MANITOBA PUBLIC UTILITIES BOARD

Re: MANITOBA HYDRO
2004 GENERAL RATE APPLICATION

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

HELD AT:
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--- Upon commencing at 9:09 a.m.

THE CHAIRPERSON: Well, much as we all miss, Mr. Williams, I think we should get underway because we could be quite interrupted at 9:50 and we'll have to make a judgment call depending on the strength of the alarm signal but we do have clearance to remain, but if it starts interfering with the taking down of the transcripts, et cetera, we'll have to call a halt to it.

This morning we have Mr. Anderson from MKO who's going to undertake cross-examination of the Hydro Panel. Mr. Anderson, are you ready to begin?

MR. MICHAEL ANDERSON: I am, Mr. Chair, thank you.

THE CHAIRPERSON: And we now note that Mr. Williams is here so we can start confidently ahead. Mr. Anderson...?

MS. PATTI RAMAGE: Mr. Chair...?

THE CHAIRPERSON: Yes, Ms. Ramage.

MS. PATTI RAMAGE: Before Mr. Anderson begins, I -- a package of materials which were marked as exhibits last night we distributed and additional materials, which I haven't had an opportunity to review, were distributed and I just wanted to make by way of preliminary comment, that some of these materials Manitoba

Hydro is able to speak to.

Others were not produced by Manitoba Hydro and I would -- I'm just making the preliminary comment that in terms of, they have been marked as exhibits or are, I assume, going to be proposed to be marked as exhibits and there isn't a witness to speak to some of those materials.

And in the normal course we wouldn't mark them as exhibits until we had established some degree of familiarity with them and I simply bring this to your attention as we're proceeding with these documents that we may not be able to speak to all of them.

THE CHAIRPERSON: I appreciate your remarks and we'll -- we'll consider them conditional exhibits as we work through them and I'm sure Mr. Anderson can speak to their origins as he introduces them.

Mr. Anderson...?

MR. MICHAEL ANDERSON: I would expect and be comfortable with that process. Mr. Chair, following along the comments made by Ms. Ramage, I have an additional set of materials, in part arising from the opportunity, of course, to review the transcript of yesterday and the materials that I had provided.

They are in the sequence that I would propose that they be numbered with the exception of the --

there is one extract from the filed Manitoba Hydro Annual Report, I'm not proposing that this be given an exhibit number, it's just for convenience.

So the first one in the group that was provided to you that should be before you, it has a water level graph for the period October 21st, 2003 to December 21st, 2003, South Indian Lake, at the very top.

And we had ended off on the numbering, as I recall yesterday, Mr. Chair, at MKO-8. They're different charts, Mr. Mayer. They are -- they look very similar but they actually have quiet different information in them.

THE CHAIRPERSON: Proceed, Mr. Anderson. You're saying provisionally we would number the first South Indian Lake Chart --

MR. MICHAEL ANDERSON: MKO-9, Mr. Chairman.

THE CHAIRPERSON: -- 9, okay.

--- EXHIBIT NO. MKO-9: Water level graph for the period October 21st, 2003 to December 21st, 2003 South Indian Lake

MR. MICHAEL ANDERSON: The next one is an extract that MKO prepared for filed exhibits. It's just a

restatement on them with some calculation for convenience.
THE CHAIRPERSON: Is this the comparison of export revenues and import by fiscal year?
MR. MICHAEL ANDERSON: Yes.
THE CHAIRPERSON: So we'll say number 10.
MR. MICHAEL ANDERSON: Thank you, Mr. Chair.

--- EXHIBIT NO. MKO-10: Comparison of export revenues and import by fiscal year

MR. MICHAEL ANDERSON: The next document is available from the National Energy Board's web site in respect of the export summary records. There was a brief discussion. Mr. Cormie had mentioned certain aspects of documents filed. I have prepared that.
THE CHAIRPERSON: Provisional 11.
MR. MICHAEL ANDERSON: Thank you.

--- EXHIBIT NO. MKO-11: Document available from the National Energy Board's web site in respect of export summary records

MR. MICHAEL ANDERSON: The next document

is the same for the year 2003.
THE CHAIRPERSON: Provisional 12.
MR. MICHAEL ANDERSON: Thank you.

--- EXHIBIT NO. MKO-12: Document available from the National Energy Board's web site in respect of the export summary records for the year 2003

MR. MICHAEL ANDERSON: The next is Lake of the Woods Control Board's current forecast for Winnipeg River in Manitoba.
THE CHAIRPERSON: This is the Winnipeg River Outflow at Slave Falls --
MR. MICHAEL ANDERSON: At the top, yes.
THE CHAIRPERSON: -- Seven Sisters?
MR. MICHAEL ANDERSON: Yes.
THE CHAIRPERSON: That's provisional 13.

--- EXHIBIT NO. MKO-13: Winnipeg River Outflow at Slave Falls.

MR. MICHAEL ANDERSON: And then the final one is --

MS. PATTI RAMAGE: Excuse me, the last -- provisional 13, the document I have is South -- in Southern Indian Lake.

MR. MICHAEL ANDERSON: You're missing one.

MS. PATTI RAMAGE: Mr. Peters' assisted and we've located it. Thank you.

MR. MICHAEL ANDERSON: Thank you, Mr. Peters.

THE CHAIRPERSON: So subject to further comment we'll call that Provisional 13.

MR. MICHAEL ANDERSON: Thank you. And then the final one (1) is the -- are the current water level forecasts available on Manitoba Hydro's website at the present time.

THE CHAIRPERSON: Okay. So the Southern Indian Lake Chart, 60 Day Water Level, May 27th to July 31st, which is the top chart, provisional 14.

MR. MICHAEL ANDERSON: Thank you.

--- EXHIBIT NO. MKO-14: Southern Indian Lake Chart, 60 day water level, May 27th to July 31st.

THE CHAIRPERSON: So, Ms. Ramage, you'll have the opportunity to -- if you have any objections to

any of these before we formally stamp them with the exhibit numbers.

MS. PATTI RAMAGE: Thank you. I thought it be -- I wanted to give my preliminary comment but deal with them as they arise so I can understand the use that they're intended for.

THE CHAIRPERSON: Thank you. Any time you're ready Mr. Anderson.

MR. MICHAEL ANDERSON: Thank you, Mr. Chair.

MANITOBA HYDRO PANEL, Resumed;

CROSS-EXAMINATION BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: Began -- begin, Mr. Chair, just by working to get a clarification of some of the basic elements of the Application, of course.

And I realize after having reviewed the transcripts that much of this is gone over by others. I'd like to say I'm quite interested in the examinations of all my colleagues here. I appreciate the examination of Mr. Peters in respect of export operations and water levels and the advice that the Board may have received on that.

I don't intend, hopefully, to touch on it

but I'd like to just clarify some of the information that we already have on this rather ample record. It's very interesting and I appreciate Hydro's responses to all the questions.

If I began at the beginning, however, for the purposes of my examination today at Tab 1, page 1, just lined of the Application of Volume I, excuse me. Generally lines twenty-seven (27) to thirty-three (33).

The statements been repeated many times by Mr. Warden and others that since 1997 Manitoba Hydro's been able to forgo projected rate increases because favourable export revenues made it possible to absorb the increasing costs without rate increases.

In the 2004/05 and 2005/06 test years, due to the unusually severe impacts of the current drought, Manitoba Hydro's no longer able to achieve its projected revenue requirements without requesting rate increases.

Mr. Warden, or -- that continues to be the core position of Manitoba Hydro in respect of this Application?

MR. DAVID CORMIE: Yes, it does.

MR. MICHAEL ANDERSON: Thank you.

All right. In looking at trying to take a view of the circumstances as it would be understood by customers and certainly by MKO, citizens who are customers

of Manitoba Hydro, I wanted to just briefly touch on MKO-2. Which is a Provincial Government press release in respect of rate equalization and the uniform rate legislation emerged from that.

I refer to this only in that there has been more than -- you would agree that there has been more communication in this news release to Manitoba Hydro's customers in respect of the establishment of the uniform rate?

MR. VINCE WARDEN: Yes.

MR. MICHAEL ANDERSON: An in particular the former Zone 3 customers, many of whom are in First Nation and remote communities on grid within Manitoba, have been made aware that there is a uniform rate?

MR. VINCE WARDEN: Yes, they have.

MR. MICHAEL ANDERSON: And can you indicate your recollection of the information that was provided to Manitoba customers as to why the uniform rate was established?

MR. VINCE WARDEN: Well, I don't recall the exact communication. There was communication by way of bill inserts to customers explaining uniform rates. I think there was reasons given there and it was attributed to policy decision of Government.

(BRIEF PAUSE)

MR. MICHAEL ANDERSON: If you look at paragraph 2, the press release, Mr. Warden, and I thank you for your earlier comment.

Would you -- would you confirm that information, at least in general terms, indicating that as it's stated by Minister Salinger, that opportunities arising out of the burgeoning electricity market in the United States, provided the basis for the establishment of the uniform rate?

MR. VINCE WARDEN: Well, that's what the Government news release says, yes, I'll agree with that.

MR. MICHAEL ANDERSON: And is that basic understanding to the best of your recollection, communicated by Manitoba Hydro to its customers?

MR. VINCE WARDEN: I would have to go back and review our communication that I indicated was included in bill inserts at the time. I don't know whether we specifically tied it to export revenues, we may have, but I would have to review that.

MR. MICHAEL ANDERSON: Without intending to add too much to the paper, Mr. Warden, would you please undertake to provide what was communicated to the Manitoba Hydro customers in respect to the uniform rate? If it's

present in the filings, if you could point me to it I'd be happy for that.

MR. VINCE WARDEN: I don't believe it's there, we can do that though.

MR. MICHAEL ANDERSON: Thank you, Mr. Warden.

MS. PATTI RAMAGE: To clarify in terms of what was communicated, I'm thinking what you are looking for is the bill insert that Mr. Warden referred to.

MR. MICHAEL ANDERSON: Ms. Ramage, that would be helpful. I would -- I would add to it, if there was a corresponding press release issued by Manitoba Hydro announcing the uniform rate, I'd appreciate that as well. Thank you.

THE CHAIRPERSON: I believe what Mr. Anderson's asking for is any direct communications from Manitoba Hydro to the customers, related to the uniform rate, whether it was by bill insert, or any other means. But from the company.

--- UNDERTAKING NO. 38: To provide any proof of communication between Manitoba Hydro and its customers, announcing the uniform rate.

MR. MICHAEL ANDERSON: As always, I welcome the assistance of the chair in ensuring that the undertaking meets the question that was provided. Thank you, I appreciate that, Mr. Chair.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: Going from that to trying to understand the rationale for uniform rates, as well as the financial performance of the Corporation, prior to the current Application, the document that I would point to, because it's most publicly available, I suppose, would be -- it's at Appendix 2.2, it's the Manitoba Hydro Annual Report at page 94, and, Mr. Chair, I have provided a single page photocopy for everyone's assistance, as they wish.

THE CHAIRPERSON: What Mr. Anderson is referring to, it appears to be a photocopy from the Annual Report for the year ended March 31st, 2003, is that correct?

MR. MICHAEL ANDERSON: Correct, it's the page -- the first page of the consolidated financial statistics, page 94 of the Annual Report for the year end March 31, 2003. Thank you, Mr. Chair.

(BRIEF PAUSE)

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: Everyone has that? Thank you. Now, Mr. Warden, would you confirm that if we look at the -- this consolidated financial statistics, you'd confirm that this provides a ten (10) year overview of the Corporate -- of the Corporation's performance?

MR. VINCE WARDEN: Yes, it does.

MR. MICHAEL ANDERSON: And that the time period it covers is the fiscal year ending 1994 through the fiscal year ending 2003?

MR. VINCE WARDEN: Yes.

MR. MICHAEL ANDERSON: And to assist my understanding of the sequencing, the last General Rate increase approved for the Corporation, occurred in the fiscal year ending 1997, is that correct? April 1st, 19--

MR. VINCE WARDEN: Well, it would be the fiscal year ending 1998, so April 1st, 1997 was the last rate increase to -- to residential customers.

MR. MICHAEL ANDERSON: Thank you, Mr. Warden.

MR. VINCE WARDEN: And small commercial customers, sorry.

MR. MICHAEL ANDERSON: And just for the record, Mr. Warden, the magnitude of those rate increases was respectively for each class?

MR. VINCE WARDEN: The most recent -- or the increase is 1.3 percent, I believe, on average.
MR. MICHAEL ANDERSON: Thank you, Mr. Warden.
And using the revenues from that increase, as well as revenues from all other sources, the -- the corporation was able to post net income for its consolidated electric and gas operations for the remainder of the period of this table?
MR. VINCE WARDEN: Yes.
MR. MICHAEL ANDERSON: And for clarification, Mr. Warden, the consolidated operations began -- or were reported first in the year ending 2000. Is that correct?
MR. VINCE WARDEN: No. They're consolidated operations for the entire period. The only significance to the year 2000 was the -- that's the acquisition of -- reflects the acquisition of Centra Gas in that year.
MR. MICHAEL ANDERSON: Thank you, Mr. Warden. That was the clarification I was seeking.
If we look at the line noting net income for the fiscal year 1998 and beyond, through 2003, the presentation of that income for each of those years, for the years ending 1998 through 2003, are -- is primarily

represented by the net income of the electricity operations. Is that correct?

MR. VINCE WARDEN: That's correct.

MR. MICHAEL ANDERSON: And I use the term, primarily, but it's essentially substantially all of the net income reported in those years. Is that correct?

MR. VINCE WARDEN: I think you're point being that the gas operations did not contribute significantly to the bottom line and I agree with that.

MR. MICHAEL ANDERSON: That's all I -- I'm seeking, Mr. Warden. Thank you.

And recognizing that it speaks to the thinking of the Crown, is it these -- are these net revenues the same opportunities referred to in the May 28, 2001 press release by the Government of Manitoba, as providing the foundation for the uniform rate?

MR. VINCE WARDEN: Well, I wonder if you could be, you know, a little more specific with your question?

MR. MICHAEL ANDERSON: Sure, Mr. Warden.

That in looking at the record of strong performance by the corporation in terms of its net income, that, that provided justification to the Government to establish the uniform rate?

MS. PATTI RAMAGE: Mr. Chair ...?

THE CHAIRPERSON: I believe that only the Government could answer that, Mr. Anderson.

MR. MICHAEL ANDERSON: I agree with you.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: But I would then say, however, it's a -- it is a matter of -- of fact that in order to implement the uniform rate, there was a procedure developed and applied by the corporation to apply, what we now describe as a net export credit, to the customer classes arising from these revenues.

MR. VINCE WARDEN: No. No. There was no change in the way costs or revenues were allocated as a result of uniform rates. The only implication was that there was a -- a $14 million reduction in total revenues.

