIAM HAMLIN: It -- it is difficult to ascertain in a negotiation what -- what various components your counterparty is considering in -- in establishing what they think is a fair purchase price.

But to the extent that they're considering it against resources that they would develop they are striving -- it's our understanding that they're striving to factor in the risk that whatever resources they develop will have to offset or mitigate these emissions and have the costs associated with them.

So it -- it's our understanding that it is a consideration within their -- their thinking.

MR. HAROLD SURMINSKI: I would just like to follow up on Mr. Evans' point on the displacement of the greenhouse gases. In the Wuskwatim Clean Environment Commission hearing we used that argument a great deal; the displacement that Wuskwatim would assist in displacing greenhouse gasses in export markets.

THE CHAIRPERSON: How does the -- our coal thermal plant compare with plants of that nature that are used to generate electricity with your MISO colleagues with respect to emissions?

MR. WILLIAM HAMLIN: My -- my understanding is that for -- compared with plants of comparable size and age they -- they are roughly -- roughly equivalent. There are probably economy of scales and drivers that larger facilities in that region may have greater -- have more mitigation technologies associated with them for scrubbing of sulphur dioxides and -- and perhaps particulate collection.

THE CHAIRPERSON: Thank you, Mr. Hamlin.

Ms. Bowman...?

(BRIEF PAUSE)

CONTINUED BY MS. MYFANWY BOWMAN:

MS. MYFANWY BOWMAN: Sorry, I was just making a note there. Manitoba Hydro takes into account displacement of greenhouse gasses in export markets in making export decisions; is that fair?

MR. WILLIAM HAMLIN: My mind is drifting, could you hit me with that one one more time?

MS. MYFANWY BOWMAN: I got it out clearly

all at once and you want me to do it again? Manitoba Hydro takes into account displacement of greenhouse gas emissions in export markets in making export decisions; would that be fair?

MR. WILLIAM HAMLIN: We -- we consider the implications in terms of tracking what our global -- our global implications are. We strive to -- to get our counterparties to sign over any emission reduction benefits that might come associated with our sales.

And I think that -- that's the limit of our -- our consideration.

MS. MYFANWY BOWMAN: Okay. And so to some extent Manitoba Hydro takes that into account. But Hydro is also required to take into account environmental implications at home of its generation and distribution choices, is that also fair?

MR. WILLIAM HAMLIN: That's correct.

MS. MYFANWY BOWMAN: So would it be fair to say that it's a balancing act that Manitoba Hydro has to maintain as best it can at all times?

MR. WILLIAM HAMLIN: We've tried to maintain all those considerations to the best of our ability.

MS. MYFANWY BOWMAN: And that's a fairly complex process?

MR. WILLIAM HAMLIN: Correct.

MS. MYFANWY BOWMAN: Moving onto something a little bit different, I understand that the thinking behind DSM programs is that they lead to conservation which can allow us either to defer new plant or to export more power, is that right?

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

MS. MYFANWY BOWMAN: Are there plant additions that have been deferred or are currently being deferred as a result of conservation efforts in Manitoba?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Yes, we have an existing DSM saving that's already built into our system, into our planning. So the next in-service date accounts for or takes into account this saving the DSM has provided.

MS. MYFANWY BOWMAN: Thank you. Now, to go back to the issue of displacing greenhouse gas emissions and export markets, is it Manitoba Hydro's understanding that when it sells a kilowatt hour of power to an export market, is it displacing an entire -- is there a one (1) for one (1) exchange in terms of what

it's displacing, or does Manitoba Hydro know?

MR. WILLIAM HAMLIN: We consider that for a kilowatt hour that we export it displaces a mixture of coal and natural gas resources and we use a proxy emission factor that's in between those two (2) resources to consider the implications.

Coal -- coal being -- having an emission factor of about one (1) ton per megawatt hour and the best natural gas having an emission factor of about point four (.4) tons a megawatt hour, we use a factor of about point seven five (.75) for our calculations.

MS. MYFANWY BOWMAN: That wasn't actually quite what I was trying to get at. When you sell a kilowatt hour into an export market does Manitoba Hydro know whether it is displacing an entire kilowatt hour of production in that market, or is it simply allowing the kilowatt hour in the export market to be used for some other purpose?

MR. WILLIAM HAMLIN: Unless you're trying to factor in transmission line losses, it's -- it's one (1) kilowatt for one (1) kilowatt.

MS. MYFANWY BOWMAN: So as far as Manitoba Hydro is aware if we sell a kilowatt hour down south they don't produce that kilowatt hour, as opposed to they produce a kilowatt hour and they do something

else with it?

MR. WILLIAM HAMLIN: Correct. Every kilowatt hour we deliver at the US border we consider a kilowatt hour of generation displaced.

MS. MYFANWY BOWMAN: Does Manitoba Hydro have any research or evidence to support that belief or is that simply an assumption that Hydro is making?

MR. WILLIAM HAMLIN: Again, falling back to the only consideration that could come into play is the line losses, and we would consider the line losses comparable -- for every kilowatt hour we deliver at the border, our assumption is line losses from the alternate US source to get to the US load are comparable to transmission from our border to that load.

MS. MYFANWY BOWMAN: It -- it is not actually line losses I'm trying to get at. I'm trying to get at generation and export markets.

And if Manitoba Hydro exports a kilowatt hour, does that export market then not generate a kilowatt hour or does it generate a kilowatt hour or part of it for some other purpose? Or does Manitoba Hydro have any idea?

MR. WILLIAM HAMLIN: I'll fall back to other -- other than the line loss issue there -- there's no other consideration that we would add into that. So

it's a kilowatt hour for a kilowatt hour.

MR. HAROLD SURMINSKI: Can you suggest what you're thinking of? Because energy is a fixed quantity and if there is a demand in the US, you know, a kilowatt hour is a finite amount and --

MS. MYFANWY BOWMAN: What I'm trying to get at, and -- and perhaps I'm -- I'm asking it awkwardly, and I apologize if that's the case -- what I'm trying to get at is if we export more, does the export market then produce less or does it produce the same amount and simply use more? Or do we know?

MR. HAROLD SURMINSKI: It's a one-for-one relationship. If the demand is -- is there, in the US, it's either that -- must be generated in the US or it's generated here. There is no multiplying or dividing factor in the energy. A unit of energy is -- it's the same here as it is there.

MS. MYFANWY BOWMAN: Thank you. I'm not sure that -- that I'm communicating my question as clearly as I should but I'll -- perhaps I'll try someone else.

MR. WILLIAM HAMLIN: I think -- I think we're now understanding the -- the question. We -- we would not consider Manitoba Hydro's exports to have a significant impact on the -- the supply and demand

characteristics of the US market. We're a fairly small contributor into that -- into that marketplace.

And so I think perhaps what you're getting at is -- is perhaps because our resources might be lower-cost, that it would provide an incentive to -- but I don't believe it would provide an incentive to additional energy demand. I -- I don't think that's the case.

We sell at the market price within the US market. And so I don't think that that's a significant consideration at all.

MS. MYFANWY BOWMAN: And do you know that or is that simply your assumption?

MR. WILLIAM HAMLIN: That is our assumption.

MS. MYFANWY BOWMAN: Fair enough.

MR. ROBIN WIENS: I -- I might add, I think that's a reasonable inference to make because, as Mr. Hamlin indicated, in the global marketplace in the United States, Manitoba Hydro is a very small player. And even if it were not, even if it were a significant player such that it could influence the price in that marketplace, you know, the typical elasticity response to price of electricity is considerably less than unity.

So I think it's a reasonable inference, what Mr. Hamlin has stated.

MS. MYFANWY BOWMAN: Thank you, Mr. Wiens.

Now, as I understand it, as of 2003 exports were displacing primarily but not exclusively coal generation in export markets.

Is that right?

MR. WILLIAM HAMLIN: I said a mixture of -- of coal and natural gas resources.

MS. MYFANWY BOWMAN: I'm looking at Manitoba Hydro's VCR report, the 2003 update. And as of 2003 the report says that:

> "Currently, almost all of our exports displace coal fired generation."

Would that be an accurate statement as of 2003? Do you want me to read it again?

MR. WILLIAM HAMLIN: I would -- I would concur with the statement. There -- there's an expectation of a changing balance and that our historic resources displaced mostly coal and -- and there is increasing amounts of natural gas in the mixture that is being displaced.

MS. MYFANWY BOWMAN: Your foresaw where I was going. In fact, the report indicates that:

> "By 2010 it is assumed that Manitoba Hydro will offset mainly natural gas

fired generation."

Is that your understanding as well?

MR. WILLIAM HAMLIN: That -- that was our understanding in 2003. But since then our expectations have changed because of the natural gas prices and the -- and the difference in economics between coal and natural gas. We would still consider that more natural gas is displaced than historically but we would not assume that it migrates completely to a natural gas displacement over time now.

MS. MYFANWY BOWMAN: Are you expecting that that trend will continue and that over time you'll be displacing more and more natural gas and less and less coal?

MR. WILLIAM HAMLIN: We expect that there will be -- our -- our expectation is -- is summarized by a mixture of combined cycle natural gas, simple cycle natural gas and -- and coal to come up with a -- a long-term anticipated displacement of zero point seven five (0.75) tonnes per megawatt hour exported.

MR. HAROLD SURMINSKI: A lot of the change in our thinking is the -- the change that has occurred in the US. Three (3) years ago the -- gas generation was -- was predominant in plans for all utilities and -- and coal was not a factor and we have

found since then things have changed and coal -- new coal generation in the future is, again, a possibility.

So it's a thinking that has changed because of the natural gas prices and also there was just so much generation it was difficult even keeping up with the orders for the units -- generating units.

There was a real flurry of purchase activity but that no longer exists now.

MR. ROBERT MAYER: Just following on from that, I realize politics don't influence Hydro's decision at all, but we did hear at Wuskwatim -- we did hear at Wuskwatim that they were, in some of the long-term planning, there was expectation of stricter environmental regulations in the States and as a result that might provide a higher market for Manitoba Hydro's product.

We saw that come to an end with Bush/Cheney. However, we can say without a doubt that Bush/Cheney, as a pair in any event, won't be around any longer than two (2) years. Have we added that back into the consideration?

MR. WILLIAM HAMLIN: It was never removed from the consideration. Our -- our expectations have modified in terms of timing but not in the eventuality that there will be constraints on greenhouse gas emissions within the US marketplace.

MR. HAROLD SURMINSKI: And other than the federal US government there are a lot of states -- many of the states have their own considerations of emissions policies. So there is a lot of activity in the US at the state level.

MR. LEN EVANS: I wonder if I could just make a general observation apropos our discussion here. It seems to me if we were really serious, and by we, I mean those of us in Canada and the United States about the global warming problem, it's an increasing problem, and I think people are becoming increasingly aware of it and -- and the objectives of Kyoto.

I mean, if we're really serious about that, one would hope that both the American and Canadian governments would cooperate with Manitoba and help to maximize the hydro capacity in this province to maximize our output of hydro generation in order to do what we were talking about earlier, to replace or displace thermal power generation wherever it be.

The biggest opportunity is in the upper Mid-West, unfortunately not Ontario. And the corollary of that we should have a domestic pricing policy to keep domestic prices up high so that we minimize domestic consumption and have even more for exportation.

But that's a politically led suggestion

but that's the ideal world. I think that's where TREE will likely come from.

THE CHAIRPERSON: Some may not agree with you, Mr. Evans.

MR. ROBERT MAYER: I expect we're going to hear about that this afternoon.

MR. LEN EVANS: It's my philosophical approach.

CONTINUED BY MR. MYFANWY BOWMAN:

MS. MYFANWY BOWMAN: To follow up on that question then, would it be fair to say that greenhouse gas emissions are one (1) of the factors that Manitoba Hydro considers, but there's a lot of other factors, as well?

MR. WILLIAM HAMLIN: I'm not sure what, in particular, you're referring to but in general for dispatch considerations, for resource planning considerations, greenhouse gas is one (1) among many considerations.

MS. MYFANWY BOWMAN: Now Hydro's response to an interrogatory by RCM/TREE -- and this isn't -- you don't have to turn to it, but if you want to its Interrogatory 10-G indicates that increased domestic electricity consumption has a potential to displace

emissions here at home.

And I think that at some point the example was given of space heating and water heating. Is that what Hydro had in mind or was it thinking of other emissions that can be displaced domestically?

MR. ROBIN WIENS: I think that's fair to say. Manitobans use a variety of fuels in their domestic and commercial operations and in some cases increased usage of electricity may displace, for example, natural gas if somebody were to change over water heating, for example.

There is a potential that there would be reduced emissions within the Province associated with that type of a change.

MS. MYFANWY BOWMAN: Thank you.

(BRIEF PAUSE)

MS. MYFANWY BOWMAN: If we look at Manitoba Hydro's rebuttal evidence at page 24, Manitoba Hydro distinguishes between full cost accounting and full cost pricing. And I'm just wondering if one (1) of you can help me be clear on what that distinction means?

MR. WILLIAM HAMLIN: We would consider full cost accounting to be the consideration of the

implications to the extent practical in all major -- in our major decisions.

Full cost pricing is going well beyond that to try and monetize all these considerations and put them as an adder to the price that consumers receive.

MS. MYFANWY BOWMAN: And Manitoba Hydro does not support full cost pricing, as I understand it?

MR. WILLIAM HAMLIN: Correct. I think I have to -- we would -- ultimately it's sound economics that the price consumers pay reflect all of the implications of the resources used in getting that product. We believe that that process is going to happen for greenhouse gasses through other and more appropriate mechanisms.

And that putting it as a price adder on the electricity here is not the most effective way to deliver that price signal.

MR. ROBIN WIENS: If I may, I'd just like to add to that, Mr. Chairman, that to the extent that Manitoba Hydro in making decisions with respect to resource development internalizes some of these costs, and that would include the mitigation payments, compensation payments, decisions to opt for a more costly resource rather than a less costly resource because of the environmental implication, then those costs are

internalized and they do flow through, but they're not directly added as an adder to a price after you've -- after you've done your revenue requirement. They're already included in the revenue requirement.

THE CHAIRPERSON: Thank you Mr. Wiens, it's a very valid point.

MS. MYFANWY BOWMAN: If I could just have a moment?

THE CHAIRPERSON: Mr. Peters, I'll just take this opportunity to suggest, if you wouldn't mind, if you could, acting in your general role, if you could let Professor Miller know of this interesting discussion we had this morning so that he could review the transcripts before he begins his cross.

MR. BOB PETERS: I will do that at the break.

THE CHAIRPERSON: Thank you.

MS. PATTI RAMAGE: Mr. Chairman, if Ms. Bowman wants to have a moment, perhaps this might be a good time to distribute some undertakings.

THE CHAIRPERSON: Very good.

MR. BYRON WILLIAMS: Mr. Chair, if you'll excuse us, we'll just step out for a minute or two (2).

THE CHAIRPERSON: That's fine.

MS. MYFANWY BOWMAN: And you'll be

pleased to know I'm just about done.

THE CHAIRPERSON: As long as you're coming back.

(BRIEF PAUSE)

THE CHAIRPERSON: We'll officially declare this a brief break in the proceedings.

