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:

Public Utilities Board
400, 330 Portage Avenue
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APPEARANCES

R.F. Peters		)Board Counsel
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Odette Fernandes		)
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Peter Miller		)TREE
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TABLE OF CONTENTS

LIST OF EXHIBITS

LIST OF UNDERTAKINGS

	Description	Page No.
5	Provide pamphlets re mitigation costs	572
6	To provide the assumed costs for a five (5) unit and a ten (10) unit Conawapa generating station, including the average energy generated under each scenario	584
7	Reproduce the "Manitoba Hydro Rates -April 2005" table (tab 3 - CAC/MSOS Book of References) specifically correcting the rates for incremental use for the Gss (Non Demand and Demand) and GSM customer classes	646
8	Obtain correspondence from NERA confirming their view of the relative merits of one export class versus two export subclasses	674

--- Upon commencing at 9:04 a.m.

THE CHAIRPERSON: Well, good morning everyone or at least everyone that is here. Hope you had a reasonably good weekend.

Mr. Peters, you can begin again.

MR. BOB PETERS: I will continue.

MANITOBA HYDRO PANEL:

VINCE WARDEN, Resumed

ROBIN WIENS, Resumed

CHIC THOMAS, Resumed

HAROLD SURMINSKI, Resumed

CONTINUED CROSS-EXAMINATION BY MR. BOB PETERS:

MR. BOB PETERS: Good morning, Panel.

I think where we left off Friday, Mr. Wiens, I think you had agreed that customer classes should reflect significant distinct characteristics if possible.

MR. ROBIN WIENS: Yes.

MR. BOB PETERS: And, Mr. Surminski, I think you told us that under your MISO arrangements, those arrangements comprised approximately 80 percent of your opportunity sales.

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

MR. BOB PETERS: And your opportunity customers, at least since April of 2005, are financially firm in that you must deliver or pay if you don't deliver.

MR. HAROLD SURMINSKI: Can you clarify that with opportunity exports?

MR. BOB PETERS: My question, yes, was relative to opportunity exports.

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

MR. BOB PETERS: And I suppose the distinction you're making, Mr. Surminski, is that on your firm exports, some of those aren't financially firm.

MR. HAROLD SURMINSKI: Yes, that's correct. Actually, I -- I went back to the office and -- and clarified some of that.

And what the trading people actually say is the opportunity term contracts are actually better contracts in terms of expecting to deliver for -- for the customer, in that Manitoba Hydro will either supply or purchase off the market for the -- for the counter-party. Whereas the system -- system participation sales, we can curtail and -- and have no obligation to actually supply

it.

MR. BOB PETERS: And while that may be what the theory is, we've heard from -- last week from you that in reality your firm and opportunity customers appear to have the same level of financial firmness from Manitoba Hydro.

MR. HAROLD SURMINSKI: Why would you say that?

MR. BOB PETERS: Well, let me ask it this way.

Even if you are a firm export customer and Manitoba Hydro has the ability not to deliver under certain circumstances, Manitoba Hydro chooses to deliver to keep its reputation.

MR. HAROLD SURMINSKI: Yes. I thought that's -- was the way you were thinking of it.

Yes, that's right. But that may not be the case in the future. Things are changing and I think there will be more clear terms associated with future long-term contracts.

Actually, counter-parties prefer the -- the financially firm product now. So I think future long-term contracts will probably go that way.

MR. ROBERT MAYER: Mr. Surminski, you just used a term I don't think I'd heard before, you

called it "opportunity term."

What is "opportunity term" and how long can opportunity term be?

MR. HAROLD SURMINSKI: There are the -- the type of contracts that one (1) month, six (6) months are negotiated, up to a year into the future. Our people call them term contracts.

MR. ROBERT MAYER: And you added opportunity for the purpose of this Hearing, did you, so that we know the difference between opportunity and firm?

MR. HAROLD SURMINSKI: That's correct.

MR. ROBERT MAYER: Thank you.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Am I correct in the math that if you create the opportunity class as Manitoba Hydro proposes, there is 45 percent of the variable costs directly assigned to that opportunity class, and that results in approximately $80 million of allocated costs being charged to other customers instead of export customers?

MR. ROBIN WIENS: You're correct about the 45 percent of the variable costs that would, under the current method, have been assigned to -- to the -- against exports; 45 percent of that level of costs in the

recommended method is assigned against opportunity exports.

I'd have to think a little more or else get back to my notes to be certain about where you're coming from with the $80 million number.

MR. LEN EVANS: Excuse me -- just a quick question for clarification, did you say that there was no obligation to supply firm export power?

MR. HAROLD SURMINSKI: Yes, what we call firm for the purposes of this hearing are long term contracts or long term firm, although I mentioned I don't like the word, firm, in that terminology.

So they're long term contracts, negotiated into the future one year out and longer and they have, for example, the Excel contract has clauses that allow Manitoba Hydro to curtail deliveries. And they're what -- five (5) -- four (4) or five (5) different -- like unit outages, transmission problems, low water; the clauses are written into these system participation contracts that allow Manitoba Hydro to curtail and have no obligation to deliver.

MR. LEN EVANS: Excuse me then, Mr. Chairman, this sounds very much like opportunity sales or interruptible sales.

MR. HAROLD SURMINSKI: But the counter-

party is willing to accept these because they usually have generation on in their system -- like installed in their system.

So they do have their backup generation, they just don't want to run it because it's too expensive. So they are willing to -- to purchase the product from Manitoba Hydro that will supply 98 percent of the time, or we do supply a large percentage at a time. We curtail very rarely.

MR. LEN EVANS: Just very quickly, one supplementary then, generally speaking is the firm usually more expensive than the opportunity sales? The price of your firm exports are generally more -- higher than the price of your opportunity exports?

MR. HAROLD SURMINSKI: Yes, historically that's been the case. That is why -- that's one of the reasons contracts are negotiated, long term contracts are negotiated. It's usually a -- the reason for that is guarantee for the purchaser. They can -- they can have this guarantee of energy supply into the future, that they're willing to pay a premium for.

So in the past, there has been a premium for long term sales. But currently with the high -- extra high prices of the electricity, we've had very high opportunity prices. So in the last few months

opportunity prices have been getting prices that are higher than long term contracts negotiated five (5) years ago or three (3) years ago.

But that's usually a short term phenomenon because of natural gas prices being high, electricity prices being high. But we'll have to see exactly how this plays out with the natural gas prices.

MR. LEN EVANS: Thanks.

THE CHAIRPERSON: These provisions that your refer you to that allow you not to deliver in certain circumstances, did they arise out of the experience of the drought?

Because I remember in 2004 there was some commentary by the Panel about Force Majeure provisions within the contracts out of the experience of the drought?

MR. HAROLD SURMINSKI: No, these clauses were negotiated before that drought. The contract for Excel, for example, was first negotiated in the early 2000's. And the terms did not really change. We have these clauses in most of our long term contracts.

THE CHAIRPERSON: Thank you. I'll have to consult -- I'll have a look at the transcripts from then. Thank you. Mr. Peters...?

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Yes, thank you. Mr. Surminski, we perhaps all have an idea as to what we think about when we say firm contracts and opportunity contracts.

And what you're encouraging the Board in your filing is that firm contracts are sourced out of dependable energy of the Corporation and that's -- that's why they're called firm.

MR. HAROLD SURMINSKI: That's correct.

MR. BOB PETERS: It has nothing to do with the financial terms, whether you deliver, whether you pay if you can't deliver, it's whether or not it comes out of dependable resources of the Corporation?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: If most of your futures contracts are likely to be financially firm, if I gathered correctly from a previous answer to myself and the Board, will those contracts be defined as opportunity or as firm contracts in the cost of service study?

MR. HAROLD SURMINSKI: They will remain firm if they come from dependable resources.

MR. BOB PETERS: And they will remain as opportunity if they come out of non-firm resources?

MR. HAROLD SURMINSKI: That's correct.

MR. BOB PETERS: And so the financial firmness will be irrelevant to how you categorize them for the cost of service study purposes?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: And Mr. Wiens, the $80 was -- if you haven't found it it was in Tab 8 of the Book of Documents and I was really comparing NERA's total allocated and assigned costs to those in the recommended methodology by Manitoba Hydro and came up with ballpark $80 million of difference in -- in what would be allocated to other customer classes instead of export.

MR. ROBIN WIENS: I see that, Mr. Peters. That's correct.

MR. BOB PETERS: And then to conclude on this, Mr. Wiens, can you then summarize what the compelling reason is to have opportunity and firm classes as opposed to only one (1) class for export customers as appears to be NERA's recommendation?

MR. ROBIN WIENS: Manitoba Hydro believes that we don't have firm resources in place to serve those opportunity sales, so that allocation of a share of the embedded cost of generation, we believe, is not appropriate for the opportunity sales.

MR. BOB PETERS: Mr. Surminski, we touched on it, and I want to just have a few more areas

of questions with you on Manitoba Hydro's exporting goal and I -- I take it from some of the materials filed that one of your corporate goals, and Mr. Warden can correct me if I'm wrong, is to maximise the export revenues?

MR. HAROLD SURMINSKI: Yes, that's one of our goals.

MR. BOB PETERS: And where I don't know that you and I were on the same page last time was I suggested that Manitoba Hydro designs its generating stations to include a component for export and I don't think you agreed with me; did you?

MR. HAROLD SURMINSKI: Yes. I -- but I did review that a little further and I guess one (1) of the factors that we did not talk about was -- was the ability to actually serve load during all hours of the year. I think we had talked about the possibility of designing a plant only for the dependable capability.

So that would mean a relatively uniform capability throughout the year. But how would we serve the peak loads during the peak winter months. We do need more units at a plant and more capacity at each of our plants because we have a non-uniform distribution throughout the year.

So that's one (1) of the other main reasons why we design extra capability at each plant so

we can meet the high loads as well as the load throughout the year.

MR. BOB PETERS: I don't want to have you -- to have you teach me engineering 101 but if it's low loads, it doesn't matter how big your plant is, at that point in time if it's below dependable energy you don't need all the turbines and all of the equipment that you have at some of your power generating stations; would that be intuitively correct?

MR. HAROLD SURMINSKI: Low loads and on peak summer day, you certainly don't need it, but it's the reverse in an on peak winter cold day.

MR. BOB PETERS: And when you -- when you want to design to meet some of those maximums are you taking -- when you're designing to meet those maximum peaks are you still having the operating assumption that the water flows are going to be dependable or are you making some other assumptions as to water flows?

MR. HAROLD SURMINSKI: We design our plant based on the entire range of flows and the ability to utilize the entire range of stream flows optimally. So it would be foolish to design just for dependable supply where that occurs one (1) or two (2) percent of the time and spill the water and all other flow conditions.

So just from that perspective, just designing the plant, based on dependable water supply, it just -- it's not the place that you would stop.

Perhaps average water supply might be the first place you'd stop and say, maybe you don't need further units because on average you would not be spilling. But, we go even further than that and consider the load factor of our domestic load, which is 60 some percent.

So we need -- we need extra capacity just to meet load in every hour of the year. But I will concede, I guess I was emphatic in saying that exports are not a factor. They are a factor, but they are a relatively minor factor in designing the size of a hydraulic plant. They're not a major driver. They are a factor in the end, but not -- not a major factor.

MR. ROBERT MAYER: Mr. Surminski, when you build a generating station or dam a river, it strikes me that if you've got to build the dam you probably want to put as many turbines in there as is feasible because that -- presumably the major cost has got to be the actual construction of the stuff that keeps the water back.

Am I correct in that assumption?

MR. HAROLD SURMINSKI: Yes, you're very

right. The incremental cost of the last unit is relatively small of the actual generating unit. Yes, all the infrastructure, the dam itself, the spillway, all the other parts are the major part of the site, major cost of the site.

MR. ROBERT MAYER: And in the large dams on the lower Nelson, I understand you to have a significant number of turbines and if I recall correctly, the proposal at Wuskwatim had an option of using two (2) or three (3) turbines, I believe, you opted for three (3). And that's because you can't possibly put any more in the width of that river, is that correct?

MR. HAROLD SURMINSKI: No, actually we were -- we actually do not have enough capacity at the Wuskwatim site to meet the shape of the Manitoba Hydro load. And we would count on support from other hydraulic facilities like the lower Nelson which does have large cycling capability. But the reason that we did not install more at Wuskwatim, is for environmental sensitivity purposes.

Installing more turbines means that we would cycle the plant more, up and down, within a day and environmentally we chose not to do that. That was a site -- that was a part of the discussions with our First Nations people. They did not want large fluctuations of

water cycling up and down in a day.

MR. ROBERT MAYER: Thank you.

MR. VINCE WARDEN: Mr. Peters, I don't know whether this is helpful, or not, but as Mr. Surminski indicated we do design and add new generation to serve the Manitoba load, no question about that, it's not -- until now has not been built to serve the export market.

However, in the grand scheme of things the system would not have been designed as it is, were it not for that export market. So, you know, we would have an entirely different system if we didn't have an export market sitting there waiting to take our surplus energy.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Thank you Mr. Warden and I suppose the question back to you and Mr. Wiens and Mr. Thomas is, recognizing that the system is designed and does consider to some extent exports, why hasn't the Corporation factored in the cost of that and taken those costs and put them into the export class, in the cost of service study?

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Peters, in effect, we have done that. We are allocating a portion of costs to the firm export class on the same basis as we allocate costs to the domestic classes even though it is our belief that the costs incurred to facilitate those firm sales would have been considerably less, but not quantifiably, not in any quantifiable manner less than cost to serve a domestic customer class.

Mr. Warden's comment about we would design a very different system if it were not for exports, we have not -- we have not tried to go back and back cast and say what type of a system would we have designed if we were operating an isolated market.

And there's no reason to consider that that type of a system on a unit cost would be less than what Manitoba Hydro has today. It would probably be more.

MR. BOB PETERS: But your -- your allocation, Mr. Wiens -- your allocation, Mr. Wiens of costs to the firm export class doesn't identify specific costs that would have been incurred as a result of up-sizing the generation or transmission system to accommodate exports.

MR. ROBIN WIENS: It has not done so.

MR. BOB PETERS: And it hasn't done so --

it hasn't done so because you're not able to do so or because, from a policy level, you feel you should treat it as -- firm exports as a -- the same as you would any other customer class?

MR. ROBIN WIENS: I don't know that I would go so far as to say we would be absolutely unable to do so. It would take a significant effort in terms of time and -- and studies to try and identify that.

My expectation would be that we would probably come up with an embedded cost for a firm export class that would be less than what we have in the cost of service study recommended method that we brought forward to you today.

MR. BOB PETERS: And your answer is -- I mean, it's your -- your intuitive answer that cost would even be more -- or, sorry, would be less than what you are proposing in the recommended methodology?

MR. ROBIN WIENS: Yes.

MR. BOB PETERS: How can you say that without having done the test?

MR. ROBIN WIENS: Well, as -- as Mr. Surminski has already testified in response to the question from the Vice-Chair, when we put the major facilities in, we have incurred by far the largest part of our costs. When we put the facilities in that allow

for exports, they are very small percentage on a per-unit basis relative to the cost of putting in the dam and the power station and so forth.

Similarly, when you -- when you'd make a decision to build a transmission system to bring power down from the North, without exports you are still incurring the vast majority of your costs to put in the right-of-ways and get the towers in. The incremental cost of up-sizing the transmission is a very small portion of that.

MR. BOB PETERS: But, again, never one that's been directly studied by the Corporation.

MR. ROBIN WIENS: No. I haven't got a quantitative study of that that I could put before you today.

MR. BOB PETERS: Okay.

Mr. Surminski, if you could turn with me, and hopefully the Board, to the document at Tab 19 of the book of documents, I just want to make sure your point is well understood.

The document at Tab 19 of the book of documents, on page 1, talks about the hydraulic generating capacity at the various facilities run by Manitoba Hydro.

Do I take from this chart that the plant

is designed, built, and put in place to go as high as the theoretical maximum output and you have in fact achieved that in some instances?

MR. HAROLD SURMINSKI: Yes. The theoretical maximum here is -- is simply the capacity or the maximum capability of the plant, multiplied by all the hours of the year. So if the plant were generating at maximum capability for all hours of the year, that is assuming it had enough water, it could theoretically generate that energy.

MR. BOB PETERS: And approximately twice as much energy would be generated as required under dependable flow -- as achievable under dependable flows?

MR. ROBIN WIENS: Yes. But this is a theoretical number. At some plants the design capacity is very high and -- and we would never have water for all eight thousand seven hundred and sixty (8,760) hours of a year to -- to support generation at that level.

So it's -- it's a very theoretical number that we would never achieve.

MR. BOB PETERS: And then what about the maximum usable flow generation, which is plus or minus thirty-five thousand (35,000) gigawatt hours of energy?

MR. HAROLD SURMINSKI: Yes. This maximum was based on an historic year that we had, I believe it

was 1974, and we actually achieved that. And, as I stated, this past year we actually exceeded the previous all-time records.

So, definitely, the maximum here -- and again, this not -- this is a flow level that is not -- well, we can see it's not nearly as high as the theoretical because we never have flows for every single hour of the whole year at -- at extremely high levels.

MR. BOB PETERS: Mr. Surminski, in the absence of firm exports how would you size Manitoba Hydro's generation facilities?

MR. HAROLD SURMINSKI: It is a fairly complicated question you're asking here.

MR. ROBERT MAYER: More than engineering 101?

MR. HAROLD SURMINSKI: Yes, more than engineering 101.

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Well, we do consider the entire range of flow conditions in the long term. So initially in the first -- it depends, first of all, on the size -- the relative size of your plant. If it's much larger -- if it's a very large plant, like a

Conawapa, you only need thirty (30) megawatts in the first year but you build thirteen hundred (1300).

So for many years you will have excess capacity available on your system from the plant. So there is a factor there that we consider the -- the size of the plant in our planning. We do a long-term study, so we go out forty (40) years at least and -- and estimate how often the generation from the plant will be useful. And it's either useful to our domestic customers or our export customers.

So it is a culmination of how we are able to utilize the energy that can arise from the plant and basically it's an optimization process. We -- we keep adding a unit at the plant and -- and check whether the incremental benefits are enough to offset the incremental cost.

We start with something like an average level and keep adding a unit and -- and checking the benefits versus costs. We get to a point where, as we add more and more units, the last unit is only going to be used 5 percent of the time and it's only used a small percentage of the time, the benefits from that unit are much reduced.

So there is a point at which the last unit is -- is incrementally only used -- expected to be

utilized over all the range of possible flow conditions so we consider our ninety-three (93) flow conditions on a monthly basis. And you get to the point where the last unit is -- is just sufficient to recover its costs.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: And those last units are expensive units if they're only used 5 percent of the time; correct?

MR. HAROLD SURMINSKI: Well, expensive relative to the benefit. They're -- they're not expensive in terms of the entire plant, as Mr. Mayer was saying earlier.

MR. BOB PETERS: But in terms of the time that you would operate them I guess it's the benefits you receive from them compared to the costs that go into them, you want to run those units as much as possible to keep those costs, on average, as low as possible?

MR. HAROLD SURMINSKI: Yes, but we have no choice. It's the water supply that determines whether you run them or not.

MR. BOB PETERS: In -- in the case of Conawapa, that's one in which you -- you're thinking about putting in ten (10) generating units; is that right?

MR. HAROLD SURMINSKI: That's correct.

MR. BOB PETERS: And under dependable flows do you agree that whether you have ten (10) units or five (5) units the dependable energy that comes out of them is approximately the same?

MR. HAROLD SURMINSKI: Yes. Five (5) units are -- five (5) to six (6) units are sufficient to utilize dependable flow at the plant.

MR. BOB PETERS: And yet you're thinking of putting in additional units if you ever were to build it?

MR. HAROLD SURMINSKI: Yes. Because we don't design on dependable conditions. We design on stream flows much higher than that.

MR. BOB PETERS: In terms of the surplus capacity in your generating stations, your peak hydraulic capacity is approximately five thousand (5,000) megawatts?

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

MR. BOB PETERS: And the domestic peak requirement is forty-one hundred (4100) megawatts?

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: And so the excess is available again to support export sales?

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

MR. BOB PETERS: In the absence of imports; that's imports of power, Mr. Surminski, could Manitoba Hydro market firm exports?

MR. HAROLD SURMINSKI: Yes. Yes, it'd just be at a lower level.

MR. BOB PETERS: In a year in which there are dependable flows in the absence of imports, could Manitoba Hydro market firm exports?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Your question was without imports and thermal energy?

MR. BOB PETERS: Yes I'm thinking only of hydraulic resources at this point.

MR. HAROLD SURMINSKI: Yes, it would depend on the domestic load and it still is a balance of whether your system is over-installed, even with -- or using only hydraulic energy.

MR. BOB PETERS: I thought that the domestic requirement that we looked at last week was approximately twenty-one thousand (21,000) gigawatt hours and that was roughly equivalent to your dependable flows

for your hydraulic generation?

MR. HAROLD SURMINSKI: Yes, currently but if you go back just after Limestone was installed when our load was eighteen or seventeen thousand (18,000-17,000) at that time we could have served all our load with hydraulic energy only. As load growth has taken place it eats away into our surplus and we've got to the point now where hydraulic generation by itself cannot support our domestic load.

And actually our domestic load, I think, is more like twenty three or twenty four thousand (23,000-24,000) currently.

MR. BOB PETERS: In any event your domestic load can't be served by the dependable flows from your hydraulic plant alone?

MR. HAROLD SURMINSKI: Yes, currently that's the situation.

MR. BOB PETERS: And then does it follow then to do any firm export contracts you have to also have imports then as a basis to ensure that you can meet those?

MR. HAROLD SURMINSKI: Yes and that's -- that's the balance that takes place in determining whether it's advantageous to sign long term contracts, is that the backup is only required in very rare situations.

So nine (9) out of ten (10) years we can supply our firm sale load of hydraulic energy. So one (1) out of ten (10) if we have to pay some extra costs for thermal and import, it's less costly, it's still a great benefit to sign a contract that you can make money on nine (9) out of ten (10) years.

MR. BOB PETERS: Thank you, Mr. Surminski. I want to turn --

MR. ROBERT MAYER: Before you leave that. Mr. Surminski, you said that water supply -- it's the water supply that determines whether you run your units. So if you have significant water as you now do and you are, in fact, spilling water in the Winnipeg river, are you running all your units all the time?

MR. HAROLD SURMINSKI: On the Winnipeg river where there is excess water we are running all our units, yes, definitely.

MR. ROBERT MAYER: That wasn't the question I asked. You also have significant supply on the lower Nelson at the present time. Are you running all your units all the time? All your reservoirs have significant water in them right now, am I correct?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Yes we have significant water, but what I'm checking on is whether we'd be running our units in the off peak hours. We may -- we cycle our plants such that we run maximum output in the on peak hours. And the water that we have is still less than the total capability or the -- of the station.

For example, the lower Nelson plants are designed for something like one hundred and seventy thousand (170,000) cubic feet per second. Our average flow now maybe only about a hundred and thirty or a hundred and forty thousand (130,000-140,000).

So actually our average flow is not sufficient to utilize all the units. But, what we do is cycle the plant, run all units at a hundred and seventy thousand (170,000) in the on peak hours. Shut some of the units off in the off peak hours, so I would say that we are actually -- for the water supply we currently have, we are shutting down units in the off peak hours.

Only when we get to a hundred and seventy thousand (170,000), then we have enough to run twenty-four (24) hours a day.

MR. ROBERT MAYER: Mr. Surminski, it is my understanding that one of the real advantages of hydro power is you use your ability to store the water because you can't store the energy, you use the ability to store

the water in order to firm and shape your loads, in order to, we've been told, that hydro power is really good at allowing you to do this.