And I think the point of the press release, without getting into the thinking behind it, was that Manitoba Hydro with its net income was able to absorb that $14 million without passing further rate increases onto customers.

MR. MICHAEL ANDERSON: And that was what I was going to ask next. That the strong performance of the corporation enabled Manitoba Hydro to implement the uniform rate legislation without requiring rate increases. Is that correct?

MR. VINCE WARDEN: That is correct, yes.
MR. MICHAEL ANDERSON: Thank you.
In following along the core rationale for the Application, as we discussed earlier, and trying to understand better.
The requirement for the rate increase as well as what we might expect in the future. If I could ask you to turn to Volume II, Electrical Forecast, MH03-01, which is numbered page 32 within that tab, please.
I hope I've described that document correctly, Mr. Chair.
MS. PATTI RAMAGE: Could you repeat the reference, Mr. Anderson?
MR. MICHAEL ANDERSON: I would be happy to. It's Volume II of the Rate Application, Appendices -- it's marked as Tab, Electricity Forecast MH-03-01, the page is numbered at the lower right hand corner, 32.
MS. PATTI RAMAGE: Thank you.
MR. MICHAEL ANDERSON: It's the IFF-03-1, for Electrical Operations Projected Operating Statement.
MR. BOB PETERS: And, Mr. Chairman, to assist Mr. Anderson, I think that can also be found at Tab 2 of the book of documents PUB counsel circulated, if it's handier for those to reference, if Mr. Anderson can just confirm that.

MR. MICHAEL ANDERSON: That's correct, Mr. Peters, and I appreciate the clarification, thank you. And you're -- by the way, I wanted to compliment all parties for assembling books of documents, and hope that people bear with me as I proceed with my loose sheets that were given numbers, thank you. It's Tab 2 of PUB -- of Board Counsel's book, Mr. Mayer.

(BRIEF PAUSE)

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: Do you have the -- the reference?

MR. VINCE WARDEN: Yes, we do.

MR. MICHAEL ANDERSON: Now, I just wanted to make sure that I understand the references correctly. If I look, for example, just keeping the loose sheet, the page 94, the extract of the annual report together with -- and then comparing that to the net income line on this exhibit, we don't see any projection or forecast by Manitoba Hydro to achieve a net income similar to that achieved for several of the years in the ten (10) year consolidated financial statistics page in the Annual Report, is that correct?

MR. VINCE WARDEN: It's not in the IFF

document you had before you, that's correct. Until we get to very later in years, you can see by the time we get out to 2012, we're back into the $100 million net income range, up to one forty-three (143) and one ninety (190). All very dependent of course on water conditions during that period of time.

MR. MICHAEL ANDERSON: Thank you, Mr. Warden.

(BRIEF PAUSE)

MR. MICHAEL ANDERSON: If I also read the Table together -- correctly, except for the year ending 2005, are all the projections for the achievement of net income dependent on the implementation of a general customer rate increase?

MR. VINCE WARDEN: Yes, that's what's built into the forecast. However, as indicated previously in these Proceedings, we -- no decision of Manitoba Hydro to apply for a rate increase is made, until we're actually confronted with conditions of the time. At this time of course we're only apply for the two (2) years, 2004/05, 2005/06.

MR. MICHAEL ANDERSON: Thank you, Mr. Warden. I do appreciate that. It was just the -- the

comparison being drawn is that the performance indicated in the consolidated financial statistics, following the year ending 1998, was done without the requirement for an additional rate increase, correct?

That is the achievement in net income --

MR. VINCE WARDEN: That is -- that is correct, yes.

MR. MICHAEL ANDERSON: But that for all years in the IFF, beginning with the year ending 2006, the achievement of net income is dependent on approval forward looking, based on your forecast of increases in general customer revenue, is that correct?

MR. VINCE WARDEN: Well, that is correct, however, that has to be really qualified, because if we were to back up and present an IFF, back in the late '90s and through 2000, we were projecting rate increases for those years as well, which we chose not to apply for because of the conditions of the time.

So, I'm just making the point that we'll reassess going forward what the conditions are, and make a determination of whether a rate increase is required.

The IFF is just one (1) look at the future, based on average water flow conditions, the conditions will vary from that, we know for sure.

MR. MICHAEL ANDERSON: It remains that at

the present moment in time, however, recognizing the forecast issues that have been discussed at some length here, this is your -- this remains your best picture of the forecast period?

MR. VINCE WARDEN: It does at this point in time, the forecast is updated annually. The test years of course is what we want to bring focus to.

MR. MICHAEL ANDERSON: Thank you, Mr. Warden. Again, doing a comparison between the ten (10) year statistics from the Annual Report, and going in this case, to the -- the line in respect of fuel and power purchased, on my extract page 94, of the 2003 Annual Report.

With the exception of the year ending 2003, which we've had considerable discussion about in respect of the requirement to purchase power related to lower water conditions.

Would you confirm that for the remaining nine (9) years of the period of record, that the fuel and power purchased ranged from $10 million in 1995, to a high of $71 million in the year ending 2002?

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

MR. MICHAEL ANDERSON: Thank you. And then if I turn to the fuel and power purchased line in IFF-03-01, the reference I referred to earlier, would you also --

would you also confirm that power purchases are being forecast to -- from a low in the year ending 2006 of $91 million to a high ending last year, the forecast period, year ending 2014, of $169 million?

MR. VINCE WARDEN: That's what's in the forecast, yes.

MR. MICHAEL ANDERSON: Would you please explain the reason why Manitoba Hydro is forecasting substantial fuel and power purchases through the forecast period, relative to the last ten (10) years of operations?

MR. VINCE WARDEN: Well, those power purchases are mainly to support export revenue, however, Mr. Surminski could probably give you a better answer than that, or a more detailed answer than that, if you need it.

MR. MICHAEL ANDERSON: That would be appreciated. Thank you.

MR. HAROLD SURMINSKI: Yes, that would be correct. In -- in recent years it has been economic to -- to purchase and use thermal -- our own thermal generation to generate export revenues.

MR. MICHAEL ANDERSON: I'm sorry, would you mind just repeating the last part of that answer please.

MR. HAROLD SURMINSKI: In many years the thermal generation can be imported in the off peak hours at low prices, and exported at non peak hours at higher

prices. So there is economy in -- in importing for export, creating energy by importing and exporting at high prices.

MR. MICHAEL ANDERSON: I just wanted to be clear, Ms. Ramage, whether that is in fact what is being forecast in terms of system operations over this period, or whether that's something that might happen? That's why we asked for the answer to be repeated.

Is the scenario you've just described, what these costs represent?

MR. HAROLD SURMINSKI: Yes, they're representative of eighty-six (86) different flow conditions. They come from my area, we simulate the eighty-six (86) different possible stream flow conditions, and in various flow conditions, there's different levels of -- of imports required, in the very low flow and lower ten (10) percentile flows, imports and purchases are required because the -- the hydro system is not producing, but say in the remaining 90 percent of the time, there is economy in -- in purchasing and running thermal for export purposes.

MR. MICHAEL ANDERSON: Thank you. And just so that I'm clear and perhaps it has been asked and answered. I was interested in the eighty-seven (87) simulations question. And if you -- while we're working

on that, if you don't mind please, turning to PUB-MH1-28, in which this matter was responded to.

MR. HAROLD SURMINSKI: There are many parts to this. Do you have a (a) or a (b) or a (c)?

MR. MICHAEL ANDERSON: I -- I beg your pardon. Yes, of course. It's PUB-MH-I-28D.

MR. HAROLD SURMINSKI: D?

MR. MICHAEL ANDERSON: D as in Delta, thank you.

This response provides similar to the discussion that we've just had, a narrative describing how Manitoba Hydro arrives at flow related production revenue and costs for the purposes of developing an -- an IFF. Is that correct?

Would this be -- would this process be applicable to the development of an IFF?

MR. HAROLD SURMINSKI: Yes. And it's a combination of -- of the first two (2) years that are done by Mr. Cormie's group and -- and the remaining years that are under my responsibility.

MR. MICHAEL ANDERSON: Thank you. And I know that Mr. Peters and others have explored this, but, as I understand this, if I could tie it to the IFF document that we're reading.

The first two (2) years essentially

incorporate Manitoba Hydro's expertise and best understanding of what it sees in the real world. Is that correct?

MR. DAVID CORMIE: The -- the first year is what we expect the likely outcome to be. There's uncertainty there.

In the second year, our method use -- uses median influence to reservoirs and -- and that's not because we -- we know that there'll be median flows, that's just the most likely outcome.

MR. MICHAEL ANDERSON: Thank you. And then in the following years, it's described in this response to PUB-1-28 Delta (D), that there's a run of eighty-six (86) simulations.

Do you make a determination which of those simulations is most appropriate for the purpose of determining the remaining years of the IFF?

MR. HAROLD SURMINSKI: We -- we assume that each of those have equal probability of occurring. So they each get an equal weight. So it's just an averaging of all eighty-six (86) consequences. The consequences of revenues and costs are what we average.

We do not use a single flow condition, we use the consequences of generation costs and export revenues for all eighty-six (86), and average those.

MR. MICHAEL ANDERSON: Thank you, that was very helpful and that's what I was seeking, whether it was one (1) sequence of the eighty-six (86) you chose, or -- that's very helpful, thank you.

Could you describe in -- and -- in a manner that we could relate to in terms of low, median and high average, where this average of the eighty-six (86) flows actually fits in?

MR. DAVID CORMIE: Maybe an example would help. Let's say there were three (3) flow cases. A low one (1), a median one (1) and a high one (1).

In the high case, let's assume that there's enough hydro energy that no imports are required. So one (1) of -- one (1) of the results is a zero.

Under the median flow case, there's enough hydro again that there is no imported energy required. So now we have two (2) zeros.

And let's say in the third case, it's a low case. And you require ten (10) units of -- of purchase power.

So now you have three (3) numbers. Two (2) zeros and a ten (10). The average of those is 3.3. So in the IFF we would put in 3.3, not -- not a zero, not a -- a ten (10), but the average of the three (3). And so that's -- it's -- that's the average.

So in the case of all eighty-six (86), we go through that and we get eighty-six (86) different numbers for power purchases. We average those as our power purchase costs and that's what goes into the IFF.

In the same way we have eighty-six (86) possible outcomes for export revenue. Hence the average of those eighty-six (86) revenues that goes into the IFF and the same thing for thermal costs and the cost of burning coal and natural gas at our generating stations. It's the average.

So it's not trying to represent any single one (1) event, it's just the average of all possible outcomes.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie. And the eighty-six (86) -- so essentially you run your model and that's the one -- the word that I've seen it referred to in the transcript and I have -- I'll stop for a moment right there and just ask, what do you internally describe this model as? What's the name that you give it?

MR. HAROLD SURMINSKI: The acronym is SPLASH, S-P-L-A-S-H for simulation program for long term analysis of system hydraulics.

MR. MICHAEL ANDERSON: Thank you. And this model has input into it the flow characteristics of

each of these eighty-six (86) years of record of stream flow; that's correct?

MR. HAROLD SURMINSKI: Yes, the input is the unregulated inflows into the system. So the model regulates -- these are inflows from basically at our borders, inflows that we have no control over. So we're given flows on the Saskatchewan River at the Pas, for example and we input that into the model.

The Winnipeg River as it flows into Manitoba, we input that and local flows, similarly, Churchill River Diversion we model that as -- as an inflow into our system. So the unregulated inflows are input and the model decides on -- on what is the best way to regulate these inflows.

It operates Lake Winnipeg. It simulates the operation of Lake Winnipeg, Cedar Lake, basically those two (2), and Southern Indian Lake is also modelled.

MR. MICHAEL ANDERSON: Thank you. What I'm searching for, I suppose and -- is what -- is there a -- a flow chart or document that describes in a simple visual form how this model functions and what its core inputs are? I have another specific question that I could ask if it would be of assistance on this, Ms. Ramage.

MR. HAROLD SURMINSKI: There were some documents in the CEC, The Clean Environment Commission,

process. There were many questions about our SPLASH model and we did provide some responses in that process.

MR. MICHAEL ANDERSON: Mr. Mayer, of course, would be intimately familiar with this as I recall the transcript as you referred to the other place. Is there a convenient exhibit that could be incorporated into the record before this proceeding describing how this process works?

MR. HAROLD SURMINSKI: There's not a single one. It would be a combination of two (2) or three (3) or five (5). It's not a flow chart. It was all in -- in text. We did not provide -- I think you -- you had asked if there was some graphic or a flow chart. There is -- there was nothing like that in that process.

THE CHAIRPERSON: Mr. Anderson, are you attempting to develop the thought -- or to -- how do you put it, get rid of the thought that it's possible that there's some bias in the forecasting model approach that they take?

MR. MICHAEL ANDERSON: Well, to assume that there's some bias would require that there be additional understanding on how it's assembled and what we don't have before us in this proceeding is a -- is a description of the components that go into it.

We've been -- the evidence is that there's

a rate application before this Board based on its forecast of revenues including ex-provincial sales and operating revenues which also lead to power purchases and so on and so forth.

It's a central element that's driving the flow related production revenue and costs estimate that are in the IFF and I, for one, would like to have a better understanding of how these eighty-seven (87) historic years of stream flows are assembled.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: My next question would be -- well, I'll just do the narrative now, is that obviously the characteristics at each of the generating stations in the system that are hydraulic, need to be incorporated into some way in respect of the stream flows and so forth, and all of that produces numbers in the forecast revenue.

Is that a general description of the system, Mr. Surminski?

MR. HAROLD SURMINSKI: Yes, the characteristics of not only the generating stations, but the reservoirs, so that you had the storage characteristics, the -- the rating curve, the ability to release water, all those must be modelled, as well as the

export market.

The -- the expected prices in on peak hours, off peak hours, because the model balances decisions now, should -- should any excess and surplus energy, should it be sold this month. First of all, the model operates on a monthly time step. Should the energy be sold this month or -- or be kept in storage for later use.

So, there's always a decision being made, what's -- what's the best decision to -- to make in terms of storage and -- and retaining water for future use.

MR. DAVID CORMIE: Mr. Anderson, all that -- at the -- at the CEC Hearings, we went through extensive descriptions of our modelling, and -- and that was all tested, if -- if that would be helpful, you could go to that record and -- and you'll see that there was -- the result of that was that no one brought to that Hearing, any evidence to say that our modelling was not sufficient to do the job.

In that identical model, those identical exceptions are used in this Application.

MR. ROBERT MAYER: Just to add to that, Mr. Cormie, if I recall correctly, as I recall the notes of some of you -- of at least one (1) of your meetings that you had with the experts hired by Pimachicamak (phonetic),

they found your modelling process to be, as I recall the word, reasonable.