--- Upon recessing at 11:26 a.m.
--- Upon resuming at 11:29 a.m.

THE CHAIRPERSON: Okay. We'll call the proceedings back to order now.

Ms. Ramage, if you don't mind the introducing, I believe you've got response undertakings 5 through 8 here?

MS. PATTI RAMAGE: That's correct. The first in the group of four (4) is what Manitoba Hydro has documented as Undertaking Number 5 and that was providing the copies of the pamphlets handed out to the CEC Hearings dealing with mitigation costs.

THE CHAIRPERSON: And I believe it was the Vice Chair's suggestion?

MS. PATTI RAMAGE: That's correct. And I

believe that is -- that could be Exhibit 10, I think that's where we are at.

THE CHAIRPERSON: Subject to check.

--- EXHIBIT NO. 10: Pamphlets handed out to the CEC Hearings dealing with mitigation costs

MS. PATTI RAMAGE: The next would be Undertaking Number 6 and that was the -- extrapolating from the 04/05 Power Resource Plan the -- providing the capital cost of a five (5) unit and ten (10) unit Canowapa Generating Station along with the average energy generated under those scenarios.

And I'd suggest that be marked at Number 11?

THE CHAIRPERSON: Thank you.

--- EXHIBIT NO. 11: Extrapolating from the 04/05 Power Resource Plan the capital cost of a five (5) unit and ten (10) unit Canowapa Generating Station along with the average energy generated under those scenarios

MS. PATTI RAMAGE: Next is Undertaking

Number 7 and that was in response to Mr. Williams' -- one of the charts he ran through during his cross yesterday and Mr. Wiens had some corrections with respect to the GSS non-demand and demand classes and he reproduced that table.

THE CHAIRPERSON: Thank you.

MS. PATTI RAMAGE: And I'd suggest that would be number 12.

--- EXHIBIT NO. 12: Corrections to table with respect to GSS non-demand and demand classes

MS. PATTI RAMAGE: And finally as Undertaking Number 8 there had been a request, I believe it may have come from you, Mr. Chair, regarding obtaining correspondence from NERA confirming their view of the merits of one (1) export class versus two (2).

And I would first suggest that become Exhibit 13 and next simply draw your attention to the fact this is an e-mail exchange between Mr. Wiens and NERA and I was simply going to draw your attention to the dates. This was from last August. It's not something we obtained yesterday but rather their confirmation that came last summer when Manitoba Hydro had first proposed this.

THE CHAIRPERSON: The modern age enters our proceedings. Thank you.

--- EXHIBIT NO. 13: Correspondence from NERA confirming their view of the merits of one (1) export class versus two (2)

MR. ROBERT MAYER: So did the word "political".

MS. MYFANWY BOWMAN: Thank you, for --

THE CHAIRPERSON: Thank you, Ms. Ramage.

Ms. Bowman...?

MS. MYFANWY BOWMAN: I thank the Panel for its indulgence in giving me a moment there. I just have a couple --

THE CHAIRPERSON: Don't worry about it. I think everyone appreciated the brief pause.

CONTINUED BY MR. MYFANWY BOWMAN:

MS. MYFANWY BOWMAN: I just have a couple of questions left. First of all, Mr. Lazar, in his report, does a calculation of the impact of what turns out in the end to be a 127 percent rate increase. What the impact of that would be on domestic consumption.

And he does that on the basis of

elasticity estimates provided by Manitoba Hydro. Can anyone on the panel tell me whether those elasticity estimates would still be appropriate when we're talking about a rate increase of that magnitude?

MR. ROBIN WIENS: We have to be very careful with that. I think you would -- you would at least want to ask that question. I think -- I don't think that Mr. Lazar was trying to say -- to suggest in any way that his analysis was precise.

But I do think that you would have to take into consideration that notion of arc elasticity might not -- might not travel as well from, say, a 10 or 20 percent rate increase to a rate increase of that magnitude.

Now, having said that, I -- I -- I would have to take another look at what Mr. Lazar has presented and probably analyse it again a little more carefully just to be able to provide a complete response to that question.

But -- but generally I think your suggestion is -- is reasonable.

MS. MYFANWY BOWMAN: Would you be prepared to take a look at that and get back to us on that issue?

MR. ROBIN WIENS: I've been meaning to do

that so, yes, I will.

MS. MYFANWY BOWMAN: Thank you. You'll undertake that then?

MR. ROBIN WIENS: Yes.

--- UNDERTAKING NO. 12: Mr. Wiens to re-analyse Mr. Lazar's report concerning arc elasticity

CONTINUED BY MS. MYFANWY BOWMAN:

MS. MYFANWY BOWMAN: Thank you. My last couple of questions relate to, again, Mr. Lazar's report and if all of his recommendations were implemented they would take us in the direction of a fairly significant rate increase.

Can anyone -- his first version of the table that does that calculation indicates that the rate increase would be 56 percent. Later I believe he discovered that he made a mathematical error and he upped that number.

But if we were talking about a 56 percent rate increase can the Panel or anyone on it comment on what would be the implications of that for the Manitoba economy and Manitoba Hydro customers?

(BRIEF PAUSE)

MR. VINCE WARDEN: Well there's no doubt in the climate, for one (1) thing that we live in, any -- any rate increase of that magnitude is just unfathomable really, we can't imagine. It would create significant hardship on customers. It would have a very negative effect on industry who depend on the low rates for -- to offset transportation costs that are -- higher transportation cost that are incurred because of geography.

There's a host of implications that would be derived from a rate increase of that magnitude and something we haven't thought a lot about because it just isn't -- isn't something that would even be contemplated by Manitoba Hydro.

We've, in the past, prided ourselves, perhaps too much, on the fact that we've got the lowest rates in Canada, North America, the world. I think that's very good thing for Manitoba and the economy. There are limits however. And when we see inefficient use of our resources that's perhaps when those limits have been reached.

MR. ROBIN WIENS: Yes, I think I could add to that that it certainly if it there was a perceived

need to increase rates of any significant magnitude, Manitoba Hydro would not look at doing it only once. If you were compelled for whatever reason and I'm not sure that that is what Mr. Lazar is actually recommending or suggesting.

But, you know, if for whatever reason you were compelled to do that you would, in addition to the hardship for all classes of customer, I think you would have some significant reduction in the use of energy by all Manitoban -- all rate classes within Manitoba and probably particularly in the large industry group.

MS. MYFANWY BOWMAN: Would it be fair to expect that another consequence of that would be a significant increase in the number of disconnections that Manitoba Hydro sees amongst the residential class?

(BRIEF PAUSE)

MR. VINCE WARDEN: We've seen a significant increase in the disconnections because of high gas prices. So it would seem reasonable if the price of electricity went up, we would see greater number of disconnections, yes.

MS. MYFANWY BOWMAN: And it would also be fair to expect that residential consumers, in particular,

low income residential consumers would be profoundly effected by such a change?

MR. VINCE WARDEN: Absolutely.

THE CHAIRPERSON: Is there anything to be learned from the California experience when their energy prices soared for a period of time, as to the effect it had on demand in California and the effect on residential customers?

MR. ROBIN WIENS: The biggest problem with California experience was not the increase in retail prices, it was the fact that the utilities weren't allowed to increase their retail prices in any significant degree, but they had to pay much higher wholesale prices.

So we're not talking about the same thing. We're talking about the major impact in California was on utilities, some of which technically became bankrupt.

(BRIEF PAUSE)

MS. MYFANWY BOWMAN: Thank you those are my questions. I will turn the mic back over to My Friend, Mr. Williams.

THE CHAIRPERSON: Thank you, Ms. Bowman. Mr. Williams...?

MR. BYRON WILLIAMS: Thank you very much Mr. Chair. I just -- first of all on behalf of my clients, I did want to thank Manitoba Hydro for putting Mr. Hamlin up as a witness. It's a subject that's of, of course great interest. Someone mic's on here -- I'm hearing -- getting some feedback --

THE CHAIRPERSON: We are faultless up here.

MR. BYRON WILLIAMS: Maybe I'm leaning too close. It's a subject of obvious significant concern and I do want to thank my colleague Ms. Bowman, who I persuaded or coerced into embarking upon this Public Utility Board adventure.

I fear that she may become, like Mr. Wiens or Mr. Bowman, a disciple or devotee of this process, and there are certainly worse thing that can -- can happen to -- to My Friends.

CONTINUED CROSS-EXAMINATION BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: In terms of, Mr. Wiens -- just perhaps some cleanup in terms of two (2) undertakings that arose in the -- the course of our discussions yesterday, one (1) in response to a CAC request and one (1) in response to a question from the Chair.

I'll direct your attention first -- and I'm still hearing the feedback -- to Exhibit 12, which is Manitoba Hydro Undertaking number 7. And I would ask you, just for comparison purposes, to compare that to the -- Tab 3 of the CAC/MSOS book of references.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: That would be the CAC/MSOS book of references. Thank you, Mr. Wiens.

And just so I understand what you've done, if I go to the bottom line, which is the overall rate for incremental use, and comparing the two (2) tables, I see that the rate for residential is unchanged; correct?

MR. ROBIN WIENS: That's right.

MR. BYRON WILLIAMS: And you've made some significant modifications to general service small non-demand with particular emphasis on those over eleven thousand ninety (11,090) kilowatt/hours; is that correct?

MR. ROBIN WIENS: Yes, that's correct.

MR. BYRON WILLIAMS: And the other change is with regard to GSS demand, and you've made some changes in terms of that category as well; correct?

MR. ROBIN WIENS: That is correct.

MR. BYRON WILLIAMS: In terms of general

service medium or general service large greater than 100 kV, those results are -- are the same with the original table; correct?

MR. ROBIN WIENS: That appears to be the case, yes.

MR. BYRON WILLIAMS: And I won't go through our discussion of yesterday but to the -- the conclusions that were drawn with regard to the residential GSM and GSL would be unchanged from our discussion yesterday?

MR. ROBIN WIENS: Yes. Our discussion of yesterday would encapsulate that conclusion.

MR. BYRON WILLIAMS: Okay. Thank you. And I thank you for the assistance, I'm sure it will be of assistance to Mr. Harper as well.

And just very quickly in terms of your response to Undertaking number 8, Exhibit 13, which is a correspondence from NERA, just to follow up on what your counsel said.

This is documentation from long before the filing of the rate application. It dates back to August of 2005; correct?

MR. ROBIN WIENS: That's correct.

MR. BYRON WILLIAMS: And in response to a request from you, NERA, and in particular Heathy

Parmesano (phonetic) had an opportunity to caucus with two (2) other analysts from NERA, being Bill and Amparo (phonetic); correct?

MR. ROBIN WIENS: That's correct.

MR. BYRON WILLIAMS: And the subject of your conversation was Manitoba Hydro's modification to the NERA recommendation of one (1) export class and to split that into a firm class and an opportunity class; correct?

MR. ROBIN WIENS: That's right.

MR. BYRON WILLIAMS: And the opinion expressed by NERA was that it makes a lot of sense and that is something that they would normally recommend in terms of a separate treatment for opportunity and firm sales.

MR. ROBIN WIENS: That's what she said, yes.

MR. BYRON WILLIAMS: Thank you for that.

MR. ROBERT MAYER: Was it a political or a data problem?

MR. ROBIN WIENS: Mr. Mayer, it was not a political problem. It was a commercial problem.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Mr. Warden, welcome

back. And I won't have much to chat with you about but I do have a -- a couple of questions now and then perhaps a few --

THE CHAIRPERSON: I just meant to say, regardless of the nature of the problem, we do appreciate the sharing of that e-mail.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Mr. Warden, so, as I was saying, in terms of this hearing, you -- there has been, as you recall, to date some discussion of the purpose underlying the advancement of Wuskwatim -- or -- prior to the time that it might be needed for domestic purposes.

You recall that discussion?

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: And I don't know if you need to turn there, but for your benefit in the CAC/MSOS book of references, Tab 15, I've indicated -- included an excerpt from the Manitoba Hydro submission before the Clean Environment Commission.

But as I understand the justification put forward by Manitoba Hydro with regard to Wuskwatim, first of all, it was allowing -- to proceed with new generation would allow Hydro to benefit from export opportunities

which would contribute to its ability to maintain low domestic rates; that was part of the rationale put forward by Hydro?

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: And in terms of the advancement of the in-service date one of the objectives was -- in fact, a prime objective was to obtain additional export revenues and profits; correct?

MR. VINCE WARDEN: Correct.

MR. BYRON WILLIAMS: And that was done in the context of an expectation that the Manitoba load is going to grow and therefore less surplus power will be available for exports and that exports would inevitably decline; correct?

MR. VINCE WARDEN: Yes, that is correct.

MR. BYRON WILLIAMS: And so the expectation was that the additional power from Wuskwatim would assist in offsetting the decline in exports and maintaining current export revenues and profits; would that be a fair summary of the Hydro position?

MR. VINCE WARDEN: Well, as we stated, Wuskwatim was not being built for -- to serve the domestic load but the net result is -- is as you've stated, yes.

MR. BYRON WILLIAMS: And the expectation

that one of the benefits of that would be the ability for Manitobans to continue to enjoy the low rates of which you spoke previously?

MR. VINCE WARDEN: I agree.

MR. BYRON WILLIAMS: Just in terms of the business case for Wuskwatim and my understanding is that when we looked at the business case and I'm speaking in the Clean Environment Commission hearing, the business case for the advancement was based on the fact that the IRR or internal rate of return associated with advancing the project was acceptable and in the order of 10 percent; would that be fair?

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: And at the same time as you looked at the business case in terms of the internal rate of return, Manitoba Hydro also looked at Wuskwatim and undertook a financial analysis to explore the long-term impact on rates of advancing the station and it demonstrated that rates would be somewhat lower in the long run as well; correct?

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: Now, just to, in terms of Wuskwatim, and I'm trying to get a sense of what, if anything, it offers for future ratepayers, it's my understanding the advancement of Wuskwatim, one of the

results of that is that the actual cost of the plant in 2020 will be less due to the advancement than if construction had been delayed to bring the plant in service for that date; is that your understanding as well?

(BRIEF PAUSE)

MR. BYRON WILLIAMS: If you don't recall, Mr. Warden, it's not that critical.

MR. VINCE WARDEN: Well, you know, I don't recall the specific numbers but it's logical that, you know, building earlier rather than later is going to result in a lower capital cost.

MR. BYRON WILLIAMS: And just staying with Wuskwatim for -- for a minute, my understanding was that the expectation with that generating station was always that as the Manitoba load grows, Wuskwatim at some point in time or some similar generating option would have to be -- or would be required for domestic purposes in any event; is that right?

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

MR. BYRON WILLIAMS: So there's some crossover point in the future, all other things being equal, where Wuskwatim will be required to support

domestic needs assuming the load growth in the domestic market that exists -- was forecast at the time of the Clean Environment Commission Hearings?

MR. VINCE WARDEN: All other things being equal, yes, I agree with that as well.

MR. BYRON WILLIAMS: sIt's always the important caveat, isn't it? And once Wuskwatim is on line, if it is online, am I right in assuming that it will serve as a back up for purposes of system reliability?

It's one (1) more resource on the system that may be drawn upon in the event of any concerns?

MR. VINCE WARDEN: Sure.