So I wondered with -- about your comment about water supply determines whether you run your units. I take it that there are other considerations made because I am correct, am I not, that once the water goes through the turbine and generates electricity you cannot store that electricity?

MR. HAROLD SURMINSKI: Yes. Electricity cannot be stored but we have significant reservoirs where we can actually hold the water back.

MR. ROBERT MAYER: All of which in Manitoba have limits?

MR. HAROLD SURMINSKI: That's correct.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Mr. Surminski, can I conclude from that last exchange that the sizing of hydraulic generation plant is to minimize spillage? That's one (1) of the objectives?

MR. HAROLD SURMINSKI: Yes, minimizing spillage is just a reverse of maximizing generation.

MR. BOB PETERS: And just the reverse of maximizing generation to support export sales over and

above which you need domestically?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: Can you repeat that please?

MR. BOB PETERS: If you agree with me that Manitoba Hydro sizes its hydraulic generation plants to minimize spillage then does it follow that Manitoba Hydro is sizing its hydraulic generating plants to maximize export sales as well?

MR. HAROLD SURMINSKI: They are a factor. But I think we're getting back to that same question as we started the morning on, it's a relatively small factor. We would still design a plant for -- for maximum utilization of water and just in the short term we may be considering exports to a greater degree when -- when the plant is -- a large plant is installed and the intervening years before it's required for domestic use it is used for the export market.

So you can say it's -- we take advantage of the export market. But whether we actually design it for the export market that's -- that's the -- the differentiation that I'm making. We use it and we gain revenues from the export market but we don't, to a great

degree, design the plant actually for the export market.

I conceded that there is a portion but it's not a very large portion in the design.

MR. BOB PETERS: And it's a portion that you can't quantify with the costs for the cost of service purposes?

MR. HAROLD SURMINSKI: That's correct.

MR. BOB PETERS: In terms of transmission losses, where I'd like to go to next, Mr. Surminski, we don't need to get any deeper than engineering 101 on this, but my understanding is that when you generate electricity and transport it to market there is a loss of energy along the transportation route?

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

MR. BOB PETERS: And that occurs on your transmission lines; correct?

MR. HAROLD SURMINSKI: Correct.

MR. BOB PETERS: So in essence there would be less energy received in Winnipeg than what is put on the transmission lines in Northern Manitoba?

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

MR. BOB PETERS: Just as a point of interest, does that loss of energy, does that dissipate in the form of heat energy or what happens to it?

MR. HAROLD SURMINSKI: Yes, heat energy, I think, is the main component.

MR. BOB PETERS: I know Mr. Wiens educated us on unaccounted for gas in a different forum but I still don't know where that goes but to some extent the transmission losses are -- are at least analogous that you end up with less than what you started with when you loaded up the lines?

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

MR. BOB PETERS: Would you agree with me, Mr. Surminski, that the transmission losses of Manitoba Hydro are significant?

MR. HAROLD SURMINSKI: Yes. They could be in the order of 9 to 10 percent.

MR. BOB PETERS: And so that's approximately three thousand (3,000) gigawatt hours a year?

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

MR. BOB PETERS: Am I correct, Mr. Warden, that in accounting terms and on the accounting records of the Corporation line losses are not captured?

MR. VINCE WARDEN: They are reconciled.

MR. BOB PETERS: We're now into

accounting -- you don't discretely show line losses as a line item, would that be fair?

MR. VINCE WARDEN: Not as a cost, no, not as a line item cost.

MR. BOB PETERS: In terms of the cost allocation, Mr. Wiens, how do you treat line losses?

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Peters, line losses are treated in the cost of service study and they're done in this manner, that the class loads for the purpose of allocating costs are grossed up to the generating station.

So a customer that is served from the distribution system will show a higher loss factor than a customer who is served from that transmission system.

MR. BOB PETERS: At document 15 of the book of documents, there's I think two (2) pages -- I'm sorry there's more than two (2) pages, but on the first and second page are a series of numbers of different energies consumed. Have you located document 15, pages 1 and 2?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: In the total system

forecast for total energy, Mr. Thomas, does that include line losses or is that net of line losses?

MR. CHIC THOMAS: That would be at generation so that would have the line losses added back in.

MR. BOB PETERS: So this number the thirty-two thousand (32,000) gigawatt -- thirty-two thousand (32,000) or -- I guess it's gigawatt hours, correct, in the middle of the page that would be gross number including line losses?

MR. CHIC THOMAS: Correct.

(BRIEF PAUSE)

MR. BOB PETERS: If we go down, approximately half way down the lefthand column we see net exports and there's -- between pages 1 and 2, there's some different figures there, Mr. Thomas, is the nine thousand seven hundred (9700) gigawatt hours of net export, does that include line losses?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And then if we go to page 1 of the documents at Tab 15, we see that the firm export, if we follow it across to the right-hand side and the top half of the page, it's about five thousand, three

hundred and fifty-nine (5359) gigawatt hours, that would be the firm export sales, correct?

MR. CHIC THOMAS: That's right.

MR. BOB PETERS: And do firm export sales listed here include line losses?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: When you say it includes line losses, does that capture the line losses as a result of losses on the high voltage direct current transmission lines?

MR. CHIC THOMAS: Yes, we don't distinguish between the two (2) in the cost of service study.

MR. ROBERT MAYER: So you include all line losses, including line losses in the distribution system?

MR. CHIC THOMAS: Yes, as Mr. Wiens had alluded to for those -- we have distribution losses and then we have the transmission losses. And all those are added back in to get total energy at generation.

(BRIEF PAUSE)

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: The third document at

Tab 15 of the book of documents deals with transmission losses also.

And just so we have a good understanding of what -- what Schedule D-3 is showing the Board, Mr. Thomas, can you explain to the Board briefly what a common bus (phonetic) is?

MR. ROBIN WIENS: Common bus is the term used to describe the number of points on Manitoba Hydro's system where energy is taken from the transmission system and injected into the sub-transmission system to be carried to load centres.

So common bus losses refers to the losses that occur on the transmission system between generation and the point at which energy is delivered into the sub-transmission system.

MR. BOB PETERS: Is there more than one (1) common bus or is it a fictitious name to capture -- or a fictitious point to capture all such points of demarcation from the transmission into the distribution system?

MR. ROBIN WIENS: Well, it's not fictitious. It is a term that is used to capture all points that feed into the distribution system from the transmission system. And I -- I cannot tell you precisely how many points there are but my understanding

is that there in excess of eighty (80) such points.

MR. ROBERT MAYER: These are actual places that can be identified?

MR. ROBIN WIENS: Precisely, Mr. Vice-Chair.

MR. ROBERT MAYER: I suspect one of them sits right on the corner of Mystery Lake Road (phonetic) and the INCO access road but I...

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: On the -- on the losses shown in this -- on page 3 of the documents at Tab 15, are the HVDC losses included in arriving at the common bus losses?

MR. ROBIN WIENS: All losses between generation and common bus are included in that number, including HVDC.

MR. BOB PETERS: Can you explain to the Board, Mr. Wiens, how you have allocated transmission losses in the cost of service study to the domestic class compared to the export classes?

MR. ROBIN WIENS: Mr. Peters, it's exactly the same. We take the -- the quantum of the losses divided by the quantum of generation or alternatively by the lower number, the quantum of

deliveries from common bus, and that represents the average losses to serve all customer classes.

MR. BOB PETERS: But there's no direct allocation of those losses to the firm export class.

MR. ROBIN WIENS: All classes bear that share of losses. There's no direct assignment but by virtue of the fact that all classes, including the firm export class, have their loads defined at generation, they all share in those losses.

MR. BOB PETERS: This might be a question for Mr. Surminski.

Is it at least notionally correct, sir, that domestic requirement is first loaded onto the transmission lines and then whatever room is left over you can use that for export?

MR. HAROLD SURMINSKI: Well, in concept only. But we'd never actually designate a particular generation to a particular load.

MR. BOB PETERS: But you'd make sure that you served your domestic load before you served your export requirements.

MR. HAROLD SURMINSKI: Yes. It's a higher priority. The domestic is a higher priority than export.

MR. BOB PETERS: Is -- is it also

correct, sir, that there is a non-linear relationship between line losses, and that is there's line losses at the beginning of your loading up the transmission lines but there are linearly or exponentially more line losses for the last units put on the transmission line?

MR. HAROLD SURMINSKI: Yes. Losses incrementally increase non-linearly.

MR. BOB PETERS: I said "exponentially" but you might not go that far.

MR. HAROLD SURMINSKI: Yes.

MR. BOB PETERS: Does it then follow that there are more losses on your transmission system due to exports?

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

MR. BOB PETERS: But you don't allocate a higher percentage of transmission losses to the export class under the methodology used in the cost of service study?

MR. ROBIN WIENS: They have the same percentage of losses as the domestic classes.

MR. BOB PETERS: All right. And then maybe the question is why, Mr. Wiens, when we understand from Mr. Surminski that there's a non-linear relationship and the last loaded power suffers greater transmission

losses than the first power put on the transmission lines?

MR. ROBIN WIENS: Well, I have a recollection that we did provide a response to an information request covering that matter and I -- I don't have the reference at the top of mind right now.

But my recollection about it is that it's -- it's a more complex relationship than just that. During the peak period that tends to be the case, during the off peak period it tends to be probably the reverse.

And HVDC is not the same as -- as AC transmission in that you can be pretty certain as you increase the load on AC transmission that you're going to have that -- you're going to have that non-linear relationship.

But in the case of HVDC it also depends on how many valve groups are operating at the time. And, in fact, it can happen that you have no more losses on HVDC during high load periods as -- as you do on -- during low load periods. It depends on how the system is operating.

So, generally speaking, over a transmission system yes, it's true that the incremental -- as you increase loads your losses will increase. For -- in respect of the -- of the -- I guess the context in which we look at these losses and the availability of

HVDC we have not represented exports as having a higher degree of losses then domestic customer classes.

MR. BOB PETERS: Is that something that you could quantify, Mr. Wiens?

MR. ROBIN WIENS: I would probably prefer to leave that more to the experts, but my expectation is that we could -- we could attempt to depict that and to depict the context surrounding HVDC and peak versus off peak in some fashion.

I doubt it would be precise but we could try to reflect it.

MR. BOB PETERS: Mr. Surminski, are you able to confirm to the Board that at peak the losses on the HVDC system are approximately 55 percent for domestic and forty-five (45) for export?

MR. HAROLD SURMINSKI: I don't know what -- where you're getting that information. Can you provide more information on that?

MR. BOB PETERS: Let me look at it at the break and I may come back to it. But you might look at PUB/MH-1-24. I think it's --

MR. HAROLD SURMINSKI: Yes. I have it open but those numbers don't --

MR. BOB PETERS: -- there.

MR. HAROLD SURMINSKI: -- don't ring a

bell.

MR. BOB PETERS: All right, I'll -- I'll get back to you further on that. I want to turn to the water rental issue and, right now, according to your IFF, which is found at Tab 3 of the book of documents, the water rental fee for the test year -- or for the year in which you're performing the cost of service study it's approximately $108 million; that's correct?

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

MR. BOB PETERS: And under document, I believe, number 8 in the book of documents, $31.8 million of water rentals is deducted from export revenues under the methodology that is presently in force in Manitoba?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And the proposal is, instead of deducting $31.8 million to deduct only $14 million and only directly assign that the opportunity export class?

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

MR. BOB PETERS: And zero (0) dollars of the water rental fees gets directly assigned to the firm exports?

MR. CHIC THOMAS: Directly assigned, correct.

MR. BOB PETERS: And what your

distinction is, Mr. Thomas, is that some water rentals do end up in the firm export class because the firm export class is treated the same as other domestic classes when it comes to that allocation?

MR. CHIC THOMAS: That's right.

MR. BOB PETERS: Why is it that to determine the share of water rentals to be charged to exports, you don't divide total exports by the total hydraulic generation and have a percentage that you can apply to the dollar amounts.

MR. ROBIN WIENS: Mr. Peters, the way we've done this, it works out to the same thing. The firm export class is assigned along with the domestic classes a similar or using the identical method is assigned the cost. The water rentals are included in that cost.

Firm exports receive the same allocation of water rentals as domestic customer classes, which on a per kilowatt hour basis, works out to being the same as the opportunity exports received.

MR. BOB PETERS: But under you recommended methodology, Mr. Wiens, from the total exports you also deduct the total imports before dividing it by the hydraulic generation, isn't that right?

MR. ROBIN WIENS: There's a number of

words there that I have to hear to be able to answer your question, Mr. Peters, so perhaps you could ask it again.

MR. BOB PETERS: In terms of the methodology, Mr. Wiens, to determine the share of the various customer classes you are taking exports and then you're reducing that by your imports and then dividing it by hydraulic generation, have I understood that correctly?

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

(BRIEF PAUSE)

MR. CHIC THOMAS: Sorry, Mr. Peters, what was the question at hand now?

MR. BOB PETERS: I hadn't asked another question, but I knew you and Mr. Wiens were engrossed in discussing your last answer to me and I wanted to make sure the Board had the correct answer.

And I was suggesting in terms of the water rentals that were charged and calculated for the classes, you took total exports and you subtracted from that imports before dividing it by total hydraulic generation.

And I understood that was the correct -- that was the way you do it or proposing to do it?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And --

THE CHAIRPERSON: Mr. Peters, do your questions carry on in the same vein, can they take it under advisement and come back on this particular item after the break just to save time?

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: I'm thinking that might be appropriate and I suppose where I'm going with that, just so the Panel Members can respond is that I think we understood earlier that the total import costs do not get certainly directly assigned to the firm export class, but here the imports are being deducted from the total exports before you're deciding what share of the water rentals. And I wondered if that was inconsistent and that's what I'd like the witness panels to focus on that.

If I could move on then, Mr. Chairman, I'd like to just talk briefly about marketing costs and, Mr. Wiens, the materials indicate that there are full-time marketing staff that have duties related to -- that include duties related to exports, would you agree with that?

MR. ROBIN WIENS: Yes.

MR. BOB PETERS: And in some of the quantifications the Corporation has said that probably

twenty-nine (29) of them could be predominantly considered in power sales which would be related to export matters?

MR. HAROLD SURMINSKI: Yes. That's in our filing.

MR. BOB PETERS: And you quantify the cost of -- of those employees but you do not directly assign those to the export class?

MR. ROBIN WIENS: That's correct.

MR. BOB PETERS: And can you explain to the Board why you wouldn't do that if you can identify them as being predominantly in the power sales export business?

MR. ROBIN WIENS: Well, Mr. Peters, you'll appreciate that when we were in the preparation of this document the memory of 2003/2004 was uppermost in our mind and, of course, during that period much of our power trading activity revolved around assuring supply on our marketing exports.

So we did treat this item, I believe, some $7.4 million as a general cost and -- which was therefore assigned to domestic customers and just a moment -- and firm sales, but not opportunity.

I think in retrospect we would probably have wanted to look at a finer division of those costs

but that's not what appears here. In this case, however, I think it's fairly safe to say that it doesn't have a material impact on the cost of service study.

MR. BOB PETERS: I thought we heard last week, Mr. Wiens, that the cost of service study '06 that you prepared is based on median flow scenarios where drought is implicit but certainly not an -- not an express year forecast?

MR. ROBIN WIENS: True. But I think as I've tried to explain earlier, although we do base this on next year's IFF which -- and we do have median flows as a basis for it, we cannot take into -- use of median flows does not really take into effect the asymmetric aspect of the long-term operation of our system.

So we do not capture adequately the use of imports and thermal energy in -- in our median numbers. So they would not flow through to the cost of service study unless we were to make some specific assumptions.

And among those assumptions is that these resources which includes thermal, imports, and of course, the use of our power trading personnel support, both domestic and export, and we have carried that into this study.

I think our -- our recognition, the post-filing of the study, was that in this case we probably

could have made a preliminary assignment of some -- at least some of the $7 million.

MR. BOB PETERS: Is that something you've worked on since the preliminary finding or are you waiting for the Board direction from this hearing before you look at that further?

MR. ROBIN WIENS: We have not advanced in terms of the study itself. These types of modifications. we would carry forward into the next study and, of course, it would be dependent, certainly in part, on what we hear from the Board following these proceedings.

MR. BOB PETERS: Well, in addition to those external marketing and power purchasing and transmission marketing expenses, you'd agree that there may be other aspects carried on by the Corporation that could likewise be directly assigned to an export class on further review?

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Peters, I would agree that there are probably some possibilities that we could explore but they're probably not as straightforward as -- as this type of cost. So while we would -- we're certainly prepared to take a look at them, I'm -- I'm not

sure the conclusion is -- is arrived at as easily as in the case of these costs.

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

And, Mr. Wiens, to turn the coin over as they say, are there also costs that could be, under similar review, directly assigned to the domestic customers but presently aren't?

(BRIEF PAUSE)

MR. ROBIN WIENS: Again, Mr. Peters, I -- you know, I think there are some possibilities that exist there but it -- it's certainly not as straightforward.

I mean, we -- we have discussed earlier this morning the -- the concept that when we add capability to the generation and transmission system to support exports, that it is done at a much lower unit cost than it is done for the overall dams and civil works that go in -- into it.

So presumably you could come up with -- with enough work and effort, you could come up with a methodology that would -- would hive off those costs, embedded costs that could be considered to be directly assignable to exports, and that would leave the rest that

would be directly assignable to the domestic customer classes.

So the answer to your question is theoretically yes. Whether we can do it in practice, I'm not so sure.

MR. BOB PETERS: Okay. Thank you. Before we get to the break I do want to cover just a couple more brief areas. Transmission lines is one (1).

In respect of transmission lines, again, there are no transmission line costs directly assigned to either the opportunity export or the firm export. We're agreed on that?

MR. ROBIN WIENS: Correct.

MR. BOB PETERS: And instead Manitoba Hydro proposes that the firm export class be allocated a portion of the transmission costs based on the energy usage -- I believe energy usage on the inter-ties only.

MR. CHIC THOMAS: That's right, yes.

MR. BOB PETERS: And the inter-ties, again, are -- is it seven (7) in number? I'm not sure --

MR. CHIC THOMAS: That sounds approximately correct.

MR. BOB PETERS: All right. Whatever the number --

MR. CHIC THOMAS: Subject to check.

MR. BOB PETERS: -- the inter-ties are that portion of the transmission system where once the electron passes a certain point it's not coming home, it's going -- it's going for export.

Is that a fair way to -- to understand it?

MR. ROBIN WIENS: That would be the provincial border.

MR. BOB PETERS: Except -- except, Mr. Wiens, the inter-ties are sometimes located within -- inside the provincial border.

MR. ROBIN WIENS: A portion of them is always located inside the provincial border.

MR. BOB PETERS: All right. I -- maybe I'm not understanding then the portion of the inter-tie costs that gets included in the allocation of -- of transmission costs to -- to the export customer.

MR. ROBIN WIENS: All of Manitoba Hydro's transmission costs, all of it, are allocated to the firm export customer classes as well as to the domestic classes.

MR. BOB PETERS: All right. And there's no distinction made then, Mr. Wiens, for that portion of the inter-tie that is not needed by Manitoba domestic load but can only be used to service export load?

MR. ROBIN WIENS: I don't think you can

actually identify any such portion, for at least a couple of reasons. One of them being -- and maybe I'll step back from my comment that once it's on -- on its way it won't come home, that point being at the border.

No. That point would be once it's past the last sub-station that serves domestic customer classes. Presumably at that point it's on its way, unless we have a situation in which power is flowing into Manitoba, which does happen from time to time.

So the point being that domestic customers do use these lines, they -- some customers use these lines when power is flowing from north to south and potentially all customers use them as -- in situations where power is flowing south to north.

MR. BOB PETERS: All right. The importing of power, Mr. Wiens, is only necessary in a year when you cannot meet your dependable energy flows on a theoretic basis, correct?

MR. ROBIN WIENS: On a sustained basis, yes. There may be times during other years when power is imported, as well.

MR. BOB PETERS: You indicate in the document that was the second document under Tab 2 of the book of documents, that 2(2) Tab, where we looked at the functionalization of costs and I think on the

transmission system you functionalized $203 million of costs for transmission, correct?

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

MR. BOB PETERS: And it struck me, Mr. Thomas, that that didn't seem like enough money allocated to transmission and not all of the transmission assets are included in the transmission function; that's also correct.

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

MR. BOB PETERS: And the largest asset that's not included in the transmission function are the HVDC transmission lines?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And in short you are functionalizing the HVDC facilities as generation facilities, basically I understand on the argument that but for geography that generation would take place closer to the load where its required?

MR. CHIC THOMAS: That's fair.

MR. BOB PETERS: And in terms of how the allocation of transmission cost does work and you've told us that there's nothing directly allocated to export classes, the recommended methodology from Manitoba Hydro's perspective is to put approximately 19 percent of those transmission functionalized costs into the firm

export class?

MR. CHIC THOMAS: Yes.

(BRIEF PAUSE)

MR. BOB PETERS: When we look at the -- probably Tab 15 is where all those numbers are, Manitoba Hydro uses the transmission system approximately 40 percent of the time in the summer for exports.

MR. CHIC THOMAS: Which page exactly are you looking at in Tab 15, Mr. Peters?

MR. BOB PETERS: I was looking at page 2 and I was looking at the summer on peak and off peak exports and I was concluding that approximately 40 percent of the total energy was used for export and to do that you'd have to use the transmission system.

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And to capture that 40 percent, at least in the summer, overall you're saying that a 19 or 20 percent total allocation is appropriate in the recommended methodology?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: While we're on transmission matters, Manitoba Hydro has an open access transmission tariff, am I correct in that?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And it has that transmission tariff, partly as a responsibility or requirement by FERC and to be able to export energy?

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

MR. BOB PETERS: Can you tell the Board, Mr. Surminski, who uses the Manitoba Hydro open access transmission tariff?

MR. HAROLD SURMINSKI: It's available to -- available to anyone that purchases it or desires to use it.

MR. BOB PETERS: This would include wind generators in Manitoba?

MR. HAROLD SURMINSKI: Yes, it would.

MR. BOB PETERS: Do they purchase it from you?

MR. ROBIN WIENS: Mr. Peters, to date the wind generation in Manitoba has been purchased by Manitoba Hydro at the point of delivery of the generator into Manitoba Hydro's system. So the answer is, no, they don't use Manitoba Hydro's transmission tariff. I guess it's possible in the future that that could occur.

MR. BOB PETERS: So there's no -- there's no other generator in Manitoba then that uses the

Manitoba Hydro transmission tariff, would you agree with me?

MR. HAROLD SURMINSKI: Yes, that's correct. It's available but we do not have anyone that -- that flows power through our system and -- and sells outside our system. Manitoba Hydro has been the purchaser

MR. BOB PETERS: You make money off of this tariff? Mr. Warden might be happy to hear if that's the case.

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Peters, I'm treading on very, very thin ice here because this is not my area of detailed knowledge. Manitoba Hydro does make -- does receive some revenue for the use of its transmission system.

My understanding is that most of that revenue is actually received through the MISO tariff, of which Manitoba Hydro is a party. In other words, our costs are incorporated into the MISO tariff to come up with a system-wide average.

I believe we do earn some very limited amount of revenue also from the Manitoba Hydro tariff.

But once you - or if you should ask me, how do -- how do you distinguish between who pay the Manitoba Hydro tariff and who pays the MISO tariff, I'm probably into some open water there.

So we would -- if you want to ask that, we would have to undertake to get back to you. Alternatively, we might be able to find the response to an information request that covers that.

MR. BOB PETERS: Do you recall in the cost of service methodology, Mr. Wiens, whether there's a netting of that revenue against any -- any other costs on the transmission side?

MR. CHIC THOMAS: Yes. The costs we can identify are netted in terms of what it costs us and the revenue we receive.