MR. DAVID CORMIE: I believe they accepted the outcomes, yes.

THE CHAIRPERSON: I think it would be quite appropriate if you could assemble some extracts from the Hearing that are relevant to the description of how the model is developed and worked, and file it as an exhibit.

Would that be acceptable to you, Mr. Anderson?

MR. MICHAEL ANDERSON: That would. I have at this stage, no assumptions or presumption of whether it's suitable or -- or otherwise, because of course I don't have the material to review. So, that would be very helpful, Mr. Chair, thank you.

THE CHAIRPERSON: Like it is clear that the -- some of the evidence that's directly relevant to the Rate Application with respect to the forecasts. And the forecasts, we've heard considerable testimony of how they're derived.

And if we have at the other set of Hearings, you know, a good description of it, it would probably be quite useful to have it introduced as evidence here.

MR. MICHAEL ANDERSON: That would be

helpful, and I'm sure that the Vice-Chair will correct me if I'm misappre -- don't understand the procedure correctly, but my understanding was a joint hearing held between the Clean Environment Commission and the Public Utilities Board of Manitoba, and while there hasn't been a clear comment on the applicability of the record and the other place, to this body, if, in the record, there was available for review, that would be helpful, just to get some thinking on.

Leaving that right there for the moment, the response that you've just requested or suggested, would be suitable. Thank you, Mr. Chair.

THE CHAIRPERSON: Well, for the purposes of the Board and fully informing us when we go into our deliberations, I think there's -- it would be useful to have that there, because I can't see it causing any damage to our developing view of the issue. And I wouldn't like to think that there was something out there that we weren't aware of that could be helpful.

And it sounds like that you feel that you can pull evidence from the other Hearing that -- together, that would provide us that view, and I think that would be helpful. It might save a lot of time at this Hearing.

MR. HAROLD SURMINSKI: Yes, I could do that. I'm very familiar with the material, so I could do

that quite easily.

MR. MICHAEL ANDERSON: That would -- that would be very helpful.

--- UNDERTAKING NO. 39: For Mr. Anderson to assemble some extracts from the Hearing that are relevant to the description of how the model is developed and worked, and file it as an exhibit.

THE CHAIRPERSON: I think the -- the question we're driving at was PCNMH-NCN-1. The question was provide all documentation on the SPLASH model including operating instructions, internal reviews, model documentation.

And a description of when the model was developed and which studios the model has been used in. And an answer was basically provided. So I think you clearly have the capability of -- of responding.

MR. MICHAEL ANDERSON: And, Mr. Chair, if I might. I'd like to reserve the opportunity to cross-examine on that material when it's present. Recognizing that there is considerable volume material and it's been summarized, but I would just like to make note of that.

THE CHAIRPERSON: Fair enough.
MR. MICHAEL ANDERSON: Thank you.
I suppose one (1) of themes, although it's in error --
THE CHAIRPERSON: Mr. Anderson, I just want to point out --
MR. MICHAEL ANDERSON: Thank you.
THE CHAIRPERSON: -- we're very cognizant of the fact that there's the CEC Hearings that have been going on and a lot of evidence is being entered there that may have some bearing here. And we're reluctant to spend any more time than is required for us to develop a fair view of it. We don't want to get into a lot of repetition if we can avoid it.
So I think this -- this concept of -- of moving evidence across, I think might be useful.
MR. MICHAEL ANDERSON: I agree that -- that was part of my earlier commentary. That I'm -- I'm very comfortable with the Board's work in process to bring across, to adopt, if that's even the correct term, evidence that appeared and was -- there was -- for which there was attribution, cross-examination and so forth.
I'm comfortable to have that body of evidence brought forward, subject only to asking a limited number of questions relevant to the Application on that

information.
THE CHAIRPERSON: Fair enough.
I have some good news for us, I believe, apparently the fire drill has been cancelled.
Proceed, Mr. Anderson.
MR. MICHAEL ANDERSON: Thank you very much, Mr. Chair.

CONTINUED BY MR. MICHAEL ANDERSON:
MR. MICHAEL ANDERSON: In a vein similar to my questions about SPLASH and it's relationship to the forecast. Some of the things that would emerge from that will come, of course, when the materials are filed.
But I'd like to now just turn our attention to getting a -- a better understanding of how the balancing between reservoirs, that you've referred to briefly, takes place.
And specifically, Mr. Cormie, on Tuesday, referred to -- on the 15th, transcript of the 15th. The process of maximizing the operations of the utility in respect of those opportunities.

(BRIEF PAUSE)

MR. MICHAEL ANDERSON: And the transcript

reference -- everyone, Mr. Chair, is June 15th at pages 330 and it begins to -- at lines eight (8) through fifteen (15). Mr. Cormie's reply to Mr. Peters was:

> "And so the -- this update to the operating plan is a continual process and that operating plan is generated using computer models to maximize the profit of the corporation over the planning period.
> And that involves the use of reservoirs to move water from one (1) season to the next, recognizing the ability of our reservoirs to move and purchase off peak power and sell it on peak.
> And so that process is continually maintained and updated and takes full advantage of our capability in the marketplace."

And just -- the -- this is the model that we're describing essentially is summarized by that statement, Mr. Cormie. The use of -- the application of the model within the corporation.

MR. DAVID CORMIE: That's the -- the process that we follow. Modelling is one (1) -- one (1) part of that, yes.

MR. MICHAEL ANDERSON: Thank you.

To understand the -- the ability to take advantage of the characteristics of the reservoirs, and including the movement of resources from one (1) season to another, I had provided yesterday, and the Chair was kind enough to provide it with MKO-3.

But as Mr. Mayer noted, an essentially identical set of maps that combines MKO-3 to a great extent, appears in Manitoba Hydro's reply to PUB/MH-I-82-A, Alpha. I just wanted to -- as it went by yesterday, I just wanted to make note of that.

Mr. Cormie, page 2 of 4 of that reply, identifies the water sheds that supply the hydroelectric systems at Manitoba Hydro, is that correct?

MR. DAVID CORMIE: Yes.

MR. MICHAEL ANDERSON: And in -- in summary, we have four (4) major watersheds that provide resources to the Manitoba Hydro system?

MR. DAVID CORMIE: Yes.

MR. MICHAEL ANDERSON: And that the -- the drainage basin from which all of these water -- that contains all of these watersheds, involves waters from four (4) Provinces and two (2) states in the United States?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: And just to summarize the effect of this, that all of the water that's in -- that is -- all the precipitation that falls within the polygon that's identified in the first page of MKO-3, all eventually -- that is that isn't consumed, evaporated and so forth, flows past the lower Nelson River Plants of Manitoba Hydro?

MR. DAVID CORMIE: With the exception of the riparian flows that leave Missi Falls.

MR. MICHAEL ANDERSON: And to be clear about that, those are the remaining outflows from Missi Falls into the Churchill River, that are not otherwise diverted, is that correct?

MR. DAVID CORMIE: That's correct. And in addition to that, there are some lakes in Northern Saskatchewan that have two (2) outlets, one (1) into the Churchill River, and one (1) into the Mackenzie River Basin, so not all the water flows down the Churchill and Nelson Rivers, no.

MR. MICHAEL ANDERSON: Thank you for that clarification. And the watershed that you were talking about with dual flows, I -- I believe is Walliston Lake, is that correct?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: Thank you. And --

and Walliston Lake, most familiar to us in Manitoba, discharges through the Cochrane River, into the north end of Reindeer Lake, is that correct?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: And the characteristics of climate, topography, et cetera, provides a considerable variability in terms of precipitation and flow regimes through these four (4) watersheds, across this region, is that correct?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: And to try to understand the balancing a bit, and I'm keeping my finger on the dependable generation that was at page 2 of PUB/MH-I-82, I'd like to -- everyone if possible please, to turn to the large foldout green map, of the Manitoba Hydro system that is attached following page 4 of that same response.

There's one (1) up on the wall behind Mr. Peters, but it's entitled, Hydroelectric Power in Manitoba, and it's the final document attached as part of the Manitoba Hydro Response to PUB/MH-I-82-A.

(BRIEF PAUSE)

MR. MICHAEL ANDERSON: Does everybody have

-- thank you, Mr. Chair. Now, in looking at these facilities they -- the items that are indicated in red are developed and existing facilities that are now operated by Manitoba Hydro; is that correct?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: And of these facilities, some of them have a dual purpose as a control structure as well as a generating station; is that correct?

MR. DAVID CORMIE: The Missi Falls is a dual structure. It has a generating station as well as a control structure. There is no generating station at Notigi.

And I believe all of the other --

MR. ROBERT MAYER: That's not right, Mr. Cormie.

MR. DAVID CORMIE: Missi Falls has a generating plant at the station.

MR. ROBERT MAYER: They have a generating station there?

MR. DAVID CORMIE: Yes, they do. And it's a house unit there. We provide local station service there. So I believe the only facility that is just a pure control structure is the Notigi Control Plant.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie. I'm trying to -- in terms of the inflows that Manitoba has the ability to control in its system reservoirs and so on, work with those first, the three (3) primary reservoirs that Manitoba Hydro operates are the four (4) bay behind the Grand Rapids Generating Station at Cedar Lake, Lake Winnipeg controlled by the Jenpeg Control and Generating Structure and Southern Indian Lake controlled by Notigi Control Structure; is that correct?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: And off of this map, and I realize that they are operated and constructed by others but do have an influence on Hydro's system, you would confirm that the control structures upstream of the Lake Winnipeg plants also -- their operations provide for regulation of flows and benefit Manitoba Hydro's operations?

MR. DAVID CORMIE: That's correct. There are reservoirs in Ontario, Saskatchewan and Alberta operated by other authorities whose affect -- whose -- whose operation affect the supply of water and the timing of water to Manitoba.

MR. MICHAEL ANDERSON: And just to pick up on a series of questions I was asking earlier, although

you do not control these structures, your modelling process does incorporate information from these other authorities and their reservoir operations?

MR. DAVID CORMIE: In the operational planning models, we -- we operate -- we anticipate the operation of the upstream reservoir operators and are in constant contact with those authorities to ensure that we understand what to expect with regards to their operation.

From a long term planning perspective, from the SPLASH modelling perspective, we use present use regulation and -- and they're -- they're -- they're a constant and are not changed in Manitoba Hydro's modelling.

MR. MICHAEL ANDERSON: Could you please describe what you mean by "present use information"?

MR. DAVID CORMIE: Well, we have -- we have the historical flow records that go back to 1912, but some of those facilities weren't in place in 1912. They've been constructed since that time. And they -- their operation now would change the way the 1912 flows would arrive in Manitoba.

And so we'd refer to present use flows to ensure that we're -- we're recognizing that those -- that those new facilities are in place.

MR. MICHAEL ANDERSON: Just for my

understanding. Summarized it means that, you have a flow record dating back to 1912, but where a facility has modified the water regime, you've incorporated that into your flow modelling for flows entering Manitoba?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: Thank you.

And we've discussed -- there's been some discussion already of the operation of -- of Lake of the Woods and -- and the Ontario reservoirs and it's affect on Winnipeg River.

I wanted to turn a bit to the Churchill system. It -- are the in-flows into Manitoba substantially affected by the operation of Sask Power's facilities -- the White Sand Dam -- the White Sand control structure on Reindeer Lake at the -- on the Reindeer River at the outletted Reindeer Lake?

MR. DAVID CORMIE: They are, yes.

MR. MICHAEL ANDERSON: And Sask Power and it's operations planning, as you've indicated, are one (1) of the authorities that you stay in constant contact with about their operations of that facility?

MR. DAVID CORMIE: And the Saskatchewan Water Corporation.

MR. MICHAEL ANDERSON: In respect of all waters crossing the boundary from Saskatchewan into

Manitoba?

MR. DAVID CORMIE: Saskatchewan Water Corporation determines the operational plans for the reservoirs in Saskatchewan, having consulted with Sask Power.

MR. MICHAEL ANDERSON: Using very broad numbers, Mr. Cormie, and if you wish to provide more specificity, it's welcome.

But just for the Board's benefit and for mine, I'd like to confirm that, of the flow of the Churchill River, for example, Pukatawagan in Manitoba. That on a broad annual basis, approximately 50 percent of the flow of the Churchill River comes out of the Reindeer Lake system. Is that correct?

MR. DAVID CORMIE: Of the flows that arrive on the Churchill River into Manitoba, two-thirds (2/3) come from Saskatchewan, and one-third (1/3) is local into Manitoba.

And then of that two-third (2/3) that arises, upstream of Manitoba, one-third (1/3) comes from the Ranger River Watershed and the other third (1/3) from the upper Churchill.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie.

And so one (1) looking at flow records

would just take that broad divisor and sort out what the flow contribution would be from Reindeer Lake, a straightforward matter to do?

MR. DAVID CORMIE: Over a very long term, yes.

MR. MICHAEL ANDERSON: Thank you.

And just in terms of a matter of operational relations, and it's just -- just to -- to clarify in terms of that the flows coming from the Churchill River and of course from the Reindeer River system, are flows that contribute to the waters that are stored in the reservoir at Southern Indian Lake.

Is that correct?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: And those waters are then regulated in terms of their eventual release by the Notigi control structure?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: So the operations of Sask Power, in terms of its -- of the White Sand Dam and Island Falls, have a -- are of considerable interest to Manitoba Hydro?

MR. DAVID CORMIE: Yes, they are.

MR. MICHAEL ANDERSON: And -- and just also -- also just to complete the record on that

relationship. Is it correct that all of the generation from Island Falls is isolated from the Saskatchewan system, except for the transmission interconnection of Manitoba Hydro?

MR. DAVID CORMIE: A portion of the -- of the Island Falls output is used to serve Northern Saskatchewan load, what is surplus is -- is transmitted into Manitoba, wheeled through Manitoba and returned to Saskatchewan through our southern interconnections with Sask -- Saskatchewan.

MR. MICHAEL ANDERSON: I -- I saw the engineer being specific in response to my question, when I talk about all of the load, I appreciate that, Mr. Cormie. There are loads north of Island Falls through the Lake Athabasca Region, to the mining companies and so forth up there, is that correct?

MR. DAVID CORMIE: Yes, there -- there's load there, yes.

MR. MICHAEL ANDERSON: Thank you. And the interconnection at that point, is as I understand now, a 230 kV transmission line, that was co-constructed in 1983 between Sask Power and Manitoba Hydro?

MR. DAVID CORMIE: I'm not familiar with those details, no.

MR. MICHAEL ANDERSON: Nothing

substantively turns on that, I just wanted to confirm that, if it could be that it's a 230 kV transmission line. I'll proceed.