MR. BYRON WILLIAMS: Mr. Chair, with some regret I'm moving to my next to final topic and it will be relatively brief, but these are the questions that Mr. Harper has asked me to ask, for the purposes of his direct evidence. So it probably will take about thirty (30) minutes, in total. So I'll take your guidance on how you would like me proceed.

THE CHAIRPERSON: Well, I don't know what everyone's arrangements were. We were going to shorten our lunchbreak down to 45 minutes. So if we close down at 12:15 then we come back at 1:00 rather than 1:30, is that acceptable to the Panel?

And Mr. Buhr will you be available to come at 1:00, if Mr. Williams manages to finish by 12:15 or you -- so it appears Mr. Buhr that you won't be required ahead of the presenters to cross-examine.

Okay. Then Mr. Williams you can carry onto 12:15.

(BRIEF PAUSE)

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Mr. Thomas, you and I never get to get to chat. I'm not sure if this is the Wiens department or the Thomas department, but I think there will be some overlap. But perhaps if the both of you could turn to Tab 6 of the CAC/MSOS book of references.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: And you can see what we've attempted to do here is outline for certain items the cost of service treatment under the current method and also under the recommended method, is that correct?

MR. CHIC THOMAS: It appears that way, yes.

MR. BYRON WILLIAMS: And I have to confess that when we go through these subjects I tend to not retain which proposed allocation method is being used. So I'm going to ask you to just walk through this with me in order that I can try and keep these clear.

First of all, for an item, Brandon fuel costs, the treatment, Hydro's evidence the treatment under the current method is that it's allocated 50 percent domestic and 50 percent to exports, is that correct?

MR. CHIC THOMAS: Yes.

MR. BYRON WILLIAMS: And under the recommended method that treatment will remain the same, in that 50 percent will go to domestic and 50 percent will be allocated to export, is that correct?

MR. CHIC THOMAS: Yes.

MR. BYRON WILLIAMS: Now, the export portion as I understand it will be split 55 percent to firm and 45 percent to opportunity, correct?

MR. CHIC THOMAS: Yes.

MR. BYRON WILLIAMS: So -- and given the methodology proposed the domestic and firm portions will be allocated to the domestic and firm export classes, correct?

MR. CHIC THOMAS: Yes.

MR. BYRON WILLIAMS: So that's essentially a 50/50 split between domestic and export?

MR. CHIC THOMAS: Yes.

MR. BYRON WILLIAMS: The Selkirk fuel classes costs were under the current method allocated 100 percent domestic, correct?

MR. CHIC THOMAS: Yes.

MR. BYRON WILLIAMS: And that is -- under the recommended method, again there's an allocation of 100 percent domestic, correct?

MR. CHIC THOMAS: Yes --

MR. BYRON WILLIAMS: The initial and allocation and then subsequently those costs will be allocated amongst the domestic and firm export classes, correct?

MR. CHIC THOMAS: That would be the distinction, yes, between the two (2) methods.

MR. BYRON WILLIAMS: And in terms of purchases and we've got there in brackets, imports, under the current method it's 100 percent export and under the recommended method again it's initially 100 percent export with a subsequent split, export split, 55 percent firm, 45 percent opportunity, correct?

MR. CHIC THOMAS: Yes.

MR. BYRON WILLIAMS: And those domestic

and firm portions will be allocated to the domestic and firm export classes.

MR. CHIC THOMAS: Yes.

MR. BYRON WILLIAMS: And that same treatment holds true for wind; correct?

MR. CHIC THOMAS: Yes.

MR. BYRON WILLIAMS: And in terms of Wuskwatim we've put in big question marks because Wuskwatim is not in the cost of service approach right now; is that correct?

MR. CHIC THOMAS: Yes, that's true.

THE CHAIRPERSON: However, earlier we did speculate on where the costs would go.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: And it's always open to the Board to -- to speculate.

What I wanted to do, just as -- just to clarify a few matters for Mr. Harper, I want to clarify what appears to be an apparent inconsistency in terms of the -- the treatment of fuel costs.

And just to go back to that, our understanding of the current method is that 50 percent are allocated to domestic, 50 percent to export. And I wonder if you could turn with me to Tab 17 of the

CAC/MSOS book of references.

And I'm sure you can clarify this for me but you'll -- you'll recognize that this is an interrogatory from the 2004 General Rate Application, being CAC/MSOS first round 109.

Is that correct, sir?

MR. CHIC THOMAS: Yes.

MR. BYRON WILLIAMS: And I -- I'll let you review it for a couple of seconds, then I'll pose my question.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: Now, the question posed back then was, Why are there no O&A costs or thermal costs associated with export sales. And you'll -- just to summarize, you'll agree the response of Hydro was that export sales are largely supported by surplus domestic capability, but that some thermal and some import are also used to support export sales.

Do you see that, sir?

MR. CHIC THOMAS: I do.

MR. BYRON WILLIAMS: You also note that -- in this response, that there's no convenient method to determine the proportion. So the PCOSS-04 has adopted

the convention of charging 100 percent of imports but no thermal -- and I underline the word -- generation against exports.

Do you see that, sir?

MR. CHIC THOMAS: I do.

MR. BYRON WILLIAMS: So when we initially reviewed this response, we would say that that would appear to be inconsistent with the fifty-fifty (50/50) split in terms of fuel costs.

So perhaps you can clarify to me whether or not there is an inconsistency or if we're just misinterpreting the response.

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Williams, I'm -- I'm trying to be as helpful as I can here. This response would appear to suggest that no thermal fuel costs were assigned to exports in 2004, and that would not be correct. There would be 50 percent of the thermal fuel costs would be -- would have been pre-assigned to exports in this response.

With respect to operating and administration, this response would be correct in that there were no operating and administration expenses

charged against exports in -- in 2004, but they would have flowed through to the generation pool and however that was allocated at that time, that would have been the result.

MR. BYRON WILLIAMS: And I do appreciate the clarification.

So just so that I understand this, the response before us at CAC/MSOS first round 109 from 2004, that, to the extent that it related to thermal fuel, was inaccurate; is that correct?

MR. ROBIN WIENS: We've had some discussion here and we've agreed that -- that that would not have been the case --

MR. BYRON WILLIAMS: Okay

MR. ROBIN WIENS: -- that we would have assigned -- made the initial 50 percent assignment.

MR. BYRON WILLIAMS: And so that's consistent with your evidence in this proceeding that the traditional allocation of Brandon thermal fuel has been on a fifty-fifty (50/50) basis between domestic and firm; correct? Or that --

MR. CHIC THOMAS: Yes.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: Just so I'm clear in terms of the historic treatment of Selkirk and fuel cost; has that always been on the 100 percent to imports or has that, in the past, been on a fifty-fifty (50/50) basis?

MR. CHIC THOMAS: In my tenure anyway it's always been that way.

MR. BYRON WILLIAMS: And how long have you been around Mr. Thomas?

MR. CHIC THOMAS: 100 percent domestic.

MR. BYRON WILLIAMS: How long have you been here?

MR. CHIC THOMAS: 1993 I believe.

MR. BYRON WILLIAMS: Okay, that's good enough for our purposes.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: I want to clear up some -- help hopefully clear up something else from Mr. Harper so if you can have at hand two documents being from the Public Utilities Board book of documents Tab 13, which is the response to PUB/I-22(c) and also from the CAC/MSOS book of documents, Tab 24 which is a response to first round Interrogatory PUB-24(d).

MR. ROBIN WIENS: Can you give us the

reference from the CAC book of documents agin?

MR. BYRON WILLIAMS: Yes, Tab 24. The very last page. Thank you for that assistance from the back row.

I want to turn to -- to the drought period 2002 to 2004 and consider the relative impact on power purchases during the drought on the various classes including domestic, dependable, export and opportunity export.

So, if I look at PUB/I-22(c), the purchases would be captured in the fourth column in which is imports; is that right?

MR. CHIC THOMAS: Yes.

MR. BYRON WILLIAMS: And you see in that -- in that column a range of -- of purchases in various years ranging from a low of three hundred and thirty-three (333) gigawatt hours in 2001, up to a high of over seven thousand (7,000) gigawatt hours in the year 2003/04; is that right?

MR. CHIC THOMAS: Yes.

MR. BYRON WILLIAMS: And I wonder if you'd accept, subject to check, that if I totalled those purchases for the period of 1995 through 2005 that would get me a bit over sixteen thousand, three hundred (16,300) gigawatt hours would that be about right?

MR. CHIC THOMAS: Subject to check, yes.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: I'll come back to that in a couple of moments but I just want to turn now, and I'm clearly leaning too close to the mike, to PUB -- to Tab 24, the CAC/MSOS book of references because I want to understand why you make imports and the various approaches you use to imports, what they're used for during various water periods.

And just by way of -- and perhaps to this is to Mr. Surminski, everyone's eyes seem to be looking towards him. Just to -- to assist me in summarizing this -- this Interrogatory, my understanding is that import transactions can be required for two (2) reasons. One being economics and the other being energy security; is that right?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And in terms of economic transactions there's two (2) types and the first type is in terms of -- in order to capture arbitrage opportunities; is that correct, sir?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And the second type

of -- of transaction in terms of imports are those made to avoid operating more expensive generation in Manitoba, correct?

MR. HAROLD SURMINSKI: Yes, okay.

MR. BYRON WILLIAMS: Now, my understanding is that during droughts, energy is imported to displace hydraulic generation and maintain reservoir storages for energy security or to displace more expensive thermal generation; correct?

MR. HAROLD SURMINSKI: Yes, correct.

MR. BYRON WILLIAMS: And just if we go back to that high year from the other table of seven thousand fifty-three (7,053) of imports during the 2003/04 year, my understanding is that all of those imports were made to support reservoir storages or to -- or to serve the domestic load directly rather than operating more expensive gas fired generation; is that right?

MR. HAROLD SURMINSKI: Yes, gas fired generation in our system.

MR. BYRON WILLIAMS: And just going to the bottom line of the -- this response:

> "Imports to support reservoir storages for firming export sales were not required as export sales were firmed up

from the market during this period."

Is that right?

MR. HAROLD SURMINSKI: Yes.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: What exactly does that -- that phrase mean, that the export sales were firmed up from the market during this period?

MR. HAROLD SURMINSKI: Well, we are able to -- to purchase energy directly in the US and -- and offset obligations to counter-parties instead of delivering from our system or -- or other means, or generating gas fired generation in our system.

MR. BYRON WILLIAMS: So when it says that:

"Imports to reservoir storage for firming export sales were not required."

Does that mean that for -- for this specific year you firmed up export sales through purchases in the US market rather than importing electricity -- or importing energy to support reservoir storage for firming export sales?

That was very articulately asked, wasn't

it?

What I'm trying to get at, Mr. Surminski, is-- what I'm trying to understand is, it seems to me that you're telling us in this interrogatory response that you used all seven thousand fifty-three (7,053) gigawatt hours of imports to -- in Manitoba and that you, in terms of -- that in addition to that there were purchases in the US market over and above that seven thousand fifty-three (7,053) gigawatt hours to firm up export sales; is that right?

MR. HAROLD SURMINSKI: Yes, that's correct. If you followed the -- the energy flow across that row for that year, you would find that there's a shortage, that the supply does not match demand because there are purchases in the US that do not show up in these numbers.

MR. BYRON WILLIAMS: So just two (2) questions of clarification for Mr. -- Mr. Harper that flow from that.

One (1) is, do you sometimes use the word -- are the words purchases and imports always used interchangeably? Or, in this case, is there a difference between purchases and imports?

MR. HAROLD SURMINSKI: There is. There has been a difficulty in reporting purchases specifically

and imports we are now creating a system that is -- that will reconcile or will consider the factors more -- more appropriately for the future.

MR. BYRON WILLIAMS: Just so I understand, if I go back to PUB-122-C, where will I find -- will I see those purchases reflected anywhere on that -- that document? And by purchases, I mean purchases in the -- the US market to -- in -- in that year, 2003/04?

MR. HAROLD SURMINSKI: In terms of energy quantities, no, you will not see them there. They were -- they were not -- in some cases they may not be energy quantities, they may be a financial settlement.

MR. BYRON WILLIAMS: So you -- you spoke of difficulties in reporting these purchases.

Where -- where would I find that documentation in terms of either energy quantities or financial compensation?

(BRIEF PAUSE)

THE CHAIRPERSON: Ms. Ramage, we're going to give you some time to go through this because we're scheduled to have the break at 12:15 because we want to come back for 1:00 so that we can continue with Mr. Williams and then we have the presenters at 1:30 because

this is a short day.

Mr. Williams...?

MR. BYRON WILLIAMS: Mr. Chairman, if -- if I might just, as Hydro goes away to -- to help me with my answer I'll just let -- or my question. I'll let you know just a couple of other questions that I was going to ask and you may be able to -- they may not be as difficult as this one apparently is. But I just want to -- they may be, I'm not sure.

The next -- the next questions, I just want to understand are -- and I'll pose them afterwards but just so you know, are imports under diversity agreements reported as, first of all purchase power in the IFF, and as imports for the purposes of responding to PUB-I-22(c); that's one (1) question.

Secondly, and this may be a version of the one we just discussed; are purchases made to support firm exports, in brackets, (i.e. power not really imported to Manitoba) reported as purchase power?

And the answer to CAC/MSOS/Hydro-II-10(a) might give you some guidance on that, I'm not sure it gave me much guidance; or as imports? And so that's kind of where I'm going with some of these questions.

THE CHAIRPERSON: Thank you, Mr. Williams. We'll look forward to everyone's return at one

o'clock. Thank you.

--- Upon recessing at 12:14 p.m.
--- Upon resuming at 1:08 p.m.

THE CHAIRPERSON: Okay, Mr. Williams. We were left with the heroine lying across the railway tracks and then we had the break.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: I may have been asking the question but I believe the ball was in Hydro's court in -- in terms of answering the question, so.

THE CHAIRPERSON: I was hoping you could say it again for those just returning.

MR. BYRON WILLIAMS: I'm not sure I can, but I think Ms. -- Ms. Ramage has something to say.

THE CHAIRPERSON: Please, Ms. Ramage.

MS. PATTI RAMAGE: It's not a lot of insight. What I was going to advise, Mr. Chairman, is that we've determined we need to look at this a little more carefully and we're going to be using the time at three o'clock to go back to the office and speak to those in the know and come back in the morning with the answer

Mr. Williams is looking for.

THE CHAIRPERSON: Sounds quite reasonable. Mr. Williams...?

MR. BYRON WILLIAMS: Yes. And just further to this, Mr. Chairman, certainly I'll be reserving my right -- my right to -- to resume questioning on this.

And to assist Manitoba Hydro, once we've got that little issue clarified, the next area I want to go to on a related theme relates to page 33 of the evidence of Manitoba Hydro, lines 15 through 23.

MS. PATTI RAMAGE: Is that the rebuttal?

MR. BYRON WILLIAMS: Yes. Thank you for that clarification.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: Sadly, Mr. Chair, that does not conclude my cross-examination. I still have a bit of weighting to do.

THE CHAIRPERSON: We were hoping you weren't finished, Mr. Williams.

MR. BYRON WILLIAMS: I've rarely heard that kind of comment, sir. I turn...