MR. BOB PETERS: Mr. Thomas, the transmission function of which you told the Board a few minutes ago was approximately $230 million of costs, those are the costs that are included in the transmission tariff as well; is that correct?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: To your knowledge, there's no additional costs in the tariff that aren't already included in the transmission function?

MR. CHIC THOMAS: There is a small

portion of the ancillary service from -- that -- that comes from the generation function.

(BRIEF PAUSE)

MR. BOB PETERS: Mr. Thomas, I'm not going to go any deeper there, so we don't have to throw any lifeline to Mr. Wiens or yourself, but would you know approximately how often the Corporation revises that transmission tariff?

MR. CHIC THOMAS: We look at -- we look at it on an annual basis along with any cost of service study that we have at hand.

MR. BOB PETERS: And -- and that's where I was headed, is that you -- do you revise it annually with -- when you do the cost of service studies?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And at this point in time, to your knowledge, that Manitoba Hydro open access transmission tariff is not a tariff that has been put before this Board to approve any of the -- the charges.

MR. ROBIN WIENS: No.

MR. ROBERT MAYER: But we are purported to assume some control over it and I understand you lawyers are still before the Court of Appeal.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: The issue is one, to your understanding, Mr. Warden, that there has been some litigation commenced and the matter is, at this point, at best, pending?

(BRIEF PAUSE)

MR. VINCE WARDEN: In answer to your question, Mr. Peters, I'm informed that that is a correct statement.

MR. BOB PETERS: All right. With the Panel Members, in the next six (6) minutes if I could, I'd like to just deal with a couple of matters from the rebuttal evidence, particularly from Mr. Harper's -- your comments on Mr. Harper's evidence.

And I'm looking on page 32 of 43 of Manitoba Hydro's rebuttal. I'm not sure you're going to need to access it, but if you choose to I'll certainly provide you the time.

On page 32 of 43 and going down to line 28 to be specific, is it generally your understanding, Mr. Wiens and Mr. Thomas, that Mr. Harper is suggesting that the costs of imports be assigned to opportunity exports?

(BRIEF PAUSE)

MR. ROBIN WIENS: My understanding is that, first of all Manitoba Hydro does assign our purchase costs directly to opportunity export sales. But, Mr. Harper appears to want Manitoba Hydro or to think it appropriate for Manitoba Hydro to assign the totality, 100 percent of import costs against opportunity export sales.

MR. BOB PETERS: And it's also your understanding is it, that Mr. Harper takes that position as he contends that no imports are needed under median flows for domestic load or for firm export sales?

MR. ROBIN WIENS: We have been over this territory a couple of times in the last couple of days and that is what he is contending and that is the thing with which we do not agree.

MR. BOB PETERS: And your disagreement with Mr. Harper is for the same reasons you've answered to me in the last little bit this morning and last week, as well?

MR. ROBIN WIENS: That is correct.

MR. BOB PETERS: And in essence, you want the Board to consider that you operate the system -- the hydro utility not only with hydraulic resources, but all

of the resources that you have available including imports and thermal and that for opportunity sales, you don't need to get into the fixed costs that are used to have the generating stations and the transmission system?

MR. ROBIN WIENS: Yes. It is quite correct that in any one (1) year imports may be entirely or almost entirely used to facilitate opportunity sales, but it is not correct to say that over the course of the water cycle.

MR. BOB PETERS: And is that the same answer you would give, Mr. Wiens, when asked about wind power as an import, I believe, on the same page Mr. Thomas or sorry Mr. Harper is of the view that the imports from wind power are not needed to domestic load or firm exports and therefore those costs could also be assigned?

MR. ROBIN WIENS: I think in the case of wind power, we should refer to power purchases because they're actually not imported, they're sourced within Manitoba. And the same answer would apply, yes.

MR. BOB PETERS: But in that particular case, Mr. Harper is suggesting that the costs of the power purchases would be charged to both firm and to opportunity?

MR. ROBIN WIENS: Yes, he's saying that I

believe, because he recognizes that there is some, albeit small relative to energy, some firmness component to the wind power.

MR. BOB PETERS: But, again --

MR. ROBERT MAYER: Mr. Wiens, on this wind power stuff, my understanding that the purchase of wind power is firstly not particularly economic at this point in time; that the generation of wind power by anybody other than an organization that can take advantage of the significant tax advantage or the significant tax credit, is not an economical thing to happen.

Am I correct in assuming that the purchase of wind power by Manitoba Hydro, at this point in time, is a policy decision and is more environmentally related than it is economically related?

(BRIEF PAUSE)

THE CHAIRPERSON: We're going to take our break now so we'll give you a little bit of time to mull that one over so we'll be back at quarter to 11:00.

--- Upon recessing at 10:28 a.m.

--- Upon resuming at 10:49 a.m.

THE CHAIRPERSON: Okay, welcome back, everyone. We're just a few minutes behind schedule. Mr. Peters, perhaps you could help us out, our brains were baking with that sun coming from the back as to the various mullings were going on before we broke.

MR. BOB PETERS: Thank you. There was actually two (2) matters when we broke that I think the Company had -- was considering and we can maybe start with the one just before the break in terms of questions from the Panel.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: I understood that the witness panel was considering a response and if they've had time to consider that perhaps I'd ask you to summarize the issue and your response at this time?

MR. VINCE WARDEN: Mr. Peters, maybe just for added clarity if you could repeat the question then I'll respond.

MR. BOB PETERS: Well, --

MR. ROBERT MAYER: I think the last question was mine, Mr. Peters. The issue of wind power and being more a policy and an economic -- or a policy and an environmental matter rather than an economic one

at this point?

MR. VINCE WARDEN: Well, in terms of the economics, Mr. Mayer, I can tell you that the economics of wind power are marginal at best. We -- it was justified to Manitoba Hydro basically as a -- as a breakeven situation in terms of the economics.

There are -- are other benefits associated with wind. As you know we've committed to the ninety-nine (99) megawatts. We're not quite sure how -- how much more will be economic for Manitoba. We're studying that. But the ninety-nine (99) megawatts based on the prices that we've entered into in the long-term contract were, as I said, marginally economic.

There are other benefits associated, the construction activity in Manitoba, the revenue to the farmers. So all of those things were not considered in our economics but as far as Manitoba Hydro is concerned, it's -- it's close to breakeven.

MR. ROBERT MAYER: Just supplementary to that -- to that issue, and to somewhat tie it in with your -- with your power purchase agreements, the latest announcement by this company that it's making noises about building significant wind generation in St. Laurent, that sounded to me like it was independent. It sounded to me like it wasn't joint partnership with

Hydro.

If that were to proceed at that point in time your open access transmission tariff becomes significant; am I correct?

MR. VINCE WARDEN: I would agree with that.

MR. HAROLD SURMINSKI: Manitoba Hydro -- sorry, Manitoba Hydro intends to -- to purchase all energy and bring it into its system. All proponents that we have heard of do not want to take a risk and -- and try to market their own power. Everybody intends to sell to Manitoba Hydro.

MR. VINCE WARDEN: That we're aware of.

MR. ROBERT MAYER: Does Manitoba intend to buy -- does Manitoba intend to buy power from anyone who willy nilly decides to set up his -- to set up a wind generating turbine?

MR. HAROLD SURMINSKI: No.

MR. VINCE WARDEN: Well, certainly not at any price, Mr. Mayer.

THE CHAIRPERSON: Mr. Peters...?

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: In terms of wind power, in the recommended methodology is there any portion of

the wind power that is directly assigned to the opportunity export class?

MR. CHIC THOMAS: As I think we've said before it's treated as a power purchase cost so therefore the 45 percent would be directly assigned to the opportunity export class.

MR. BOB PETERS: And -- and there's $30 million of purchase power imports which is -- which is directly assigned into the opportunity export class?

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

MR. BOB PETERS: And in addition to wind power that includes other imported purchases south of the border?

MR. CHIC THOMAS: Also true.

MR. BOB PETERS: There was one (1) question that we -- we bogged down a little bit and we put it over until -- perhaps to consider after the break and I'm not sure the Panel had a chance to consider and that was how the corporation deals with the -- the water rentals and specifically the formula where I was suggesting that from the total exports the Company was proposing to deduct the total imports and then divide it by total hydraulic generation to come up with the portion; have you had a chance to consider that?

MR. ROBIN WIENS: Yes, Mr. Peters. And

it's actually it's the share of imports that we associate with opportunity sales that that is done with, so just to be clear, the opportunity -- the opportunity exports in the current cost of service study with the recommended method, roughly forty-two (42) or forty-three hundred (4,300) gigawatt hours, nine (900) or so of the imports are associated -- directly associated with that forty-two hundred (4,200) gigawatt hours.

And I think it's helpful, Mr. Peters, to think of this as the -- the power comes in when it's exported, nine hundred (900) gigawatt hours -- or when it's imported, comes in and is stored in the reservoirs. And then when -- I think the -- so the power that's not generated in the reservoirs is in effect sold to domestic customers in -- in those periods that it's being imported.

Then it is re-exported out of the reservoirs. So the imported power incurs the import costs, the exported power creates the water rental. But notionally in the cost of service we switch them around. The domestic customer pays the water rental costs associated with that nine hundred (900) gigawatt hours and the export customer pays the import costs, which would be considerably greater than the water rental costs.

MR. BOB PETERS: In that answer, Mr. Wiens, is -- is the math then that Hydro is proposing to subtract only 45 percent of the import costs or the power purchase costs, as Mr. Thomas would say, from the exports; that's the difference?

MR. ROBIN WIENS: That's correct. The rest -- the rest goes into the generation pool and some of it is allocated to firm exports and some to domestic customers.

(BRIEF PAUSE)

MR. BOB PETERS: At document 17 of the book of documents was a -- an information response to CAC/MSOS by the Corporation, first round, actually first question, and I -- I did want to touch on that.

And I may have glossed over it previously but at document 17 of the book of documents there was the question about any distinction between cost causation and equitable sharing of costs among the customer rate classes.

You're encouraging the Board to consider those as synonymous in this answer?

MR. ROBIN WIENS: Yes. I think, subject to the discussion that ensues throughout the response to

that information request.

MR. BOB PETERS: Well, in that -- in that response, Mr. Wiens, and particularly the last -- the last paragraph is designed to speak to the allocation of the net export revenue, I believe; the Company wants to draw a distinction in terms of how to consider it because the Corporation doesn't -- doesn't support the view that export revenue from -- should be attributed to the use of -- the customers' use of the facilities.

MR. ROBIN WIENS: Yes. You know, I think in the past -- and we've heard this statement a -- any number of times that it's transmission and distribution that makes the exports possible and, therefore, all of the revenues associated with exports are -- when you properly consider cost causation, should be attributable back on that basis.

And -- and we disagree because while we do agree that generation and transmission do make possible those exports, they do not necessarily make possible the value that's received for them.

MR. BOB PETERS: You say in that response that:

> "At a time when most surplus capacity was sold on an opportunity basis only..."

And the sentence goes on, but I'm thinking you're -- you're looking back to the mid 1990's when you were referencing that answer?

MR. TRENT WEST: Well, you could go back beyond that. You could go back to the early 90's, you could back into the 1980's, and that was generally true throughout most of that period.

As we got into the mid 90's we -- we began to get some significant increases in net export revenues, from the mid 90's on forward. The world of one and a half (1 1/2) -- one (1) to one and a half (1 - 1 1/2) cents a kilowatt/hour was probably before the mid 1990's.

Probably by 1996 or so we were up above two (2) cents a kilowatt/hour, although sperhaps still below average embedded costs of the generation and transmission system.

And, of course, export values have grown much more rapidly since then.

MR. BOB PETERS: The words you've used in the next sentence, Mr. Wiens, or continuing on in that sentence you're suggesting now to the Board that the way Manitoba Hydro is currently allocating net export revenue and as has been done in the past, was done for the sake of convenience?

MR. ROBIN WIENS: Not strictly for the

sake of convenience. It recognized that we had some surplus capability that could generate some revenues on the export market. Those revenues were typically well below, on average, the unit cost of the generation.

And in that particular world it was probably reasonable anyway, if not absolutely correct, reasonable to deduct those costs in effect from the value of -- the size of the generation and transmission cost pool.

MR. BOB PETERS: And your last sentence I think in that answer really is the same answer you've given in maybe different words, but your suggestion of the whole premise as to how to allocate the net export revenue comes down to the last sentence where Hydro concludes it's no longer correct to suggest that the assignment of export revenues to customer classes on the basis of usage only is in keeping with cost causation?

MR. ROBIN WIENS: Yes, that's what we're suggesting here.

MR. BOB PETERS: In the rebuttal evidence early on, on page 4 of 43 and following, Manitoba Hydro provided rebuttal evidence in respect of the -- some of the MIPUG evidence. And on page 4 of 43 and following there were discussions about what MIPUG was proposing with the excess of export revenues, do you recall that?

MR. ROBIN WIENS: I do recall it, yes.

MR. BOB PETERS: And in essence and I'll certainly -- I'm sure Ms. McCaffrey will do it more eloquently than I, but, there -- it came from a starting point that there had to be a threshold amount -- any amount over a certain amount was considered to be excess for the purposes of the MIPUG discussion and recommendations?

MR. ROBIN WIENS: Well, that's what we understand their position to be.

MR. BOB PETERS: That's fair enough and we'll hear from the authors of the evidence. But, in essence, Mr. Wiens back in 1996, Manitoba Hydro thought allocating the net export revenue according to generation and transmission costs incurred by the customer classes was fair and reasonable or at least not seriously incorrect?

MR. ROBIN WIENS: Yes.

MR. BOB PETERS: And somewhere between 1996 and 2002, there was a change in that thinking because in 2002 a suggestion from Manitoba Hydro was to adopt a distribution of the net export revenue on the basis of all costs incurred by the customer classes?

MR. ROBIN WIENS: Yes, there was a change in our thinking.

MR. BOB PETERS: And the way that thinking manifests itself before the Board is, in 1996 you took one (1) position and in 2002 you had changed your position and came in with a different suggestion?

MR. ROBIN WIENS: Yes, as far as our presentation of a position in this public forum, that's correct. I think I've said elsewhere, though, that we definitely had been considering this at least as far back as 1998. So not -- not long after the public hearings that occurred in the spring of 1996.

MR. ROBERT MAYER: And I'm correct, Mr. Wiens, in suggesting that at least two (2) of us sitting on this Panel rejected your position at that point in time?

MR. ROBIN WIENS: How could I forget Mr. Mayer?

MR. ROBERT MAYER: I'm not going to go there.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Rejected your position in 2002?

MR. ROBIN WIENS: Yes.

MR. BOB PETERS: And in 2002 your position is the position that was advanced by CAC/MSOS

today and in previous hearings, maybe for different reasons but the same -- the same result?

MR. ROBIN WIENS: I think it was pretty close to the same, if not actually the same.

MR. BOB PETERS: All right. And I know later on in your rebuttal and I -- I have a marginal note here, pages 15 of 43 and the like, MIPUG tries to help the Board understand where the threshold is in terms of your thinking because in 1996 when everything was -- was the way you were arguing it should be in terms of generation and transmission, 32.7 percent of the revenue you received was from export revenues; would you take that subject to check?

(BRIEF PAUSE)

MR. ROBIN WIENS: Yes.

MR. BOB PETERS: So we went from 32.7 percent of export revenue in relation to total revenue and then when we come back this year it's in the range of 42.7 percent?

MR. ROBIN WIENS: Yes.

MR. BOB PETERS: Some ten (10) percentage points higher; you'd agree with that?

MR. ROBIN WIENS: Yes.

MR. BOB PETERS: And -- and the proposal as you understand it from MIPUG is, well, pick a mid-point between those two numbers and that's -- that's where the threshold could and maybe should be established by this Board to deal with the net export revenues?

MR. ROBIN WIENS: That's my understanding of their position.

MR. BOB PETERS: And do you understand from their position that some of the businesses that have been operating in Manitoba may have made business decisions related on how the export credit was -- was shared with consumer classes?

MR. ROBIN WIENS: I would disagree with that. I would say they made their decisions based on what they reasonably perceived the rates to be at that time and into the future.

MR. BOB PETERS: And would they be looking at -- at historic trends and historic formulas to help them see what might happen in the future?

MR. ROBIN WIENS: Mr. Peters, they would have looked at today's rates and probably, based on my experience with customer service, with our customer service people they would have, in some cases anyway, wanted to have some understanding of how the rates might change in the future.

And throughout much of that period I think you will recall that Manitoba Hydro's position has been pretty steadily that we expect rates to increase at or slightly below the rate of inflation.

MR. BOB PETERS: Let's move it to how the net export credit was going to be allocated, Mr. Wiens. If the consumers were looking to see how that was going to be done they would have had no warning prior to 2002 in respect of an about-face that the Corporation was going to do on how to allocate the net export credit; would they?

MR. ROBIN WIENS: Well, I expect that's true. But I'm not sure that it's material in terms of consumer expectations about rates through that period.

MR. BOB PETERS: All right. So, you're not drawing a distinction or you're not correlating rates to how the net export credit would be allocated to consumer classes?

MR. ROBIN WIENS: Well, there is a -- there is very much a connection but I thought we were dealing here with consumer perception and I think consumer perception is not worried so much about how export revenues are allocated but rather what is the future direction for the rates that they'll pay for power regardless of, you know, internal considerations

associated with how those rates are derived.

MR. BOB PETERS: And that's an assumption by Manitoba Hydro or have you gone to the consumers to -- to test whether that was the driving -- you know, one of the driving thoughts behind how they perceive their business going forward?

MR. ROBIN WIENS: Well, it's more than an assumption. It's -- it's based on my experience in these types of discussions. Now, whether that experience deals with the whole universality of perception, perhaps not.

But my understanding is that certainly if we go back to 1996 or 1997 and we're talking about rate levels that's what we would have said. Today's rates plus at or slightly below the rate of inflation. And, you know, who was contemplating then that average export revenues would double between '96 or '97 and 2003-04; that wouldn't have been on anybody's radar screen at that time.

So the expectation then would have been based on the rates that were in place at that time and some understanding about inflation, not about the treatment of export revenues.

MR. BOB PETERS: In terms of the MIPUG proposal where a threshold level is established at some -- in some manner, one of the options that's suggested by

that Intervenor is that any amount in excess of the threshold could be put into a regulated reserve fund to pay down the debt and built up a stablization reserve, I suppose, against future rate changes. Are you familiar with that suggestion?

MR. VINCE WARDEN: I'm familiar with the suggestion, yes.

MR. BOB PETERS: And what's Manitoba Hydro's position as to whether that's even an appropriate use of any amount determined to be in excess of the threshold?

MR. VINCE WARDEN: Well, Mr. Peters, as I've testified previously the methodology used in the cost of service study in and of itself does not create any additional revenue. So there would be no additional revenues for putting into a special reserve fund for paying down debt as suggested by MIPUG.

MR. BOB PETERS: You're just saying that any excess doesn't necessarily mean it's sitting there as cash, it would be tied up in assets?

MR. VINCE WARDEN: No, I said previously that we -- the whole purpose of this exercise is to come up with revenue cost coverage ratios that we can use in judging the extent to which any future revenue requirements should be apportioned between ratepayers;

that's all it is. There's no additional revenue that's generated out of any methodology that we're considering here.

MR. BOB PETERS: So it's your position that would be unduly complicated to even establish a reserve fund when you're not creating additional revenues?

MR. VINCE WARDEN: It's not complicated, it's just wrong. It just wouldn't happen.

MR. BOB PETERS: You'd be --

MR. VINCE WARDEN: And it would be nonsensical in the event that there were surplus revenues which I'm saying there are not, to set up a reserve fund at the same time as we're expanding, building new generation, new transmission, having to go out in the market and borrow monies having -- at a presumably a higher rate than what we could earn by having some money sitting in some kind of a fund. It just does not make economic sense.

MR. BOB PETERS: It doesn't do anything on the financial statements of the Corporation?

MR. VINCE WARDEN: Well, first of all, the money isn't there to put into a reserve fund and if there were some funds to put into a fund, it would be the wrong thing to do.

MR. BOB PETERS: All right.

THE CHAIRPERSON: Mr. Warden, I'm not advocating any particular position, but I'm just curious when you say wouldn't make sense, don't you do that in a sense when you're developing sinking funds, debt repayment obligations?

MR. VINCE WARDEN: We have a requirement under the Manitoba Hydro Act to set aside a portion of -- it's a formula based on the debt outstanding at the end of the previous year that is put into the sinking fund. We do though for the reason I just gave, keep those sinking funds at the absolute minimum required by statute.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: In terms of this excess monies, one (1) other suggestion might be that -- that instead of putting the money back into crediting the various customer classes, this would allow the Corporation to make payments to the shareholder.

MR. VINCE WARDEN: Mr. Peters, there is no excess monies.

MR. BOB PETERS: I understand the point, and I understand the point is from a cost of service study methodology, but if the -- if the net export

revenues were reduced by an amount that was considered in excess and that money never flowed into the cost of service study, it could then be used for other purpose, correct?

MR. VINCE WARDEN: Well again, the purpose of the exercise is to develop those revenue cost coverage ratios, to determine the extent to which customers are paying their way, in terms of the costs incurred by the Corporation. That's all it is. Once those ratios are determined, then we decide how we're going to allocate our increased revenue requirements amongst the customer classes.

You know, if we did attain and we will attain, at some point, our -- out debt/equity ratio target of 75/25, then we would have the luxury of determining how any dividend, so to speak, that was over and above that ratio, how that could be allocated back to ratepayers.

We're a long ways away from that yet. So that we -- we don't have that situation today and won't have until at least 2011/12.

MR. BOB PETERS: So I take from that answer, Mr. Warden, that until the net equity ratio is down to 75/25, you don't consider there to be any definition of any excess revenues and, therefore, there

would be -- there would be no funds available to be dividended back to the shareholder or perhaps rebated to the customer, as was suggested by MIPUG?

MR. VINCE WARDEN: Correct.

(BRIEF PAUSE)

MR. BOB PETERS: In the document number 20 of the book of documents is a listing of various deferred costs. It comes from a response by the Corporation to an information request on behalf of the Board in the first round, number 7, found as document number 20.

Do you have that, Mr. Wiens and Mr. Thomas?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And in this particular document you are telling the Board the deferred costs that you reflect on your financial statements; correct?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And, as I understand it, the deferred costs had a value at the time of acquisition, those deferred costs have been either amortized or depreciated, so to speak, and they now have a resulting book value.

That gets us through those first three (3) columns?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And the amount by which you take the annual amortization or -- or depreciation is the amount that would enter into the costs of the Corporation, such that they would show up on the cost of service study?

MR. CHIC THOMAS: As a depreciation expense, yes.

(BRIEF PAUSE)

MR. BOB PETERS: All of these deferred costs as they're amortized, that annual portion of amortization is considered a depreciation expenses in the cost of service study?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: In -- in respect of -- let's pick DSM, Demand Site Management programs, there are some there that have different time periods of amortization.

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: Do you know why that is?

MR. CHIC THOMAS: I am not a DSM expert.

I think I'd defer that to someone else.

MR. BOB PETERS: Anybody on the Panel have any specific understanding as to why the Demand Site Management programs are into five (5) years, ten (10) years and fifteen (15) years?

MR. ROBIN WIENS: Well, I'm not a DSM expert either, Mr. Peters, but I -- it would seem from this that it was the belief of whoever established those amortization periods that they were appropriate to the type of program that was included in them, and that some programs yield results over five (5) years, some over ten (10) years and, from what appears here, the vast majority over fifteen (15) years.

MR. BOB PETERS: Does --

THE CHAIRPERSON: Is there any possibility that the difference is simply at one time the Corporation had a policy that amortized them over shorter periods of time because the financial statements just read, Amortized over -- I think it's fifteen (15) years now.