So, we have the inflows to the -- on -- on the Churchill River system, which of course are then diverted by the Missi Falls control structure, forming the present reservoir at Southern Indian Lake, which is then controlled by the Notigi control structure and its outlet, is that correct?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: Coming again from the west, another major system, the North and South Saskatchewan Rivers, combine into the Saskatchewan River that flows by the Pas, Manitoba.

Its natural outlet is at Grand Rapids, and that is now controlled by the Grand Rapids Generating Station, is that correct?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: And similar to what we have in the flows on the Winnipeg River, the Red River watershed, which would then include the Assiniboine River in the southern prairies, at the present time flows primarily unregulated into Manitoba, but is in the end regulated by entering Lake Winnipeg, to be controlled by the Jenpeg Control Structure, is that correct?

MR. DAVID CORMIE: That's correct.

(BRIEF PAUSE)

MR. MICHAEL ANDERSON: Now, in terms of -- if you could work with me, help me on this. It's my understanding that there is an operational pattern that has developed through actual use between these major watersheds, these reservoirs and watersheds feeding them. There were two (2) that I'd like to refer to right now are Lake Winnipeg and Southern Indian Lake.

And looking at the operations of Manitoba Hydro, is it generally correct, that Lake Winnipeg is utilized to provide open water summer generation for the Manitoba Hydro system? In terms of that period of time in which it's most predominantly called to provide supply?

MR. DAVID CORMIE: The outflows from Lake Winnipeg, on the average, provide 7 percent of the water supply to the large Lower Nelson River Plants, so it -- it provides water year round.

MR. MICHAEL ANDERSON: On average, is the lake called upon more predominantly during the summer months, to provide supply to the Lower Nelson Plants?

MR. DAVID CORMIE: I don't know how to answer that question, I wouldn't characterize it that way.

The system is operated as a system, as an interconnected set of rivers and reservoirs, and Lake Winnipeg is the most important reservoir, it supplies -- it has the greatest storage capability. It has tremendous flexibility to accommodate all -- almost all changes that occur on the other reservoirs and rivers.

So, it's -- it's important summer and winter, it's -- it has some limitations, we -- we would like to have more, but it -- it is -- it is a vital asset for Manitoba Hydro's operations.

MR. MICHAEL ANDERSON: All right, thank you, Mr. Cormie.

MR. ROBERT MAYER: Mr. Cormie, just to clarify that, it's my understanding that there's some restriction on winter flow as a result of ice build up on the channels.

MR. DAVID CORMIE: That's correct. In the wintertime the outflow capability from Lake Winnipeg is reduced and the flows on the Nelson River are diminished as a result. And as -- and as a consequence we operate the Churchill River Diversion so that maximum diversion flows are available during the -- during those periods when outflows from Lake Winnipeg are restricted.

THE CHAIRPERSON: Mr. Anderson. If it's not too much of an interruption in your flow, we will take

a break now for ten (10) minutes.
MR. MICHAEL ANDERSON: That would be fine, Mr. Chair. And thank you, Mr. Mayer.

--- Upon recessing at 10:20 a.m.
--- Upon resuming at 10:40 a.m.

THE CHAIRPERSON: Okay, Mr. Anderson, you can recommence at your pleasure.
MR. MICHAEL ANDERSON: Thank you, Mr. Chair.

CONTINUED BY MR. MICHAEL ANDERSON:
MR. MICHAEL ANDERSON: I had -- before we resume where we were with the ice constraints at the north end of Lake Winnipeg, and I thank Mr. Mayer for that, that was my next question exactly, hence my earlier question about open water operations in the lake.
I just wanted to clean up one matter that, from my discussion, and I apologize, of the extract from the annual report of consolidated financial statistics and the reference to the IFF. It's a brief question, I think.
We had -- I was discussing generally that the fuel and power purchased in the ten (10) years of the historic record presented in the annual report are

substantially less than those that are being forecast in the IFF; that's correct?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: And there was an explanation discussion about what the forecast in the IFF was, I accept that. Why were the same type of thermal operations not being engaged in and incurring those expenses in the ten (10) years of historic record?

MR. DAVID CORMIE: Several factors have contributed to the increase in power purchases. Firstly, Manitoba load continues to grow and so more and more of our hydraulic energy is being consumed in the province and less is available for sale in the on-peak markets into the United States.

But those opportunities still exist in the United States and -- and so Manitoba Hydro increasingly purchases more and more off peak power in order to continue to reap the margins in the on peak. And -- and that's a result of -- of load growth.

Then the second factor is the on peak/off peak differential has grown tremendously over the last ten (10) years. On average it used to be five dollars ($5) a megawatt hour. And so there was limited opportunity to buy off peak power before it became uneconomical to resell it in the on peak market with only a five dollar ($5)

spread between on and off peak.

Today the margin between on and off peak can be forty (40) or fifty dollars ($50) a megawatt hour. And so there's greater opportunities to buy more and more expensive off peak power, and to still reap a margin in the on peak.

And -- and so that -- that's the reason why there is forecast to be continued growth in -- in power purchases.

MR. MICHAEL ANDERSON: Thank you.

(BRIEF PAUSE)

MR. ROBERT MAYER: Just arising from that, Mr. Cormie. Having heard what you said, I would have expected to see a reduction in those power purchases, 2011 forward, assuming construction and -- well, assuming Wuskwatim in service, why would they continue to grow after that, in light of the fact that you would have expected two hundred (200) extra megawatts coming on line in 2010 should have affected your power and fuel purchases?

MR. DAVID CORMIE: I'm sure, Mr. Mayer, that there is some affect, but because Wuskwatim is so small, and we will concentrate the output of Wuskwatim

into the on peak hours, and -- and almost all Wuskwatim output can be sold in the on peak hours.

And so -- but there's still additional tie-line space available in the on peak hours, that we can continue to purchase off peak power. So, I'm sure the affect is there, it's just -- it's just a very small affect, and -- and just look at the number here and it's just not readily obvious from -- from the numbers, that's all.

(BRIEF PAUSE)

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: So then just proceeding to an understanding, Mr. Mayer clarified of course that there is -- there are ice constraints at the end of the open water season that limit the outflows from Lake Winnipeg, is that correct?

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

MR. MICHAEL ANDERSON: Thank you. In respect of the Churchill River Watershed, I just in contrast, I had wanted to clarify that it's generally Manitoba Hydro tends to store water in Southern Indian Lake, during the open water summer season, for releases

later in the fall, is that correct?

MR. DAVID CORMIE: Our objective with the operation of the Churchill River diversion, is to have the Southern Indian Lake Reservoir, as full as possible, so that releases in the winter down the diversion route, can be maximized, and -- and arrive at the Lower Nelson to offset the flow reductions that we experience, as a result of the ice restrictions at Lake Winnipeg.

MR. MICHAEL ANDERSON: Thank you. It's that sort of inter-seasonal balancing that I was interested in confirming for the record.

Similar to my question about the changes in thermal though, I did want to go back and clear up one (1) matter at PUB/MH-I-82-A or Alpha, which of course there's a map at page 1 of 4, that's essentially similar to MKO-3, but I wanted to turn your attention to both the map at page 1, and the table at page 2.

MR. DAVID CORMIE: I have those.

MR. MICHAEL ANDERSON: Thank you.

My question earlier was about the number of water sheds. The MKO-3 and the map on PUB/MH-I-82 identifies, of course, that there are six (6) water sheds, including the lower Churchill. But in terms water sheds with power -- that supply power to the Manitoba Hydro system for production purposes there are -- there are five

(5), correct?

MR. DAVID CORMIE: We -- we combine the Nelson River local and the Red River water sheds as one (1) because they are in effect controlled by the Jenpeg control structure.

You can continue to breakdown the water shed map into smaller and smaller basins. For example, you could separate out the Assiniboine River water shed, if you chose to.

MR. MICHAEL ANDERSON: I understand. But for practical purposes, the Assiniboine is part of the Red River system. Correct?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: Without it being a great deal of work, is it possible to provide the dependable generation supply and average generation supply numbers for Nelson River local and Red River? Just split that for this table?

MR. DAVID CORMIE: We -- we do not have Red River flows going back to 1912 and we -- whereas we do have the total unregulated in-flow into Lake Winnipeg which includes the Red River local back to 1912. So it would only be a -- a -- an approximation.

Mean annual flow into Lake Winnipeg from the combined Nelson River -- the Lake Winnipeg local and

the Red River is around seventeen thousand (17,000) cubic feet per second, of which the Red River makes up on average about eight thousand (8,000). So, if you used 50 percent that would probably be a fair approximation.

MR. MICHAEL ANDERSON: Thank you, that's helpful for the purposes I had in mind. So just divide the numbers that you see there. Thank you.

My purpose in that was just simply to put some concept of contributions from the water sheds identified on the map and their -- and Map 1, Water Shed Locations, MKO-3. So that helpful. Thanks.

Now, in -- in turning to what is now MH-28, which was an undertaking response yesterday, showing the -- it's a revision of Manitoba Energy and Reservoir Storage. It's a very interesting discussion and I thank you for that.

And also if you wouldn't mind to PUB/MH-I-29A.

It's from spending too much trying to confirm my airline reservation correctly with the flyer numbers.

That's PUB/MH-I-29A, or alpha.

(BRIEF PAUSE)

MR. MICHAEL ANDERSON: And -- and without -- having no intention to go over the discussion that you'd had yesterday. I just wanted to confirm for my own purposes that the values indicated here are representative of all of the reservoirs contributing water to the Manitoba Hydro system.

So, water energy in storage includes in storage outside of the Province of Manitoba beyond the Manitoba Hydro immediate system; is that correct?

MR. DAVID CORMIE: It includes reservoirs regulated by Manitoba Hydro and by others.

MR. MICHAEL ANDERSON: Thank you. Now, there was a discussion about the calling upon the reservoir to provide resources which speaks for itself in the record.

I just wanted to refer to transcript page 397 of June 22nd, Mr. Cormie, and in reply to Ms. McCaffrey's comments in terms of the actual performance of the system you had indicated in discussion of the reduction of two thousand (2,000) terawatt hours, if I have the numbers on that right, that it was a financial issue more than a reliability issue that was in the minds of the Corporation as it was doing its reservoir planning for the -- the year ending 2004?

MR. DAVID CORMIE: What's the reference in

the transcript, sir?
MR. MICHAEL ANDERSON: Yes, I have it at page 39 -- sorry 937, January 22nd -- June 22nd. Going back in the Diesel Hearing. June 22nd, page 937.
MR. DAVID CORMIE: And could you ask your question again then?
MR. MICHAEL ANDERSON: Sure. I was -- you'd indicated that the additional use of two thousand (2,000) terawatt hours at the end of 2003/04 approximately was as a result of the financial consideration rather than a reliability issue so the consideration being given into all of the operations here is for financial dispatch -- optimal financial dispatch of the resources available?
MR. DAVID CORMIE: If you compare energy in reservoir storage at April 1st, 2004 to April 1st, 2003 there's two (2) terawatt hours additional water in reservoir storage on April 1st, this year.
And we've gone over this yesterday and did you want me to repeat all that again?
MR. MICHAEL ANDERSON: Absolutely not, Mr. Cormie. Where I was going is if you look now at PUB/MH-I-29A is what appeared to be a question in terms of Hydro being able to call more deeply upon its reservoir storage, in part, responded to by that reply in respect of the addition of combustion turbines in Brandon, providing a

dependable energy capacity of twenty three hundred (2,300) Gigawatt Hours and import capability increasing, theoretically by four thousand (4,000) Gigawatt Hours for a total increase in dependable capacity of six thousand three hundred (6,300) Gigawatt Hours?

MR. DAVID CORMIE: And your question is?

MR. MICHAEL ANDERSON: Did this additional dependable capacity contribute to the planning decisions to place an additional call on energy in reservoir storage?

MR. DAVID CORMIE: That was a consideration at the end of fiscal year 2002/2003.

MR. MICHAEL ANDERSON: And, of course, the calling on the increased import capacity resulted in an increase in purchased power costs?

MR. DAVID CORMIE: In fiscal year 2002/2003 it reduced the amount of power purchases necessary in the months of February and March.

MR. MICHAEL ANDERSON: And in other months? That's the applicable period of time you're saying, that these faci -- these resources referred to at PUB-MH-I-29A were called upon?

MR. DAVID CORMIE: Those resources weren't called upon, but they were there to be called upon, should 2003/2004 be a drought year. And so we were able to come

into the spring to April 1st of 2003, with less water in reservoir storage, in the context of why reservoir storages were lower at that point in time than they were in the drought of '87/'88.

That -- that was the context in which the question was asked. Why was reservoir storage lower this year than -- in this year, than in that previous drought. And that was because we had additional dependable capability on the system, so that reservoirs could be drawn with no additional -- while maintaining the same reliability of supply risk.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie. In terms of understanding some of the -- the shape of these curves, and activities and decisions that were being made, if you could please now turn to MKO-5, which are a collection of sixty (60) day water level forecast and current year actuals that were posted on Manitoba Hydro's website for the relevant period.

MR. DAVID CORMIE: I have those.

MR. MICHAEL ANDERSON: Okay. And I -- I would just like to have your assistance in understanding what these particular tables are indicating to us.

The first table for Southern Indian Lake, indicates that as we've discussed earlier, that storage during the summer is taking place and at least at this

time you anticipated having the level of Southern Indian Lake reaching its long term average toward the end of October of 2003, is that correct?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: And of course there's -- although it's not in colour, this -- the lower of the two (2) lines, the lefthand line is actual, and then there's a break and then the line following to the right, heading up to the long term average is projected at that time; is that correct?

MR. DAVID CORMIE: Including a -- a plus or minus one (1) foot range.

MR. MICHAEL ANDERSON: And while we're discussing that, would you explain why Manitoba Hydro posts that -- that variable range in its forecasts? In terms of what it's intending to communicate with them.

MR. DAVID CORMIE: Manitoba Hydro makes a forecast of water levels based upon a forecast of water supply. And there's considerable variability in the water supply.

And in order to indicate that there is no certainty around the water supply forecast, especially when you look out sixty (60) days, that conditions can change. Manitoba Hydro may be making exactly the same water releases from its control structure, but water

levels could be higher or lower, should the water supply be higher or lower.

And we want to -- these are posted on the internet, so that other stakeholders on the waterways affected by Manitoba Hydro's operation, have some idea of what to expect in the -- in the short term.

And we want to ensure that they understand that there is uncertainty with that forecast, and that -- that once we get out to sixty (60) days, that the forecasts are with -- probably within a foot of -- of the actual forecast.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie. And so in -- in terms of looking at -- following that forecast, the middle graph is for Footprint Lake, and just for clarification of the Board and others, Footprint Lake is at Nelson House, below the Notigi Control Structure; is that correct?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: And could you please describe operation line that we see on the Footprint Lake graph?