(BRIEF PAUSE)

CONTINUED BY MR. BYRON WILLIAMS:

Mr. BYRON WILLIAMS: Next, just again some Bill Harper related short snappers. I'll turn your attention to Tab 23 of the CAC/MSOS book of references.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: And you can see -- I'm assuming again it's my new friend Mr. Thomas that -- we're dealing with an excerpt from the prospective cost of service study, and in particular I'm drawing your attention to the top of page 21, which is titled "The Calculation of the Firm Opportunity Split."

Do you see that, sir?

MR. CHIC THOMAS: I do.

MR. BYRON WILLIAMS: I wonder if you can indicate for me how the surplus energy for the purposes of that calculation is determined. And in particular - and sorry, Mr. Surminski, I should have known it was you -- in particular I'm wondering about the assumptions made in terms of the operations of Brandon and Selkirk.

MR. HAROLD SURMINSKI: These are estimates that are consistent with our integrated

financial forecast. What it combines is the use of median flow conditions in the first two (2) years and the expected of all eighty-six (86) flows in the remaining years.

So I believe '06 was -- no. Actually, this -- this was an '04 estimate. So two (2) years out -- everything in the two (2) years out and further was derived from eight-six (86) possible flow conditions.

So in those eighty-six (86) possible flow conditions there are low flow cases, which utilise a lot of thermal and import energy, as well -- the whole range of flows as well as the highest flow cases which utilise very little, only the testing portion of -- of thermal.

So it's the entire range that's used and averaged to get a central number, a representative number for the year.

MR. BYRON WILLIAMS: That's helpful, sir. And just I understand, this is not reflective of median flows, the assumption is based upon the eighty-six (86) flows?

MR. HAROLD SURMINSKI: That's correct.

MR. BYRON WILLIAMS: Just -- in terms of considering Selkirk and Brandon, would it be fair to say that not all dependable Selkirk and Brandon production capability is treated as potential surplus for export

under this calculation, or would that be inaccurate?

MR. HAROLD SURMINSKI: That is accurate. Because the weighting, for example, may be in the very lowest flow, a maximum capability or dependable capability may be utilised. But for all other flow conditions it's lesser amounts and practically zero (0) for -- for maybe 40 percent of the flow conditions.

MR. BYRON WILLIAMS: Okay. Thank you for that.

Mr. Wiens, you'll recall you had some conversation with -- I was going to call him doctor, but -- with Mr. Peters in terms of the direct assignment of costs to -- certain costs to the export class. And you're familiar, as you've indicated, with Mr. Harper's evidence.

And do you recall that -- that he raises a concern, at page 44 of his evidence, that:

> "The introduction of any departure from the approach of treating firm export customers similar to domestic customers for purposes of allocating generation and transmission costs opens somewhat of a pandora's box and begs a question as to what other adjustments departure should be made."

Do you recall that evidence?

MR. ROBIN WIENS: Well, I have a -- I have a general recollection of it but if you would give me the page reference I could go right to it and that might be helpful in responding to whatever you've got in store for me.

MR. BYRON WILLIAMS: Okay. Well, in terms of what I've got in store, you can either turn to page 44 of Mr. Harper's evidence or it might be more helpful actually to turn to the interrogatory posed by the Public Utilities Board to CAC/MSOS, which is number 13. So the actual interrogatory for the -- from the Public Utilities Board to CAC/MSOS, which is number 13.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: No, it's not in the CAC/MSOS book of references, for those who are searching desperately for it. It's -- yeah.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: Actually, it is. It's in Tab 22. I misspoke. Thank you, Mr. Mayer.

(BRIEF PAUSE)

THE CHAIRPERSON: That's a good admission, Mr. Mayer.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: Thank you Mr. Wiens. In terms of that just to attempt briefly summarize the -- his response. He appears to be making the point that attempt to directly assign transmission costs or generation costs or firm exports could require an adjustment to the proposed methodology of allocating the remaining costs of firm and exports and it was not immediately obvious that such adjustment could reasonable be made.

I won't bore you with the remainder of the details, but do you have any comments about the thrust of his concerns?

MR. ROBIN WIENS: Well, I think that would be a concern similar to one that we would have. Once we start hiving off special costs for exports or attempting to do so it does begin to beg the question, well when we now treat this export class as part of a group of domestic and export classes into which we

allocate costs, are there some costs we should exclude.

So it would add some complexity in terms of the number of tables that Mr. Thomas would have in his allocation structure, quite possibly.

MR. BYRON WILLIAMS: Mr. Harper goes further in this interrogaty, I believe and he speaks, in particular near the bottom of this page and moving onto the second pages and raises a concern about directly assigning some water rentals. And he says:

> "But since the allocation of generation costs using marginal costs is designed to allocate all generation costs it is not intuitively obvious how the methodology could be adjusted if water rentals were excluded."

And just perhaps, you've made this point already, but is that a concern that you would share on behalf of Manitoba Hydro?

MR. ROBIN WIENS: Well, yes, if we were to -- if we were to depart from what we are recommending, we would have to give that some consideration, whether the issue is -- is important enough that we have to make some broad scale adjustments or whether we could fine tune it, we'd have to consider that.

MR. BYRON WILLIAMS: And to the extent

that this Board is considering additional direct assignments, it also has to be cognizant of the rollout in terms of unforseen consequences to the model as a whole?

MR. ROBIN WIENS: I think when you get to making any change in what Manitoba Hydro has recommended, we would have to investigate what the impact of such a change is on some of the other features of the recommended methodology. And it could go beyond the allocation, classification and allocation of generation costs, to issues including how we are proposing to credit net export revenues back to customer classes.

And all of these things would have to come into consideration, if we were talking about any kind of a substantive change to what Manitoba Hydro's proposed.

MR. BYRON WILLIAMS: Mr. Chairman, I'm moving a slightly different subject in terms of transmission charges at all. I'm not sure if the whole Manitoba Industrial Power Users Group is here or not.

I see, from my perspective I'm certainly willing to stand down at any time when it's of assistance to the Board.

(BRIEF PAUSE)

THE CHAIRPERSON: Thank you, Mr. Williams. Ms. McCaffrey, would your presenters wish to proceed at this time?

MS. TAMARA MCCAFFREY: We're ready to go.

THE CHAIRPERSON: Excellent. That would be nice.

(BRIEF PAUSE)

MS. TAMARA MCCAFFREY: Mr. Chair, there are going to three (3) presenters from the Manitoba Industrial Power Users Group.

THE CHAIRPERSON: And we'll call on you to introduce them.

MS. TAMARA MCCAFFREY: And I will introduce them shortly once we -- once we have the materials distributed.

(BRIEF PAUSE)

THE CHAIRPERSON: Okay, Ms. McCaffrey, if you wouldn't mind introducing your presenters.

MS. TAMARA MCCAFFREY: Well, it would be my pleasure, Mr. Chairman and members of the Board, to introduce to you three (3) representatives from the

Manitoba Industrial Power Users Group.

With me to my immediate left is Mr. Bill Turner, I think familiar now to the Board. He is the Chairman of the Manitoba Industrial Power Users Group and he's also a plant manager a Canexus Chemicals Brandon plant.

And he will be giving you a brief presentation followed by comments from David Markham who sits to Mr. Chairman's left and he is here on behalf of the Mining Association of Manitoba and we'll sum up with Mr. Darren McDonald's comments and he's here from Gerdau Ameristeel Manitoba.

We've been distributing copies of each presentation so that you can follow along and I can indicate that Mr. Turner will be referring as well to an economic impact statement that was prepared with respect to the -- some of the value that industry does provide to Manitobans.

I provided a few copies of that to Mr. Barron should the Board be interested in looking at that later and I certainly have extras for anyone that's interested. But it's not strictly necessary to follow along the presentation.

THE CHAIRPERSON: We would like to see that, Mr. Barron, when you get a chance.

MS. TAMARA MCCAFFREY: With those opening comments then I'd like to turn the mike over to Mr. Turner from Canexus.

THE CHAIRPERSON: Welcome, Mr. Turner.

MR. BILL TURNER: Thank you. Mr. Chairman and members of the Board. My name is Bill Turner, I'm the plant manager at Canexus Chemicals in Brandon.

Since November 2000 I have been the Chairman of Manitoba Industrial Power Users Group. MIPUG membership currently consists of the following companies, Cannex's Chemicals Brandon, formerly, Nexen. Inco Manitoba Division in Thompson, Hudson Bay Mining and Smelting Company in Flin Flan, Erco Worldwide, Enbridge Inc., Tolco Manitoba Kraft Papers, Simplot Canada Limited, Griffin Canada Limited, Tembec and Gerdau Ameristeel Manitoba.

We would like to thank you for the opportunity to address you today. We have brought documents that deal in greater detail with who MIPUG is and the economic impact that MIPUG members have in their respective communities and in the province. I would just like to note that this economic impact study was prepared before Tembec became a member.

MIPUG is an association of major

industrial companies operating in Manitoba. The purpose of the association is to work together on issues of common concern related to electricity supply and rates in Manitoba.

To that end, MIPUG has participated as an Intervenor in each of the Board's reviews of hydro rates since 1988, as well as the Board's review of the Centra gas acquisition in 1999, and Hydro's major -- major capital projects in 1990.

At that last hearing we explained that in each case power costs are extremely important to the continued operation and growth of the MIPUG member companies. Also, we emphasized that the fact that MIPUG members compete in a global marketplace. If we are to remain competitive, electricity rates in Manitoba must help offset some of the geographic, climatic disadvantages we face.

A more recent concern is the exchange rate on the Canadian dollar. This means we in industry require predictable firm power rates for all industrial customers that reflect the cost of providing service.

We are well aware that our members currently pay rates that are about 14 percent more than it costs to provide them with service, or about $27 million per year in extra operating costs. Addressing

this disparity would help to encourage competitiveness and growth in Manitoba in each of our industries.

This was part of the rationale put forward as the basis for the 2 percent rate decrease to our members. We considered this a move in the right direction and an important signal to our members that Manitoba remains committed to fair rates for industrials.

Fair rates that reflect Hydro's costs and diligent attention to ensure those costs are as low as possible while maintaining a financially healthy utility, that are in fact an essential part of ensuring that Manitoba companies continue to survive and grow.

This is critical in maintaining and enhancing the long-term investments, jobs and other benefits that come from having these other operations in Manitoba.

Manitoba companies annually purchase about four thousand (4,000) gigawatt hours of electricity at a cost of well over $100 million from Manitoba Hydro. In total, MIPUG members employ over forty-five hundred (4,500) people, have a replacement value of their assets in Manitoba of over $2 billion, and sell over 90 percent of the products they produce outside of Manitoba.

Many of Manitoba's communities and workers depend on our continued survival and growth. And we have

all seen the consequences of this alternative. For example, in Northern Ontario, forestry operations have closed in part due to high energy prices. It should be noted that while operations have shut down in Ontario, Manitoba has yet to lose a major forestry operation.

With me today I've brought Darren McDonald from Gergau Ameristeel Manitoba, and David Markham from the Mining Association, who'll be happy to answer questions from the Board after the presentation.

David...?

MR. DAVID MARKHAM: Thank you.

THE CHAIRPERSON: Welcome, Mr. Markham.

MR. DAVID MARKHAM: Thank you very much, Mr. Chairman and to the Board.

My name is David Markham. I am the Executive Vice-President of the Mining Association of Manitoba. Our association has represented the interests of mining and mineral exploration sectors in the province since 1940. And our membership includes all mines currently operating in the province of Manitoba, including the Thompson Operation and Hudson Bay Mining and Smelting Company's operations in Flin Flon and Snow Lake.

I wanted to start by impressing upon you the significant contributions that the mining industry

continues to make to the lives of Manitobans and the overall economy.

The mining industry employs approximately three thousand two hundred (3,200) persons directly, as well as a very broad and diverse supply chain ranging from contract miners, diamond drillers, geologists, engineers, and various other suppliers. These people, their families and communities rely on the sustainability of the industry for their livelihoods.

For every direct job created in the mining industry a further four (4) indirect jobs are created to support that position. In total, sixteen thousand (16,000) Manitobans are employed in the mining industry, or one (1) out of every thirty-eight (38) Manitoba workers.

Furthermore, the mining industry pays the highest average industrial wage of any industry sector in the province. We would suggest that as consumers of Manitoba Hydro power, that firms in the mining industry provide a substantial return to all Manitobans as results of the Manitoba Hydro advantage currently in place in this province.

With regard to the current proceedings, I want to get right to the point and address some of the issues identified by Manitoba Hydro as part of the cost

of service study that the mining industry is extremely concerned about.

To be blunt, the mining industry has grave concerns regarding any move by Manitoba Hydro that would impose the full market rate for supplying power to industrials. This would devastate the climate for operating mines in Manitoba and seriously impeded any future growth and advancement of our industry in the Province.

It has been the position of the mining association that general service large rates must be structured to reflect Manitoba Hydro's actual costs of providing power to its large industrial customers and that mechanisms should be considered that provide assurances of long term rate stability to industrial firms that operate in this Province.

While the mining industry is currently enjoying the benefits of strong commodity prices, in Manitoba there remains considerable pressure to identify new ore reserves in order to sustain operations in Flin Flon, Thompson and Snow Lake.

In the Minister of Conservations' 2005 Provincial Sustainability Report for Manitoba, the declining state of the Provinces reserves of metals was identified as a source of major concern, in fact, was one

(1) of the only economic indicators that was a source of concern.

Bringing a new deposit into production is an extremely lengthy process that is subject to high financial risks and major capital demands. In order for a deposit to be commercial viable it is critical that risks and costs are minimized.

As Hydro charges represent significant input costs for operating mines, in most cases a mines hydro bill is it's second highest expense after labour cost, decisions made today will directly impact upon the viability of developing new mines in the future.

For any mining company, electricity costs are one of the critical variables that determine whether an ore body is to become a valuable mineable deposit or remain worthless rock.

It is also important to recognize that the business of processing and smelting ore in this Province is changing quite drastically. The Province's two (2) major mining facilities no longer simply process the ore that they have extracted from their properties here in Manitoba.

In response to the declining feed stocks and ore reserves available in Manitoba, our mining companies are competing internationally to attract new

processing capacities for facilities outside the Province to their facilities up north.

Attracting new source of outside concentrate is a critical means of ensuring that surface processing continues to its fullest capacity and that the mining industry remains viable in these communities.

Transporting this material to mining facilities up north imposes severe costs on mining companies. For example, Inco Limited ships concentrate from its Voisey Bay facilities in Newfoundland and Labrador by ship to Quebec City, then by rail to Winnipeg and finally by truck to Thompson.

The concentrate is actually shipped past three (3) other competing smelters to get to Thompson. However, the economics of proceeding imported feed in places like Flin Flon or Thompson work because of competitive hydro rates.

The absence of competitive hydro rates would negate the possibility that outside feeds could be processed at Manitoba service operations. And if surface operations are producing at less than optimum capacity the entire mine operations are marginalized as a result.

I also wanted to assure you that the mining industry actively works with Manitoba Hydro to

make sure that the energy use in our operations is used effectively and efficiently. Manitoba mining companies have made considerable efforts to control their consumption of energy.