I'm suggesting that the five (5) and ten (10) ones are just echoes of the past.

MR. VINCE WARDEN: Mr. Chairman, as long as I can remember, it has been fifteen (15) years, the amortization period. We could get specifics of those

programs if it was important, but as Mr. Wiens indicated that vast majority are fifteen (15) years and that is our policy today that any programs that come into service are amortized over fifteen (15) years.

THE CHAIRPERSON: Our understanding unless we hear otherwise from you is that your accounting policy today is to amortize DSM over fifteen (15) years.

MR. VINCE WARDEN: That's correct.

(BRIEF PAUSE)

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Just to follow up on the DSM, Mr. Warden, I understand from your answer to the Chairman that you account for these costs or your amortize them to recover them fully over fifteen (15) years based on the current -- the current policy at Manitoba Hydro?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And one-fifteenth of those costs are then flowed through to Mr. Wiens and Mr. Thomas when they do their cost of service study and those costs are then put into the cost of service study?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And Mr. Thomas, one-

fifteenth of the cost that's put into the cost of service study, does it end up in a specific customer class or is it shared generally amongst them all?

MR. CHIC THOMAS: As you can see by that particular line item for DSM, it's functionalized as generation. So therefore all customer classes would -- would pick up a piece.

(BRIEF PAUSE)

MR. BOB PETERS: My understanding was that Manitoba Hydro was going to take the DSM costs and directly assign them to the customer classes for which the DSM program was intended.

MR. CHIC THOMAS: Yes, I was in error Mr. Peters, that's correct.

MR. BOB PETERS: So rather than putting them in the hopper, they are directly assigned to the respective customer classes, depending on the program?

MR. CHIC THOMAS: That's correct.

MR. BOB PETERS: Put another way if the program is for the residential consumer all of the costs on an annual basis end up in the residential class direct assignment?

MR. CHIC THOMAS: That's right.

MR. ROBERT MAYER: The first answer made a lot more sense to me than the second one. I guess the second one is true, the first one just made more sense.

If you -- the idea of DSM is that you cut down on the use of power. The argument has been made in this forum and in others that if you do enough of that you don't have to build a hydro dam.

So why would the -- if one customer class through DSM makes significant savings in the amount of power you have to generate, why would that particular class have to pay the costs of that saving?

MR. ROBIN WIENS: I'll attempt to respond to that Mr. Mayer. First, not all programs but many programs, DSM, not only result in deferring the installation of new generation, but they may result in deferring the installation of transmission and distribution, as well.

So it's not strictly that all the benefits are realized in the generation function. There are some that are realized in the other functions. Most of them, I would say are realized in the generation function.

But second, there is a -- what we have encountered over the years is that there is a timing issue associated with the incurrence of benefits and costs. For instance, Manitoba Hydro may invest $10

million in a DSM program or programs that exclusively benefit a certain class. But, in the past, we may have charged all those costs against the generation function.

And in effect, allocating all of those costs to all the customer classes, such that there is an inordinate benefit in some cases flowing to a customer class that isn't paying for those costs.

That's not true of all programs but it is true of some programs. And we encountered that issue back in the 1990's and so at that point we did determine and this Board concurred with us that for some types of programs, we could allocate them and should allocate them directly to customer classes so that the benefits and costs are appropriately shared.

Now, even in those programs where one class gets all the benefits and the classes are -- are assigned all the costs, eventually over a long enough period of time the benefits are shared. But that period of time is sometimes too long to influence appropriate -- the arrival of appropriate results in our cost of service study.

So we began that process, as I say, back in probably the early to mid 1990's and eventually we had enough classes being assigned directly the costs of DSM that it was a natural step and an appropriate step to

move to that basis and that's where we are today.

MR. ROBERT MAYER: I take it then, the one -- I suppose the DSM programs with which I'm most familiar the ones that generally are intended, at least, to benefit the residential class.

Home insulation program, the light bulb give away, those kind of programs at least I understand where I'm going to get the results because I'm not going to have to buy a whole bunch more light bulbs and I'm expectedly going to save money on my power bill by doing this.

Are those the programs you're talking about that -- that -- those programs, I take it, would be assigned directly to the residential class?

MR. ROBIN WIENS: I'm probably not recalling all the history. Certainly that's the case today and I don't believe the residential class was the first class for which that determination was made.

Part of this results from the fact that just by -- by the natural evolution of DSM programs some are -- some are highly economic and some are less economic. So they get rolled in at different times.

The -- the temptation is to find -- take those that are most economic and start on them right away and defer some of the others. So you could find that we

had some very early DSM programs with some dramatic results affecting general service large and affecting street light class of service and that was when we began to realize that perhaps we should be looking more at matching cost to benefits by class.

Certainly if you're going to have eight (8) or nine (9) or ten (10) years gap between when programs are introduced from one class as opposed to another, the failure to match benefits and costs by class can have some significant impacts on your cost of service results.

So this is why we opted for this position.

THE CHAIRPERSON: If you don't need additional generation at a particular point in time then it's available for export sale; correct?

MR. ROBIN WIENS: Yes.

THE CHAIRPERSON: So effective DSM produces more potential for export sales?

MR. ROBIN WIENS: Or for deferral of generating units further into the future. Export sales in the near term, deferral in the longer term.

THE CHAIRPERSON: Thank you.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Mr. Wiens, in light of

that last couple of answers to the Chairman in terms of the purposes served by DSM, one of them is energy conservation, from what I heard your answer, and one of them is deferral of plant additions; correct?

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Peters, DSM results in energy conservation and in some cases in capacity conservation and the result of that is that it would facilitate, other things being equal, more exports.

And the economics, if you will, are derived on the basis of -- of the value of energy in the long term in the export market. But it does also have the effect down the road of allowing us to defer generation but we don't use that in the valuation of the DSM program.

MR. BOB PETERS: Thank you for that and I wasn't -- I didn't want to get back into the tests used to evaluate the various programs so I understand the answer and I appreciate that.

But it seems then -- why are the costs for the DSM program that you list in document number 20; why are those not changed to the export class?

(BRIEF PAUSE)

MR. ROBIN WIENS: We don't have any programs for the export class.

MR. BOB PETERS: Mr. Wiens, you weren't following my logical line of questioning. It -- it seemed to me intuitive from your answers to the -- the Chairman and the Vice-Chairman that DSM results in energy conservation and deferral of plant additions, and that energy conservation can be used for exports and, therefore, the overall primary role of DSM appears to be resulting in increases in export revenues.

Doesn't that follow?

MR. ROBIN WIENS: That is the immediate and short-term impact of demand side management. But you'll appreciate that demand side management is engaged in -- because the optimum levels of demand side management reduce the overall costs of the system, thereby benefiting all of our customer classes, particularly the participants whose bills are reduced.

MR. BOB PETERS: I -- I think we're mixing the -- the result of the program for the consumer and the result of the program to the Corporation as a whole.

And if -- as a result of the DSM programs

and spending the $150 million on programs frees up some energy that can be exported, isn't there a logical conclusion that some of those costs maybe should be assigned to the export class?

MR. ROBIN WIENS: The export class does not receive quantifiable benefits from DSM. They continue to pay a price based on the market.

MR. BOB PETERS: But the residential consumer who gets the free light bulbs sees a reduced bill every month -- but some -- and then the energy that that consumer has saved is exported and the benefit isn't shared just with the residential class that uses the light bulbs but it's now going to be shared with all the classes, from what I hear you saying in the cost of service study.

MR. ROBIN WIENS: Yes. And the export revenue that is thereby received is allocated back for all -- the benefit of all the customer classes.

MR. BOB PETERS: You're encouraging the Board then to treat the export class as a -- the same as a domestic customer and look at the costs and benefits to that class of any specific DSM program, and in your examples there are no DSM programs that are targeted to export.

MR. ROBIN WIENS: No. It simply happens

that the surplus that is thereby created is exported for the highest price that Manitoba Hydro can obtain for it.

MR. BOB PETERS: Manitoba Hydro doesn't want to have DSM programs for export, that would be counter-intuitive to -- to exporting as -- as much as you can.

MR. ROBIN WIENS: Well, I guess you have to ask the question, What benefit would Manitoba Hydro receive by -- by paying for DSM costs for the customers of Northern States Power, for example.

THE CHAIRPERSON: But, Mr. Wiens, just following the discussion here, earlier you and others had indicated that there had been a major change. You've talked about the gain in the unit price of the sales of the exports.

And in the last year, as I understand what you said before, if you could not sell -- and of course it even goes back to this letter that we were discussing last week -- if you don't have to sell a kilowatt hour to an industrial customer for, say, four (4) cents and instead you can sell it in a peak power to the Americans at nine (9) cents, there's a substantial gain that's been realised, has there not?

And under the method that you are saying, that that four (4) cents was prevented because of

expenditures incurred with respect to the industrial class, you put the cost against the industrial class but the revenues would flow to the export.

Is that not true?

MR. ROBIN WIENS: Well, the revenues would flow to Manitoba Hydro and subsequently be allocated among the customer classes of Manitoba Hydro.

THE CHAIRPERSON: But the revenue would first go into the export class.

MR. ROBIN WIENS: The revenue would be received from the export class.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Do your answers change, Mr. Wiens, when you consider that by use of an effective DSM program the result is you don't have to import as much power and then there is a direct cost and benefit to certain customers?

MR. ROBIN WIENS: Well, it may well be that as a result of the DSM program there's less power that's required to be imported. But I'm just not sure if, you know, if I can follow where you're going with that Mr. Peters.

MR. BOB PETERS: Well, I was wondering, whether or not, there would be benefits that would be --

in an import -- when you reduce the imports then maybe the charges should be to the consuming customer classes domestically, but if you're using the benefit of the DSM for exporting then maybe some of the costs should follow the benefits?

MR. ROBIN WIENS: But I think just by virtue of paying the -- you know -- the costs that the market will bear, the export customer is paying for those benefits and they're coming back into the Province of Manitoba and being distributed to each of the domestic classes of service.

MR. BOB PETERS: All right. We've got your point, thank you.

The next document in the book of documents is document 21 and it deals with mitigation costs. And while there are some acronyms on this page for Churchill River Diversion and Lake Winnipeg Regulation and Northern Flood Agreement and Non-northern Flood Agreement, these numbers represent the amount that Manitoba Hydro has paid out in mitigation expenses over the various decades listed, correct?

MR. VINCE WARDEN: Correct.

MR. BOB PETERS: And is it correct that $570 million has been paid to date and there's still approximately $104 million to be paid although that $104

million is, at this point, just an estimated figure?

MR. VINCE WARDEN: That's correct.

MR. BOB PETERS: In terms of accounting purposes, Mr. Warden, how do you treat those mitigation costs?

MR. VINCE WARDEN: The mitigation costs are allocated to the respective assets to which they pertain. So the list of assets is -- or projects is identified on -- in the answer to PUB/Manitoba Hydro 5.

MR. BOB PETERS: You're telling the Board that whatever mitigation costs arise as a result of the generation project, those mitigation charges are charged to the generation and then they are depreciated over the life of the asset or the life of the plant that results?

MR. VINCE WARDEN: Yes, maybe just a little bit further than that. The 570 million are costs that we've expended to date. We also as you indicated, estimate what our future liability is.

So it's a total of the $570 million and the estimated liability that is allocated to the respective assets and amortized or depreciated over the remaining life.

MR. BOB PETERS: You consider mitigation costs as part of the cost of the capital asset?

MR. VINCE WARDEN: We do.

MR. BOB PETERS: And then from the cost of service study then we've been told earlier in these proceedings that the capital assets of the Corporation are reflected in the cost of service study by way of the depreciation costs that results annually?

MR. VINCE WARDEN: That's right.

MR. BOB PETERS: And included then in the depreciation cost will be an amount that would have been attributed to mitigation, Mr. Thomas?

MR. CHIC THOMAS: That's correct.

MR. BOB PETERS: Just a question, Mr. Thomas, Mr. Wiens, if in the future Manitoba Hydro builds for export and there is a mitigation cost associated with that capital asset, how will those costs be reflected in future cost of service studies?

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Peters, regardless of the purpose of a plant that's put in service, if there are mitigation costs associated with it they would be capitalized and depreciated in the same way as the one -- the costs that are depicted here.

MR. BOB PETERS: I'm not sure if my question is too hypothetical or not, but if the

construction was building for export, Mr. Wiens, and costs were incurred to -- to take advantage of or attempt to take advantage of the export market would those costs then end up being directly assigned to the export class?

(BRIEF PAUSE)

MR. ROBIN WIENS: I guess to the extent that we determine that such a plant or plants are dedicated to put in place -- dedicated to serve the export market yes, we would, we would assign them directly.

MR. ROBERT MAYER: Manitoba Hydro presented to the Clean Environment Commission some very concise pamphlets on mitigation costs. Two (2) of us have seen those, neither Mr. Peters nor the rest of the Panel here have seen them.

Are those pamphlets still available?

(BRIEF PAUSE)

MR. VINCE WARDEN: I don't -- I don't see why not, Mr. Mayer.

MR. ROBERT MAYER: They might be helpful. They weren't -- it seems to me there were three (3) or

four (4) of them and they were given out in a response to a request by Dr. Avery-Kinew to Hydro at the hearings in the Pas.

We had some discussion as to whether we really wanted to put this in writing, but the end result you produced a group of pamphlets. If we could be provided with copies of those I think it might be helpful in helping the rest of the Panel understand the mitigation costs and how they went and how they were arrived at.

MR. VINCE WARDEN: Certainly.

--- UNDERTAKING NO. 5: Provide pamphlets re mitigation costs

MR. BOB PETERS: Thank you.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Turning to another topic I just want to touch with you, Mr. Warden, and that is the possible impact of what is Bill 11 before the Manitoba Legislature.

THE CHAIRPERSON: Mr. Peters, just before you change the topic, I just have one (1) question just for the understanding.

On the book of documents, Section 20, for example, when you talk there about these deferred unamortized balances and deferred costs totalling 151 million; are there other similar costs that are in accounts such as construction and progress?

MR. VINCE WARDEN: Are there other costs that are in construction and progress...?

THE CHAIRPERSON: Of similar nature; for example, planning costs, site study costs, things of that nature that haven't started to being amortized yet?

MR. VINCE WARDEN: Yes, there are.

THE CHAIRPERSON: Thank you.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Those would be found under the company's filings, I suppose, of capital -- capitalized costs, Mr. Warden, that are normally found at GRA hearings?

MR. VINCE WARDEN: I'm just thinking actually on reflecting a little bit more on your question, Mr. Chairman, with respect to demand side management those costs are flowed through -- they -- they were taken out of work in progress and put into -- into capitalized accounts for purpose of depreciation the year after the incurrence.

So the only remaining work in progress for the year in question -- the subsequent year they go into -- into the fixed asset category.

THE CHAIRPERSON: So in construction and progress one would find things like planning costs and things of that nature? a

MR. VINCE WARDEN: For the current year. Those planning costs go into our amortized over a fifteen (15) year period in the year after the date of incurrence.

THE CHAIRPERSON: So even in, for example, projects that haven't even commenced yet, the planning costs associated with Gull or Conawapa they'd be in these numbers?

MR. VINCE WARDEN: Yes.

THE CHAIRPERSON: Thank you.

(BRIEF PAUSE)

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Mr. Warden as I -- just before I close the Tab 20, then, of the deferred costs and I look down to diesel site clean-up costs, fifteen (15) years at $18 million, that just, as described, would be for clean-up of diesel generating sites in Northern

Manitoba?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: Would you agree that there's really no value in that going forward and that those diesel sites have probably been replaced with land lines?

(BRIEF PAUSE)

MR. VINCE WARDEN: It's a question of how those costs are recovered, Mr. Peters. We have a separate cost of service study for diesel and those costs are recovered prospectively in the diesel cost of service study.

MR. BOB PETERS: And probably a good distinction, Mr. Warden, in terms of how they are recovered, but one (1) option for recovery would be to recover them in one (1) year and write them off in the year in which --

MR. VINCE WARDEN: Well, there's really no place to write them off. We recover all costs incurred -- or for the most part all costs incurred on diesel -- at diesel sites from diesel customers. So we can't write them off against diesel customers, otherwise they'd be faced with a big bill -- a big bill in the year

of write off.

MR. BOB PETERS: I guess the same then isn't true for the grid items, that those could be written off in one (1) year if that was the determination?

MR. VINCE WARDEN: Yes, if there is a determination that there is no future value there could be the -- a write off in that year.

MR. BOB PETERS: Mr. Warden, I wanted to ask you about -- about the impact of Bill 11 and perhaps you can confirm that presently that Bill is still before the Manitoba legislature?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: And as I understand it, one (1) of the aspects of Bill 11 was to create a fund out of which -- or a fund to be set up by Manitoba Hydro?

MR. VINCE WARDEN: Yes, that's one (1) of the provisions in Bill 11.

MR. BOB PETERS: And would I be correct in saying no such fund has yet been set up?

MR. VINCE WARDEN: That's correct.

MR. BOB PETERS: And no such fund will be set up until or unless the Bill was passed into law?

MR. VINCE WARDEN: That's right.

MR. BOB PETERS: If we assume and I'd

like Mr. Wiens and Mr. Thomas to help us here, if we assume that the Bill is set up and passed into law, how will the cost of service study reflect any fund that is to be set up under that legislation?

MR. VINCE WARDEN: Maybe I'll respond to that. The cost of service study would only recognize costs that are actually incurred. So if there were costs that were incurred for DSM for example, or for some kind of a cross-subsidy which is also referenced in Bill 11, it would only be at the point of that cost incurrence on the financial statements in Manitoba Hydro that there would be any recognition in the cost of service study.

MR. BOB PETERS: And you might have to help me with the accounting part of that, Mr. Warden. If -- and I appreciate there's a lot of if's in these questions, but if the Bill is passed into law, if the fund is set up, how will that fund then flow through the cost of service study?

MR. VINCE WARDEN: There would be no impact of setting up the fund on the cost of service study, that would not impact the cost of service study, at all.

MR. BOB PETERS: So all that would result would be the net revenue that would be included to be allocated would be reduced or the net income of the

Corporation would be reduced?

MR. VINCE WARDEN: Well, the net income wouldn't be reduced until such time as there was an expense incurred. So one (1) option that's being considered, one (1) that I'm not advocating but is an appropriation of retained earnings.

So we could just simply take the retained earnings that's in Manitoba Hydro now and appropriate a portion for the purposes of Bill 11, it does not seem to be the right thing to do when our retained earnings, as I've said many times, are already well below what they should be.

We wouldn't want to restrict sthose retained earnings for a purpose other than for the major risks faced by the Corporation.

MR. BOB PETERS: Would another approach, Mr. Warden, be to treat it the same as you'd do the uniform rate adjustment?

MR. VINCE WARDEN: No. We're talking totally different matters. There was a -- there was a reduction in revenue associated with the -- with the uniform rate legislation.

We're talking here about the possible incurrence of some expenditures in the future. And those expenditures would be allocated appropriately through the

cost of service study.

So it's really quite a different scenario than the uniform rates, as I see it.

MR. BOB PETERS: Do I take the distinction then, Mr. Warden, is in one example for the uniform rates there's a revenue reduction but if Bill 11 comes into force and a fund is set up, it would be how the fund was used, the cost out that fund that would be allocated to the cost of service study?

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

MR. BOB PETERS: All right. One of the things you said in an answer just a few minutes ago, Mr. Warden, was that the cost of service study only recognizes costs incurred.

Do you recall saying that?

MR. VINCE WARDEN: Yes, I did.

MR. BOB PETERS: And is that in essence the answer to one of the recommendations from RCM/TREE who's advocating that certain externalities be charged to consumers of Manitoba Hydro?

MR. VINCE WARDEN: Well, I wasn't really thinking or RMC -- RCM/TREE when I responded but, yes, what they are advocating would be the inclusion of -- of costs not incurred by the Corporation, externalities, and

passing those on to -- to ratepayers.

MR. BOB PETERS: Manitoba Hydro sees those externalities as being in addition to the cost of service study items.

MR. VINCE WARDEN: They're not included in our cost of service study today.

MR. BOB PETERS: In -- in some ways I think Manitoba Hydro also says that the externalities are in some ways already internalised by Manitoba Hydro in its export pricing.

Have I understood that correctly?

(BRIEF PAUSE)

MR. VINCE WARDEN: Mr. Peters, only to the extent that when we forecast prices to be received in the future on the export market, we take into account such things as carbon credits or some other externalities that -- that may affect that price in the future.

And -- and I think, as Mr. Surminski testified earlier, we do in -- in scenario planning for -- for new generation, we look at -- at all costs, those that are external to the Corporation as well as those that will be incurred directly.

MR. BOB PETERS: All right. And I also

understand then that the externalities that the Corporation feels it has been exposed to or have -- has incurred to date already end up in the rates through these mitigation and compensation payments and environmental expenses to get the capital assets in place.

MR. VINCE WARDEN: Well, I -- I wouldn't call mitigation externalities. They -- those are actual costs incurred or to be incurred.

MR. BOB PETERS: So the externalities which you're referring to are the ones that would be incurred by someone outside of Manitoba and by somebody other than Manitoba Hydro?

MR. VINCE WARDEN: Yes.

MR. BOB PETERS: In the few minutes remaining before -- before lunch and My Friend Mr. Williams gets his materials in order, there was one (1) question, Mr. Surminski, of you that I sdid want to touch on and it had to do with how I interpreted one (1) of your answers and I may have been wrong, but if I was you're going to tell me.

I had understood you to be saying to the Board that you're last unit of generation is cheaper to use that the first units of generation that you put into your generating stations?

MR. HAROLD SURMINSKI: I don't quite understand your question, what do you mean by, to use?

MR. BOB PETERS: Is it correct, that the last generator to run is run more cheaply than the first generators that are spinning away?

(BRIEF PAUSE)

MR. HAROLD SURMINSKI: I still don't understand exactly what you mean by that.

MR. BOB PETERS: All right. I'll keep fishing here, Mr. Surminski. There are embedded costs for each of the units of generation that you put into your generating stations, your hydraulic generating stations, correct?

MR. HAROLD SURMINSKI: Well, embedded costs are for the plant, in total.

MR. BOB PETERS: And that plant in total is comprised of the costs of individual units as they're called or generators?

MR. HAROLD SURMINSKI: We don't differentiate between units, it's the infrastructure, it's the total for a site.

MR. BOB PETERS: Well, you indicated before that your last unit may only be operated 5 percent

of the time in any type of a generating station, is that correct?

MR. HAROLD SURMINSKI: No, it may be a picking up the last 5 percent of the available water but -- on a long term basis -- but it may be operating more than that due to cycling in a plant.

MR. BOB PETERS: I don't want to get too deep into the cycling, but does that just mean that you try to run all the units with the same number of hours under the same load so that they wear down evenly and you have all cylinders roughly the same?

MR. HAROLD SURMINSKI: That is done but it is a -- the cycling of a plant is determined by the value of peak energy versus off peak energy.

MR. BOB PETERS: Maybe I could ask you for this undertaking to short circuit this discussion, Mr. Surminski. From the 04/05 power resource plan could you provide the capital costs for a five (5) unit Conawapa generating station as well as a ten (10) unit Conawapa generating station? Could you provide those assumed costs?

MR. HAROLD SURMINSKI: Yes, they can be provided, we did consider those in our resource plan.

MR. BOB PETERS: And then could you also provide as part of that undertaking the average energy

generated under each -- under each scenario?

MR. HAROLD SURMINSKI: Yes, we could.