MR. DAVID CORMIE: The -- this forecast was prepared on August the 28th and it was showing that from August the 28th until the fifteenth (15th) of October, water levels on Footprint Lake would be held

relatively constant. On the plan, at that point in time, was for mid-October for outflows from Notigi to increase.

It takes approximately three (3) to four (4) weeks for that flow increase to work its way down the Burntwood River, the Ratten Burntwood Rivers (phonetic) to the generating stations on the lower Nelson.

And, with the increase in power demand expected mid-November, outflows need to be increased at mid-October so that the water arrives in -- at -- at a time when it's needed for production.

So, this forecast chart shows that water levels on Footprint Lake would start to rise mid-October and would rise approximately one (1) foot from mid-October to mid -- to the first of November in response to increased outflows from Notigi.

MR. MICHAEL ANDERSON: Does this graph also reflect the -- there's been discussion about conserving storage. Are the Southern Indian Lake graph and the Footprint Lake graph, consistent with operations intended to conserve and build reservoir capacity at Southern Indian Lake?

MR. DAVID CORMIE: Yes. And for that same period of time, maintaining the releases at Notigi from the end of August to the middle of October allows the level of Southern Indian Lake to continue to rise as water

is held back in storage.
And then starting about the third week in October, you'll see on the southern Indian Lake chart, the water level starting to -- rather than rise, it starts to turn down as the flow increase that was made at Notigi as an affect on the level of Southern Indian Lake.
MR. MICHAEL ANDERSON: Thank you, that's exactly what I was looking for.
And just for -- for the record, were the releases of Footprint Lake between -- it looks like about the 15th of June, onward, to the 15th of October, were the releases at Notigi essentially at their licensed minimums during that period of time?
MR. DAVID CORMIE: There -- there is no license minimum for Notigi. We were operating the Churchill River diversion at that time in order to maintain water levels, in order to balance the effect of low water levels throughout the system.
Having a lower Notigi release through the summer of 2003, lower than elevation seven hundred and ninety-three (793) feet above sea level would have created severe hardship along the diversion route downstream of the Notigi control structure.
And we set the discharges so that we would -- although they were low, they weren't unacceptably low

along the diversion route and that was the constraint that was -- that was our objective at that time, not to create undue hardship along the diversion route.

And any water that was released out of storage on Southern Indian Lake to serve that purpose could be off-set by increased reduction -- increased storages on Lake Winnipeg. So, that the net effect, once the combined water flows from the diversion and Lake Winnipeg arrive at the lower Nelson plants, the same total flow and the same amount of power could be generated.

So, the two (2) projects are operated in tandem with the objective to minimize the impact on the -- on the other stakeholders and then the environment.

MR. MICHAEL ANDERSON: And then -- and then thank you for that. And my final comment, of course, is you -- you've already stated that the flat line on Footprint Lake between June and October is the result of regulation.

MR. DAVID CORMIE: Yes, because we were held in -- holding the Notigi outflow as constant. However, the local in-flow was declining gradually throughout the summer and the net result was a slight decline in water level on Footprint Lake.

MR. MICHAEL ANDERSON: Thank you. Moving onto the -- the next water level graph for Split Lake, and

if we look at our -- at the green map on the Nelson River, Split Lake is not identified here, but it would be, Mr. Chair, and, Members of the Board, and, Mr. Cormie, if you'd please confirm that it's basically the -- the blue body of water immediately below the -- in this case, the Kelsey Generating Station?

MR. DAVID CORMIE: Yes, Good Lake is the -- is where both the Nelson River and the Burntwood River join together and -- and the combined flows from the Nelson and the Burntwood mix at that point, and -- and begin to feed the Lower Nelson Generating Stations from in there.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie. And if we look at the -- the line -- the elevation line between the first of June and the 28th of August, that line reflects -- is also a product of Manitoba Hydro Regulation of its system, as you described?

MR. DAVID CORMIE: Which chart are you looking at now, sir?

MR. MICHAEL ANDERSON: I'm sorry, Split Lake?

MR. DAVID CORMIE: Yes, well you can see that the level of Split Lake was maintained at elevation five forty-five (545) for that three (3) month period.

MR. MICHAEL ANDERSON: And then the

beginning on -- in late August, apparently it looks from the map, very close to the date that this forecast was created, the water levels on Split Lake dropped quickly, can you explain why that would be?

MR. DAVID CORMIE: The -- the flows on the Nelson River during the months of June, July and August, had to be kept at -- at such a -- at a constant rate in order to meet our -- our load obligations during that period of time.

As we got towards the end of August, there was an opportunity to conserve additional water in the -- in Lake Winnipeg, as a result of lower power demands, through the September/October period.

So, outflows from Lake Winnipeg were reduced at the end of August, to conserve additional water in reservoir storage in Lake Winnipeg, and the affect of reducing the outflows from Lake Winnipeg is a lower total flow down the Nelson River, which resulted in lower levels on Split Lake from the end of August through the end of October, as indicated on the chart.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie. And if we go to the second page of MKO-5, the chart for Cross Lake, which for purposes, if we're looking at the green map, is the body of water immediately downstream of the Jenpeg Control Structure; is that

correct?
MR. DAVID CORMIE: That's correct.
MR. MICHAEL ANDERSON: And the reduction in outflows from Lake Winnipeg that you just described, is reflected on the chart for Cross Lake?
MR. DAVID CORMIE: That's correct.
MR. MICHAEL ANDERSON: And so, the water levels on Split Lake, following August 28th, reflect in effect, a combination of reductions and outflows from both Notigi and Jenpeg; is that correct?
MR. DAVID CORMIE: That's correct, with the additional note that water levels on Split Lake rise starting the 1st of October, middle of October, as a result of increasing diversion flows from Notigi.
MR. MICHAEL ANDERSON: Which as you noted is the small downward dip in the Southern Indian Lake forecast?
MR. DAVID CORMIE: That's -- that's correct.
MR. MICHAEL ANDERSON: Thank you. And just to complete the -- the time sequence record, you identified the time duration necessary for a release from Notigi to reach the Lower Nelson Plants, could you please describe the time sequence for release from Jenpeg to reach the Lower Nelson Plant?

MS. PATTI RAMAGE: Mr. Chair, I'm -- this has gone on for some time now, and I'm starting to be more than a little concerned about where we're going, and what this exactly has to do with the Rate Application before this Board.

THE CHAIRPERSON: Mr. Anderson, can you help with our understanding of this?

MR. MICHAEL ANDERSON: I can, Mr. Chair, thank you. This is really my last question on this series, because they've all been clearly answered for me. I just wanted, in the record, the flow sequence.

What we're speaking to of course are the considerations that the Corporation makes when it makes it water flow sequencing planning. I did refer to those -- those interests in my opening remarks and in my subsequent questions have comments to make about that.

They do result in cost to the Corporation, and that's where I'm going.

THE CHAIRPERSON: Okay.

MR. MICHAEL ANDERSON: Thank you. I apologize if I'm laying a foundation that may not be as clear but I have established what I needed to with these charts.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: But if it's possible just to -- with the consent of the Board just for the -- keep the record complete to indicate the -- the time for water released at Jenpeg to reach the Lower Nelson Plants, I'd appreciate that.

MR. DAVID CORMIE: That's depending on the magnitude of the flow change. It can be between three (3) and five (5) weeks.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie. Taking the information that we've just developed on that particular sequence of flows, these decisions to conserve storage would have been reflected in increases in power purchases; is that correct?

(BRIEF PAUSE)

MR. DAVID CORMIE: The -- I believe the answer to that question is that there was less demand for -- under our contractual arrangements, and we were able to meet the power demand through the fall.

And I believe at the time we were already maximising our purchase capability and so I don't know if it resulted in increased purchase, but it resulted in continued high levels of purchases and -- and there were offsetting reductions in -- in sales.

So, that the net result was energy could be conserved in reservoir storage.

MR. MICHAEL ANDERSON: Excuse me, and my final one in terms of that aspect of it. In terms of the nature of sales that were being made, you had indicated earlier that during a period of time, this specific period of time when there was conservation of reservoir storage, opportunity sales had been terminated during this period; is that correct?

MR. DAVID CORMIE: What I had indicated in the record previously was that any contractual sales were terminated. We were -- we had not entered into any forward opportunity sales. There were on a -- an hourly and a daily basis, some opportunities for buying and reselling in the very, very short term hourly and daily markets.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie. If you could please turn to MKO-10 which is an assembly with some calculation of four (4) other exhibits or documents, please?

MR. DAVID CORMIE: I have that.

MR. MICHAEL ANDERSON: Thank you. And I appreciate that I've built this, basically, off of the information provided in Manitoba Hydro 14 and 15, essentially just transferring the information and doing

the calculation to -- to arrive at revenues -- average revenues.

And I realize that this is the information that we have that I'm dealing-- I'm imputing a known quantity in megawatt hours with an average price and I realize that there's the -- the inaccuracy that that would generate but that's the best information we have in terms of monthly information.

What I'd like you to do, if you -- if you would is go down, I have reorganized this into fiscal years for -- beginning in -- the beginning of the record and go down to the time series for the fiscal year '03 ending March 2004.

And if you follow along on my line for August 2003 to the right using this -- just this information, recognizing it's qualified in terms of its detailed accuracy, it appeared that beginning in July 2003 there was a period of sequences where imports exceeded export revenues.

And would you confirm that this period of time corresponded with your reservoir conservation period in the charts that we had just discussed?

(BRIEF PAUSE)

MR. DAVID CORMIE: I think that's consistent with how I would characterize it, that as -- as we went through the -- the spring of 2003, the severity of the drought worsened, resulting in -- by the time we got to June '03, we were looking at inflows that were some of the -- near the lowest on record, whereas in April we were in probably 20 percentile conditions.

So, the -- the drought severity worsened, and in order to maintain the same level of supply reliability, we had to gradually increase our efforts to conserve water, and -- and that was reflected in the decision at the end of August to take that next step to reduce the outflows from Lake Winnipeg even further.

Every opportunity was made during the summer period to buy down some of our export obligations, but during the summer season that is the peak demand period, and -- in the United States, and our customers are actually relying on the physical delivery of electricity.

And although, we would like to have settled financially for some of those obligations, utilities were reluctant to do that, except on a day-by-day basis, and so we had to maintain the physical ability to deliver power if -- if we were requested to do so.

As we got through the summer season, when the demand for power in the United States starts to

diminish as the air conditioning season comes to an end, our customers were then in a position where they had alternative supply options to Manitoba Hydro. And at that point in time we would start to financially settle our delivery contracts, which meant that we required less energy production capability and could -- could have lower flows.

The issue of the time delays for water releases is very relevant here. Four (4) or five (5) weeks in advance, our customers can't tell us whether they need physical power or not during the summer time.

And so, we have to assume that we have to be in a position to deliver. Later on in the fall, once they know they are out of their peak demand period, they are in a position to say that they have replacement power available, and that it would be -- wonder why it was capable of having lower flows and have lower production capability on its system.

And -- and we took that -- we negotiated some settlements under those contracts, and -- and we were able to conserve water through the fall season, as a result.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie. Your penchant for detail answered several questions that I had, and I very much appreciate that.

Thank you.
Turning now to MKO-6 please. And please keep at hand the charts on MKO-5.

(BRIEF PAUSE)

MR. MICHAEL ANDERSON: Do you have that?
MR. DAVID CORMIE: Yes, I do.
MR. MICHAEL ANDERSON: You can confirm that the press release that you have from the Manitoba Government for MKO-6 indicates that the ferry service to York Landing had been closed, effective September 5th; is that correct?
MR. DAVID CORMIE: That's correct.
MR. MICHAEL ANDERSON: And it indicates on the first line of the press release that it had been closed until further notice for safety reasons, due to low water levels on Split Lake; is that correct?
MR. DAVID CORMIE: That's what the press release says, yes.
MR. MICHAEL ANDERSON: And --
MS. PATTI RAMAGE: Mr. Chair, again I'm not -- I do not see where this is going in terms of the Rate Application before us.
THE CHAIRPERSON: Mr. Anderson, could you

in quick summary provide us of the link and help Ms. Ramage understand where you're going.

MR. MICHAEL ANDERSON: Yes I can, Mr. Chair. Thank you.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: When Manitoba Hydro made its decisions to conserve reservoir storage in late August, as we've discussed, what other considerations, other than financial export marketing and domestic power requirement planning does Manitoba Hydro take into consideration when it makes those decisions?

MR. DAVID CORMIE: A key issue is whether we will be establishing new water regimes on the -- on the lakes and the rivers, going into territory that we had not been in before.

Being very aware that there were many public facilities along the waterways that will be affected by low levels and -- and we don't want to lower water levels and -- and break new ground with regard to the water regime unless we are confident that those facilities -- that -- that service to those customers can -- or those -- those other stakeholders can -- can continue.

In the -- in the decision to make the flow

reductions out of Lake Winnipeg in August, we recognized that water levels in the drought of 1988 had been lower than were forecast for the fall of 2003.

And during the summer of 1988, ferry operations continued and so it was our belief that ferry operations would be unaffected.

So, we recognize that there was an -- an issue but also knew that potential problem, but we knew that -- that those operations had been successful in the past and we had no indication that the ferry service would now not be able to operate under better water conditions than had occurred in the previous drought conditions.

(BRIEF PAUSE)

MR. DAVID CORMIE: Manitoba Hydro has a -- a -- an agreement with the York Landing First Nation. It's a -- a implementation agreement. It's one (1) of the agreements that follows-up under our NFA Agreement with the northern First Nations.

And -- and Manitoba Hydro recognized it had some obligations to the community with regard to providing for additional costs resulting from changes in water levels.

Through the -- through that fall period,

Manitoba Hydro spent in excess of two hundred and twenty thousand dollars ($220,000) addressing our contractual and extraordinary mitigation costs associated with this low water event at the community.

And the ferry went back into service on October the 14th as a result of efforts by the Province of Manitoba, Manitoba Hydro, and the Federal Government to fix the problems that were causing the ferry service to not be available through that period.

MR. MICHAEL ANDERSON: As distinct from the -- your comments in respect of forecasting changes to the ferry service, did Manitoba Hydro take into account those costs that would arise from its obligations under its agreement with the York Factory First Nation as part of the decisions it made in late -- August 2003?

MR. DAVID CORMIE: The -- the decision to conserve water was -- was one (1) based upon maintaining a -- maintaining the capability of having a reliable supply of electricity through -- for -- for the Province of Manitoba should the drought continue.

And we knew that there would be costs associated with that. Some of which would be -- additional mitigation costs. But the major costs would be the increase in power purchase costs and the potential for additional thermal generation.