For example, Hudson Bay Mining and Smelting's new electrolytic cell house, a facility that uses the latest technology and was constructed at a cost in excess of $100 million has improved the efficiency of the company's power consumption to the extent that the amount of power consumed per unit per zinc output has declined by 18 percent.

Inco Limited's Thompson's operations have pro-actively applied demand side management principles with the assistance of Manitoba Hydro's Powersmart program. This year alone the company has implemented various projects including the replacement of compressors for the company's Birch Tree mine, an audit of the company's existing steam trap capabilities and the cost sharing of a study into the company's converter air system.

Such projects have resulted in significant reductions in electricity consumption and the resulting cost savings have enhanced the efficiency and competitiveness of the Thompson facility.

Operations such as Inco's Thompson's

operation, Hudson Bay Mining and Smelting have embraced energy conservation enthusiastically and achieved significant cost savings and reductions in consumption that have made their operations more competitive and efficient while at the same time, benefiting Manitoba Hydro and Manitoba ratepayers.

Thank you.

MR. ROBERT MAYER: Ms. McCaffrey, would you -- how do you propose when we should ask questions?

MS. TAMARA MCCAFFREY: Any time you like or can you jump in now if you have questions now, or you can wait for Mr. McDonald to give his presentation and then follow up with questions to whom ever you'd like.

THE CHAIRPERSON: Mr. McDonald...?

MR. DARREN MCDONALD: Mr. Chairman, Members of the Board, thank you for the opportunity to discuss our concerns here today.

My name is Darren McDonald. I'm the energy manager for Gerdau Ameristeel Northeast Operations which includes two (2) operations in New Jersey, two (2) in Ontario and the one (1) here in Selkirk, Manitoba.

Gerdau Ameristeel operates fifteen (15) plants in North America, all of which are nearly identical in equipment and process. Gerdau has over a hundred (100) years experience in the steel business and

translates the best practices from each mill throughout the portfolio of plants to achieve the best and most efficient operation.

Our business is global. We have commodity prices for our steel which means we must have operating costs that are competitive on a global basis. As you know, steel is a very cyclical business. Today we are in the top of that cycle but we have to be able to weather the trough and we've been in a -- in a topping cycle for quite some period of time as far as steel timeline goes, so we're expecting that trough to come soon.

We're here today to ensure your awareness of our sensitivity as a large industrial consumer to any increase in electricity costs. We have a great deal of experience in other markets, in deregulated markets in the northeast US and pricing at the potential export price is -- is something that concerns us because we are dealing with these jurisdictions that price at marginal pricing today and we're seeing industry fail in those jurisdictions.

Second slide. A little bit of information on our contributions as Gerdau Ameristeel to -- to the province. We're the largest shipper in the province. We ship a hundred and fifty (150) truck loads per week. Spend about $20 million a year on shipping.

Our presence in the province has attracted downstream jobs. I've listed four companies here, Montiferral America (phonetic), T.C. Industries (phonetic) in Selkirk, Black Cat Blades (phonetic) and Bradley Steel Producers (phonetic). These are some examples of businesses that are here because our primary manufacturing is located here.

We employ fifty (50) full-time equivalent positions in -- through local contractors each year in maintenance and capital expenditure projects and we're the largest recycler in the province.

The next page covers some of our contributions in dollars and cents. We have five hundred and twenty-two (522) employees employed in Manitoba. We spend $43 million a year in wages with an average salary of about eighty-two thousand dollars ($82,000) including the benefits.

We pay over six hundred thousand dollars ($600,000) in property tax, eight hundred thousand (800,000) in health and education, three ninety-five (395) in provincial fuel tax and energy purchases over $12 and a half million and that includes natural gas. So we spend annually, this is 2004 dollars, about $57 million a year.

I think the next line, capital investment

since 1995, showed Gerdau Ameristeel's long-term commitment to the province in the capital investment that's been made in the province. If we were to replace the total capital that exists in the province today we'd be at about $225 million.

Not on this slide is also some -- there is also some things not on this slide that I'd like to highlight and that is donations in 2004. We're very active in the community.

We've made over sixty thousand dollars ($60,000) in donations to things like the Selkirk waterfront project. We support the Canada Day activities. We purchased playground equipment for a couple of local schools. Sponsor RCMP drug awareness programs. And -- and we support environmental initiatives sponsored by Ducks Unlimited.

Next slide. So what is our situation? Steel is capital intensive and energy intensive. Our investment horizons are long-term. We're looking ten (10), fifteen (15), twenty (20) years down the road because we're spending large dollars on capital equipment.

We need stable electricity rates and stable policy to ensure the long-term investments occur. Low cost, stable, reliable delivery of electricity is

essential to our operations in Manitoba.

Manitoba, our operations within Gerdau Ameristeel, we have fifteen (15) locations. We have to fight within the company for production rights for some -- some of the tonnes that we produce. We also have to attract the capital dollars from a limited capital fund within those fifteen (15) locations. So we're really looking for, where are we making the best return on investment and that's where we're going to make those capital investments.

So each plant is really doing its best to control its operating costs. In Manitoba the operating costs are -- are rising, partly because of the rising Canadian dollar and we're all facing that issue, relatively high labour costs and rising transportation and fuel costs. We have -- because of our location, shipping is an issue for us.

As a kind of demonstration of our concern for what might happen in -- in power -- I'm still on the same slide -- on our last quarter in conference call our CEO mentioned two (2) locations in particular where he had some concerns with respect to power prices and our sensitivity to power prices. He mentioned New Jersey operations and Manitoba operations on that conference call. The recent rate increases and -- and rate

structure changes in -- in Manitoba are a concern.

Our experience in the PJM market in -- in the US Northeast has -- has brought to our attention the concern with marginal type pricing. And we've seen industry leaving New Jersey, where our two -- two (2) operations are, Ford has closed down, Alcoa, three hundred and fifty (350) megawatt smelter has closed down.

And -- and in those states we're seeing the -- yet the State commissions, public utility commissions, going to FERC and asking, Why are these industries leaving our jurisdiction, Why are they fleeing to lower cost jurisdictions. And that kind of question is -- is coming from -- that kind of migration of jobs is coming from marginal cost pricing.

And we're seeing -- and I'll show you further on in this -- in this presentation how our own prices stack up where we're paying marginal cost type markets or where we're working in regulated markets.

Next slide. Our manufacturing costs. These are all of our locations in North America, Canada and the US. The black -- the black column is our Manitoba facility. It has the highest operating costs of -- of all locations.

Although we enjoy the -- the lowest power costs, we are in the unfavourable position of having the

highest cost structure. This is in part due to the Canadian dollar, high transportation costs, high labour costs, and -- and some product mix implications.

If you turn to the next slide, Relative Power Costs, you can see where Selkirk is on this slide. We're the -- we're the lowest power cost. But, as you can see, there are many locations with power costs that are very close to the costs, but they don't have the same labour and logistical type of challenges that we face here.

I would also like to point out to the -- to you the high price jurisdiction on this slide are all the deregulated states that have the LMP or marginal type cost setting. You're looking at the -- the New Jersey facilities and the Ontario facilities having that type of power market.

And to the right of Ontario, those are all our -- the states that we operate in with regulated pricing. And these are our actual costs -- ratioed to New Jersey so that we're not divulging any actual dollars.

The next slide. I wanted to point out that although prices aren't high for electricity in Manitoba, we are operating a very efficient operation in Manitoba. We don't need high power prices to drive

efficiency. The balance of the prices -- of the costs that we have in Manitoba are enough to drive our operators to be as efficient as they can in all areas of our business, including the electricity consumption. And you can see on this recent chart that the dark line is where Manitoba sits in relation to the rest of our facilities.

The other thing -- the other point I wanted to make on this -- on this slide is that low cost, stable, flat pricing in a -- in a business like ours, heavy manufacturing, promotes efficiency. In our operations that -- that have prices that change hourly, we are stopping and starting those operations in -- in response to high prices. That saves us money on -- on dollars and cents but it costs us on efficiency.

Every time you stop and start an operation, very large industrial operation, you're losing efficiency. And that's a point that's kind of missed in a lot of cases when you're looking at hourly price signals to determine when -- if you want manufacturing to determine when it will run by -- by hourly pricing signals, that's very tough on an operation. It costs you a lot of money for equipment, starts and stops, and it also impedes the operator's rhythm, which -- which is critical to a -- a smooth operation.

Next slide. Basically the conclusions. We believe regulation to achieve firm, low cost, stable power rates are necessary to maintain investment in the province. Gerdau considers the stability of electricity prices when making these long-term investment decisions.

Rate designs that increase costs for incremental or new load in the province provides a signal to Gerdau to invest outside of the province. We're already, as you saw from our operating costs and from our other slides, challenged. So keeping the -- keeping the electricity rates low encourages investment.

Time of use rates may not necessarily improve efficiency as -- as people commonly believe. And the last point, low cost electricity much be viewed as a means to achieve and retain economic growth in the province.

Thank you.

THE CHAIRPERSON: Thank you, sir.

MS. TAMARA MCCAFFREY: Thank you, Mr. McDonald and other members. I now turn it over to the Board for any questions that you may have. They'd be more than happy to have a discussion with you at this time?

MR. ROBERT MAYER: Mr. Chair, if I might...?

Mr. Markham, what has HBM&S got left in Snow Lake?

MR. DAVID MARKHAM: The Chisel North Mine and Concentrator which was opened in 2001.

MR. ROBERT MAYER: That still operates...

(BRIEF PAUSE)

MR. ROBERT MAYER: Ms. McCaffrey, we have another piece of a presentation that says Canexus on it.

MS. TAMARA MCCAFFREY: That's just what Mr. Turner is whispering to me actually. I'll give Mr. Turner an opportunity to talk to you a little bit more about the company that he's from.

MR. BILL TURNER: Thank you, Mr. Mayer. With respect to my own operations in Brandon, our need for reliable cost effective electricity energy is one of the most critical factors to our industry.

Canexus uses an electrolytic process to produce sodium chlorate which is used to bleach wood pulp. This process requires considerable electrical energy and, in fact, approximately 6 percent of our manufacturing cost is the cost of electricity which happens to be about $42 million a year currently.

Canexus exports all of its products

outside Manitoba and approximately 95 percent of it goes to the United States. The North American market for our product is very competitive. Canexus operates on plant in each of BC, Alberta, Manitoba, Quebec and Brazil. In the last three (3) years Canexus has shut down two (2) of our operating facilities, mainly due to high power pricing, leaving several families either without employment or requiring moves to other jurisdictions looking for employment

In times when the industry is not operating at 100 percent capacity the plants with the lowest costs of production run full load and the plants with the highest costs of production are cut back.

Our Brandon plant competes with our external competitors as well as our internal competitors within Canexus. Sodium Chlorate plants the -- pardon me. The competitiveness of any Sodium Chlorate producer can be assessed easily with only three (3) key considerations; power price stability and availability, salt price and availability and transportation to markets.

Of the three (3) factors, power is the most important because of the large amounts of power required for electrolysis. Electricity is a feed stock just like natural gas is feed stock for the fertilizer

industry. Canexus has been producing Sodium Chlorate in Brandon since 1968.

At that time the plant started at an annual rate of twelve thousand (12,000) tonnes. Through several upgrades, incremental expansions and a major expansion that was completed in 2004, which we spent approximately $50 million on, we currently manufacture in excess of two hundred and sixty-three thousand (263,000) metric tonnes per year.

This now makes us the largest Sodium Chlorate plant in the world. Our most recent expansion was the relocation of our plant from Louisiana to Brandon due, in part, to the high cost of electricity energy in the US.

This expansion project was a major commitment of capital dollars and time. The cost of that 2004 expansion was almost as large as the MTS Centre next door to us here and in a place the size of Brandon you can imagine the economic impact that that would have.

The main reason the most recent expansion was awarded to the Brandon plant was the fact that Manitoba has had a history of very stable and cost effective power rates. This has been a positive factor in convincing our board of directors that expansions should occur in Manitoba.

Once again, Canexus is considering an expansion due in part to the closure of our facility in Ontario.

We have been evaluating several options and upon hearing of a potential change to charges for new or expanded electrical loads, we have become quite concerned. Any expansion of our operations is a major commitment of resources, including people, time, and money.

For such commitments to be justifiable, there has to be some level of certainty as to costs, both now and in the future. We need some level of confidence that the rules won't suddenly change on us.

Before we make an investment of capital and time we need to know what the rates will look like in long term and that there won't be any nasty surprizes later.

It's not low prices that bring industry. Low prices can become very, very high very quickly if there is instability in the principles and systems used to set rates. We saw this in spades in Alberta, where one of our lowest costs plants became one of the highest during less than a decade in the mid-90's when Alberta changed how it set it sets rates.

Prices do matter. But, it is confidence

in the long term regulation and pricing system that is key, not just today's rates. We know that fair, cost based rates that are stable and that treat existing customers the same as those who grow or who are new, have been good for industry and for Manitoba.

Until recently we have had confidence in our investments in this Province, due to the fact that the rates were set in a principled manner and that any changes to those rates required a review by the PUB before they could be imposed.

Hydro has sent out a letter which I understand you have a copy of, which indicates that they are considering a new system extension policy, designed to target and discourage growing or new companies from expanding in Manitoba.

We are not against paying what it cost of service, but it appears that Manitoba Hydro is trying to select the types of industry being brought into the Province based on the number of jobs that will be provided.

This may prevent growth in industries that provide other critical benefits to the Province. While there may be fewer workers, these workers are well paid and have higher than average salaries. Industry has benefited from consistent PUB involvement in rate setting

to ensure an independent review of proposals in order to protect all the consumers from unfair proposals.

Canexus may not be the largest company -- biggest company in Manitoba, but we have quality committed work force of sixty-seven (67) people. Skilled workers with well paying jobs who play important roles in the Brandon community.

We view our place in the community with pride helping support our families, pay taxes and provide opportunities for trained people to find employment in the Westman Region.

I should also note that Canexus is one (1) of Manitoba Hydro's largest DSM participants, offering about a hundred and sixty (160) megawatts of load that can be -- curtailed by Hydro on short notice. This program was developed over a number of years by working closely with Hydro as a participant in the curtailable rates monitoring committee.

Through solid communication the work of this former committee addressed the issues and concerns of both parties quickly and amicably and the program is now one of the most successful conservation programs Hydro operates, providing benefits to both Conexus and all the other customers on Hydro's system. Conexus appreciates working with Manitoba Hydro cooperatively in

this manner.

And in closing, Mr. Chairman, the industrial consumers of Manitoba Hydro have been well served by this Utility in the past. Hydro is a good company to deal with and we would not want our comments to be read as criticism of the professional and competent staff that Hydro employs.

Although we have been blessed in the past with a good partner in Hydro we are concerned by what appears to be slow shifts over time in Manitoba Hydro's priorities, away from its domestic customers to its export sales.

For industries that invest significant capital and resources Manitoba, the most important factor with respect to Hydro rates is a stable and predictable price environment. In that regard, we believe that Manitoba ratepayers in all classes have been well served by having Hydro's rates regulated by a principled PUB.

Industrial customers, in particular, have seen the havoc that arises when other jurisdictions in Canada and in the US have veered off into unregulated market driven or privatized environments, where market forces are put ahead of principled cost allocated and rate stability.