--- UNDERTAKING NO. 6: To provide the assumed costs for a five (5) unit and a ten (10) unit Conawapa generating station, including the average energy generated under each scenario

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Thank you. To close off if the Panel could turn to Tab 10, of the book of documents, we will conclude with what I understand to be the conclusion, Mr. Wiens and Mr. Thomas, of your four (4) methodologies of cost of service studies and that -- are the revenue to cost ratios from each, correct?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: The current column number one (1) represents the currently approved PUB methodology that was approved in the last Board order?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And next to that you provide the cost of service methodology performed by NERA, correct?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And one (1) of the distinctions about NERA from where the current methodology is, is that NERA recommends the use of one (1) export class, correct?

MR. CHIC THOMAS: That's one (1) of the NERA recommendations, yes.

MR. BOB PETERS: And that export class by NERA is -- and when NERA did their report they knew you had opportunity exports and they knew you had firm exports, as well, correct?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And yet in their wisdom they blended those into one (1) export class?

MR. CHIC THOMAS: That's right.

MR. BOB PETERS: And can you explain to the Board what Manitoba Hydro's understanding is as to why NERA incorporated all of your exports into one (1) class rather than differentiate between the different types of classes now being done by Manitoba Hydro?

MR. ROBIN WIENS: Mr. Peters, I'm not sure if you'll recall but following the issuing of Order 7/03 Manitoba Hydro did express some concerns about going with more than one (1) export class and those concerns were largely tied in with how much information we would have to provide and whether any of that information was

commercially sensitive in order to divide the exports into those two (2) classes.

At the time that Manitoba Hydro engaged NERA we had not resolved those concerns and we were still in a position of thinking that if we were going to treat exports we would have to look at a single export class.

Subsequent to having received the NERA report we took a look at what the possibilities were that we could actually look at two export classes and we determined that there may be a basis on which we could divide those exports up without getting into information that was commercially sensitive.

And on that basis we undertook to provide the cost of study material that we filed with this Board at the end of October of 2005, and I think, as I have mentioned earlier, we did contact NERA and had that discussion with them and they were, at the risk of again providing indirect information, that -- that they found that to be appropriate.

MR. ROBERT MAYER: That was just about the same answer you gave to the same question last week; right?

MR. ROBIN WIENS: That's -- well, there's a little more information there but it's basically the same answer, yes.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: And in addition to the NERA methodology you did the vintaging methodology again in response to a directive from the Board in one of their last orders?

MR. CHIC THOMAS: Yes.

MR. BOB PETERS: And the recommended methodology, Mr. Wiens, I wasn't quite sure of the timing. Maybe you could just help the board understand from when you got the NERA report to when you decided to go down the recommended methodology, what was the timeframe involved there?

MR. ROBIN WIENS: Mr. Peters, I think you may also recall that Manitoba Hydro filed some material with the Board in respect of the differing methodologies in February of 2005, and we did not have the recommended methodology included at that time.

So the timing is sometime I would think in the spring or perhaps early summer of 2005.

MR. BOB PETERS: And have all of these revenue to cost coverage ratios that we see and the changes that we see, we've looked at previous documents where by far and away the vast majority of the impact is as a result of the methodology in allocating and

determining the net export credit?

MR. ROBIN WIENS: That's correct.

MR. BOB PETERS: All right. Mr. Chairman, with that I think it's an appropriate time for the lunch break. I will review my notes, but I suspect I will be finished and Mr. Williams will -- will be first up this afternoon.

THE CHAIRPERSON: At the risk of having things pitched at me, I had one (1) last question. Just to assure myself that I understood the approach that Hydro were following.

If we return to the example of Bill 11, for example, okay, you indicated that the COSS wouldn't be affected unless there were actually incurred costs; okay, I can understand that.

So if there were incurred cost and if those costs were incurred for, let's say, low income DSM gas or something of that nature; do I understand your approach would be you would assign those costs against the residential class?

That was the category of customers that received the benefit?

MR. ROBIN WIENS: Right. Mr. Chairman, I -- I had been somewhat concerned about the direction of the discussion with respect to Bill 11 because until we

actually do receive direction from the government of Manitoba we're not in a position to actually determine with any degree of finality how these costs are going to be treated.

THE CHAIRPERSON: That actually wasn't my point. I was only using it as an example. I was saying if we return to the discussion before on DSM you were indicating if DSM costs were incurred you would allocate them to the class that, if you like, was the recipient?

MR. ROBIN WIENS: I mean, that's -- that is one way you could look at it. I'm not sure that that's the determination we would make. And, you know, I would refer to the -- the situation where we had some costs associated with uniform rates and rather than allocate them to the residential class, they have been taken as a first call on net export revenues.

I -- you know, I'm not saying that we would have a -- a firm recommendation on that today but just mentioning that there are alternatives to consider.

THE CHAIRPERSON: You're not foreclosing any option then as far as that goes, if that situation developed. I understand you.

Okay. Thank you everyone. We'll see you all back at 1:30.

--- Upon recessing at 12:07 p.m.
--- Upon resuming at 1:36 p.m.

THE CHAIRPERSON: Okay. Welcome back everyone.

Mr. Peters, if you could take us through a few undertakings.

CONTINUED BY MR. BOB PETERS:

MR. BOB PETERS: Yes. Thank you. And good afternoon, Mr. Chairman, Board Members, Ladies and Gentlemen.

One -- I will call it an undertaking and I'm, quite frankly, not sure how I left the questioning on the record. So rather than wait for the transcript and go back, I would turn to Mr. Surminski and wanted to just get confirmation from the Corporation about losses on the HVDC system and ask Mr. Surminski if he had a chance to verify the numbers I put forward or to confirm them and indicate to the Board what they are.

MR. HAROLD SURMINSKI: I don't recall exactly how we got to that but I -- I think the question was during the on-peak hours the losses on the HVDC system, how much -- what proportion was for domestic -- can be assigned to domestic sales and what portion to

exports.

And I think Mr. Peters had a number like 55 percent for domestic and 45 percent for export. And I can confirm that those numbers are correct.

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

Mr. Chairman, there was earlier on in the proceedings last week, I think the first day, a question from the Corporation as to whether they would produce a letter that gave rise to -- or at least was reported to have given rise to an article in the newspaper that was referenced in your opening comments.

That led to some research and it led to some consultation by My Friends Ms. Ramage and Ms. McCaffrey. And to that end there are now, as I understand it, a total of four (4) letters, one (1) of which has already been handed out.

The first letter has the date stamp of October 4, 2005 in the top right-hand corner. The next one has October 31, 2005 as a date stamp. That is followed by one that was in December, I think, 5th of 2005.

And then lastly would be the December 15th, 2005 letter that was initially filed -- or attempted to be filed by Manitoba Hydro before we tried

to straighten out the chronology and the -- the series of documents that gave rise to -- to my question.

I propose at this time, Mr. Chairman, that all four (4) of these letters be considered as Manitoba Hydro Exhibit number 9. And that I will defer any questions I have of these -- of these documents until, I think, subsequently.

But it may be at this point in time Ms. Ramage and her panel may wish to at least speak to them, as they -- as they wish, as we file them. So I turn it over to Ms. Ramage and Mr. Warden to see if there's any further comments on those.

--- EXHIBIT NO. MH-9: Four (4) letters dated October 4, 2005; October 31, 2005; December 5, 2005; and December 15, 2005.

THE CHAIRPERSON: Mr. Warden...?

MR. VINCE WARDEN: Yes. Thank you. I think the only point I'd like to make is I, in reviewing this correspondence, I would put it under the heading of Normal Correspondence Manitoba Hydro With Its Customers. Although the subject is very important, it still is a consultation process that -- that Manitoba Hydro would go

through with -- with customers.

There was never at any point any intention on Manitoba Hydro's part to circumvent in any way the PUB process.

The -- as I indicated earlier at the appropriate time Manitoba Hydro will be coming forward with a rate application and that was our position then and is our position today.

THE CHAIRPERSON: Thank you Mr. Warden. Okay.

That being done, we will move on to CAC/MSOS, Mr. Williams.

MR. BYRON WILLIAMS: Thank you and good afternoon Mr. Chairman and Members of the Board. I should note that my client, Ms. Gloria Desorcy, Executive Director of the Consumers Association, never one to miss a rivetting discussion on marginal costs and opportunity costs, has left her other very important commitments to join us and to look over my shoulder.

THE CHAIRPERSON: Did she have to fight her way through the press to get in here?

MR. BYRON WILLIAMS: It was overwhelming the number of people interested in attending, Mr. Chairman.

Just by way of introduction, perhaps I

might start by thanking My Friend, Mr. Peters, whose diligent work has reduced a great deal of the amount of work that my clients would have asked me to have done in terms of cross-examination, so I appreciate that.

I've been monitoring his cross-examination both in the room and in the Intervenor room, over the monitor. There are some times when I will, either follow up on his conversations or trench -- or walk down a similar path for a different purpose.

I'll try not to duplicate what he has done but there are moments where we will necessarily be some duplication. I can also indicate to the Board that essentially the examination this afternoon by CAC/MSOS is divided into four (4) or five (5) sections and at the intro of each section, I may just for the -- hopefully for the assistance of the Board outline some of the subjects that we may be covering and that may assist you in following my convoluted path.

MR. ROBERT MAYER: Especially when you start by telling us there's four (4) or five (5).

MR. BYRON WILLIAMS: Four (4) from me, Mr. Mayer and perhaps one for my colleague Ms. Bowman. Just in terms of where the first hour or so will take us, I want to explore some -- go back to first principles and some basic principles in terms of the mandate of Manitoba

Hydro, as well as the purpose of a cost of service study analysis.

Secondly, we want to explore some terminology and some concepts, including concepts such as short run marginal costs and hopefully the reason for that exploration will become apparent later in the afternoon. We then want to look at the situation of the general service large class, in terms -- in relation to short run marginal costs, and we think that's an important issue in this hearing.

And near the end of the first section, we'll explore the fundamental change that has occurred, in terms of the price per unit available in the export market to Manitoba Hydro and some of the ramifications of that for the current cost of service methodology, as well as for the recommended methodology.

Without further, adieu after a lengthy preamble, I'm going to turn to Mr. Warden.

CROSS-EXAMINATION BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: And, Mr. Warden, I'll give you a chance to elaborate in a couple of seconds, but I just want to confirm my sense of a conversation that you had with Mr. Peters last week.

And I think it was day two (2) of the

proceeding and Mr. Peters was talking with you regarding cost of service in general and the allocation of export credits in particular. And I'm not -- certainly not quoting him directly, but the thrust of his conversation seem to be suggesting to you that as long as Manitoba Hydro got its revenues that it could essentially be indifferent to the results of the allocation of export credits.

Without asking you to elaborate do you remember that conversation, Mr. Warden?

MR. VINCE WARDEN: Yes, I do.

MR. BYRON WILLIAMS: And again without asking you to elaborate, his suggestion was that while Manitoba Hydro could be relatively indifferent it was certainly of great interest to the various classes of consumers whose ox might be gored by the outcome of the proceedings?

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: Now, again without asking you to elaborate in great detail, my recollection of that conversation was that you took issue with Mr. Peters suggestion that Manitoba Hydro was indifferent to the outcome of the allocation of export credits.

And one (1) of the reasons you cited was that the outcome of this decision could have important

ramifications in terms of Manitoba Hydro, in terms of the -- in terms of domestic consumption, in terms of system planning and in terms of when and how generation might be added; is that correct, sir?

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: And I believe you went further and suggested that, again, Manitoba Hydro would not be indifferent to the results of the allocation of net export credit because the outcome would affect the various customer classes whom Manitoba Hydro exists to serve and that's of importance to you?

MR. VINCE WARDEN: I agree.

MR. BYRON WILLIAMS: So Manitoba Hydro certainly is not indifferent to the outcome of this -- this proceeding because it matters to the operations of the Corporation and it also matters to the interests of the customers whom Manitoba Hydro exists to serve; correct?

MR. VINCE WARDEN: You still don't want me to elaborate, so I'll just say correct.

MR. BYRON WILLIAMS: You -- we'll give you a chance a bit later. Just in terms of your customer base, Mr. -- Mr. Warden, and I don't want to ask you to speak for your customers, but in your experience, if the various customer classes feel that they're being treated

fairly and the Corporation is operating efficiently then you tend to hear less complaints from customers of Manitoba Hydro; would that be fair?

MR. VINCE WARDEN: Yes, that's fair as well.

MR. BYRON WILLIAMS: I'll give someone a chance to chat just a little bit now, not too much though. But -- but in terms of the rate setting process it might assist me, and certainly would assist my clients, in understanding how Manitoba defines the -- the term fairness and the term of efficiency? Perhaps Mr. Wiens or Mr. Warden could help me with that?

MR. ROBIN WIENS: I tempted to just reply with short answers like the last couple of questions but, no, Mr. Williams, fairness broadly means that we treat customers with similar circumstances in similar ways. And customers with dissimilar circumstances in appropriately dissimilar ways.

Efficiency means that our rates, that come from, in part, out of our cost of service process, provide the best possible incentive that we can to customers in terms of reflecting the appropriate value of power for -- at the margin for those decisions they make to either consume or to conserve.

MR. BYRON WILLIAMS: Thank you, Mr.

Wiens, for your focussed and helpful answer. We'll come back in a couple of minutes to that definition of efficiency.

Mr. Warden, I also understand that you had -- and I heard -- overheard you having discussions with Mr. Peters regarding the various iterations of excerpts from the Manitoba Hydro Act which appear at Tab 1 of the -- of the book of documents of the Public Utilities Board; do you recall that conversation?

MR. VINCE WARDEN: Yes, I do.

MR. BYRON WILLIAMS: I don't want My Friend, Ms. Ramage, to get all anxious in the sense that I would be seeking your legal opinion because I'm certainly not. But I am interested in exploring how the Act frames Manitoba Hydro's mandate.

And I wonder if you would agree with me that in terms of Manitoba Hydro's mandate a key obligation is to provide for the continuance of a supply of power adequate for the needs of the Province; would you agree with that, sir?

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: And a second key obligation, key part of your mandate, is to promote economy and efficiency in the develop -- development, generation, transmission, distribution, supply, and end

use of power; is that correct?

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: A couple of other mandates which I won't dwell on are to provide and market products within and outside the products (sic) and also to market and supply power; correct?

MR. VINCE WARDEN: Correct.

MR. BYRON WILLIAMS: I wonder if you'd agree that in essence your mandate is to meet the power needs of the province, promote -- and promote economy and efficiency in the development and use of power in the province, with an underlying objective of furthering the well-being of the Province, the Corporation and your customers.

Would that be a fair statement of your mandate?

MR. VINCE WARDEN: The furthering the well-being of the Province is of course not part of the Manitoba Hydro Act, and although we may all have personal ideas on that matter, it's probably not appropriate to express those views.

MR. BYRON WILLIAMS: In terms of the -- the other two (2) obligations, you're to meet the needs of -- for power and promote economy and efficiency, and the -- that mandate in turn benefits the customers of

Manitoba Hydro.

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: In -- in terms of your mandate, the words used are economy and efficiency, and I wonder whether you or Mr. Wiens can confirm that these words can capture the concepts of -- whether these words capture the concepts of conservation and sustainable development -- whether in your view.

MR. VINCE WARDEN: Broadly speaking, I would say yes, they do.

MR. BYRON WILLIAMS: We've been talking at the level of motherhood statements, Mr. Warden, and we'll do so for just a couple more minutes but, again, I don't want to get into a -- a controversial discussion, but you'll agree with me that while Hydro exists to serve its customers, there may be differing perspectives in -- in how best to balance the interests of ratepayers with the interest in having a healthy and strong corporation.

Would you agree with that?

MR. VINCE WARDEN: Long term, no. I think they're one and the same.

MR. BYRON WILLIAMS: In -- in the short term there may be some controversy, and I'll just give you an example.

Manitoba Hydro may -- may have a view that

to increase the long-term health of the Corporation it needs to improve its -- it needs a rate increase to improve its debt equity position, whereas some ratepayers may take a position that -- who are more concerned perhaps with their own debt equity situation, that they'd feel better with that money in their -- their pocket.

Would that be fair?

MR. VINCE WARDEN: That would be fair.

MR. BYRON WILLIAMS: So while we can agree on those broad motherhood statements, when it comes down to balancing interests, in the short term at least, there may be challenges and there may be competing perspectives; correct?

MR. VINCE WARDEN: Correct.

MR. BYRON WILLIAMS: I want to turn to the -- to the rate setting process for a second, Mr. Warden.

And this will come as no surprise to no one but your rates are reviewed by an independent regulator which acts pursuant to some sort of statutory authority; correct?

MR. VINCE WARDEN: Correct.

MR. BYRON WILLIAMS: And looking at the rate setting process, at the very broad strokes, you'll agree -- agree with me that one (1) component of that

rate setting process is to consider the overall revenue requirement of the Corporation in terms of what it needs to meet its necessary costs; correct?

MR. VINCE WARDEN: Yes.

MR. BYRON WILLIAMS: And another part of that process is the process of cost allocation whereby we consider reasonable ways to allocate those costs amongst various classes of consumers; correct?

MR. VINCE WARDEN: Correct.

MR. BYRON WILLIAMS: And another element is the actual setting of rates in order to attempt to recover those costs in a manner that promotes values such as fairness and efficiency; correct?

MR. VINCE WARDEN: Correct.

MR. BYRON WILLIAMS: Ultimately, the process is aimed at seeking a just and reasonable rate, fair to the Corporation, fair to ratepayers as a whole and fair as amongst various classes of ratepayers; correct?

MR. VINCE WARDEN: Are you speaking from the Corporation's perspective or the -- or the Board, the Public Utilities Board's perspective?

MR. BYRON WILLIAMS: I think you speak for the Corporation, so your understanding of the process, sir.

MR. VINCE WARDEN: Well, fair and reasonable rates are the objective. So I'm going to agree with that, yes.

MR. BYRON WILLIAMS: Mr. Wiens, when we look at the rate setting process, there's various views on what are the key considerations. But I wonder if you would agree with me that some of the -- the key objectives -- of the key objectives for the rate setting process, one (1) would be the recoverment of the necessary revenue requirement; would that be correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And another would be a process that respects and achieves the objective of fairness; would that be fair?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And a third would be the -- the idea of promoting efficiency of the rate classes and rate blocks and discouraging wasteful consumption; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And another key value may be stab -- achieving stability of the rates themselves with a minimum of unexpected changes which -- which might seriously be adverse to existing customers; would that be fair?

MR. ROBIN WIENS: That sounds like something that I might read before going to bed at night, Mr. Williams.

MR. BYRON WILLIAMS: Sounds very close to our good friend Mr. Bonbright which I've -- I've sadly taken to reading from time to time as well.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: Now, Mr. Wiens, you know, the values and the objectives that we've cited, such as fairness, efficiency, stability, you'll agree with me that in the process of attempting to achieve a just and reasonable rate there's -- it's a bit of a balancing act because some of these values may come into conflict from time to time; correct?

MR. ROBIN WIENS: Yes, this can happen.

MR. BYRON WILLIAMS: And I think even in your discussion of efficiency you noted that you, in aiming for the objective of efficiency, you -- you look for the best possible signalling that you can given other objectives; would that be fair?

MR. ROBIN WIENS: Yes, I think that's fair. The -- the three (3) objectives, revenue requirement recovery, fairness, and efficiency that you

have referenced in this line of questioning, I think it's fair to say those are among the eight (8) and possibly now ten (10) Bonbright criteria. Those are commonly used to summarize and -- and -- and bring to bear the key criteria.

And they can be in conflict from time to time. also some of the -- some of the other criteria like stability, simplicity and so forth certainly can -- can make it difficult to balance among the objectives.

MR. BYRON WILLIAMS: So in your job with -- with Manitoba Hydro in terms of achieving these objectives you're not aiming for perfection, you're aiming for a reasonable balance?

MR. ROBIN WIENS: That's correct.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: Now, in terms of the purpose of the -- the cost of service analysis itself, we've already agreed that one of the objectives in setting rates is that they should be fair; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And in large part fair rates are considered to be rates where customers pay the cost incurred to serve them; would that also be

correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And so the objective of the cost of service process is to identify the portion of the revenue requirement incurred to serve each customers' class; you'd agree with that? The primary objective?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And as you've noted already there may be other considerations such as efficiency and environmental impacts that are legitimate objectives that you may also have to factor in to the cost of service process; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: I wonder if you'd agree with me that when you try and factor in these principles, being fairness, efficiency, and conservation, to a certain degree some compromises are required?

MR. ROBIN WIENS: That's usually the case.

MR. BYRON WILLIAMS: And, in your view, when we are looking at cost of service as opposed to other elements of the -- the rate -- the rate setting process do you have a view as to which of these factors should be given primary consideration?

MR. ROBIN WIENS: Well, I don't know that you can make a bold flat out statement on that without a great deal of context because those which are important at one time may be less important at another time.

But I think, broadly speaking, you know, we would want to achieve the optimum compromise between recovering what we require for our revenue requirement, fairness and -- and sending the right price signals. Efficiency.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: If -- and just so I understand and perhaps this is an answer that is incapable of -- or a question that's incapable of an answer, but in -- from the perspective of the Corporation, if push comes to shove, for the cost of service process, does fairness take priority over efficiency?

MR. ROBIN WIENS: Again, there's an awful lot of context that you have to put around that and it may come to some of that even in this response. But when you're talking about a cost of service study specifically as opposed to the overall process of arriving at rates, it is arguable that you may want to state, yes, you're

more concerned with fairness than you are with efficiency.

That doesn't mean to say you can avoid the issues related to efficiency completely and -- and let me refer back to my favourite bedtime reading and what may be becoming your favourite bedtime reading as well, Mr. Bonbright does not typically look at embedded costs which are the basis of this cost of service study as necessarily meeting the fairness criteria.

Mr. Bonbright is an economist and as such he is more concerned about marginal cost. He's more concerned about the fair assignment of marginal cost among customers classes than embedded cost.

Now, it is a fact that the history of regulation, throughout most of North America anyway, has dealt more with embedded costs than marginal costs. But if you're going to refer back to the first principles I think you do need to bear the issue of marginal cost in mind.

And if you get to a point where, for example, it becomes more and more difficult to say, well, embedded costs are a reasonable proxy for marginal cost, then you have to begin to ask the question as well about how you deal with the fairness precept to the cost of service study.

MR. BYRON WILLIAMS: Thank you, Mr. Wiens, for responding to my sometimes opaque questions. I appreciate that. That's a nice segue. I want to turn to Part II which is to the -- not Part II of my outline, but Part II of Part I.

I'd like to turn to -- to the -- some discussion of marginal costs and for the Board's assistance there is an analogy I -- that we've attached in -- or an outline of an analogy that we've attached as -- as Tab 2 to the -- to the CAC/MSOS book of references.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: And, Mr. Wiens, just by way of preamble, in my opening statement I confessed that I was not a devotee or disciple of the Public Utilities Board to the same extent as yourself or Mr. Peters, but I am becoming one and -- but my client, Ms. Desorcy and -- and myself and perhaps others in this room sometimes struggle with concepts such as short run marginal costs, opportunity costs and long run or long term marginal costs.

And what I'm going to ask you to do is I'm going to put parts of this -- the shared garage analogy background to you via cross-examination and in the course

of doing so hope to explore some of those concepts; is -- is that fine with you, Mr. Wiens?

(BRIEF PAUSE)

MR. ROBIN WIENS: Mr. Williams, we will see where this goes. And it may lead in the direction that you had contemplated or perhaps not.

MR. BYRON WILLIAMS: You've served too long as a witness, Mr. Wiens. But, thank you for your initial assistance anyways.

Just by way of initial background, you'll agree with me that we're looking at fact situation where we have three (3) neighbours who don't own cars or own garages.

Obviously this was written by someone in Toronto, but do rent them occasionally and would like somewhere to store them, you agree with that?