But there are -- but relative to those costs, the costs of ferry service at Split Lake is -- was a -- was one (1) of the smaller amounts.

THE CHAIRPERSON: Mr. Cormie, you suggested that the -- the ferry service difficulty was, if I understood you properly, was -- was unexpected. Do you --

MR. DAVID CORMIE: It was unexpected because that same facility operated successfully fourteen (14) years -- sixteen (16) years previously, with lower water levels, and -- and we were not predicting new low levels on Split Lake.

The water levels were higher than had occurred in the past, under -- so something that the ferry had changed that -- and that's one (1) of the reasons we issue these water level forecasts, so that those people who are caught unaware, including the ferry service, the ferry service of the Province of Manitoba has access to our forecasts, and -- and can prepare themselves for that.

We have a -- a mitigation department, and in our operational planning meetings prior to the decision, we met with them and made sure that they understood that water levels were going to be very low, and they immediately went into a mode of communication with those affected stakeholders to ensure that issues like these could be avoided or mitigated if necessary, and

that resulted in Manitoba Hydro spending significant amounts of money to help, you know, this situation.

THE CHAIRPERSON: Thank you.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: I -- I step carefully into what I'm about to request, and I ask all parties to bear with me on this.

The clarification by the Chair was important, would you -- could you please undertake to contact your mitigation people and file with us, what information they provided to the York Factory First Nation, in respect of the decision to store water?

MS. PATTI RAMAGE: No. Mr. Chair, that has, to the best of my mind, nothing to do with the Rate Application before this Board.

THE CHAIRPERSON: We'll take it under advisement and we'll get back to you later. Could you move on now?

MR. MICHAEL ANDERSON: Yes, I can. I had wanted to indicate, and I'm not sure I had raised it as a matter that Chief Red Head was requesting the opportunity to make a presentation at some point to the -- to the Board in respect of the mitigation costs that the Company is discussing now.

THE CHAIRPERSON: Is he still intending to do this?

MR. MICHAEL ANDERSON: If it's possible, I received a -- another -- he had expressed an interest because of the discussion that we've just had.

THE CHAIRPERSON: I'd encourage you to talk to Mr. Peters.

MR. MICHAEL ANDERSON: All right, I just had wanted to indicate that, so I won't -- I have no need to pursue that further now.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: If we go to MKO-9, Mr. Cormie?

MR. DAVID CORMIE: Yes.

MR. MICHAEL ANDERSON: I don't intend to pursue this in the same detail I did the previous exhibit, but this forms the bookend on the water flow sequence, that we have been discussing, is that correct?

That operations then resumed as forecast in October/November, and that each of these charts begin to show additional releases coming out of storage on Southern Indian Lake and Lake Winnipeg, is that correct?

(BRIEF PAUSE)

MR. DAVID CORMIE: Well, this is the forecast that was prepared on October the 21st, and released to the public. And it shows our expected operations for that sixty (60) day period, starting October 21st.

MR. MICHAEL ANDERSON: Thank you. I just wanted to confirm that what it does indicate is the resumption of releases, increases -- it shows increases in releases from Notogaea and Lake Winnipeg, showing the resulting changes in water levels at Footprint Lake, Split Lake and Cross Lake?

MR. DAVID CORMIE: It just shows the forecast, sir.

MR. MICHAEL ANDERSON: You're quite correct. Do these graphs represent, to your knowledge, what occurred in actual operations?

MR. DAVID CORMIE: I believe they are fairly accurate with regard to the operation of the Churchill River diversion. I believe less water was released from Lake Winnipeg, than is shown, and so Cross Lake levels did not rise the extent that is shown in that forecast because we held back water -- to a greater extent than the -- the forecast indicates.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie. And the releases that were being made from

Southern Indian Lake were justified on what market conditions and obligations; just in a general summary? What loads were you serving beginning in the middle of October, drawing on reserves in Southern Indian Lake?

MR. DAVID CORMIE: We were serving the -- primarily the Manitoba load. I believe through the winter season we bought down the vast majority of our export obligations.

And so this operation was designed to ensure that the Manitoba load could be met as well as maintain our reservoir -- our energy in storage targets for the end of the fiscal year so that we would be able to continue to meet the power demand should the drought -- continue in 2003/04 -- in 2004/05.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie. Now, if you could take, please, MKO Exhibit 10 and MKO-11.

(BRIEF PAUSE)

MS. PATTI RAMAGE: Mr. Chair, if I could perhaps --

THE CHAIRPERSON: Please.

MS. PATTI RAMAGE: -- clarify, MKO-11 is -- is not an exhibit which has been prepared by Manitoba

Hydro in -- in the normal course of the hearing Manitoba Hydro is, at least, alerted to documents through the Information Request process or through Intervenor evidence.

We've attempted, so as to move things along, deal with these documents that were not necessarily part of the process but at least Manitoba Hydro was familiar with.

I'm putting out a caution that this is a National Energy Board document. I don't believe Mr. Cormie has -- has seen it before and Mr. Anderson may -- I guess I'm trying to go down the road of, I think it might be appropriate to ask Mr. Cormie if he even knows what this document is so we can deal with whether we want to proceed with this line of questions -- questioning.

THE CHAIRPERSON: I think Mr. Anderson can make it clear to us fairly quickly as to what purpose he has for these and I grant what you say, that these weren't in the process up to now, but we can't have any assurance that Mr. Cormie or any other member of your Panel is going to react instantaneously to it.

But in all fairness, I think Mr. Anderson can tell us how he intends to bring this into his cross-examination. Mr. Anderson...?

MR. MICHAEL ANDERSON: Thank you, Mr.

Chair. There was an exchange by Mr. Peters which led to some discussion about various elements of export revenues calculations around the four (4) exhibits that are the source of MKO-10.

I made a caution and I appreciate Mr. Cormie's flexibility in terms of my general use of the information in respect of periodicity of certain costs. But clearly what's missing -- there was a request and some discussion about the demand component and I'll just explain because I recognize what the Board's disposition was on the specific values, but the exports and imports tables on Exhibit 10 are necessarily missing the demand value, as I understand the discussion with Mr. Peters.

So they understate both the export revenues and the import costs to the extent that they don't reflect the demand element of it.

I had, in reading the transcript, it appeared to me that it had been left, that tables providing the average demand information, in a form substantially -- similar to MH-14 and 15, would be filed as an undertaking response, as average numbers. But that the specific numbers would be filed in confidence with the Board.

So as I reviewed the transcripts and realized that these had not been filed and got --

collected the exhibits, it was my interest in trying to clarify with information available on the public record, what the complete number with demand was.

So, my first two (2) questions would have been or would be, just to confirm that these records are provided -- prepared by the National Energy Board from information provided by Manitoba Hydro, as part of their operations and their license requirements.

And two (2), to try to indicate whether the values for megawatt hours indicated on both this and MKO-12, in fact incorporate the demand component?

I'm just trying to compare all the documents that are provided in respect of costs. And Mr. Peters had spent some time pursuing that, and I was following that with great interest, Mr. Chair. And looking for what I thought was an undertaking providing average demand numbers, in a form substantially identical to Manitoba Hydro 14 and 15.

So, in my efforts to be assistive, I've prepared -- or obtained these documents from the National Energy Board site, providing records of their operations.

MS. PATTI RAMAGE: Just to clarify, it is not my understanding, and if a Member of my own Panel or someone else wishes to correct me on this, but it's not my understanding that Manitoba Hydro gave an undertaking to

file those average demand rates in the public forum.
THE CHAIRPERSON: Well, Mr. Anderson, if I may, what you're telling us is that you have, on your own initiative, located this information from the National Energy Board, and provided it to us as a contingent exhibit, to assist the Board in furthering its knowledge, if you like, of export and import prices over the period?
MR. MICHAEL ANDERSON: That's correct. The Chair may recall that I did interject during Mr. Peters' discussion on this, to indicate that in fact this information, at least in this form, was available on the public record on the National Energy Board. And I had made that point at that time.
THE CHAIRPERSON: Well, what I'm getting at directly, because you've put this in our hands, is in your line of cross-examination of Manitoba Hydro, given that you do not have the specifics, I'm just wondering how you intend to use this information in your cross-examination?
MR. MICHAEL ANDERSON: As I had indicated, Mr. Chair, to try to -- Mr. Cormie had indicated and cautioned us that there are exports in addition to those that go to the United States, for example, enter within Canada.
There is some information in the annual report as to the relative percentages of that, and

typically historically the last two (2) periods -- years of record, have been sixteen (16) and 18 percent, if I have the math right on that.

The object was to try to complete the other exhibits that had been filed, given that Manitoba Hydro's evidence was that there was missing a substantive -- potentially substantial component of the -- of the price and cost.

There are four (4) exhibits, for example, as I indicated, or documents, that MH-10 was sourced from. So, my intent was to confirm that the information was provided by Manitoba Hydro to the National Energy Board, and that these documents reflect that information, and that the dollars per megawatt hour -- the question would be -- contain all those components of cross.

And that was essentially it.

THE CHAIRPERSON: Yes. Manitoba Hydro has met its obligations to supply in confidence, the additional information that we had requested. We need to think about this for a little while, so I think what we're going to do is we're going to have an early lunch. And if, you know, the parties don't mind, we will return at 1:15 rather than 1:30, so we won't -- we won't lose any time by this.

MR. MICHAEL ANDERSON: I -- I would just

say that the record is -- is quite good. There's been a fair bit of exploration of this by many parties. The interrogatory responses and so forth.

My intent was to have the -- the numbers and provide an attribution as I've requested and then I can work on the math for -- that I need to do for my final argument, Mr. Chair. That's what I had in mind. Nothing more than just to confirm that, that's what they are.

THE CHAIRPERSON: No, I appreciate that Mr. Anderson. I think we just want to reflect a little bit on all this. So we'll see you all at 1:15, thanks.

MS. PATTI RAMAGE: Mr. Chair, before we break, Manitoba Hydro had a -- an undertaking that we thought we'd get out so that if any parties want to reflect on it over the lunch break.

THE CHAIRPERSON: Thank you, Ms. Ramage.

MS. PATTI RAMAGE: It will be the mysterious Exhibit 30.

THE CHAIRPERSON: I'm glad we filled in that place mark.

MS. PATTI RAMAGE: And it is Manitoba Hydro Undertaking Number 40, dealing with assuming a debt equity target of 75 percent to balance out the debt incurred by the purchase of Winnipeg Hydro. What would the equity of Manitoba Hydro need to be increased by.

That was the question it deals with.

--- EXHIBIT NO. MH-30: Response to Manitoba Hydro Undertaking Number 40

THE CHAIRPERSON: So that will be Exhibit 30. Thank you very much. And we stand adjourned.

--- Upon recessing at 11:46 a.m.
--- Upon resuming at 1:18 p.m.

THE CHAIRPERSON: Okay, good afternoon everyone. Good afternoon. We adjourned with three (3) matters to consider related to Mr. Anderson's cross-examination and I'd like to speak to these matters.

With respect to a presentation by Chief Redhead, as suggested earlier, we would appreciate Mr. Anderson conferring as to possible times for the presentation with Mr. Peters.

We would be pleased to hear from the Chief. I am confident that Mr. Anderson will advise Chief Redhead as to the issues before the Board to assist the Board in preparing his presentation.

As to requiring Manitoba Hydro to provide for this Hearing, copies of communications to communities

with respect to low water levels and implications thereof.
While we understand Mr. Anderson's interest in the matter, and we appreciate the importance of such communications, we don't find it directly relates to the matters before the Board and therefore will not require Hydro to respond.
That being said, we would appreciate the following information from Manitoba Hydro with respect to the implications of low water levels.
Please provide the aggregate cost of mitigation paid in 2003/04.

--- UNDERTAKING NO. 40: Manitoba Hydro to provide to the aggregate cost of mitigation paid in 2003/04

THE CHAIRPERSON: Please provide the aggregate cost of mitigation related to drought conditions experienced from the fall of 2003 through to and including fiscal 2003/04.

--- UNDERTAKING NO. 41: Manitoba Hydro to provide to the aggregate cost of mitigation related to drought conditions experienced from

the fall of 2003 through to and including fiscal 2003/04

THE CHAIRPERSON: And please break down these payments into two (2) categories; required by contract, paid outside of contract.

--- UNDERTAKING NO. 42: Manitoba Hydro to provide a breakdown of the payments in Undertaking No. 39 into two (2) categories; required by contract, paid outside of contract.

THE CHAIRPERSON: Finally, with respect to conditional MKO Exhibits 11 and 12 and, by way, I note that Mr. Anderson has corrected his conditional 12 and replaced it with another document which I believe you all have.

Our understanding is that Mr. Anderson intends to utilize the information provided on these tables to improve his understanding of Hydro Exhibits 14 and 15 and the overall issue of net export sales.

The issue of net export sales -- export sales, imported power purchases and the elements

comprising those sales and purchases are relevant to this Hearing.

Table 14 and 15 exclude demand charge information, both with respect to sales and purchase, and only by taking into account said charges can the information of Tables 14 and 15 be converted into a fuller understanding of net export sales revenue.

Accordingly, the Board sought a better understanding of the Corporation's 2003/04 export sales and purchases and sought and received, in confidence, information from Hydro that has met its needs.

In short, the Board does not require tables from the National Energy Board to reach the level of understanding required to reach conclusions with respect to the matters before the Board. That being said, we understand Mr. Anderson's desire to improve his understanding for the purposes of final argument.

And we understand that in the absence of the information we have received in confidence it would be difficult for Mr. Anderson to improve his understanding. We note that he has found publicly available National Energy Board information, that, in conjunction with Manitoba Hydro exhibits, could enhance his understanding and better equip his final argument.

We understand that Mr. Anderson intends to

cross-examine the Hydro Panel to assure himself as to the accuracy of the information contained in the tables. Accordingly, we will allow Mr. Anderson to seek confirmation from the Corporation as to the accuracy of these publicly available tables.

In doing so, we remind Mr. Anderson that we've accepted the Corporation's assertion that the information they have provided the Board in confidence should, in the public interest, remain in confidence.

We also remind Mr. Anderson that we are satisfied that the information provided by the Corporation to the Board, in confidence, is sufficient to allow us to meet our mandate.

Leaving aside the confidential material provided to the Board there has been sufficient information provided in this hearing to allow one to conclude that in 2003/04 the Corporation purchased more power than it had in the past, purchased more power than it sold, paid higher prices for the imported power and experienced a net deficit on export/import operations.