I would ask the Board to consider the

presentations made by the Manitoba Power Users Group in light of the competitive challenges faced by Conexus and other energy intensive industries in Manitoba and help us retain our competitive position in Manitoba and in North America.

The future growth of large industry in Manitoba depends on reliable firm power at fair and reasonable rates. Rates that reflect cost of service principles and demonstrate commitment to innovative rate options that benefit both industry and Manitoba Hydro.

I thank you.

THE CHAIRPERSON: Thank you, Mr. Turner.

Are there any questions?

MR. ROBERT MAYER: Mr. Chair, yes. A couple.

Dealing with Canexus, you've indicated that electricity or power input is 60 percent of your manufacturing costs. Judging from your paper in whole, I take it your labour costs rank no higher than fourth?

MR. BILL TURNER: When we talk 60 percent we break our operating costs into two levels. One is variable costs which is pure raw materials going into our finished goods; that is 60 percent -- Hydro is 60 percent of that cost.

We also then have what we call cash costs

and that's our labour cost, taxes and any operating expenses that we have to operate our facility.

MR. ROBERT MAYER: And you pay -- then your comment in your written materials is a little misleading then if you say 60 percent of your manufacturing costs is the cost of electricity.

MR. BILL TURNER: In our industry we refer to the manufacturing costs as variable costs. We've got -- we have different accountants working for us.

MR. ROBERT MAYER: Thank you for clarifying that.

MR. LEN EVANS: Thank you, Mr. Chair. I appreciated your comprehensive and clear presentation about the importance of the industries in Manitoba.

Members of the Industrial Power Users Group, and of course your own company that you gave us some background on and I notice Canexus you mention the previous name Nexen. Can you recall the earlier names because it's gone through a variety of owners and name changes, I believe.

MR. BILL TURNER: Well, if you start right from day one, initially it was Dryden Chemicals which was sold to Occidental Petroleum. And the Canadian division of that was actually handled by, at that time,

Hooker Chemicals.

We then split off into a Canadian division called Canadian Occidental Petroleum and an umbrella company was CXY Chemicals at that time and then that was -- we were totally bought out -- or we bought out our parent company, Occidental Petroleum, to become Nexen. And then last August Nexen actually spun us off into an income trust.

MR. LEN EVANS: That's a very interesting story of history of industrial development. I just wanted to say that I remember it initially as Dryden Chemicals so I'm going to confess, maybe I've mentioned this to you before, when I was Minister of Industry back in 1970 I was at the plant and I officially opened this plant, cut the ribbon.

I had Mr. Sidney Spivack (phonetic) come along with me because he was really the minister involved in, I think, attracting your industry in the first place. So I thought out of fairness we should recognize Mr. -- the Late Mr. Spivack.

But I do recall Mr. Tim Sale -- The Honourable Mr. Tim Sale (phonetic) who is now in government, sent me a picture of this opening, for whatever reason, a few months ago of me standing in front at this ribbon cutting ceremony or whatever we did.

So that brings -- that's just off -- off the record sort of comments. I had a -- another question of the group. Mr. McDonald, and I enjoyed looking at your charts and I just want a clarification.

The chart which is referred to as "relative power costs" --

MR. DARREN MCDONALD: Yes, sir.

MR. LEN EVANS: -- and I notice the ones from Perth Amboy (phonetic) to Cambridge --

MR. DARREN MCDONALD: Right.

MR. LEN EVANS: -- and maybe Cover to be -- those to be considerable higher than the others. Did I hear you properly when you said those were less regulated or were not regulated?

MR. DARREN MCDONALD: Right. Whitby, the two (2) Ontario plants and the two (2) New Jersey plants are in -- I guess you -- I don't know what you would call Ontario today. It's quasi-regulated. But the New Jersey plants are -- are, you know, FERC's standard market design model fully deregulated competitive market.

MR. LEN EVANS: So the point of this graph or the story of this graph is that you achieve lowers rates in a regulated environment than in a so-called competitive environment?

MR. DARREN MCDONALD: Well, this is just

the reality of the pricing that we have at these locations. It appears that the -- the marginal cost model, highest priced megawatt sets the price, is causing prices to increase beyond those that are regulated.

MR. LEN EVANS: Right. Thank you. And just one other question about your charts, the one that is entitled "efficiency is not an issue" --

MR. DARREN MCDONALD: Right.

MR. LEN EVANS: -- this one here. And I just may have -- may just not have heard you, but I'm looking at the bar charts and I don't know what the reference is. There's no names or numbers down here.

MR. DARREN MCDONALD: Yeah, that's intentional. We didn't want to release which plants were more efficient than others. What we wanted to show is the dark column is Manitoba and where it ranks with --

MR. LEN EVANS: Oh, I see.

MR. DARREN MCDONALD: -- with respect to the rest of our locations.

MR. LEN EVANS: All right. So each one of these are your --

MR. DARREN MCDONALD: Each one --

MR. LEN EVANS: -- each one of these --

MR. DARREN MCDONALD: Represents a plant.

MR. LEN EVANS: -- is a location, a

plant. I see.

MR. DARREN MCDONALD: Yes.

MR. LEN EVANS: And this is where Manitoba stands.

MR. DARREN MCDONALD: Yes.

MR. LEN EVANS: Yes. Okay. Thank you.

MR. DARREN MCDONALD: So Manitoba is -- is relatively efficient compared to the rest, even with low cost of power, was the message I was trying to deliver there.

MR. LEN EVANS: This is total efficiency?

MR. DARREN MCDONALD: This is the -- this is our major power consumer in the plant, our arc furnace, and this is -- so this is where we consume the bulk of the electricity. And it is -- there's the ranking and consumption per ton of steel produced.

MR. LEN EVANS: Hmm hmm. Okay. Thank you.

THE CHAIRPERSON: Mr. Mayer...?

MR. ROBERT MAYER: Yes, I do. Mr. Turner, as you are undoubtedly aware, as I assume your counsel or your consultants have told you, the Winnipeg Free Press article of May 1st, 2006 has been brought to the attention of this Board.

Were you aware of that?

MR. BILL TURNER: Yes, I was.
MR. ROBERT MAYER: And I take it you've had an opportunity to review that article?
MR. BILL TURNER: Yes, I have.
MR. ROBERT MAYER: Are the statements attributed to you, accurate?
MR. BILL TURNER: My statements or Mr. Brennan's statements?
MR. ROBERT MAYER: Your statements, sir.
MR. BILL TURNER: To the best of my knowledge, yes, they are.
MR. ROBERT MAYER: Then I'm reading from the article:
"Industrial customers receive..."
And this appears to be something that the author of the article attributed to you.
"Industrial companies received a letter last fall from Hydro President Bob Brennan, serving notice the Utility was considering a fee on surges in consumption above normal levels that would bring rates closer to what was being earned from the export of electricity."
Is that what you said?

MR. BILL TURNER: The -- the letter that I received was from our Hydro rep operating out of Brandon.

MR. ROBERT MAYER: So that letter wasn't from Mr. Brennan then?

MR. BILL TURNER: No. I -- I think -- Tamara were you --

MS. TAMARA MCCAFFREY: The letter that came from Mr. Brennan was, I believe, in response to Mr. Turner's letter. The original letters were from, I think a fellow name Mr. Gary Moore (phonetic), if I remember correctly, who is, Mr. Turner indicated, their Hydro representative out in Brandon.

So it may be that there was -- there certainly was some correspondence with Mr. Brennan but with resp -- I don't think that's a direct quote that he's attributing the first letter to Mr. Brennan. Maybe it was a minor mistake, it seems. But, in any event, certainly a communication from Manitoba Hydro.

MR. ROBERT MAYER: Okay. I was just trying to determine whether there was something we didn't get in this package because the only letter we have with Mr. Brennan's signature on it is basically an invitation to talk.

MS. TAMARA MCCAFFREY: Mr. Chair has

confirmed that that was the only letter from Mr. Brennan.

MR. ROBERT MAYER: Thank you very much.

THE CHAIRPERSON: Yes, thank you, Ms. McCaffrey and Gentlemen.

I think, just as a way of commenting, the companies that MIPUG represent are well known to the Board. Manitoba, as you know -- in particular know, is a fairly small community, and various ways of life. We've become fairly familiar with the large companies that operate in our midst.

I think a lot of us were quite aware and met on several occasions, Gary Leech (phonetic), for example, used to be known as MRM. I remember Went Newman (phonetic) from the Mining Association quite well. We can see the significance of the companies.

And I just wanted to say that you can be assured in our deliberations -- first of all, we're not actually talking about rates in this process, we're examining the cost of service methodology of the company, which is one (1) potential determinant of rates at the end.

But we understand the significance of the issue to you. And you can be assured through your competent counsel's representations, the materials you filed and our interest in the subject, that we will give

fair deliberation to your concerns.

Thank you very much for coming.

MR. ROBERT MAYER: I think just one other comment, coming from what the Chair said. At some point in this correspondence there is question that never appears to be answered by Hydro. And the question was: Would the matter be brought before the Public Utilities Board.

As I understand the law, it has to be, before they can mess with the rates.

MS. TAMARA MCCAFFREY: Thank you for that, Mr. Mayer. I'm just making extra sure that everyone has had an opportunity to say everything that they wanted to say while they have this opportunity before you.

It seems that they have, so.

THE CHAIRPERSON: Take your time.

(BRIEF PAUSE)

MS. TAMARA MCCAFFREY: Thank you very much for your time.

THE CHAIRPERSON: Well, thank you. Thank you again for coming.

(BRIEF PAUSE)

THE CHAIRPERSON: Okay. Mr. Williams, we're back to you.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: I guess it's good afternoon now, or good afternoon again. We're back to a few more Harperisms. And we're going to be jumping from subject to subject for the next few minutes.

CONTINUED CROSS-EXAMINATION BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: I want to just turn to the treatment of what are termed as TD transmission charges. And I don't think I have a reference for you, Mr. Thomas, although I guess the interrogatory that you might want to have nearby, I don't -- is CAC/MSOS Manitoba Hydro 2-5(c).

In terms of these charges, Mr. Thomas, my understanding is that they include MISO membership fees and legal fees, as well as MAPP membership fees; is that right?

MR. CHIC THOMAS: Yes, that's what the IR says.

MR. BYRON WILLIAMS: Now, in terms of the difference between MISO and MAPP, I wonder if you could indicate, for each of the respective organizations, MISO being M-I-S-O for the record and MAPP being M-A-P-P, what the purpose is of each, please.

Mr. Surminski, I always forget to direct my questions to you for that, I apologize.

MR. HAROLD SURMINSKI: I'm not in the best position to answer this either, but I can attempt to go as far as I can on it. The MAPP was formerly -- had several purposes, it was a reliability organization and it had the -- the reserve sharing pool was part of that.

MR. BYRON WILLIAMS: And in terms of MISO?

MR. HAROLD SURMINSKI: MISO -- footprint wise, MISO is a larger footprint. MISO extends further into the eastern part of the US. So MAPP is a smaller part of MISO from that perspective. And MISO is an independent system operator, so that's what the -- Midwest Independent System Operator is where the acronym comes from. And MISO is part of FERC's deregulated plan for the open access transmission and the deregulated environment in the US.

So there was several stages of market development. There was day one (1), day two (2), where

day one (1) was open access transmission. And followed by day two (2) of April in 2005 where a trading market was also set up.

So originally it was just open access transmission without a market. Starting in April of '05 a market was actually set up. We're a day ahead and real time trading took place.

MR. BYRON WILLIAMS: Thank you for that. And I'm clear on MISO. And just going back to MAPP, for just one second. The organiz -- it leaves a smaller footprint, and the focus, I believe you were suggesting, is in terms of issues relating to reliability and reserves; is that right?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: What I'm interested in exploring very briefly is whether or not there are benefits to domestic customers, leaving aside the creation of export revenues, from participating in these two (2) bodies?

For example, is membership necessary in one (1) or each of these organizations in order to effect diversity sale contracts?

MR. HAROLD SURMINSKI: MAPP is still a reliability organization so it would be definitely required -- membership would be required in MAPP. And in

order to undertake power trading, MISO oversees the power trading now, so that implies that require -- there is a requirement for Manitoba Hydro to be part of MISO also.

MR. BYRON WILLIAMS: And just so I'm clear, you're quite confident that in terms of the ability to effect diversity sale contracts, membership in MAPP is required, and it may be for MISO; is that right?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: I may have to take this back -- I will have to take it back if you want an answer to this.

MR. BYRON WILLIAMS: Yeah, I would appreciate an answer. So if you can confirm whether for the purposes of effecting diversity sale contracts, membership in either MISO or MAPP is necessary, and if so which, if any, of those two (2) organizations is membership necessary.

MR. HAROLD SURMINSKI: Yes, I'll undertake that.

--- UNDERTAKING NO. 13: Confirm whether for the purposes of effecting diversity sale contracts, membership in either MISO or MAPP is

necessary, and if so which, if any, of those two (2) organizations is membership necessary.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: And I'll just -- the other two questions: In terms of the allowing for emergency purchases in the event of failure of transmission connecting northern generation, is membership necessary in either of these organizations?

MR. HAROLD SURMINSKI: Can you clarify; in order to do what?

MR. BYRON WILLIAMS: Sorry. In terms of allowing for emergency purchases in the event of failure of transmission connecting northern generation, is there membership required for either of these groups?

MR. HAROLD SURMINSKI: So you're saying failure of our northern transmission --

MR. BYRON WILLIAMS: Yeah, and to enable emergency purchases to -- to compensate for that?

MR. HAROLD SURMINSKI: I would have to get back to you on that also.

MR. BYRON WILLIAMS: Okay.

--- UNDERTAKING NO. 14: Confirm, in terms of allowing

for emergency purchases in the event of failure of transmission connecting northern generation, is there membership required for either of MISO or MAPP.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Finally, are there operating benefits, such as reserve sharing, that accrue through membership in either of these organizations, and if so, are there fees necessary to support this?

MR. HAROLD SURMINSKI: Yes, I'd indicated the MAPP is a reserve sharing pool and there are fees associated with membership in MAPP.

MR. BYRON WILLIAMS: Okay. I want to turn now to the treatment of PSO transmission charges.

MR. ROBERT MAYER: Before you go there, Mr. Williams, it seems to follow from -- assuming I can't assume an answer, a yes or a no, it appears to follow from Mr. Williams' questions, that if membership in those organizations are not required, I, for one, would like to know why we pay them?

And if they are required, that's not an issue. If they're not required, then I'd like to know why we -- why it is seen by Manitoba Hydro to be

advantageous to belong to those organizations if membership is not required for our benefit?

MR. VINCE WARDEN: Mr. Mayer, maybe I can just respond that there's no doubt for us to realize our export sales to the extent that we have -- we need to belong to those organizations.

Do we need to belong for the reasons Mr. Williams requested, we'll have to confirm that. We may be able to enter into bi-lateral agreements for diversity sale purposes, but whether we absolutely have to belong to MISO for that purpose, we'll find out for sure.

MR. ROBERT MAYER: Well, that's -- and that's great. I was wondering why somebody didn't say somewhat earlier why we're there and what the reason was. I realize that you're now limiting your response strictly to one (1) particular contract that Mr. Williams seems to be concerned about. You can ignore what I asked.