MR. ROBIN WIENS: I don't -- I can't evaluate whether or not this came from Toronto, Mr. Williams, but this is the situation that you are positing, and I can read it, that's what it says.

MR. BYRON WILLIAMS: We're going to -- we're going to walk through a bit of I and then I'm going to get you to assist me with it Mr. Wiens, because it

think it needs to be drawn through, so bear with me.

The other assumption I'm going to ask you to make is that they have portable facilities that they erect and take down each time. And that they find this to be time consuming and a nuisance in bad weather. You're prepared to make that assumption, Mr. Wiens?

MR. ROBIN WIENS: It's kind of stretching credulity isn't it, I've rented cars in the past and it belongs to somebody else. Unless I have to pay for hail damage I'm not going to erect a temporary structure. But we'll follow you there.

MR. BYRON WILLIAMS: Work with me, Mr. Wiens, if you would. Make a further assumption, if you would, that as a result they decide to go together to construct garage facilities that will hold three (3) cars and that they will share.

You'll make that assumption, sir?

MR. ROBIN WIENS: I will indeed.

MR. BYRON WILLIAMS: Assume again, if you will, that to construct the garage and keep it ready for cars, costs about eight thousand (8000) annually in capital costs and maintenance, will you make that assumption?

MR. ROBIN WIENS: Boy I wish I had that garage, but okay.

MR. BYRON WILLIAMS: Not too much smart-alec stuff Mr. Wiens, we'll work through it. Would you also agree that it's estimate -- that they've estimated the cost of electricity in heating each time the garage is used will be about five dollars ($5), correct, you'll make that assumption?

MR. ROBIN WIENS: Sure, sure.

MR. BYRON WILLIAMS: I want to turn to the -- in terms of the total number of usages, you'll make the assumption that one (1) is expecting to use this facility two hundred (200) times a year. Another is expecting to use this facility two hundred and fifty (250) times a year and the third is expected to use this facility three hundred and fifty (350) times a year for a total of eight hundred (800) uses, will you agree with that sir or make that assumption?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And that would leave about two hundred and ninety-five (295) vacancies over the course of one (1) year, that being calculated by three (3) times three hundred and sixty-five (365) leaves you a thousand and ninety-five (1095) minus eight hundred (800) leaves you two ninety-five (295), correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: So when we're

looking at the cost for this facility we're looking at fixed costs in the range of eight thousand (8000) annually, and we're also looking at variable costs five dollars ($5) per use. You'll agree with that, Mr. Wiens?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And so assuming eight hundred (800) uses that leads us to variable costs of four thousand dollars ($4000), correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And that leaves us with a total cost annually of about twelve thousand dollars ($12,000) correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And I'd ask you to assume that the partners decide to share the cost of the garage as follows, based on usage, fifteen dollars ($15) per use, ten dollars ($10) for fixed costs and five dollars ($5) for variable costs, you'll make that assumption?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Now, Mr. Wiens, I'd like you to -- we're moving to the middle of this page, the rental of excess space. And you've agreed with me previously that there's two hundred and ninety-five (295) potential opportunities where that -- the space is not

expected to be used in the course of a year, correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And you'll make the assumption that another neighbour notices the garage and asks if he can use it too, okay?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And the partners say that there's not enough room to guarantee him a space but if he wants to use it when it's not fully used, they're willing to negotiate, and you'll make that assumption?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Now, being prudent businessmen, notwithstanding the incredulous scenario, Mr. Wiens, you'll agree with me that the lowest compensation that it would make any sense for these businessmen to accept for this use would be at least five dollars ($5) which is the variable cost of the garage?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Now, of course, they wouldn't tell the neighbour that but is another way that we -- that -- the five dollar ($5) figure, might we also describe that as the short run marginal cost of another car -- car using the garage?

MR. ROBIN WIENS: I think you've already described it that way. It is the cost, apart from the

fixed cost, it is the variable cost associated with another use of the garage. That's short run marginal cost.

MR. BYRON WILLIAMS: Thank you, Mr. Wiens. And I struggle with that concept, so I appreciate you assisting me in that way.

And you'll agree with me, as we've stated before, that it doesn't make sense to rent that facility out for less than short run marginal cost.

MR. ROBIN WIENS: That is correct.

MR. BYRON WILLIAMS: Let's assume now, Mr. Wiens, that this neighbour, who's unaware of the actual cost of operation, offers to pay eleven dollars ($11) to use the garage whenever it is free, which is expected to be a -- perhaps a hundred and fifty (150) times per year.

MR. ROBIN WIENS: Well, you've already told --

MR. BYRON WILLIAMS: Excuse me, Mr. Wiens. Let's -- let's amend this slightly. Let's -- that the neighbour offers to pay eleven dollars ($11) to use the garage and his expectation is that he will use it about a hundred and fifty (150) times per year.

Will you make that assumption with me?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: So if we want to do the math behind that calculation, you'll agree with me that if he's paying eleven dollars ($11) per usage and there's a hundred and fifty (150) usages per year, there's a revenue that might accrue from that rental in the range of one thousand six hundred and fifty dollars ($1,650).

Would you agree with that?

MR. ROBIN WIENS: It would be precisely one thousand six hundred and fifty dollars ($1,650).

MR. BYRON WILLIAMS: That's why I'm talking to the economist.

You'll also agree with me that if the variable -- or the -- the variable cost is five dollars ($5) per usage and, again, a hundred and fifty (150) usages per year, that the -- the variable cost associated with his usage would be about seven hundred and fifty dollars ($750) per year, being five (5) times one hundred and fifty (150).

Would you agree with that, sir?

MR. ROBIN WIENS: It would be seven hundred and fifty dollars ($750) per year.

MR. BYRON WILLIAMS: And if I subtract one thousand six hundred and fifty (1,650) minus seven hundred and fifty (750), that leaves me with nine hundred

dollars ($900), which some people might call profit.

Would you agree with that?

MR. ROBIN WIENS: Yes, I would agree with that. It's -- it's incremental net revenue.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: Now, looking at this from the perspective of the three (3) owners of the garage, we have agreed before that their total costs are twelve thousand dollars ($12,000); correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And if we bring to the table -- put in the pot, net incremental revenue of nine hundred dollars ($900), that means that we have to take out -- that means about -- leaves about eleven thousand one hundred dollars ($11,100) that they still have to contribute towards the costs of this facility in one (1) year.

Is that correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And again assuming that they continue to make eight hundred (800) uses, if I divide eleven thousand one hundred (11,100) by eight hundred (800), that leaves me with something in the range

of a little less than fourteen dollars ($14) per usage.

You'll agree with that?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And assuming that this relationship endures, the net cost that they have to contribute to per use to break even is about fourteen dollars ($14); correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And so every day or night that the neighbour does not rent this facility when there's a vacancy, that's a lost opportunity for the three (3) garage owners.

You'll agree with that?

MR. ROBIN WIENS: It is -- I mean, assuming that they want to rent it out on every possible night, then yes, it is a lost opportunity.

MR. BYRON WILLIAMS: It's a lost opportunity to increase their revenues; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And to the extent that they lose an opportunity to increase revenues, that means that there are most costs that they'll have to bear than -- than if his usage was increased.

MR. ROBIN WIENS: Assuming that the lost opportunity can be made up with someone who's willing to

pay more than the variable cost.

MR. BYRON WILLIAMS: So -- and just I may have been unclear in my question, so the -- the nights -- assuming again that there is a -- that there's someone able to pay that fee of eleven dollars ($11) when -- when that opportunity is not available or -- excuse me, when that opportunity is not used there's an opportunity cost for these -- for the owners of the -- of this facility; correct?

(BRIEF PAUSE)

MR. ROBIN WIENS: Have to be careful when we talk about opportunity cost. Technically what opportunity cost is referring to is the cost that is required to call into service a factor of production. The cost that is required to call into service these vacant spaces is really the variable cost and that would be the opportunity cost that's associated with that space.

If -- if there as somebody out there known, willing to pay eleven dollars ($11) for that space and for whatever reason that opportunity was not taken advantage, perhaps one of the three (3) neighbours decided that, oh, just in case my daughter-in-law comes

over I would like to hold that space, I'm not sure that the correct -- fully correct term would be opportunity cost but it is -- it is the -- the lost opportunity revenue, for sure.

MR. BYRON WILLIAMS: So I'm better off using words like lost opportunity revenue, Mr. Wiens; correct?

MR. ROBIN WIENS: I think you could use the term opportunity cost as long as you understand where you're going with this and what's underlying it.

MR. BYRON WILLIAMS: and I guess as you said at the outset of this analogy that remains to be seen; doesn't it, Mr. Wiens?

MR. ROBIN WIENS: Well, we're getting close.

MR. BYRON WILLIAMS: Now, Mr. Wiens, just work with me on these assumptions as we move through, we've noted that given the usage of this one neighbour that the partner net cost drops to less than fourteen dollars ($14) per use; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Now, assume with me, if you will, that other neighbours hear about the deal and pretty soon the garage is full every night and without asking you to do the calculation I'll ask that

you accept that the revenues are one thousand, seven hundred and seventy dollars ($1,770) towards fixed costs.

Will you make that assumption?

MR. ROBIN WIENS: Sure.

MR. BYRON WILLIAMS: Assume with me as well that the garage is filled on a first come, first served basis which is not satisfactory to some of the neighbours so that the partners are looking into building an extension and determine that another car could be accommodated for thirty-five hundred dollars ($3500) in fixed costs plus the same five dollar ($5) variable cost per use; will you make that assumption?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Alternatively, and would you agree with me that this would be the long run marginal cost of the garage space; that figure of thirty-five hundred dollars ($3500) plus the five dollars ($5) from the fixed variable costs?

(BRIEF PAUSE)

MR. ROBIN WIENS: Yeah, I'll go with you there. Long run marginal cost technically refers to that situation in which all of the factors of production can be varied.

In your short run marginal example you were only varying the electricity and maintenance and correctly defining those as short run marginal costs. In the long run we are able to vary the -- all the factors of production and whether we're at optimum once we do that or not, which is a further consideration, I'm not sure but -- but -- but we'll take it there. We'll call it long run marginal cost.

MR. BYRON WILLIAMS: I appreciate your clarification and your assistance, Mr. Wiens. Moving on, towards the end of this example, you'll see that the partners are considering whether to expand the facility. They're also considering whether to reduce the controversy by increasing the price of the extra spaces to twenty dollars ($20).

You'll make that assumption, sir?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Now, the problem with that is at that price, someone could eventually build their own garage in the neighbourhood and that may not be a viable option given current circumstances, correct?

MR. ROBIN WIENS: Well, you're introducing into the price the scarcity factor which is not related to the marginal cost of the additional

spaces. And a scarcity factor may be -- may induce further building. It's a signal that there is a shortage, whether it's enough to actually induce the further building or not, I guess in a market you see that over time.

MR. BYRON WILLIAMS: Okay. And let's say that instead of the market acting -- make the assumption with me that the local municipality changes the bylaws so that garages are more expensive to build. And the twenty dollars ($20) can now be sustained as a price based on the cost of alternatives, will you agree with me on that, sir?

MR. ROBIN WIENS: So the twenty dollars ($20) is sufficient to return to the -- to the lessor or the renter an amount which would, over a sufficient number of units replace the capital, as well as the ongoing variable costs?

MR. BYRON WILLIAMS: That's right.

MR. ROBIN WIENS: Okay.

MR. BYRON WILLIAMS: Assuming that the new cost is now -- that the market will bear is now twenty dollars ($20) and assuming, as well, that one (1) could rent this facility given the new bylaws all two hundred and ninety five (295) vacancy nights, I wonder if you'll accept submit to check that the contribution to

fixed costs from part-time rentals would be about four thousand four hundred and twenty-five dollars ($4425), would you accept that subject to check?

MR. ROBIN WIENS: Sure.

MR. BYRON WILLIAMS: And would you also accept that that would thereby reduce the cost to partners to roughly nine dollars ($9.00) per use with that contribution from these -- from there other sources of revenue?

MR. ROBIN WIENS: So some value around there, sure, yes.

MR. BYRON WILLIAMS: Now the conundrum, Mr. Wiens, I'm going to suggest to you that this may present to the partners is that they can, in the market obtain twenty dollars ($20) per usage from their neighbours, but that if one (1) of their partner -- one (1) of the owners of the garage increases their usage, they'll only obtain nine dollars and fifty cents ($9.50) per usage.

And I'd suggest to you that your -- they're now in the situation where an increase in consumption by one (1) of the owners of the garage effectively takes money out of the pocket of the other partners because it's denying them the opportunity to collect greater revenues from their neighbours.

MR. ROBIN WIENS: Well, we're assuming here that any one (1) of the partners would be able to exercise rights to the free nights of parking. And either bump someone else who may be paying the twenty dollars ($20) or get in before that.

So, yes, you have that conundrum and in fact you may have a situation where because of the fact that for the partners, they're now paying nine fifty (9.50) as opposed to the fifteen dollars ($15) that they were paying when they first set up the arrangement, that they may be induced to actually increase their usage over and above what they had estimated back when they figured they were going to use two hundred (200), two hundred and fifty (250) and three hundred and fifty (350) nights.

MR. BYRON WILLIAMS: So, Mr. Wiens just to sum up, we're looking at a change in circumstances. You'll agree with me, that when we were dealing just with the one (1) neighbour using that facility for eleven dollars ($11) a night, there was a benefit to the partners but they still would be better off selling to themselves at fourteen dollars ($14) a night, rather than selling to the neighbour at eleven dollars ($11) a night, you'll recall that?

MR. ROBIN WIENS: Yes, I do, yes, that's correct.

MR. BYRON WILLIAMS: Now, there's been a fundamental change in circumstances to this degree. Now, to the extent that any of the owners of the garage increase their usage of the garage, they are taking money out of the pockets of their co-owners.

Would that be fair? They're increasing the cost that the co-owners will have to assume.

MR. ROBIN WIENS: Well, they're increasing the cost that they as well as their co-owners will have to assume the next time they recalculate what needs to be recovered from -- from each of them.

MR. BYRON WILLIAMS: And the other factor that you've noted is that given the decline in the -- in the actual rate that they are charged, from fifteen dollars ($15) down to nine fifty (9.50), there may be an additional incentive for one of the -- or for perhaps all of the owners to increase their usage of this facility.

MR. ROBIN WIENS: There will be that incentive for all of them. And the extent to which that manifests itself will depend on the characteristics of each of the owners, which may be similar or may be different.

MR. BYRON WILLIAMS: Mr. Wiens, I thank you for your patience with that. The -- and I'm looking back to Ms. Desorcy, I see her still scratching her head

but I'm hoping that assists her to some degree in terms of the -- the concepts of short run marginal costs and -- as well as other concepts as well.

I'm now turning to the CAC/MSOS Book of References, Tab 3 and Tab 4.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: And I'm not sure to who this goes to but I suspect it's you, Mr. Wiens.

There -- if memory serves me right, there are two (2) studies by NERA on the record of this proceedings. One is the review of time of use and inverted rates and the other is a study and recommendations regarding the cost of service methodology as it relates to generation and transmission.

Is that correct?

MR. ROBIN WIENS: You're right.

MR. BYRON WILLIAMS: And in terms of...

(BRIEF PAUSE)

MR. ROBIN WIENS: The time of use and inverted rates study was not filed as part of this proceeding. It was filed prior to this proceeding. As

was the generation and transmission classification and allocation study.

MR. BYRON WILLIAMS: I misspoke. And -- so there are -- but NERA has performed these two (2) studies for Manitoba Hydro?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And I was trying to do a little bit of back -- research into the background regarding NERA. And you'll agree with me that in -- in terms of NERA and its expertise, they're hardly newcomers to the issue of marginal cost studies.

Would -- would you agree with that?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And in fact they did some of the leading and seminal work for NARUC, N-A-R-U-C, in terms of marginal -- marginal use studies -- or marginal cost studies back in the late 1970's, which were some groundbreaking studies in the United States; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Now, you don't need to turn there but NERA's conclusion is -- and this is set out at page 14 of its time of use study -- is that the price of electricity in the export market represents in many hours of the year Manitoba Hydro's opportunity cost

of supply -- cost of supply and marginal energy and capacity to its domestic customers.

You'll agree that that's a fair representation of NERA's conclusions?

MR. ROBIN WIENS: Yes. What -- what they're simply saying is that if you increase domestic usage by a kilowatt hour much of the year, that kilowatt hour will come from the export market, and the revenue associated with that kilowatt hour will be foregone by Manitoba Hydro.

MR. BYRON WILLIAMS: In essence, an increase in consumption in Manitoba, in NERA's view, is depriving Manitoba Hydro the -- of the opportunity to sell that power elsewhere at a higher price; correct?

MR. ROBIN WIENS: That's correct.

MR. BYRON WILLIAMS: And just going back to the somewhat tortured garage owner analogy for a second, when the opportunity cost of selling that -- that power exceeds the average rates per use, that lost opportunity reduces overall revenue; correct?

MR. ROBIN WIENS: Yes, it does.

MR. BYRON WILLIAMS: And it essentially takes money out of the pocket of other consumers; correct?

MR. ROBIN WIENS: On the understanding

that export revenue is used to the benefit of electricity consumers; that is correct.

MR. BYRON WILLIAMS: Now, in NERA's view, and I'm quoting from page 14, I believe, it's of their cost of service methodology, and you don't need to turn there, Mr. Wiens, but they seem to express the concern that:

> "Allocation of a large amount of export revenue as credit to domestic classes on the basis of only allocated generation and transmission costs can result in energy charges that fall below short run marginal cost."

Do you recall NERA making that statement, sir?

MR. ROBIN WIENS: Yes, I do.

MR. BYRON WILLIAMS: And you'll agree that that's a risk with the current methodology?

MR. ROBIN WIENS: Yes, I will.

MR. BYRON WILLIAMS: And we talked about this a little bit in terms of the garage owners, but you'll agree with me as a general economic principle, producers of product don't want to sell a product for less than out-of-pocket expenses associated with providing it because otherwise to do so would be selling

it at a loss?

MR. ROBIN WIENS: Well, they would stop selling it if you've got to that stage. But, Mr. Williams, you made a very important distinction when you used a phrase that you haven't used up to now. You used the term "out-of-pocket costs". It's true that by selling at -- to at least some customers at some of the rates today, Manitoba Hydro's revenue is reduced.

It's reduced because we are moving from one market to another so the use opportunity cost is pretty close to being accurate in that circumstance.

Out-of-pocket costs are those -- that -- that would relate to the -- what is actually spent to produce that, which is quite a bit less. But subject to that qualification I'm with you.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: Well, and I appreciate that qualification and we'll -- I'll try not to use the words out-of-pocket costs in the -- in the future and I'll stay with your qualified answer.

Following that philosophy though, that one shouldn't be selling below short run marginal costs, you'll agree, not using Manitoba Hydro as an example, but

for a typical utility with surplus capacity this would be the cost of additional fuel and maintenance to make that sale; that would be the out-of-pocket examples?

MR. ROBIN WIENS: Assuming there was additional capacity on a thermal system that would be -- or a hydro thermal system that was operating in the thermal range that would be true.

MR. BYRON WILLIAMS: And the point you were making to me before which, when I stumbled upon the words out-of-pocket costs is for Manitoba Hydro which can export generally most, perhaps all of its export, opportunity costs or short run marginal costs, are the lost revenue from an export that would otherwise be made; is that correct?

MR. ROBIN WIENS: Yes.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: In terms of a proxy for short run marginal costs, Mr. Wiens, if you turn to Tab 4 of the CAC/MSOS book of documents, you'll see at Tab 2 -- or at heading number 2, the heading "marginal cost estimates"; do you see that, sir?

MR. ROBIN WIENS: I do.

MR. BYRON WILLIAMS: Now, you've had --

this was provided -- this document was provided to you through your counsel earlier today. Have you had an opportunity to review these documents, are you prepared to accept the calculations, subject to check?

MR. ROBIN WIENS: It looks pretty close to me. I'll accept them.

MR. BYRON WILLIAMS: And what this is suggesting is that if you were going to use opportunity exports as a proxy for short run marginal costs, you'd be looking at a figure in the range of forty-nine dollars and sixty cents ($49.60) per megawatt hour based upon the average between 2001 and 2004; would you accept that, sir?

MR. ROBIN WIENS: Yes. I would accept that that is the average for the period designated.

MR. BYRON WILLIAMS: And if you look at SEP rates -- SEP rates, you'll see that the estimate provided is forty-five dollars and eighty cents ($45.80) per megawatt hour and you'll also accept that, subject to check?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And would you accept that either of these might be a reasonable proxy for short run marginal opportunity costs for Manitoba Hydro?

MR. ROBIN WIENS: Yes.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: Mr. Wiens, keeping those figures in mind, being either somewhere between forty five dollars and eight cents ($45.80) per megawatt hours and forty nine dollars and sixty cents ($49.60) per megawatt hours as a proxy for short run marginal costs, I wonder if I could ask you to turn back to Tab 3 of the CAC/MSOS book of documents which is the -- the -- entitled Manitoba Hydro rates April 2005, do you have that?

MR. ROBIN WIENS: I do.

MR. BYRON WILLIAMS: And just, Mr. Wiens, to review what this table illustrates, the first column obviously speaks to which class of residential -- which class of consumers is represented and it sets out residential through GS large -- GSL greater than a hundred (100)kV, is that correct, sir?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: The middle column sets out the rates for incremental use taking into account both energy and demand and you'll accept these as being a fair representation or an accurate representation of the rates of Manitoba Hydro, will you sir?

MR. ROBIN WIENS: Well, they are an

accurate representation of the rates of Manitoba Hydro, but they may not be the incremental use that you're suggesting they are. And if you want, I can run through some of that now or if you would prefer we could wait until you get further into the discussion you want to have.

I would say, in particular, that the general service small, both non-demand and demand, may vary significantly from the numbers that you have included in this table.

MR. BYRON WILLIAMS: We'll come to that in just one (1) second and I will appreciate the clarification. Moving to the third column we're looking at what are suggested to you to be the overall rate for incremental use based upon a variety -- in the case of residential, just based on their actual rates for energy as well as for general service non-demand.

And for general service demand, general service medium and general service large, based upon assumptions in terms of various load factors, you see that sir?

MR. ROBIN WIENS: I do.

MR. BYRON WILLIAMS: And I'm going to give you a chance to -- and the concern you have expressed is that these numbers may not be reflectful of

the overall rate for incremental use. Do you -- just so I can be clear, do you have any concerns with the figure used for residential?

MR. ROBIN WIENS: No, I don't. There may be some customers who pay a different rate, but it's not a large number, it's not really material --

MR. BYRON WILLIAMS: Okay --

MR. ROBIN WIENS: -- so, not for residential.

MR. BYRON WILLIAMS: When we get -- I'm going to skip over the two (2) general service non-demand and demand for one (1) second.

When we get to general service medium do you have any material concerns with that result?

MR. ROBIN WIENS: No, you have the rate for incremental energy, you have the rate for incremental demand, you have indicated the load factors that you would like to consider as bounding this discussion and from what I can see those numbers, if they're not absolutely correct, they're close enough.

MR. BYRON WILLIAMS: And would you take the same approach for GSL large greater than one hundred (100) kV?

MR. ROBIN WIENS: For both GS medium and GS large, yes.

MR. BYRON WILLIAMS: Okay. So we've agreed on that, now here's your opportunity to correct the Exhibit as presented to you.

MR. ROBIN WIENS: Well, I'll start with the easier one, which is the general service small non-demand, and you have indicated the rate that that class is charged for customer that use within the range of one thousand and ninety (1090) and eleven thousand and ninety (1190) kilowatt hours a month, that is the rate that's charged.

A customer -- he can still be a non-demand customer and consume beyond that amount and the marginal rate of consumption in excess of eleven thousand and ninety (11,090) kilowatt hours a month is 3.936 is the rate that you see just one step lower for general service -- for general service demand.