And that this experience arose as a result of the combination of a number of factors including the drought, the Corporation's operational decisions and changes in the energy markets. Mr. Anderson, you may seek to confirm whether the information contained in

conditional MKO Exhibits 11 and 12 are accurate.
Mr. Anderson...?
MS. PATTI RAMAGE: Mr. Chair, before we proceed, if I could -- four (4) undertakings have been distributed and perhaps we can get that on the record.
The first of which is identified as Manitoba Hydro Undertaking No. 31 dealing with EFT positions and I believe we are now at Exhibit 35.
THE CHAIRPERSON: So, Manitoba Hydro Undertaking 31 will be Exhibit 35?
MS. PATTI RAMAGE: Yes.
THE CHAIRPERSON: Sobeit.

--- EXHIBIT NO. MH-35: Response Manitoba Hydro Undertaking No. 31.

MS. PATTI RAMAGE: There is also Manitoba Hydro Undertaking No. 33; has that been distributed to the Board?
THE CHAIRPERSON: I think Mr. Barron is headed in our direction.
We have Manitoba Hydro Undertaking number 33.
MS. PATTI RAMAGE: And that we suggest be Exhibit 36, and that deals with the question of adding

another column to IR-PUB-I-6-A and splitting out staff transfers.

THE CHAIRPERSON: Thank you.

--- EXHIBIT NO. MH-36: Response to Manitoba Hydro Undertaking No. 33.

MS. PATTI RAMAGE: The next document, which I believe Mr. Barron is assisting us in distributing, relates to Undertaking Number 4, and that is Manitoba Hydro Corporate Risk Management Report.

THE CHAIRPERSON: We have that, Ms. Ramage. So, would we entitle this one (1) Exhibit number 37?

MS. PATTI RAMAGE: And I should indicate, that as with the previous report, this report does not include the appendices.

THE CHAIRPERSON: Duly noted.

--- EXHIBIT NO. MH-37: Response to Manitoba Hydro Undertaking No. 4.

MR. BOB PETERS: Ms. Ramage, was that confirmed as Exhibit 37, Manitoba Hydro?

MS. PATTI RAMAGE: Yes. And then lastly, we have a document and the cover of it's dated June 7th,

2004, with the subject, Risk Management Process Assessment, and that is provided in response to Undertaking Number 20; it's the Deloitte Touche Study on Risk Management, and I suggest that be numbered number 38.

THE CHAIRPERSON: That's fine, number 38; Risk Management Assessment.

--- EXHIBIT NO. MH-38: Response to Manitoba Hydro Undertaking No. 20.

THE CHAIRPERSON: Thank you, Ms. Ramage. Mr. Anderson...?

MR. MICHAEL ANDERSON: Thank you, Mr. Chair.

(BRIEF PAUSE)

MR. MICHAEL ANDERSON: Thank you, Mr. Chair. MKO appreciates the Board's thoughtful consideration and its findings on the matters, and understands the Board's decision.

I can briefly indicate that in respect of Chief Redhead, I did consult over the lunch break, and if it is possible for the Board to accommodate a presentation on next Wednesday, which I believe would be the 30th, if I

have the math on that right, that would be suitable.
THE CHAIRPERSON: Mr. Peters...?
MR. BOB PETERS: Yes, I think we can fit that in. Is it at 1:00 -- after lunch, or what time of the day, Mr. Anderson, is your preference?
MR. MICHAEL ANDERSON: I've advised Chiefred Head of the nature -- rather fluid nature of the Proceedings, and he's at the Board's disposal at this time. So, whenever is the most convenient.
And I have briefed Chief Redhead already on the scope of these types of proceedings, in respect of comments he may wish to make.
MR. BOB PETERS: Then, Mr. Chairman, I suggest that I'll get back to Mr. Anderson with a definitive time, which will assist his presenter in being here. And I'll communicate that to him after today.
THE CHAIRPERSON: Thank you, Mr. Peters. Thank you, Mr. Anderson.
MR. MICHAEL ANDERSON: Thank you, Mr. Chair. So, I will proceed to the task in respect of confirmation, if possible, of MKO-11 and 12. And I did provide Mr. Cormie and Mr. Surminski with a copy of the exhibit that I had intended to provide.
If there's any other copies required by the Panel, I'd be happy to provide it. I've provided one (1)

to Mr. Warden and Ms. Ramage already.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: So, to ask the simple question then in respect of eleven (11), which I assume will -- will flow to twelve (12), Mr. Cormie or whoever is best to respond, the information that's provided on -- at Table 2A of MKO-11, can you confirm that the information as presented by the National Energy Board for the periods indicated, have been provided to the National Energy Board by Manitoba Hydro?

MR. DAVID CORMIE: For the licenses for -- for which Manitoba Hydro -- which Manitoba Hydro holds, the energy and the revenues shown on the tables are -- were submitted by Manitoba Hydro.

MR. MICHAEL ANDERSON: And then to go directly then to the request of the -- of the Board; you can confirm the accuracy of this information?

MR. DAVID CORMIE: Subject to check, I accept it as accurate.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie.

In respect of MKO-12, can you also confirm that, that information was -- in respect of any reference to Manitoba Hydro was provided by Manitoba Hydro to the

National Energy Board?
MR. DAVID CORMIE: I can only confirm that the energy and the revenue quantities are correct. Everything else is conclusions that the National Energy Board drew.
MR. MICHAEL ANDERSON: That's helpful. And to be specific, you mean their calculation of dollars in Canadian revenue, et cetera?
MR. DAVID CORMIE: And the footnotes.
MR. MICHAEL ANDERSON: Thank you.
MR. ROBERT MAYER: Mr. Cormie, do these tables -- I take it they deal with import and export across the US border only. Is that correct?
MR. DAVID CORMIE: That's correct.
MR. ROBERT MAYER: So, they don't include any inter-provincial export or import?
MR. DAVID CORMIE: That's correct.
MR. ROBERT MAYER: Do they include all of your Canada/US trade in energy?
MR. DAVID CORMIE: Yes, they do.
MR. ROBERT MAYER: Thank you, sir.

CONTINUED BY MR. MICHAEL ANDERSON:
MR. MICHAEL ANDERSON: I just note that the Witnesses were consulting. Do you have a

clarification that you wish to provide?
MR. DAVID CORMIE: No, I'm -- I'm fine.
MR. MICHAEL ANDERSON: Now, thank you for that.
In terms of the -- the -- this may have already been asked and answered. The -- if we look at MKO-11, and to the extreme right hand pair of columns where it shows Canadian dollars per megawatt hour, was this information provided to the National Energy Board by Manitoba Hydro?
MR. DAVID CORMIE: The National Energy Board calculated that.
MR. MICHAEL ANDERSON: All right. Thank you.
Setting aside the nature of their calculation based on using the numbers that were -- that are present, would these numbers also reflect and include any demand related charges?
MR. DAVID CORMIE: They do.

(BRIEF PAUSE)

The -- the issue here, Mr. Anderson, is that the footnote number two (2) says it excludes the capacity charge. And the -- the revenues that are stated

there include the demand charge. And so they've implied an energy charge that includes a demand charge and they've then -- so the table is -- is not correct. The footnote is wrong.

MS. PATTI RAMAGE: This -- this is where I'm going with, this presents a problem because right now Manitoba Hydro is attempting to decipher what calculations were made in this document to come to these conclusions.

And as we've seen, Mr. Cormie believes there is an error right in terms of the footnote. And I don't think it's appropriate for us to attempt to testify to what errors may or may not have been made in this document.

THE CHAIRPERSON: Unless Mr. Anderson can then otherwise prove the accuracy of the document, I don't suppose it -- I take it, it is your position that it can't be admitted?

MS. PATTI RAMAGE: That's correct.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: The one (1) area that we had to the extent that the information can be utilized in permitting us to draw a further understanding of the material, the -- you had -- did reply to this at the beginning of my discussion on eleven (11), the

information that you confirm does reflect the information provided by Manitoba Hydro to the National Energy Board on MKO-11, Table 2, appears in what entries, Mr. Cormie?

I apologize, you did answer the question I just want to reconfirm, because I've probably clouded the record somewhat.

MR. DAVID CORMIE: Manitoba Hydro provides the energy -- monthly energies and the monthly revenues to the National Energy Board.

MR. MICHAEL ANDERSON: So, in respect of the columns identifying energy and revenue, the table is correct?

MR. DAVID CORMIE: Yes.

MR. MICHAEL ANDERSON: I would propose to Mr. Chair, that that would be acceptable for us to use those columns that have been confirmed, for whatever analysis we may continue on our own?

THE CHAIRPERSON: I think you've succeeded to the degree that you've been able to.

MR. MICHAEL ANDERSON: All right. But then I would just like that they be included with that proviso.

To the extent that the Manitoba Hydro has confirmed that is their information, I'd like to proceed with the use of it in my final argument, Mr. Chair.

(BRIEF PAUSE)

MR. MICHAEL ANDERSON: If that's acceptable?

THE CHAIRPERSON: Yes.

MR. MICHAEL ANDERSON: Thank you.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie, for that. I'd like to turn on then to my final area of the inquiry.

If we look in the Application, Volume I, there appear at page 4 and 5 of 7 at Tab 7, Figure 7.31 and 7.32. Figure 7.31 is precipitation percent of normal, for winter 2002/03 and a similar map identifying polygonized areas of precipitation percent of normal for spring and summer of 2003.

MS. PATTI RAMAGE: Mr. Anderson, again, the reference, I'm sorry, I've got --

MR. MICHAEL ANDERSON: Absolutely, I'd be--

MS. PATTI RAMAGE: -- spoiled by the tabs.

MR. MICHAEL ANDERSON: -- yeah, Volume I of the Rate Application, Tab 7, pages 4 and 5 of 7, and they are two (2) coloured figures.

These are the Manitoba Hydro's figures I'm

going to first.
MS. PATTI RAMAGE: Thank you, Mr. Anderson.
MR. MICHAEL ANDERSON: You're welcome.
MR. DAVID CORMIE: Yes, I have those.

CONTINUED BY MR. MICHAEL ANDERSON:
MR. MICHAEL ANDERSON: And you -- Manitoba Hydro, by filing these, accepts that the information in them is -- depicts the circumstances as Manitoba Hydro understood it, for its planning operations; any other use it may use this information for?
MR. DAVID CORMIE: It reflects what happened, yes.
MR. MICHAEL ANDERSON: Okay. And the source of this information as indicated, can you confirm, is Manitoba Water Resources Branch?
MR. DAVID CORMIE: That's what it says, yes.
MR. MICHAEL ANDERSON: Okay. So, what use would Manitoba Hydro make of this particular information?
MR. DAVID CORMIE: It's a good summary of the precipitation conditions over the winter of 2002/03.
MR. MICHAEL ANDERSON: Would you use this information from this source as part of your operations planning?

MR. DAVID CORMIE: Planning is a forward looking activity, this is an after-the-fact review of what -- what actually happened.

We -- we use it to the extent that we have to explain why there's no water in the rivers and the reason there's no water in the rivers is it was -- it was a very dry year. And this table provided by an independent agency demonstrates that.

MR. MICHAEL ANDERSON: Depending on the date of -- of the table though, given the -- the -- you agree though that precipitation that occurs throughout the watershed is not instantaneously available to Manitoba Hydro?

Essentially, that there is a period of time from with -- following precipitation that it becomes available to Manitoba Hydro through movement through the water sheds into its system?

MR. DAVID CORMIE: In -- in our operational planning process, we are making assumptions about how bad things could be and hoping that things will be better than that.

And that was the case last year, that we're guarding a -- a position in order to ensure that there would be an adequate supply of water and -- and at the end of the year our plans were shown to be prudent and

appropriate given that we did end up with the third lowest flows on record.

This chart just indicates why the river flows were so low. And it indicates that there was a lack of precipitation across the -- across the watersheds.

You're correct in that we don't have a complete and accurate information about how much rain is falling on -- on any particular day but we're doing planning for the entire year and any particular day's rainfall event does not change -- necessarily change our operations unless the rainfall is so dramatic, like occurred in the spring of 2002, that -- that it -- that it becomes very obvious that conditions have changed.

There is a delay in the time between the actual rainfall and the runoff and I accept that.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie.

If we could turn then to MKO-7. You can -- I -- you confirm that this shows percent of average precipitation in a much more recent timescale between September 1, 2003 to June 18, 2004?

MR. DAVID CORMIE: I can confirm that, yes.

MR. MICHAEL ANDERSON: And so would the information depicted in this, given that it is more

recent, be of value to providing information to you for your operations planning?

MR. DAVID CORMIE: No, again, it's retrospective. It looks back over the last nine (9) months and says this what's -- what has happened. Operational planning is looking forward, saying what's going to happen over the next year.

And -- and, you know, and again this is a -- this chart shows what's happened, on average, over the last nine (9) months but it neglects the fact that most of this rainfall occurred subsequent to March the 28th and prior to that, this picture wasn't representative of what -- of -- of conditions at all.

MR. MICHAEL ANDERSON: The -- on this particular chart, does this depiction here indicating above average and well above average rainfall in the Reindeer Lake system concur with your current understanding of precipitation in that region?

MR. DAVID CORMIE: The -- there are only two (2) stations in that region; one (1) at Collins Bay and one (1) at Cree Lake. And the authors of this document take quite -- are very liberal in their interpretation of what conditions are over the northern part of Saskatchewan/Manitoba based upon those two (2) readings.

So, it's someone's interpretation of what's happened. I believe that the only places that it really -- it is accurate is at the two (2) stations at Cree Lake and Collins Bay.

MR. MICHAEL ANDERSON: Using those as examples, and I don't intend to really pursue this in a great deal of detail, are there other sources of information, other than those stations that Manitoba Hydro would derive information from to determination precipitation and outlooks for Reindeer Lake and Reindeer River?

MR. DAVID CORMIE: Manitoba Hydro does not put a lot of confidence -- doesn't -- doesn't put a lot of confidence in weather forecasts and we don't rely on weather forecasts in making our operational decisions especially when it comes to protecting against drought.

And ten (10) weather forecasters will give you ten (10) different forecasts and my review of their -- of any of the forecaster's skill is, it's not much better than chance. So, it's not a very useful --

MR. ROBERT MAYER: Or the decisions of this Board.

MR. DAVID CORMIE: However, I can't speak for that, Mr. Mayer. But, we can't hope that it's going to rain and -- and we can't hope that the weather forecast

will be right. And -- and we have to be very careful to, under drought conditions, to guard against the worst case and hope that the forecasters are right that precipitation will be normal.

But there was -- the forecasters have no skill. They have no skill for predicting the weather three (3) or four (4) days from now. They have no -- absolutely no skill predicting what the water supply will be eight (8) or nine (9) months from now.

So, Manitoba Hydro does not rely on -- on forecasters' ability to predict precipitation and would rather rely on the historical range of possible conditions in order to guard its position.