MR. BYRON WILLIAMS: Really just for clarification, Mr. Mayer, there's clear benefits for the export class. My question, where I was going was just trying to determine what if any benefits from participation in these organizations accrues to the domestic class of consumers.

MR. ROBERT MAYER: I would have thought that the fact that we're able to sell so much more power

and therefore allocate it back might be some value to the domestic customers, but I guess we'll get that answer on -- tomorrow.

(BRIEF PAUSE)

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Turning to some rivetting questions on treatment of PSO transmission charges, I wonder if you can confirm that all transmission charges directly assigned to exports are transmission service for export sales, is that right?

MR. HAROLD SURMINSKI: I believe all transmission charges are for export sales, is that what your question is?

MR. BYRON WILLIAMS: What I was asking to confirm, was that all transmission charges directly assigned to exports are transmission services for export sales?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: Are there any transmission charges incurred to imports or purchases?

(BRIEF PAUSE)

MR. CHIC THOMAS: Yes, they would all be in the power purchase cost that we assign in the cost of service study.

MR. BYRON WILLIAMS: And I apologize for the tediousness of my questions, there's a few -- just things we're trying to clarify.

In terms of how the transmission -- now my understanding is that the transmission tariff application depends on whether the export destination is inside or outside the MISO tariff region, is that correct?

You know what I may do, Mr. Chairman, there's -- some of these questions are, as I said they're probably important to Mr. Harper for some technical elements of his evidence.

What I may do to move things along, is suggest that I share them with Manitoba Hydro kind of by way of pre-ask. And we might be in a better position to -- I'll confer with my colleague off line at the close of some of my other questions and just see if that's appropriate for her.

But, it just may move things along in terms of the next little while.

THE CHAIRPERSON: If that's acceptable to Ms. Ramage, then proceed on that basis. You can just file the questions and the responses with us and we can

share it will all parties.

MS. PATTI RAMAGE: I think that would be a good idea.

MR. BYRON WILLIAMS: And you can certainly hear a huge sigh of relief coming from over here, as well, Mr. Chairman. And I'll certainly -- if there are questions that Ms. Ramage feels are inappropriate we'll certainly bring that to the Board's attention.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Just moving towards, near the end Mr. Warden, so long ago when I started this cross-examination the -- or actually when we started your evidence, in your opening evidence you talked about your many years of experience with the Corporation, do you recall that sir?

MR. VINCE WARDEN: Well, I went over my experience and yes, it's many years.

MR. BYRON WILLIAMS: Thank you for that noble concession. And I didn't mean that in a pejorative sense because, of course, one of the many advantages of your many years of service with the Corporation is that you've had the experience of being through the Corporation through its highs and through its lows; would

that be fair?

MR. VINCE WARDEN: Mostly highs, but there have been a few lows along the way.

MR. BYRON WILLIAMS: And in the course of experiencing both highs and lows perhaps you'd agree with me that one of the benefits that comes from that is developing some sense of balance or perspective; would that be fair?

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: And I'm going to put this another way, just so you're clear where I'm coming from. One of the lows which might seem earth shattering to a -- to a -- a rookie, you, as a -- not to say you're a grizzled veteran but as someone with a bit more experience, you might see it as a serious issue but something that you can deal with that's not a crisis; just that sense of the balance that you get from experience?

MR. VINCE WARDEN: I'd guess I'd prefer you were more specific with that, Mr. Williams, but I guess I can agree with you thought.

MR. BYRON WILLIAMS: And in my discussion with you and Mr. Wiens near the start of my cross-examination we also talked about the -- the competing interests that the Corporation sometimes has to address

and the fact that there is some -- some sort of balancing act that you must engage in; do you recall that discussion?

MR. VINCE WARDEN: I do.

MR. BYRON WILLIAMS: And I -- I think you'd agree with me that sometimes when you're balancing things there are certain compromises, at a high level generally, that may be that -- that you may need to strike?

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

MR. BYRON WILLIAMS: But my take on you, certainly, and perhaps you would agree with this, is that as a senior, loyal and long-standing member of this Corporation you would never compromise on an issue if you felt that the short or medium or long-term future of the Corporation was at risk?

MR. VINCE WARDEN: Absolutely.

MR. BYRON WILLIAMS: Just going back through a bit of history, Mr. Warden, my understanding is that based on a previous Board Order from the Board from the 2004 General Rate Application the Corporation had the opportunity, if it chose, to come before the Board and seek a 2.25 percent rate increase effective October 1st, 2005; is that your understanding as well?

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: Now -- and if memory serve me right, you wrote to the Board and indicated that that -- that the Corporation would not be seeking that rate increase at that point in time; is that right?

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

(BRIEF PAUSE)

MR. BYRON WILLIAMS: And likewise, in more recent memory, I recall in the fall or early winter of 2005 the Corporation had actually filed a request for rate increase for 06/07; is that correct?

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: And you subsequently announced that you won't be seeking a rate increase in 2006/07; correct?

MR. VINCE WARDEN: Correct.

MR. ROBERT MAYER: Was that correct or was it just 2006 you said you're not --

MR. VINCE WARDEN: I think Mr. Williams was referring to the 06/07 fiscal year.

MR. BYRON WILLIAMS: And I should have certainly put a blackslash in there, Mr. Mayer, but that was the thrust of my question.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: And without asking you to elaborate on the view -- on your view, but you've made no secret of your opinion that over the long-term you think a debt equity ratio of 75/25 for the Corporation is important to provide an adequate -- an adequate cushion against untoward events; is that fair enough?

MR. VINCE WARDEN: Yes. I think I've been quite consistent in that.

MR. BYRON WILLIAMS: And you don't need to turn to it but I'm going to quote to you from page 6 of Hydro's rebuttal evidence at line 17 through 20. I see Mr. Wiens is turning there.

But Manitoba Hydro makes the point that the issue of appropriate financial reserves should be considered independently from the issue of the appropriate treatment of net export revenues. The latter needs to focus on cost definition and other cost issues as well as rate design criteria such as inter-class equity and efficiency considerations.

Do you concur in that view, Mr. Warden?

MR. VINCE WARDEN: I concur with our rebuttal evidence. Yes, I do.

MR. BYRON WILLIAMS: And with the specific section as well, you concur with that?

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: And certainly, from my client's perspective, we tend to agree with you. But, again, without elaborating, you'll agree with me that as a senior loyal and longstanding member of Manitoba Hydro, if you felt that the short or medium or long-term future of the Corporation was being seriously imperilled today because of inadequate progress towards that debt equity ratio, you would be in here seeking a rate increase tomorrow, correct?

MR. VINCE WARDEN: Well, I would certainly make my views known back at Manitoba Hydro with the -- with the executive, with the board, which I've done.

MR. BYRON WILLIAMS: That's probably why you have a better future with your organization, you actually check with your bosses before you do things, which may reflect my status in my organization.

Mr. Surminski, you may or not be aware of this, but long ago, when both the Chairperson and myself had less gray hair, my experience with the Public Utilities Board stated with the Manitoba Public Insurance.

Were you aware of that fact, sir?

MR. HAROLD SURMINSKI: No, I was not.

MR. BYRON WILLIAMS: Well you learn something new every day.

I wonder if you're aware, at least at a high level, that Manitoba Public Insurance operates what is known as a rate stabilisation reserve.

Are you aware of that?

MR. VINCE WARDEN: We're -- Manitoba Hydro is aware of that, I'm not sure whether Mr. Surminski is, but --

MR. BYRON WILLIAMS: As long as you're aware, Mr. Warden, that's all I care about.

I wonder if you're also aware that over the course of the last decade, before the Public Utilities Board, on matters dealing with Manitoba Public Insurance, that the quantum of that rate stabilization reserve has been a hotly contested item, with pre-filed evidence, interrogatories, cross-examination, competing -- competing versions of expert opinions.

Were you aware of that fact, sir?

MR. VINCE WARDEN: Yes. Certainly not as intimately as -- as you are or those directly involved, but I am aware of it.

MR. BYRON WILLIAMS: Yes. And always the

ever popular rebates.

Mr. Surminski, just going back to you, and you had this discussion with Mr. Peters, but I believe in your discussion with him in terms of the -- the financial impact magnitude and probability of a five (5) year drought, you suggested to him that it was a qualitative assessment; is that right?

MR. HAROLD SURMINSKI: Specifically, the $2 billion estimate, relative to the one point five (1.5), the 1.5 billion we do have a quantitative estimate for.

MR. BYRON WILLIAMS: Well, in terms of that 2 billion figure and -- and perhaps even the one point five (1.5), I wonder if you would agree with me that it has not been tested before this Public Utilities Board to the same intensity such as the Manitoba rate stabilisation rate reserve, with pre-filed evidence, interrogatories, cross-examination and competing expert evidence.

Would that be fair?

(BRIEF PAUSE)

MR. VINCE WARDEN: Probably more a question related to rate application. We certainly filed

information with respect to risks faced by the Corporation. We have made known in that -- through that report and through our annual report, published annual report, that we believe that number to be in the range of $2 billion.

Has it ever been tested before in this forum? No, probably not.

MR. BYRON WILLIAMS: Or certainly not to the intensity that I'm -- and I'm not suggesting we'd do that today, I'm just making that -- that observation. That's really a debate for another day.

MR. ROBERT MAYER: Mr. Warden, I could have sworn that -- I thought in the last hearing, firstly, there was significant cross-examination about that $2 million based on something we knew about, the horrible impact of the last drought.

And it seems to me, and I haven't got our Orders committed to memory, but I thought we kind of implicitly bought into that $2 million. And you would probably, from reading our Order, believe that it had, in fact, been tested and accepted.

MR. BYRON WILLIAMS: That might be my concern, Mr. Mayer, but I'll --

THE CHAIRPERSON: We were referring to 2 billion, I think.

MR. BYRON WILLIAMS: Yeah, 2 billion. But I'll -- but I guess the simple point I was trying to make on behalf on my clients, and I -- I think Manitoba Public Insurance would -- excuse me, I've got the wrong utility.

The simple point is that the rigour with which we approach Manitoba Public Insurance rate stabilization reserve in the regulatory process, I think is yet to come, in terms of the Corporation's risk estimates. But I'll speak to that, I guess, in closing.

THE CHAIRPERSON: We did not determine, in a very exact basis, whether or not the $2 billion estimate, plus the extra $200 million for imputed interest was or was not accurate. We could imagine it being in that range, given the experience between 2002 and 2004.

So it was not hard to imagine $2 billion, particularly when the Corporation indicated that if they hadn't taken certain trading actions the loss would have been considerably higher.

(BRIEF PAUSE)

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Just by way of

closing, Mr. Wiens, I want to go back to Mr. Bonbright and I believe that we -- there's no garage analogies so you can all heave a sigh of relief.

You will recall that according to Bonbright, and that's cited by Philips, the three (3) primary criteria in rate setting were to recover the revenue requirement, fairness, and to encourage efficiency; is that your recollection?

MR. ROBIN WIENS: That is my recollection.

MR. BYRON WILLIAMS: And again, going back to the discussion of marginal costs, at a very high level you'll agree with me that there are two (2) conceptions of marginal costs, is that correct; that being short run and long run?

MR. ROBIN WIENS: There are at least two (2), Mr. Williams.

MR. BYRON WILLIAMS: Yes, thank you for that Mr. Wiens. In terms of short run, they're typically calculated by terming the incremental costs of producing more than existing plant, i.e., no additional investment required or timeframe for increase in use.

Because that -- so as a result, short run marginal costs is more out of pocket immediate cost, generally -- that's how they're generally understood?

MR. ROBIN WIENS: Yes, short run marginal costs refers to that situation where the existing capital plant is assumed to be not capable of expansion and the costs that are necessary to incur to increase output under those circumstances.

MR. BYRON WILLIAMS: And in terms of long run, that assumes output will increase permanently such that an addition to plant capacity will be needed. So therefore, long run marginal costs therefore also include investment and fixed costs; would that be fair?

MR. ROBIN WIENS: Yeah. Long run marginal costs is what occurs when you can vary all the inputs in the production.

MR. BYRON WILLIAMS: You're always helpful Mr. Wiens. In terms of long run costs, you'll agree that they're typically higher than short runs costs, except in the event of a shortage; would that be fair?

MR. ROBIN WIENS: Typically, yes.

MR. BYRON WILLIAMS: I want to apply those concepts to a certain degree to the Bonbright rate criteria and see how they merit consideration with that -- within that context.

And so I'd ask you first to turn -- and I'll turn you first to the recovering the revenue

requirement. You'll agree with me that if rates for incremental use don't cover short run costs, then a utility is losing money on each increment of sales it makesl; is that right?

MR. ROBIN WIENS: Yes, it is.

MR. BYRON WILLIAMS: And at a theoretical level, this puts the recovery of the revenue requirement at risk, correct?

MR. ROBIN WIENS: Perhaps not in the immediate term, but eventually.

MR. BYRON WILLIAMS: Just following along a bit, ideally, one would want rates for incremental use to make a contribution to fixed costs and cover long run marginal costs, but at a minimum, you'll agree with me that they should cover the costs immediately imposed by increased use; is that correct?

MR. ROBIN WIENS: That's an ideal, and bearing in mind that the situation of the utility may be quite different from the situation of a business that has to compete with other businesses.

MR. BYRON WILLIAMS: But, ideally, it's fundamental that one does not sell for less than variable costs, correct?

MR. ROBIN WIENS: That's a fundamental of economics, yes.

MR. BYRON WILLIAMS: And it's a fundamental of Bonbright he states that:

"Marginal costs may play a dual role in rate structure, first in setting a lower limit below which no rates should be fixed."

Is that right?

MR. ROBIN WIENS: I do recall that from Mr. Bonbright, yes.

MR. BYRON WILLIAMS: And again, just looking at the application of these concepts to principle number two (2), I'll call it fairness, one could argue that if the rates a customer pays for use are not even covering variable costs, then they're being clearly cross-subsidized by their customers, correct?

MR. ROBIN WIENS: Well, I think you have to be careful when you begin to stray into this realm, Mr. Williams. As I say, a situation of the utilities, such as Manitoba Hydro, while ultimately the same economic rules prevail, they may not prevail in the short term to the same extent.

Manitoba Hydro, if it views into the future that it is not recovering its revenue requirement, it has some options. And among those options, of course, are to come to this Board and ask for increased domestic

rates.

Other factors, as well, you may be -- you may want to -- and I think legitimately, from an economic perspective, refer to a situation in which a rate is not covering short run marginal cost as being a subsidy situation.

But if there are funds available to provide such a subsidy, the Utility itself is not in any immediate danger of not recovering its costs.

MR. BYRON WILLIAMS: And thank you for that clarification. And so you were speaking in response both to the issue of fairness and also to the issue of the revenue requirement recovery?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: In terms of efficiency, one can argue whether short run or long run marginal costs send the most appropriate economic signals; you'll agree with that?

We could have a long argument about that?

MR. ROBIN WIENS: We could have a long discussion; some if it might be an argument and some of it might not be. But that's agreed, yes.