And so because it's -- I think it's defines it cleanly to think of general service small non-demand as being customers with with 50 kVA or less of usage.

So just to make it clear, a customer at 50 kVA, which is the upper end for general service small non-demand, only needs a load factor of 30 percent to get into the three point nine three six (3.936) cent block of energy.

MR. BYRON WILLIAMS: That was 30 percent?
MR. ROBIN WIENS: 30 percent.
MR. BYRON WILLIAMS: So what you -- and just for clarification, so in -- were you referring to general service small demand, sir?
MR. ROBIN WIENS: No, no. General service small non-demand.
MR. BYRON WILLIAMS: Non-demand. And just to clarify then, you would say that the figure of six point zero four (6.04) is -- is too high?
MR. ROBIN WIENS: No, I wouldn't say it's too high. I just wouldn't say it applies to the entire class. Most of the class -- and in fact we did check this over at the break -- 95 percent of the customers in this class, that six (6) cents or so, is correct.
For the other customers though, they will get beyond the eleven thousand and ninety (11,090) even though they're still below 50 kVA, and they will access, at least in part, the transitional rate that we use to bridge between non-demand and demand customer classes.
MR. BYRON WILLIAMS: So for -- for that class -- for that 5 percent then the figure of six point zero zero four (6.004) would be too high.
MR. ROBIN WIENS: It would be too high for 5 percent or so of customers and considerably more

percent of actual usage.

MR. BYRON WILLIAMS: Fair enough. And in terms of GSS demand?

MR. ROBIN WIENS: Well, general service small demand, you've identified the penultimate energy rate block, the three point nine three six (3.936) and the final runoff rate of two point four four four (2.444). And for a customer that -- I think for a customer that has both of those applying to them, I think your numbers are probably correct over the load factor range.

But I would like to point that that is going to vary depending on what the size of the actual load is. So just bear with me for a -- a minute or so.

If we're talking about a general service small demand customer that is not far above the 50 kVA threshold, and the calculation that I've done is at 60 kVA, if they're at a 40 percent load factor, their usage is at seventeen thousand five hundred (17,500) or so kilowatt/hours. That gets them to three point nine three six (3.936).

So that's the correct incremental energy rate. It gets them to eight -- paying eight thirty-two (8.32) per unit of demand and at 40 percent -- my calculation is, which -- subject to check, is about six

point eight (6.8) cents a kilowatt hour. But that's relatively small load in general service small demand.

At 60 percent load factor, which is the upper end of the range you're using, goes to twenty-six thousand (26,000), roughly, kilowatt hours a month. So that customer does get into the two point four four (2.44) cent per kilowatt hour range.

And at that point they are getting into the -- the same -- you know, the same incremental rolled up cost as a general service medium customer, at that same load factor.

MR. BYRON WILLIAMS: So just so I understand, that in terms of GSS demand, with the example you used, the customer at the higher load factor, we have overstated the overall rate for incremental use and they're moving into the GS medium range; is that correct?

MR. ROBIN WIENS: You know, I -- I would have to absolutely go through and check the -- the number. You're -- you've used for GSS demand 440 to 60 percent. So the four point three four (4.34) is -- you know, that -- that probably brackets it.

But there's a lot of these customers, just so you know, that would fall into that range because they don't have to get very high above the 50 kVA, even at a low load factor, when they're accessing the -- the lower

energy rate. And, therefore, the -- the five point eight (5.8) may be too high as the lower bound for -- for even a small customer.

MR. BYRON WILLIAMS: Mr. Wiens, thank you for that clarification. You bore -- bore with me through the garage analogy so I was happy to do so on -- on that one.

And just so I'm clear, going back to why we undertook this exercise in the first place. The concern expressed by NERA and shared by Manitoba Hydro is where incremental costs of the next, kind of, kilowatt hour of usage or running below short run marginal costs; correct?

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

MR. BYRON WILLIAMS: And going back to Tab 4 of this exhibit we've agreed that -- and a reasonable proxy for short run marginal costs for Manitoba Hydro is somewhere between forty-six (46) -- forty-five eighty (45.80) per megawatt hour and forty-nine sixty (9.60) for -- per megawatt hour; is that right, sir?

MR. ROBIN WIENS: That's certainly been the case in recent years and basically expected ongoing as well.

MR. BYRON WILLIAMS: And after you've

politely savaged the examples for GSS non-demand and demand I'm not going to run through those, but in terms of residential, in terms of comparing the overall rate for incremental use versus the -- the short run marginal costs, you'll agree with me that residential rates are not below short run marginal costs; correct?

MR. ROBIN WIENS: Mr. Williams, that I -- that would generally appear to be the case. Of course, I will put a bit of context on this in that we are talking about short run costs, marginal costs of generation here.

Not -- we haven't added in the short run marginal cost of transmission, sub-transmission and distribution. Now, I would not think, in most cases, that those would be very large. But you'll understand that as you get to the limits of the capability of a distribution system you may start to notice larger short run marginal costs.

So with that caveat, yes.

MR. BYRON WILLIAMS: And just so I understand then you -- you've noted the caveat to the extent that as you near the -- the -- the outer end of capacity of the distribution system there may be a problem but the general statement that I've suggested to you that the incremental costs for residential are not running below short run marginal costs, generally you're

not opposed to that conclusion?

MR. ROBIN WIENS: Provided that you have some surplus capability on a distribution line, the short run marginal cost is probably pretty close to the losses incurred on the line.

MR. BYRON WILLIAMS: Now, if we -- if we run down to general service large, greater than 100 kV, you'll agree with me that -- that that appear to be clearly -- the rates for incremental use -- usage appear to be clearly running below short run marginal costs; will you agree with me, sir?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And in terms of general service medium they appear to be right on the border; would that be fair?

MR. ROBIN WIENS: It's close.

MR. BYRON WILLIAMS: And the observation that you would make would be in terms of general service demand, especially those working on load factors in the 60 percent range; they're fairly close in -- in results to general service medium, would that be fair?

MR. ROBIN WIENS: Yes.

THE CHAIRPERSON: You okay if we take a short break now, Mr. Williams?

MR. BYRON WILLIAMS: Yes, sir.

THE CHAIRPERSON: Thank you. We'll be back in fifteen (15) minutes.

--- Upon recessing at 2:50 p.m.
--- Upon resuming at 3:12 p.m.

THE CHAIRPERSON: Mr. Williams...?

MR. BYRON WILLIAMS: Thank you. Mr. Chairman. And thank you for the rapt attention that My Learned Friend was paying too.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Mr. Wiens, just to finish off on the table of Manitoba Hydro rates, which is found in Tab 3 of the CAC/MSOS book of references, essentially in terms of -- we've agreed on the conclusions but in terms of the data, you took no significant issue with the residential GSM or GSL large, is that correct, sir?

MR. ROBIN WIENS: That's correct.

MR. BYRON WILLIAMS: You did highlight some important caveats in terms of GSS small, non-demand and demand. And given -- given that, I wonder if Manitoba Hydro is capable and willing to reproduce a version of this table taking into account the important

caveats that you noted in terms of GSS non-demand and GSS demand.

MR. ROBIN WIENS: It's in progress as we speak.

MR. BYRON WILLIAMS: So that's an undertaking?

MR. ROBIN WIENS: It's already been undertaken.

---UNDERTAKING NO. 7: Reproduce the "Manitoba Hydro Rates -April 2005" table (tab 3 - CAC/MSOS Book of References) specifically correcting the rates for incremental use for the Gss (Non Demand and Demand) and GSM customer classes

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: You're prescient, Mr. Wiens. Thank you for that. Turning to --

MR. ROBIN WIENS: A little bird told me.

MR. BYRON WILLIAMS: Turning to Tab 4 -- and I thank Manitoba Hydro for their cooperation. Turning to Tab 4, I won't drag the Panel through this Exhibit in any great detail but, Mr. Wiens I do want to draw your attention to two (2) matters here.

Under heading two (2) marginal cost estimates, there's also an estimate of long run marginal costs with generation being at fifty-three point five dollars ($53.50) dollars per megawatt hour, transmission distribution being at thirteen point eight (13.8) per megawatt hour, and total being sixty-seven point three (67.3), and that's referenced at CAC/MSOS/MH-2-36(A).

I take it you have no objections to that calculation?

MR. HAROLD SURMINSKI: Yes. The numbers appear consistent with what we provided.

MR. BYRON WILLIAMS: And I'm wondering -- we may use this table later in the -- the hearing -- I wonder if Manitoba Hydro -- you don't need to do it now but if -- going up to -- number 1, PCOSS results, which is derived from PUB Manitoba Hydro first round 45, I wonder if at your leisure you would review those numbers and if you have any concerns with them get back to us.

Is that satisfactory?

MR. ROBIN WIENS: Sure.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: And I'm not sure, I am assuming this question goes again to you, Mr. Wiens.

But I'm moving off those tables but perhaps highlighting the concerns that -- that may flow from those tables.

You'll agree with me that one (1) concern is when the incremental cost of usage for certain classes fall below short run marginal cost, that's a concern for the Corporation?

MR. ROBIN WIENS: It's an issue for the Corporation.

MR. BYRON WILLIAMS: And it was also an issue for NERA, is that correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And if we try and diagnose what has led to -- to this situation, I wonder if you would agree with me that one (1) of the factors that led to this situation -- one (1) of the factors that's led to some concern in terms of the current cost of service methodology and it's -- in particular it's allocation of net export revenues, is the fact that there has been a fundamental change in the export market, in particular in the price per unit obtainable in that market.

Would you agree with that?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And we've gone through this before, so I won't belabour it, but just to

summarize that concern.

The concern is that the average price per kilowatt hour for export exceeds the average price per kilowatt hour for domestic and, therefore, an increase in domestic consumption results in a lost opportunity to gain revenues in the export market and a loss of system revenues.

Is that correct, sir?

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

MR. BYRON WILLIAMS: And this concern is highlighted or exacerbated by the current cost of service methodology which allocates those net export revenues on generation and transmission; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And essentially the concern of the Corporation in terms of fairness issues is that if a class increases their consumption, they increase their share of net export revenues notwithstanding the fact that that increased consumption reduces system revenues.

Is that correct?

MR. ROBIN WIENS: That is a concern.

MR. BYRON WILLIAMS: There is a -- on the record of this proceeding there is various examples of the fundamental change that has -- the Corporation has

undergone, Mr. Wiens, but one (1) of the ones that I was taken -- that I felt was interesting -- and you don't need to turn there but I'd ask you just to confirm this with me -- is from the Public Utilities Board Interrogatory to Manitoba Hydro first round 26.

And the example used there was from -- they were comparing the situation in 1984 to the current cost of service analysis.

Do you recall that analysis generally, sir? I'll go through it but I wonder if you recall it generally.

MR. ROBIN WIENS: I think so.

MR. BYRON WILLIAMS: I -- I'm not sure if the monitor picked up that heavy sigh or not, but I'll endeavour to make it as painless as possible.

My -- my understanding -- my recollection is that in -- I'll just wait until Mr. Wiens is back with us.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: If it assists you, Mr. Wiens, I'm turning to page 2 of that Interrogatory Response. The last two (2) paragraphs.

MR. ROBIN WIENS: Okay.

MR. BYRON WILLIAMS: Just to highlight the fundamental change, my -- my understanding is that back in 1984 the average price per export revenue was only one point five (1.5) cents per kilowatt hour compared to average domestic revenue of three point eight (3.8) cents per kilowatt hour?

MR. ROBIN WIENS: Yes. If we did our math right that's right.

MR. BYRON WILLIAMS: And the average cost per delivered kilowatt hour for generation and transmission was one point nine (1.9) cents; if you did your math right, correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: In that scenario, back in the old days, a kilowatt hour diverted from export sales to serve the domestic market would cost the Corporation on average one point five (1.5) cents per kilowatt hour and would bring to the Corporation on average three point eight (3.8) cents; correct?

MR. ROBIN WIENS: Correct.

MR. BYRON WILLIAMS: And in that period of time there was a revenue advantage to the Corporation from a diversion from the export market to the domestic market; that's correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Today the -- the market and the situation has changed fundamentally and I guess that's well represented by the fact that the average revenue per export sales is six point one (6.1) cents per kilowatt hour; would that be fair?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And you'd agree with me that domestic revenue is significantly less at five point one (5.1) cents; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And when we're looking at sales at transmission voltage that would -- it's even lower at three point one (3.1) cents?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And would that be the GSL large greater than 100 kV class?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And the basic fundamental change that is now -- is the fact that now a diversion of export sales to the domestic market reduces Hydro's revenues by six point one (6.1) cents but may produce only three point one (3.1) cents offset that loss; is that correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Thank you and that

wasn't so bad; was it, Mr. Wiens?

MR. ROBIN WIENS: Not once I had it in front of me.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: Mr. Wiens, right at the start we talked about some of the basic principles that should guide -- and certainly guide the Corporation and also guide all parties in this room in terms of consideration of rate setting.

Going back to some of those Bonbright principles and two (2) of the key ones we spoke of were fairness and efficiency; you recall that discussion?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And if we look at the current method and it's treatment of net export costs, you'll agree that -- that in terms of fairness one of the issues is the fact that the current system is rewarding those who increase consumption notwithstanding their negative impact upon overall revenues; that's a fairness issue?

MR. ROBIN WIENS: I think if you -- you know, if you get into the discussion of fairness that Mr. Bonbright has in his book I -- I think he would

characterize it that way, yes.

MR. BYRON WILLIAMS: And there's also a concern with the current methodology in that it's inefficient especially when the incremental rates are running below short run marginal costs; correct?

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

MR. BYRON WILLIAMS: And -- and a further concern in terms of efficiency might roll out of this situation into rate design itself in that the -- in that it may pose some difficulties for the Corporation in terms of designing inverted rates for large industrial loads; would that be fair?

MR. ROBIN WIENS: Well, not in terms of designing them but in terms of whether or not they would actually have their intended impact.

MR. BYRON WILLIAMS: And thank you for that clarification and, again, we don't know if the Public Utilities Board will go down that path. But the -- the one of the theories behind inverted rates is that it will send better signals to consumers in terms of the consequences of their consumption choices; correct?

MR. ROBIN WIENS: Correct.

MR. BYRON WILLIAMS: And the better signals that are sent the better the message in terms of efficiency is achieved, correct?

MR. ROBIN WIENS: That's correct.

MR. BYRON WILLIAMS: And you're telling me that the status quo raises some concerns not in terms of designing inverted rates for large industrials but whether the appropriate signal can be sent using inverted rates, given their current share of costs, is that correct?

MR. ROBIN WIENS: A correct share of costs does make it more difficult to design inverted rates for that class, which would be effective over a wide range of circumstances.

MR. BYRON WILLIAMS: And just by contrast and I believe this is the evidence of the Corporation on page 21 of your rebuttal. But its position is that it can design a meaningful inverted rate for residential customers because it's dealing with costs in the context of the overall revenue requirement in the order of six (6) cents per kilowatt hour and a marginal cost in the order of seven (7) cents per kilowatt hour, is that correct?

MR. ROBIN WIENS: Yeah, I wouldn't want to leave the impression that there's not some serious issues that have to be dealt with and resolved with respect to designing inverted rates for residential customers, as well. But the gap between -- the gap

between marginal costs and embedded costs as not as serious for them as it is for some of the other classes.

MR. BYRON WILLIAMS: Okay. And I appreciate that clarification and we won't walk down that path. But the space heating issue for residential consumers would be one (1) of those presumably.

MR. ROBIN WIENS: That's part of the concern, yes.

MR. BYRON WILLIAMS: So the big problem in terms of it the Board decides go down the path of inverted rates in order to enhance efficiency is the gap between marginal costs and embedded costs for certain classes of consumers, correct?

MR. ROBIN WIENS: It's a key concern, yes.

MR. BYRON WILLIAMS: And that concern is particularly pronounced in terms of GSL large?

MR. ROBIN WIENS: Yes, it is.

THE CHAIRPERSON: While Mr. Williams is getting ready there, just to ensure our understanding is accurate, from what's been put before us I understand that domestic sales in 2004/05 were twenty-two thousand, three hundred and fifty (22,350) gigawatt hours.

And from looking at this material that Mr. Williams has put before us it would appear that 50

percent or more than 50 percent of domestic sales came at prices that were below SEP opportunity export and sale prices in 04/05 and all were below the long run marginal costs, is that a fair statement?

MR. ROBIN WIENS: That's reasonable, there maybe some exceptions but for the most yeah most sales would occur below the six point one three (6.13) cents that's identified as the --

THE CHAIRPERSON: We'll even accept the opportunity export prices that we were just looking at that were around -- just around five (5) cents a kilowatt hour, if you like?

MR. ROBIN WIENS: Yeah, there's a large portion of the domestic sales that are taking place at less than that, yes.

THE CHAIRPERSON: I also thought that you said before that the SEP and opportunity sales rates in 05/06 were considerably higher than 04/05? Given that that's the year of the spike in natural gas, watching the SEP price.

MR. ROBIN WIENS: We're not absolutely sure of that Mr. Chairman, certainly there would have been times in 05/06 where we would have had very high SEP rates, but, there's also been some times when they've been pretty low, as well.

And it may be, on balance, there's not that much difference between the two (2) years.

THE CHAIRPERSON: I'm saying basically that based on what you put before us here, what we've heard is that the situation 04/05 is certainly not changed in 05/06, the comparison against the SEP and the opportunity sale prices or against the marginal costs?

MR. ROBIN WIENS: Probably not by much, no.

THE CHAIRPERSON: Thank you. Mr. Williams...?

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Thank you, Mr. Chairman.

Mr. Wiens, I just want you to take those same key principles of Bonbright which we just applied to the current method and apply those same principles to the recommended method if we might.

And just for -- I'm -- I'm going to be moving into the -- this -- the export class that has been created or recommended by Manitoba Hydro in just one (1) second.

So just by recommended method, by that I mean the creation of export class with two (2) sub-

classes, firm and opportunity, and also the allocation of net export revenues along generation transmission and distribution.

Do you understand that, sir?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Now, applying the Bonbright principle of fairness, you would argue, presumably, that this new class or this new proposal, recommendation, meets -- meets this objective in two (2) ways presumably.

First of all, in that the -- there's an allocation of embedded cost to the export class so that it's covering what might be considered a fair share of embedded generation transmission costs?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And secondly, it's also -- once that is done the allocation of net export revenues on a wider distribution base to generation and transmission distribution rather than just to generation and transmission, provides less of a reward to those whose consumption choices are reducing overall revenues.

MR. ROBIN WIENS: Overall, averaged over all the customer classes, it does not produce any different results than the current method. We're still recovering pretty similar costs from the domestic

customers.

It does reduce the gap between marginal costs and -- and embedded costs for those customer classes for which that gap is currently the largest and it increases it for those for which the gap is currently the least.

Does it go all the way to resolving the issues of efficiency in having rates that will be above short run marginal cost? No, it doesn't. But, you know, that's -- that's something that is both a plus and a negative.

We do not have a revenue requirement that will -- would get our embedded costs up to such a place where we could confidently say that for all classes or for most consumption our rates are in excess of our short run marginal costs.

So we're left with the types of -- of changes that we're recommending here, that try to balance that gap over the classes and then hopefully in the next stage look towards some sort of rate design that will go another part of the way towards addressing those issues.

MR. BYRON WILLIAMS: And I guess that's the balance that we spoke of at the -- the start in terms of our discussion, Mr. Wiens. The -- you will agree though that this goes some way -- your recommended method

overall improves the efficiency objective.

MR. ROBIN WIENS: It contributes to the improvement of the efficiency objective.

MR. BYRON WILLIAMS: And you will be looking to other elements of the rate setting process, including rate design, to move farther along that path; correct?

MR. ROBIN WIENS: Correct.

MR. BYRON WILLIAMS: And the other -- going back to Bonbright principles, which are beside your bedside and my bedside now, the other one (1) key principle we spoke of was gradualism and stability.

And I -- I guess one of the other advantages of this proposal is that it does react to a fundamental change but it does so while building upon the strengths of the current cost of service system.

MR. ROBIN WIENS: I think that's fair to say. I think it's fair to say that if -- if it's accepted, it leaves us with a situation in which we don't have to make any discontinuous changes in -- in the level of rates that's collected from each customer class.

MR. BYRON WILLIAMS: Thank you, Mr. Wiens.

Mr. Chairman and Member of the Board -- and Members of the Board, Part 1 of my outline took a

little longer to -- to get through than I expected, for which I apologize. We'll try and make up that time in Parts 3 and 4, which will come tomorrow.

And we're moving to the section -- second section of our -- our cross. And, really, in this section we're, for the benefit of the Board, trying to explore the -- the merits of the creation of the export class, in principle why that or may not be a good thing.

We're also going to be examining at a high level the question raised by MIPUG of whether exports have been allocated their fair share of the export class. We're going to touch upon a bit of the ground that Mr. Peters chatted about late this morning in terms of the views of the NERA, in terms of the export subclass as proposed by Manitoba Hydro.

And we're going to again be looking at the impact in terms of planning, system operations and investment decisions of the Corporation of the various categories of export sales, being those based upon dependable power and those based upon surplus capacity.

MR. ROBERT MAYER: Mr. Williams, while you're dealing with the merits of the export class you might keep in mind that this Board was the only group in this room up until recently that actually thought that was a good idea.

So you might not have to go too far to convince us that we still think that way.

MR. BYRON WILLIAMS: I don't intend to go far down it, Mr. Chairman, but I thought you would give us that helpful reminder at some point during this hearing.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Mr. Wiens, the Vice-Chair has provided a helpful segue to me, but I guess the -- we've had this discussion regarding the creation of the export class and it begs one (1) question, which is why that should be done and without asking you to elaborate, one reason that Manitoba Hydro embarked upon this exercise was that the Public Utilities Board indeed invited you to conduct this exercise, correct?

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

MR. BYRON WILLIAMS: And it did so, first of all in Board Order 7 from 2003 in which it invited you to look at the creation of two (2) classes, one (1) being a firm export class and the second being an opportunity export class, correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And it's interesting this issue was repeated in Board Order 101/04, correct,

in which it recommended that you look at the NERA methodology, vintaging and propose your recommended method, as well?

MR. ROBIN WIENS: Yes, although it was, I believe, and I'll be corrected if I'm wrong, it was silent on the issue of the number of export classes. But it did direct us as you say to produce results in accordance with the NERA method and in accordance with the existing method and in accordance with what Manitoba Hydro would recommend, yes.

MR. BYRON WILLIAMS: Mr. Wiens, mindful of the Vice-Chairman's caution, apart from the fact that the Board told you this might be a good idea, you'll agree with me that NERA, as well, also thought that this might be a good idea, correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And I won't go through the entire rationale of NERA which is set out at pages 30 to 31 of its report regarding classification, allocation methods for generation and transmission, but you'll recall and agree with me that one (1) of the key points made by NERA, they argued that inclusion of an export class makes it obvious that the export sales are covering their full embedded costs of service, correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Now, analytically at a very high level, do you agree with that observation by NERA?

MR. ROBIN WIENS: Yes, I think that that is the strongest case for the inclusion of an export class is to assure to the satisfaction of this Board that exports are indeed covering their costs and that therefore it is appropriate to look beyond just generation and transmission, as a basis for the allocation or otherwise of any export revenues in excess of that amount.

MR. BYRON WILLIAMS: So, in terms of it being the strongest case, you see the value of this in providing assurance to the Board that the export class has essentially paid its dues, in terms of generation and transmission costs?

MR. ROBIN WIENS: That's correct.

MR. BYRON WILLIAMS: And then you would go on to say that once this cost causation link has been broken, the Board can take some comfort in looking at a wider allocation of net export revenues.

MR. ROBIN WIENS: I would say that it can take a look at alternatives to generation and transportation -- transmission as the only basis that has been used to date.

MR. BYRON WILLIAMS: And, Mr. Wiens, just for your benefit I'm going to be turning to Tab 7 through -- through 10 or 11 -- 7 through 11 of the CAC/MSOS book of reference; do you have that, sir?

MR. ROBIN WIENS: I do.

MR. BYRON WILLIAMS: Now, our discussion was, of course, and NERA's observation, was, of course, premised on the assumption that export sales are covering their full embedded cost of service; correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: And I'm going to draw your attention to Tab 7 of the CAC/MSOS book of references which is coincidentally the response of the Manitoba Industrial Power Group to CAC/MSOS Interrogatory Number 7; do you have that, sir?

MR. ROBIN WIENS: I have it.

MR. BYRON WILLIAMS: And, in particular, I'll refer your attention to sub (b) of the response produced by MIPUG in which they -- they -- you'll agree with me they appear to be taking issue with the -- your assertion that the export class is fully recovering its -- a fair share of its embedded costs; would that be fair, sir?

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

MR. BYRON WILLIAMS: And I'm going to give you an opportunity to -- to respond to their conclusions in some detail a little bit farther along the -- the line.

But just in terms of the broad strokes of this Interrogatory response you'll agree with me that the one key argument introduced by MIPUG is that the export class -- the class currently recommended by Manitoba Hydro fails to capture sufficiently the quantum of costs that Hydro incurs for exports; you'll agree with that?

MR. ROBIN WIENS: I'll agree that that's what they said, yes.

MR. BYRON WILLIAMS: And again, I'm asking you -- what I just want to do is get the thrust of MIPUG's arguments and I'll try and present them in a more articulate manner than I've done so today.

Going on with -- from that general statement, MIPUG is making the assertion that Manitoba Hydro's willing to incur up to the value of experts -- exports -- excuse me. Let me restate that.

MIPUG is making the assertion, and this is set out in the fourth line of the second paragraph under sub (b) that Manitoba Hydro's generally prepared to make investments in new generation, et cetera, and incur costs up to the value that the increased power can provide from

sale on the export markets.

You'll see that -- do you see that, sir? That's the assertion that they're making?

MR. ROBIN WIENS: Yes, I see that.

MR. BYRON WILLIAMS: And, again, just by way of summarizing MIPUG's arguments, they argue at today's prices the long run levelized costs are as high as six point seven (6.7) cents per kilowatt hour; correct?

MR. ROBIN WIENS: I think if you include my earlier response, both transmission and the distribution into that that's where the six point seven (6.7) cents comes from.

MR. BYRON WILLIAMS: So that -- that figure includes transmission and distribution?

MR. ROBIN WIENS: It does.

MR. BYRON WILLIAMS: And going on, and just putting MIPUG's argument to you, they also argue that this raises concern given that the recommended method -- method only allocates four point zero one (4.01) cents to firm and one point two (1.2) cents to opportunity sales; that's the argument made by MIPUG? That's on the next page of this submission.

MR. ROBIN WIENS: Yeah, we're -- yeah, we're talking about their share of embedded costs and

their share of the variable costs in the case of opportunity export sales.

MR. BYRON WILLIAMS: And, Mr. Wiens, MIPUG then goes on to argue that as -- and I'm referring to the last paragraph on the second page of this, as further evidence that the quantum allocated to the export class is unfair, they look at the costs in year one (1) of Wuskwatim which they suggest is about four point seven (4.7) cents per kilowatt hour; do you see that, sir?

MR. ROBIN WIENS: I see it. Yes.

MR. BYRON WILLIAMS: And finally they argue that -- near the end of this paragraph that similar but less dramatic decisions on bulk power system additions are expected to be routinely made in exercises with regard to DSM, wind and SSE's. You see that suggestion, sir?

MR. ROBIN WIENS: I see that.

MR. BYRON WILLIAMS: I wonder, I'm going to go through this in detail in a little bit, but at a high level if you can respond to the assertion made by Manitoba Industrial Power Group.

MR. ROBIN WIENS: Well, if I understand this response correctly and there may be some nuances that I'm not grasping, but the suggestion is being made here that Manitoba Hydro should be, in terms of the

export class, should be allocating marginal costs against those revenues, rather than embedded costs which, you know, I think that that simply leads us to the same conclusion that we have with our current cost of service methodology.

It doesn't -- adoption of this type of a suggestion would not address at all the concerns that we've brought to the table with our recommended methodology. That's my high level response to that suggestion.

It treats, basically, all export revenue as being associated with generation and transmission. So we are crediting customer classes on the basis of their usage, in effect, with the full sum of export revenue which doesn't deal with -- doesn't deal with the issues that we're trying to deal with here today, at all.

MR. BYRON WILLIAMS: Thank you for that high level response. I want to walk through some of the assertions made by MIPUG in a little bit greater detail. One (1) of them relates to the argument that when Wuskwatim comes on line that the cost per kilowatt hour in year one will be four point seven (4.7) cents.

And I guess in terms of responding to that, I wonder if you could confirm that current exports are from excess supply from hydro facilities installed

many years ago, would you agree with that?

MR. ROBIN WIENS: Certainly some of them are.

MR. BYRON WILLIAMS: I wonder if Hydro can confirm that even when Wuskwatim is in service over half of the firm exports will still be from the older stations as opposed to Wuskwatim and new wind purchases, is that a -- can you confirm that?

MR. HAROLD SURMINSKI: Are you inferring that from the quantity of exports at the time and Wuskwatim is about fifteen hundred (1500) gigawatt hours and total exports are double that?

MR. BYRON WILLIAMS: That's fair, sir. Was that a yes?

MR. HAROLD SURMINSKI: Yes.

(BRIEF PAUSE)

MR. BYRON WILLIAMS: Mr. Chairman, it's about ten to 4:00 and there's a -- I'm just going through my notes here and this is an issue that I do want to go at in a more elegant way.

I apologize for this but I'm just wondering if it might be more efficient -- otherwise I will have to move on to a new area and then come back to

this area.

I may want to get a brief adjournment or an adjournment until tomorrow to go over my notes from this section, and then come back.

THE CHAIRPERSON: Do you have any small section that you could put in for the next fifteen (15) minutes that wouldn't throw you off your game?

MR. BYRON WILLIAMS: Yeah -- what we'll do, yeah, I can move on Mr. Chairman, thank you for your guidance.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: I'll come back to this point tomorrow in a more articulate fashion. You had some discussion, Mr. Wiens today in terms of the creation of -- Hydro's recommendation to create two (2) export subclasses, correct?

MR. ROBIN WIENS: That is our recommendation.

MR. BYRON WILLIAMS: And you discussed with Mr. Peters the fact that you had run this suggestion by NERA and they considered that to be appropriate, is that correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: I understand your

reluctance to offer out of court statements of others, but the fact that they considered it to be appropriate didn't offer me a lot of comfort in terms of the position of NERA.

Is Hydro aware of whether or not NERA prefers the sub-classes to -- the idea of a firm and opportunity sub-class to the idea of just one (1) export sub-class?

MR. ROBIN WIENS: If it tracks the embedded costs incurred to meet those export sales you know, I'm -- I'm somewhat reluctant to appear to be putting words in their mouths. But I -- I think that would be reasonably fair provided that it tracks costs reasonably.

THE CHAIRPERSON: I think it is kind of unfair to ask Mr. Wiens to do that. I'm just wondering if it was helpful if it would be possible to get a one page letter from NERA just confirming their view and then you don't have to give, sort of, secondhand views of what their view is?

If that wasn't too costly for the consumers.

MR. ROBIN WIENS: We can arrange to produce something, Mr. Chairman.

THE CHAIRPERSON: Thank you.

--- UNDERTAKING NO. 8: Obtain correspondence from NERA confirming their view of the relative merits of one export class versus two export subclasses

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: So thank you, Mr. Chairman, for that guidance and so Manitoba Hydro is undertaking to provide a response to -- from NERA in terms of the relative merits of the one (1) export class versus two (2) export sub-classes; is that correct?

MR. ROBIN WIENS: Yes.

MR. BYRON WILLIAMS: Mr. Chairman, the -- I'm moving on and, again, I'm in an area where I will be stepping lightly across Mr. Peters' toes with -- which is fine, without trying to duplicate his efforts and --

THE CHAIRPERSON: He's wearing heavy boots.

MR. BYRON WILLIAMS: So just -- and I want to turn to the area and to the issue of the impact of -- of -- on system planning and investment decisions of the -- the both firm sales sourced from dependable power and opportunity sales sourced from surplus capacity.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: So are you ready, Mr. Surminski?

MR. HAROLD SURMINSKI: Yes, Mr. Williams.

MR. BYRON WILLIAMS: We're all excited. This will take us a bit into tomorrow morning as well. And, again, mindful, I don't want to duplicate Mr. Peters' work but I do want to just for the purposes of context.

My understanding is that Manitoba Hydro defines firm exports as long-term sales of up to twenty (20) years in duration which -- and that they are sourced from Manitoba Hydro's dependable and acredible -- accreditable energy resources; would that be fair?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: By contrast, opportunity exports are sourced from Manitoba Hydro's non-dependable energy resources or from purchases; would that be fair?

MR. HAROLD SURMINSKI: yes.

MR. BYRON WILLIAMS: And those quantities sold are dependent on Hydro's current surplus capacity in energy situation and the spreads in the market prices; would that be fair?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And in terms of the opportunity export portfolio, my understanding is that it could include short-term firm sales but it also includes spot market and monthly energy sales; would that be correct?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And in terms of just for further clarification, short term sales, my understanding is that the shortest duration for short term sales is about five (5) minutes in the MISO market?

MR. HAROLD SURMINSKI: Yes, that is the finest timeframe.

MR. BYRON WILLIAMS: And would it be fair to say that the typical transaction in the real time or day ahead market is one (1) hour; would that be fair?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And that the typical short term contract is one (1) month; would that also be fair?

MR. HAROLD SURMINSKI: That's what we provide in our evidence.

MR. BYRON WILLIAMS: And -- and just in case the Board thinks I'm so brilliant for absorbing that, the reference for that is probably CAC/MSOS/II-3.

Now, Mr. Surminski, I want to explore the subject of the two (2) export sub-classes, as I said before, from a system planning perspective and also look at the impact that these may have on Manitoba Hydro investment decisions.

And I'd like to turn your attention to Tab 12 of the CAC/MSOS book of documents; do you have that, sir?

MR. HAROLD SURMINSKI: Yes, I do.

MR. BYRON WILLIAMS: And this may be familiar to some members of the Board as it is an excerpt from the submission to the Manitoba Clean Environment Commission regarding the need for alternatives to the Wuskwatim project.

So you have that in front of you, sir?

MR. HAROLD SURMINSKI: Yes, I do.

MR. BYRON WILLIAMS: And what this is, and I think it's helpful, Mr. Surminski, for the purposes of clarify, is it's a -- a brief summary of how the power resource plan fits within overall hydro planning and -- and investment decision.

Is that fair?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And just to start -- and I won't go through this whole document but I'm

looking to go through parts of it and then draw some conclusions at an end -- you'll agree with me that on an annual basis Hydro reviews all current information with respect to generation requirements in order to ensure that it can meet all firm domestic load requirements together with firm committed exports.

Is that correct, sir?

MR. HAROLD SURMINSKI: Yes, that is.

MR. BYRON WILLIAMS: And when you do this review you include incorporation of updates to the load forecast, field price forecast, export price projections, capital costs, and a number of other factors.

Is that right?

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

MR. BYRON WILLIAMS: And the end product of this is a thirty-five (35) year power resource sequence for planning purposes.

Is that correct?

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

MR. BYRON WILLIAMS: And what you do with this document is use it to update the integrated financial forecast, or IFF, as well as Manitoba Hydro's long-term capital plan.

Would that be fair?

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

MR. BYRON WILLIAMS: And the information that's garnered consists of expected capital expenditures, costs of operating the generating system and revenues from export transactions; correct?

MR. HAROLD SURMINSKI: Correct.

MR. BYRON WILLIAMS: So this is a key document in terms of planning for future generation needs and also in terms of looking at the future investment decisions by this Corporation; correct?

MR. HAROLD SURMINSKI: Yes. It provides -- that is one (1) of the main purposes, is to provide an indication of -- of potential options that -- that we should consider and protect for the future.

MR. BYRON WILLIAMS: And when we -- we look at this -- moving into this document in greater detail, and Mr. Peters touched on part of this but I do want to go through bits of it again.

There are -- when looking at the planning for the reliable supply of electrical power for Manitobans, Manitoba Hydro looks both at capacity criterion as well as dependable energy criterion; is that correct?

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

MR. BYRON WILLIAMS: And when we look at

capacity criterion, it requires -- the planned generation capacity in terms of megawatts must not be less than forecast annual firm peak demand plus a reserve requirement of 12 percent of forecast firm loads; correct?

MR. HAROLD SURMINSKI: Correct.

MR. BYRON WILLIAMS: And we're looking -- when we're looking at firm loads for reserve determination, we're including only those firm export contracts that require Manitoba Hydro to provide the reserve requirement; is that right?

MR. HAROLD SURMINSKI: That's right.

MR. BYRON WILLIAMS: Turning to dependable energy criterion. The criterion here are in -- in large part focussed upon the limit or -- created in recognition of the limitations of hydraulic generation during drought conditions.

Would that be fair?

MR. HAROLD SURMINSKI: Yes, it is.

MR. BYRON WILLIAMS: And what they require is that Manitoba Hydro be capable of a dependable supply of energy to meet the basic level of forecast firm load demand; correct?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And specifically,

there has to be sufficient firm energy sources to meet firm energy demand in the event of a repeat of the lowest historic river flow conditions; correct?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And just by way of interest, you adjust historic flows to represent present use conditions and also take into account upstream water conditions and expected withdrawals; correct?

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

MR. BYRON WILLIAMS: And when we're looking at dependable supply, you're looking at energy from hydro-electric and thermal stations within Manitoba; correct?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: You're also looking at firm energy imports from out of province; correct?

MR. HAROLD SURMINSKI: Correct.

MR. BYRON WILLIAMS: And you're also looking at contracted non-firm imports from the reserves of neighbouring utilities; would that be fair?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And one (1) rule of -- one (1) important rule is that contracted non firm exports for medium firm load should not exceed 10 percent of firm energy requirements; correct?

MR. HAROLD SURMINSKI: Correct.

MR. BYRON WILLIAMS: Thank you.

MR. ROBERT MAYER: I take it, sir, that document would now have to be updated to include your power purchases from your wind generators.

MR. HAROLD SURMINSKI: Yes. I --

MR. BYRON WILLIAMS: So, Mr. Mayer, you're just stealing all my thunder there, but I'll -- no, I'm just teasing. I want to pursue this for about another fifteen (15) minutes but I -- I can either do that now or I can carry on tomorrow morning.

CONTINUED BY MR. BYRON WILLIAMS:

MR. BYRON WILLIAMS: Mr. Surminski, thank you for that helpful summary at least it was helpful to me and I think for my clients and I'm hoping to others in this room.

I want to just try and summarize some of what we just discussed and then look at the implications in terms of Manitoba Hydro's investment decisions. So it may be a bit harder slogging than the first part.

Let's start going back again to the capacity criteria. And just so I understand it, the criteria is that in-service plant must exceed annual firm peak plus required reserves, correct?

MR. HAROLD SURMINSKI: Yes.
MR. BYRON WILLIAMS: And domestic load and firm exports are included in the demand forecast used for planning purposes, correct?
MR. HAROLD SURMINSKI: Yes.
MR. BYRON WILLIAMS: And that 12 percent reserves are included for domestic load and for firm exports where hydro is required to provide the reserves, correct?
MR. HAROLD SURMINSKI: Yes.
MR. BYRON WILLIAMS: Would it be fair to conclude from that that firm export contracts are included for planning purposes but non-firm contracts, are not, would that be fair?
MR. HAROLD SURMINSKI: Yes and its only firm contracts that require Manitoba Hydro to carry the reserve. We could have contracts where we are not required to carry the reserve.
MR. BYRON WILLIAMS: So in terms of the capacity criterion you're looking exclusively at in terms of firm contracts, those where Manitoba Hydro is required to carry the reserve? Manitoba Hydro is required to provide the reserves?
MR. HAROLD SURMINSKI: I'm not sure if you're drawing the conclusion that only contracts that

require Manitoba Hydro to carry reserve are categorized as firm, that is not the case.

MR. BYRON WILLIAMS: I mis-spoke. I probably have clouded the record rather than cleared it. Just going back to my suggestion that firm export contracts are included for planning purposes, but non-firm contracts are not, and you can confirm that?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And would you go further and say that not all firm export contracts are required for -- excuse me -- that's fair enough. Okay.

Moving to the energy criteria. My understanding is that the criteria is the projected dependable energy must be sufficient to be meet firm energy demand, in the event of a repeat of the lowest historical river flow conditions, correct?

MR. HAROLD SURMINSKI: That is the criterion that we have developed.

MR. BYRON WILLIAMS: And we've talked about the inputs including wind now, and dependable hydro is what could be produced assuming the lowest flows on record, would that be right?

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

MR. BYRON WILLIAMS: In terms of planning purposes, would I be again correct in concluding that

while firm export contracts are included for planning purposes, non-firm exports are not, would that be fair?

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

MR. BYRON WILLIAMS: And that's within the context of the capacity and energy criteria. Moving on and just overall, my understanding is that firm exports require the availability of surplus dependable energy and capacity for the duration of the planned contract, would that be fair?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And if those surpluses are not available in the -- are not available, that contract could only be entered into if additional dependable generating capacity and energy is installed, would that also be fair?

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

MR. BYRON WILLIAMS: Would you agree that normally the terms for firm export contracts are set based on anticipated surpluses and normally would not inadvertently trigger the need for new supply in the future?

MR. HAROLD SURMINSKI: That has been our approach in the past.

MR. BYRON WILLIAMS: So that's based on past experience, correct?

MR. HAROLD SURMINSKI: Correct.
MR. BYRON WILLIAMS: Now what --
MR. ROBERT MAYER: You've got to ask the next question.
MR. BYRON WILLIAMS: I'll leave that to you, Mr. Mayer.
MR. ROBERT MAYER: Is that its present policy?
MR. HAROLD SURMINSKI: I was thinking of -- we -- our current policy is -- is we build -- we can build generation without having firm contracts.
MR. ROBERT MAYER: But you won't have firm contracts without having a plan to build the generation, the extra generation.
MR. HAROLD SURMINSKI: Yes.

CONTINUED BY MR. BYRON WILLIAMS:
MR. BRYON WILLIAMS: Thank you for that clarification, Mr. Mayer.
Just again for planning purposes, once you've signed these firm contracts, they -- they represent a commitment and your planning criteria require that they be considered in future forecasts.
Is that right?
MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And I guess in certain cases, signing for firm export contracts that commit surplus dependable energy could preclude the ability of Hydro to enter into other more lucrative contracts should the opportunity arise.

Would that be fair?

MR. HAROLD SURMINSKI: Yes, it is.

MR. BYRON WILLIAMS: Turning to opportunity exports now. We've established probably about twelve (12) times now that they're made from surplus supply over and above dependable supply; correct?

MR. HAROLD SURMINSKI: Correct.

MR. BYRON WILLIAMS: And they can also be the result of purchase-sell arrangements where electricity is purchased during low cost periods and resold in higher cost periods.

Would that be fair?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: And those arrangements, would it be fair to say, cannot be used for firm exports since the purchases would not necessarily qualify as dependable energy.

MR. HAROLD SURMINSKI: Yes, assuming the -- the purchases are non-firm.

MR. BYRON WILLIAMS: And just out of

fairness, it would be fair to say some opportunity sales including some sales to the MISO market, are guaranteed in the sense that financial restitution must be made if deliveries fail.

Would that be fair?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: I wonder if you'd agree that given the short-term nature of those arrangements the likelihood of this occurring is far less.

MR. HAROLD SURMINSKI: Yes, that's right. Because we negotiate shorter term based on our estimate of water availability.

MR. BYRON WILLIAMS: Just looking, going from these criteria to the implications for investment decisions, I wonder if you'd agree that -- and I'm speaking now of the non-firm contracts, the opportunity contracts.

Given the short nature of these contracts, Manitoba Hydro could not put additional facilities in place in time to meet a specific short-term or opportunity sale.

Would that be fair?

MR. HAROLD SURMINSKI: Yes. That certainly is the case.

MR. BYRON WILLIAMS: It would likely take at least a year to install some facilities and far longer to install others; correct?

MR. HAROLD SURMINSKI: I -- I agree with that completely.

MR. BYRON WILLIAMS: And you've had this discussion with Mr. Mayer but just to -- to highlight the contrast, in contrast Manitoba Hydro can consider making investments and facilities to support or enable long-term firm contracts; correct?

MR. HAROLD SURMINSKI: Yes.

MR. BYRON WILLIAMS: Notwithstanding the -- the experience of the drought year, I wonder if you'd agree with me that typically firm exports are more lucrative than opportunity exports.

Would you agree with that in general terms?

MR. HAROLD SURMINSKI: Yes, in general terms.

MR. BYRON WILLIAMS: And one (1) of the reasons, again leaving aside the -- the drought year, they typically command higher prices.

Would that be fair?

MR. HAROLD SURMINSKI: Yes, that has been the case.

MR. BYRON WILLIAMS: And the other key reason why they tend to be more lucrative is that firm export revenues are effectively guaranteed to come every year, whereas opportunity revenues depend on water flow conditions.

Is that correct?

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

MR. BYRON WILLIAMS: Mr. Chairman, I did that in -- in eight (8) minutes. I'm pretty proud of myself. So the -- I've underestimated --

THE CHAIRPERSON: So --

MR. BYRON WILLIAMS: -- or overestimated my time.

THE CHAIRPERSON: -- we'll congratulate you, Mr. Williams, and wait for you to recommence tomorrow morning.

Thank you everyone. We'll see you tomorrow at 9:00.

(MANITOBA HYDRO PANEL RETIRES)

MR. BOB PETERS: Mr. Chairman, just to get the last word over here from Board Counsel table, I just wanted to the Board Members and -- and all assembled

that tomorrow, not only will be have the benefit of -- of the continuation of CAC/MSOS cross-examination, we will expect presentations from the MIPUG group shortly after lunch.

And I suspect, if there's time permitting after that and CAC has concluded, the City of Winnipeg will have some questions of this Panel and following the City of Winnipeg, I know RCM and Tree is listed but I also want to remind ourselves that I believe tomorrow is a short -- a shortened hearing day because of a prior commitment of the Board and we will be adjourning at approximately 3:00, if I have my notes correct.

THE CHAIRPERSON: If it didn't inconvenience anyone too much, perhaps what we could do is count on a shorter lunch hour tomorrow and perhaps you could work with the other parties to see that we could fill it in ahead of the presentations and that might help.

Let's assume instead of having an hour and a half lunch break, we have a forty-five (45) minute lunch break and that will make up for some of it.

MR. BOB PETERS: Thank you. We'll discuss that and I expect that will be workable.

THE CHAIRPERSON: Ms. Ramage...?

MS. PATTI RAMAGE: Yes, Mr. Chairman, Mr.

Warden has also indicated to me that tomorrow being Tuesday, is Manitoba Hydro's executive committee meeting at 7:30 a.m. and I just thought I would let the parties know that Mr. Warden may be late and just make sure that there's no objections if he's not here at the commencement tomorrow morning.

THE CHAIRPERSON: That would be fine and we'd be pleased to allow the executive committee to use our boardroom number one if they'd like.

Thank you. Good night.

--- Upon concluding at 4:10 p.m.

Certified Correct

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Ryan Pickering