MR. BYRON WILLIAMS: And that, in fact, is a subject of some contention; is it not?

MR. ROBIN WIENS: Certainly some

discussion.

MR. BYRON WILLIAMS: You'll agree with me, though, and I suspect there will be no dispute, that if rates for incremental use are lower than even short run costs, then, clearly, the pricing signal is inefficient; would you agree with that?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Mr. Chairman, I have a few responses to -- I guess there's two (2) things yet to be dealt with by me. One (1) is the questions shortly before lunch in terms of purchase power and import powers.

And then in my effort to -- to get my colleague Intervenors on, there's also some questions that we may put to Manitoba Hydro via pre-asks that I'll discuss off line with My Friend, Ms. Ramage.

MR. LEN EVANS: Mr. Chairman, I wonder just before -- just to ask Mr. Wiens a couple of technical questions just to refresh my memory.

We've been talking about marginal costs and marginal revenues and so on, and it seems to me, in many corporations -- many large corporations, many large businesses, it's very difficult to know what your marginal costs are, let alone marginal revenue at times.

But you'd agree that the place of

maximization of profit, your very best position is where your marginal cost equals your marginal revenue?

MR. ROBIN WIENS: That's fundamental, Mr. Evans.

MR. LEN EVANS: Okay. Right. And another point: The marginal cost equals average cost at which point?

MR. ROBIN WIENS: If my recollection is correct the marginal cost curve intersects the average cost curve at the lowest point of the average cost curve.

MR. LEN EVANS: That's what I have here so you're confirming my -- my memory on this. Thank you very much.

(BRIEF PAUSE)

THE CHAIRPERSON: So, Mr. Williams, we're going to come back to you then?

MR. BYRON WILLIAMS: Yes, Mr. Chairman.

THE CHAIRPERSON: Thank you, very much. And thank you Ms. Bowman.

Well, we have the next one we're moving on to is Professor Miller -- oh, I'm sorry, Mr. Buhr.

After setting you back, when we originally thought we were going to go with you at 12:45, we almost

omitted you entirely. Mr. Buhr, could you do your cross-examine now?

MR. DOUG BUHR: I can start, Mr. Chairman, but I have grave doubts that I'm going to finish in twenty (20) minutes.

THE CHAIRPERSON: Well, give it a shot, and we'll defer the rest of it until the next day. Take your time, Mr. Buhr. You've been very patient.

MR. DOUG BUHR: Thank you.

MS. PATTI RAMAGE: Mr. Chairman, while Mr. Buhr is -- I assume he's -- I'm not even sure if you have a mic back there. But we were -- I -- Ms. Fernandes and Ms. VanDean were just passing out an undertaking, just --

THE CHAIRPERSON: Oh very good. Thank you.

MS. PATTI RAMAGE: -- to give Mr. Buhr a minute to get organized, if he needs it.

(BRIEF PAUSE)

THE CHAIRPERSON: I gather, Mr. Buhr, you're ready to go?

MR. DOUG BUHR: Yes, Mr. Chairman.

THE CHAIRPERSON: Just take one second

until we receive this undertaking and give it an exhibit number.

(BRIEF PAUSE)

THE CHAIRPERSON: Is this Exhibit number 14, Ms. Ramage?

MS. PATTI RAMAGE: Yes. That's what we have it marked as, and it is the question regarding the -- Manitoba Hydro's long-term expectation for natural gas and surplus energy prices.

THE CHAIRPERSON: Thank you very much. Greatly appreciated.

--- EXHIBIT NO. 14: Manitoba Hydro's long-term expectation for natural gas and surplus energy prices.

THE CHAIRPERSON: Okay, Mr. Buhr.

MR. DOUG BUHR: Thank you, Mr. Chairman.

CROSS-EXAMINATION BY MR. DOUG BUHR:

MR. DOUG BUHR: Mr. Wiens, I suspect, from our history before this Board, that my questions are going to be addressed and answered by you, but, please,

if any member of the Panel is more appropriate, by all means. I just want that as a qualification.

And the other thing I want you to know is I'm dealing strictly with street lighting, and -- and all of the questions are in that area. And -- and I would hope the responses would be restricted to that area as well, please.

So let's start with history. The history, as I understand it for the last thirty (30) years, is that street lightings RCC has been well above one hundred (100) and well above any zone of reasonableness.

Is that correct?

MR. ROBIN WIENS: Well, Mr. Buhr, there's a considerable degree of truth in that. We have filed, as part of our -- as part of our cost of service original filing back in October of 2005, I'll refer you to the perspective cost of service study for the fiscal year ending March 31st, 2006, and in there I'll refer you to page 34, where we have provided a history since 1992, which may not cover the entire period of your interest, but it's the recent ten (10) years -- or the recent twelve (12) or fourteen (14) years.

And you can see in the early 1990's that area and roadway lighting was indeed above 100 percent and, in fact, it was in the range of 110 percent for a

number of years, until we get to 1996. And while I may not have my coincident dates completely lined up, I believe that relates to a time period in which we had some rate decreases for the street lighting class of service, which took us down, in 1996 to a 103 percent, in 1997 to 100 percent. And when we got to 1999 and 2001 and 2002, we were considerably, actually, below 100 percent.

So we had, indeed, achieved the objective and, in fact, had overshot it for a few years. Beginning back in -- in 2003, 2004 and now 2006, and this is all using the current cost of service, what's been referred to as the current cost of service methodology, we have been in excess of 100 percent, again in the range of a hundred and five (105) to a hundred and ten (110) percent.

So that was maybe a little lengthy to respond to your question, but I think it -- I think it puts most of the recent evidence on the record.

MR. DOUG BUHR: Thank you for that.

And would you agree with me the history has also been that when Manitoba Hydro has done an actual study, the RCC for street lighting has, in fact, been higher than what it has been in perspective studies?

MR. ROBIN WIENS: I think my recollection

is one (1) actual study, and I believe that's correct, Mr. Buhr.

MR. VINCE WARDEN: I think, though, we do have to realize that we are talking post export revenue allocation. So if we were to do an actual cost of service study in the drought year, 03-04, that certainly wouldn't be the case.

MR. DOUG BUHR: Well -- but you did do an actual study for the fiscal year ending March 2003, correct?

MR. VINCE WARDEN: I was referring to the drought year though, 03-04.

MR. DOUG BUHR: And the actuals for 2003 showed street lighting at one-o-nine point nine (109.9), or a hundred and ten (110), correct?

MR. VINCE WARDEN: That's correct. But it's before the drought year that I was referencing.

MR. DOUG BUHR: And I suggest to you that the other actual studies you have, the RCC for street lighting is always higher than what the perspective RCC is.

MR. VINCE WARDEN: My only point, Mr. Buhr, was it -- it really does depend so much on water conditions. In those years where we have better water conditions than median, on which the -- on which the cost

of service study is based, you'll get that results.

In those years when it's lower, you'll get the opposite result.

MR. DOUG BUHR: Let me try this a little differently then. Let me suggest to you that in 1996 the RCC was a hundred and fifteen (115), and that the Board ordered reductions to reduce the RCC to one ten (110) in 94/95, and one o nine (109) in 95/96. That was the intent of their ordered reductions; do you agree with that?

MR. ROBIN WIENS: Yes.

MR. DOUG BUHR: And yet in 2003 your actual study shows an RCC of one ten (110). So we're back just about where we started.

MR. ROBIN WIENS: Well -- just a moment, please.

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Buhr, if you're still following in the same location, we're showing the 2003 actual at a hundred and ten (110), and the 2004 prospective, in this case, at a hundred and nine (109), which is not very different, one from the other.

And in both of those years you'll recall

that the acquisition of Winnipeg Hydro had taken place not very long before. And we had not been fully able to integrate all of the costs into the -- on the cost side, particularly for the street lighting class of service.

And those costs were buried in the distribution function. So we were not, we believe we were not allocating all of the street lighting costs in both 2003 and 2004. So those are the results that are shown, and those results we believe would be at the upper end of where we would have expected the costs to be.

And the RCC was probably somewhat lower than that. We see in the 2006, using the current methodology, that I believe now we have been able to integrate all of those costs, and we're showing about 105 percent revenue cost coverage ratio.

MR. DOUG BUHR: Mr. Wiens --

MR. ROBIN WIENS: Post export, I'm reminded.

MR. DOUG BUHR: Mr. Wiens, I was hoping to avoid this debate. But let me suggest to you that the history has been, for example, in '94 Manitoba Hydro predicted a certain RCC and, in fact, what happened is it went up, not down. And that's when we ended up in '96, and that's when we got the Board Order to cut it so that it would get cut.

And I'm suggesting to you, very simply, that the history over the thirty (30) years has been that the actual RCC's, when you do an actual study, are always higher than what your perspective study is.

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Buhr, I'm trying to be helpful here. I'm familiar with only two (2) actual studies that were done in the period covered in this table; I believe 1995/96 and 2003. And yes, you are correct, in both cases the actuals were higher than the forecast. And I'm advised, in both cases, that we had higher water flows than we had forecast in each of those years.

Whether or not that was a -- a factor or to what extent it was a factor, I don't know. But the universe that I'm familiar with is two (2) actual cost of service studies.

MR. DOUG BUHR: You will recall, perhaps, then, that in the '96 hearing Manitoba Hydro prepared a chart showing perspective and actual RCC's?

MR. ROBIN WIENS: That's entirely possible.

MR. DOUG BUHR: I suggest to you that

whatever the RCC is, it's made no difference who's owned the poles and the lights, whether it was the City of Winnipeg through Winnipeg Hydro, or Manitoba Hydro?

MR. ROBIN WIENS: Made no difference with respect to...?

MR. DOUG BUHR: To the RCC.

MR. ROBIN WIENS: I'm not sure that I can confirm that on the basis of the data that -- that I've observed. We've got -- we've got revenue cost coverage ratios around the 2000 -- 1999/2001 period, when the City of Winnipeg owned the poles that are below 100 percent, and now we are above 100 percent, subsequent to the acquisition.

So I'm not sure that it's made no difference. I -- I'm not sure that it's worth engaging in a lengthy discussion about. The results are what they are.

MR. DOUG BUHR: Thank you, Mr. Wiens.

(BRIEF PAUSE)

MR. DOUG BUHR: Sorry. I want to move to one of Mr. Peters' favourite topics, namely, the number of customers you have for street lighting.

Your numbers, I think, show a number of

customers at about a hundred and forty-four thousand (144,000) and change?

(BRIEF PAUSE)

MR. CHIC THOMAS: About one forty-seven (147), Mr. Buhr, but -- and that's on Schedule B-8 of the recommended method in the PCOSS-06.

MR. DOUG BUHR: Is that accurate?

MR. CHIC THOMAS: To the best of our knowledge, yes.

MR. DOUG BUHR: You actually have that many customers, sir?

MR. CHIC THOMAS: It's the number of poles and fix -- pardon.

(BRIEF PAUSE)

MR. DOUG BUHR: Now -- Now, let me ask this one more time. How many customers do you have for street lighting?

(BRIEF PAUSE)

MR. DOUG BUHR: If it's of any

assistance, you equate the city as to seven thousand nine hundred and three (7,903).

MR. ROBIN WIENS: The hundred and forty-seven thousand two hundred and ninety (147,290) on Schedule B-8 refers to the number of streetlights in Manitoba.

MR. DOUG BUHR: It refers to the number of...?

MR. ROBIN WIENS: Streetlights in Manitoba. The number of customers, I'm advised, without being absolutely precise, is in the order of seven hundred (700), which would typically be municipalities, Department of Highways; there may be some others.

MR. DOUG BUHR: And that's for all of Manitoba?

MR. ROBIN WIENS: That's for all of Manitoba.

MR. DOUG BUHR: And if I understand Manitoba Hydro's answers to our interrogatories correctly, you equate the City to seven thousand nine hundred and three (7,903) customers?

MR. ROBIN WIENS: Mr. Buhr, that would be the number of streetlights within the city of Winnipeg, divided by ten (10), to come up with a denominator for the allocation of customer related costs to that class of

service, and that's in the city of Winnipeg.

Overall, it would -- we would be talking about the hundred and forty-seven (147) odd thousand, divided by ten (10), to come up with the weighted customer count for the purpose of allocating customer related distribution costs.

MR. DOUG BUHR: Well --

MR. ROBERT MAYER: You have me totally confused now, Mr. Wiens. When we talk about MIPUG, we don't talk about how many transformers they have or anything like that, we talk about how many customers. We talk about general service large and that they don't share too much in distribution costs because they do their own stuff.

I think I can see where Mr. Buhr is coming from. I mean, are you counting -- when you talk about customer service, which, as I understand it, includes meter reading and talking to irate customers when they think they've been overcharged, and all those other items, you count street lighting as being -- street lighting in the City of Winnipeg as being more than one (1) customer?

MR. ROBIN WIENS: For the purpose of allocating customer related distribution costs, yes, we do. To use -- not -- it's not an identical example, but

a similar situation, Mr. Mayer, the -- Domo Gasoline is one (1) customer but they have many locations throughout the Province of Manitoba.

So when we send a bill to Domo Gasoline we send it to one (1) customer. But when we look at what costs they impose on our distribution system, we look at all the points of delivery.

MR. ROBERT MAYER: And when you talk about points of delivery, is there more -- it seems to me that one (1) street light system is one (1) street light system. How many places do you deliver to that system?

MR. ROBIN WIENS: It -- it's a variable number, but a number of ten (10) street lights on one (1) distribution circuit is fairly typical.

THE CHAIRPERSON: Mr. Buhr, it's -- it's too bad but this was the day that we were going to shut down early because of other commitments. I'm just wondering if it would be helpful to you if there's some indication you could give to the panel of direction, other than the one that you're pursuing right now, that might help them prepare for tomorrow and make your job easier?

In other words, if you wish, you could make a brief statement of your intended direction.

MR. DOUG BUHR: Thank you, Mr. Chairman.

No, I think my questions -- bluntly, Mr. Chairman, what I'm doing is following the questions that I asked in Interrogatories and I'm using Manitoba Hydro's answers.

So I will certainly be moving on to talk about negligible effects, for example, if they treated us as one (1) customer. And the question is going to be: What's negligible? And whether it's up or down? That kind of thing.

THE CHAIRPERSON: I think that's helpful to them.

MR. DOUG BUHR: In terms of street lights and their -- the one (1) study they did ten (10) years ago, there are going to be questions in regard to what lights were measured at the time? Does it cover all of the conversion that happened, that the City paid for at sixty-five bucks ($65) a light, back in '94?

Those kinds of things. So it's -- it's -- bluntly, it's based on their answers.

THE CHAIRPERSON: Okay. Thank you, Mr. Buhr. I think that might help the panel a bit.

Turning to you, for a moment, Professor Miller. Our court counsel may have spoken to you, but some of the cross-examination by CAC/MSOS I think is sort of down your path and you might find it illuminating to consult with Mr. Williams, because I don't think the

transcript probably won't be available until tomorrow.

Oh, you have it already? Ah, the speed is amazing. Okay. Well, I'm sorry, everyone, we're going to shut down now, so we'll see you all tomorrow at nine o'clock.

PANEL RETIRES

--- Upon adjourning at 3:00 p.m.

Certified Correct

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Ryan Pickering