MR. ROBERT MAYER: Panel's voting for the Farmer's Almanac, Mr. Cormie.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: I thank you for your discussion of the confidence that Hydro places in forecasters and make -- only make the note with respect to both MKO-8 and seven (7) that they actually, as you indicated, are retrospective as of -- up to June 18th, 2004 and show, to the limitations that the data sources are precipitation and percent of average precipitation and they're not forecasts; is that correct?

MR. DAVID CORMIE: They are not forecasts. They are just showing what happened over that period of time as an average. And, as I indicated before, you can have three (3) numbers, zero (0), zero (0) and ten (10), the average is three (3). Well, not one of those events is three (3).

And so averages can be misleading.

MR. MICHAEL ANDERSON: I suppose we would apply then the same caution in looking at the historic record at seven three one (731) -- figures 731 and 732?

MR. DAVID CORMIE: The -- the -- the issue here is whether Manitoba Hydro relies on these in making its operational decisions. These are interesting graphics after the fact. They explain what happened. But they are not useful from a planning perspective.

MR. MICHAEL ANDERSON: Thank you. If I could go to MKO-13 which is a sample of information provided by the Lake of the Woods Control Board. You'll notice at the extreme upper right-hand corner that this one was issued June 22nd, 2004?

MR. DAVID CORMIE: Yes, I have that.

MR. MICHAEL ANDERSON: And does Manitoba Hydro incorporate this information into its operations planning?

MR. DAVID CORMIE: Manitoba Hydro does its

own forecasting for the Winnipeg River.

MR. MICHAEL ANDERSON: Does the information depicted in -- on these three (3) graphs conform with Manitoba Hydro's understanding of the current water flows -- volumes of flow on the Winnipeg River through locations identified?

MR. DAVID CORMIE: I believe these are accurate rep -- representations of what has happened in the past, yes.

MR. MICHAEL ANDERSON: And can you describe what these three (3) graphs indicate?

MR. DAVID CORMIE: They indicate that -- the first chart indicates the flow of the river -- the Winnipeg River at Slave Falls.

It shows that through the fall of 2003 river flows were in the lower decile range and that through December/January they became more quartile conditions. They remained lower quartile conditions until the middle of March of 2004.

From the middle of March 2004 to the middle of May 2004 they were below average -- slightly below average. And then in response to significant rainfall events in the Winnipeg River watershed flows in the Winnipeg River have made a dramatic improvement from mid-May to -- and towards the end of June.

And now we're into -- inflow conditions that we would see less than 10 percent of the time. Very high flows on the Winnipeg River.

MR. ROBERT MAYER: Is there any particular relevance to Slave Falls, Nutimick Lake and Seven Sisters as opposed to Point du Bois and Pine Falls?

MR. DAVID CORMIE: Well, Slave Falls is the official water survey of Canada gauge on the Winnipeg River. Nutimick Lake is a lake that has -- it -- it has quite a bit of cottage development around the lake and Manitoba Hydro established a water level gauge on that lake to give cottage owners an indication of what types of water levels they had seen in the past and what they might expect in the future.

And Seven Sisters is one of Manitoba Hydro's generating stations and we believe it is the best indicator of the flow on the river rather than at Slave Falls. And so that's included as well.

MR. ROBERT MAYER: Is Nutimick Lake part of the Winnipeg River or is it -- I can't believe you've got -- you've got flow right through there, I understand that to be a piece of the White Shell but I don't much understand the White Shell.

MR. DAVID CORMIE: Yes, there are several lakes that form a chain of lakes upstream of Seven Sisters

including Nutimick, Dorothy, McMarger (phonetic), Sylvia and several others that -- that -- that form of chain of lakes through which the Winnipeg River flows.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: And in -- in terms of the table that we were discussing earlier regarding dependable energy on the -- in the various watersheds relied upon by Manitoba Hydro which appears at PUB/MH-I-82(a), page 2 of 4; what would this information do to the numbers that appear for the gigawatt hour potential for the Winnipeg River?

MR. DAVID CORMIE: As I indicated earlier in this hearing, water conditions in Eastern Manitoba and Northwest Ontario have improved dramatically over the last several months and it's unlikely that we will face the risk of drought conditions in those watersheds this year due to the -- the high flows that we are experiencing now.

And so, Winnipeg River generation will be higher than the dependable amount this year with almost certainty.

MR. MICHAEL ANDERSON: And this -- the second column of the table was average. Will it be, with certainty, better than average?

MR. DAVID CORMIE: I don't know if that's

a certainty at this time yet.
MR. MICHAEL ANDERSON: Thank you, Mr. Cormie. I'd like now to go to MKO-14 which are the current tables, very similar to ones I prepared earlier; currently as posted on Manitoba Hydro's web site for forecast water conditions.
MR. DAVID CORMIE: Yes.
MR. MICHAEL ANDERSON: And these, although their start dates vary depending on the table, they're all for the period ending July 31, 2004; is that correct?
MR. DAVID CORMIE: That's correct.
MR. MICHAEL ANDERSON: And as a housekeeping matter, I noticed that Southern Indian Lake and Footprint Lake are as of May 27th and Split Lake, Cross Lake and Cedar Lake are as of June 8th. I just -- can you please clarify why that would be.
MR. DAVID CORMIE: The forecast for the Churchill River are done at a different time than the forecast for the -- the Nelson -- Nelson River and become inputs into the Nelson River forecast.
So, Southern Indian Lake, Footprint Lake and all the other lakes that -- and rivers that form the Churchill River diversion, that, that forecast was updated last on May the 27th. And the forecast for the Nelson River was updated last on -- on June the 8th.

And so the information that Manitoba Hydro posts on the website reflects the most up to date forecasts that are available for each of those locations.

MR. MICHAEL ANDERSON: Thank you. I guess, the charts say what they do. I appreciate that. Thank you.

The one (1) for -- if we just go through them in brief summary. I - I take your comments about information provided -- providing retrospective information, but this is Manitoba Hydro's current best view of the reservoirs that are identified in these six (6) charts, over the forecast period identified?

MR. DAVID CORMIE: That -- that -- they -- they show our best estimate of -- of conditions, yes.

MR. MICHAEL ANDERSON: And unlike the forecasts of weather people, you do rely upon and operate according to these forecasts?

MR. DAVID CORMIE: The -- about 95 percent of the flow that goes down the Nelson River and almost 99 percent of the flow that goes down the Burntwood River, is under the control of Manitoba Hydro because it operates the control structures at -- at Notigi and at Jenpeg.

And so, as long as we do what we say we're going to do, the water levels will be what they will -- will be as forecast.

And -- and so there's -- there's only a very small portion of the flow that is not subject to our control. And whether it rains or not in the local basin may cause the water levels to be slightly higher or slightly lower.

And so, as long as we don't change our mind and -- and operate according to the schedules that were set in at the time this forecast was prepared, these -- these forecasts will be accurate.

We put a range of about a foot around those forecasts to indicate that to the user of the forecast, the conditions may change over the next sixty (60) days to the extent that Manitoba Hydro may change its mind and either increase or decrease the flows from the control structures.

But -- so, that -- that's the uncertainty there is -- is whether Manitoba Hydro behaves as it's forecast to do.

MR. ROBERT MAYER: Mr. Cormie, 1 percent of the flow down the Burntwood River is natural flow? And the other 99 percent is controlled flow?

I'm having some problem with that because if I calculate your maximum flow down the Burntwood/ Nelson, sorry, the Burntwood River at thirty-five thousand (35,000) CFS, which is I think the evidence we've heard,

that would have made the natural flow of the Burntwood about three hundred and fifty (350) CFS, and I thought it was closer to twelve hundred (1200), but...

MR. DAVID CORMIE: I -- I think I probably exaggerated there. You're right Mr. Mayer. There is -- it's -- it's probably more like 5 percent, yes.

The -- the point is that the vast majority of the flow in these rivers is under Manitoba Hydro's control.

MR. ROBERT MAYER: I understand. It just surprised me that the number would have been that low.

MR. DAVID CORMIE: In the winter time there will be very little natural runoff. Most of the flow will be a regulated flow.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: So, on an average basis, just as a question, it would be closer to the one (1) than the 5 percent? Given that the Burntwood River is -- when it serves as the channel for diverted water, is operating mainly later in the season during freezing conditions?

MR. DAVID CORMIE: Well, this spring there was very little local runoff in the north because of the lack of snow melt runoff and the delay in the -- in the --

in the melt.

So, it would be a very, very small percentage. It would be very close to being 99 percent. Once we get into the rainfall season starting about mid-May then the percentage will -- of -- of local flow will go up.

And -- and it'll be -- but on average, I think Mr. Mayer is correct, five percent is probably a better number.

MR. MICHAEL ANDERSON: All right. Thank you. The current table for Southern Indian Lake; could you confirm that it depicts a -- an operation at the present time to, if we combine that with the information for Footprint Lake, that at the present time you're storing water in Southern Indian Lake?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: And it -- at the present time it's forecast to be close to -- to nearly achieve its twenty-six (26) year average level on Southern Indian Lake?

MR. DAVID CORMIE: Extrapolating from the graph, it would reach that mid-August.

MR. MICHAEL ANDERSON: And I -- this chart doesn't show it, but can you confirm that several segments of the historic -- the actually recorded and forecast line

are within the 50 percentile of occurrence in terms of the elevation?

MR. DAVID CORMIE: I would -- I can confirm that it's within the normal range, yes.

MR. MICHAEL ANDERSON: Thank you, very much. In terms of then moving on and, as I'd already indicated, the levels at Footprint Lake reflect reduced outflows from Notigi as a result of the storage operations?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: Okay. Moving on to Split Lake; the recorded level is at the twenty-six (26) year average and the forecast is exceeding the twenty-six (26) year average. Is that correct?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: That would reflect releases from Lake Winnipeg?

MR. DAVID CORMIE: It does.

MR. MICHAEL ANDERSON: And then if we move to the chart at the top of the next page for Cross Lake, similar to our discussion earlier today and -- and currently right now the --

MR. ROBERT MAYER: Before we -- before you leave Split Lake, Mr. Anderson; is that flow coming out of Jenpeg, is that required for generation or did you have

some requirement to get some of that, what appeared to be, relatively high flood water out of -- out of Lake Winnipeg?

MR. DAVID CORMIE: We are not operating Lake Winnipeg for flood control at this time, Mr. Mayer.

CONTINUED BY MR. MICHAEL ANDERSON:

MR. MICHAEL ANDERSON: I thank you for that question. I just pulled it off my list of things to inquire about, Mr. Mayer. The Board's interventions have been very helpful this morning to me, and this afternoon.

In respect of Cross Lake, it does show then levels above the twenty-six (26) year average as a result of releases from Lake Winnipeg; both recorded and forecast?

MR. DAVID CORMIE: It does, yes.

MR. MICHAEL ANDERSON: And the 2003/04 Lake Winnipeg elevation that we see immediately below that, from a planning perspective for hydraulic operations for the period up to August 1st of this year means exactly what to you?

Can you translate this particular line and series of elevations in terms of an operational consideration?

MR. DAVID CORMIE: I'm not clear on what

your question is.
MR. MICHAEL ANDERSON: If we jump back to MKO-5 and compare the two (2) graphs; the Lake Winnipeg elevation for 2002/03 through November 1st, 2003 and then compare it to the same elevation in MKO-14.
You -- you can confirm please, Mr. Cormie, that the elevation lines on the two (2) graphs actually overlap each other, so they provide a continuum from November 1st, 2002 to August 1st, 2004?
MR. DAVID CORMIE: Yes.
MR. MICHAEL ANDERSON: Thank you. And that as discussed in filings and elsewhere, the Lake Winnipeg elevation graph in MKO-5 indicates very low operating levels on -- very low elevations on Lake Winnipeg?
MR. DAVID CORMIE: Last winter, yes.
MR. MICHAEL ANDERSON: And that the Lake Winnipeg elevation graph on MKO-14, shows a marked improvement of that elevation?
MR. DAVID CORMIE: That's correct.
MR. MICHAEL ANDERSON: And so from an operational perspective, what does this additional water do for Manitoba Hydro?
MR. DAVID CORMIE: The additional water that's in storage is -- is water that's available for generation at the hydraulic plants at a future date, and -

- and is being held in storage for -- for that -- for that purpose, to avoid the possibility of very expensive non-hydraulic generation, or to take to the export market, depending upon whether it continues to rain, or it turns dry and -- and in order to meet the future requirements of the power system.

MR. MICHAEL ANDERSON: Thank you, Mr. Cormie. If we -- now to the graph that I've added relative to MKO-5, for Cedar Lake, similarly this shows recorded in the forecast levels for Cedar Lake that are -- that exceed the twenty-six (26) year average?

MR. DAVID CORMIE: That's correct.

MR. MICHAEL ANDERSON: And in that we had a discussion of the western watersheds being relatively dry; can you explain how Manitoba Hydro's achieved this elevation on Cedar Lake?

MR. DAVID CORMIE: Manitoba Hydro chose not to draw Cedar Lake down last year. And to maintain a portion of its energy reserves in Cedar Lake. The farther up the hill you can keep your water reserves, the more energy potential they have. And -- and that's what we chose to do this last winter, is to -- to hold the level of Cedar Lake at -- at the levels that you see on that graph.

And in spite of having very low flows, we

still have a relatively good storage position on -- on Cedar Lake.

MR. MICHAEL ANDERSON: Would you agree that we're in a relatively good storage position on all three (3) major reservoirs at Southern Indian Lake, Lake Winnipeg and Cedar Lake?

MR. DAVID CORMIE: Overall the state of the storage in the power system is near normal, considering that there are eighteen (18) reservoirs in the watershed and more than just those three (3). And that's why I indicated to the Board in my -- in my direct evidence, that we were confident that we would achieve our net export revenues that were in the forecast.

(BRIEF PAUSE)

MR. MICHAEL ANDERSON: You'd indicated, this morning, that when -- in my questions regarding PUB-MH-I-28-D, for in Delta, regarding flow related production revenue and costs, that these analysis are done in effect, dynamically, as water conditions evolve; is that correct?

MR. DAVID CORMIE: You're talking about the long term forecast in the IFF?

MR. MICHAEL ANDERSON: I am not at this present time. I'm asking whether or not that the -- the

storage situation that appeared -- that we've just discussed in MKO-14, that your analysis of flow related production revenue and costs has -- you have an analysis that incorporates the current circumstances shown on the graphs in MKO-14?

MR. DAVID CORMIE: What's the reference again?

MR. MICHAEL ANDERSON: Sure. I was referring to PUB/MH-1-28(d). We had a discussion this morning about your planning.

MR. DAVID CORMIE: And as we've indicated earlier, the first year of the forecast and -- and our current operations are -- are based upon our best estimate of the current water supply conditions. And reflect the current status reservoir storage, plus the state of all the rivers then flow into the reservoirs.

As we go out farther, the second year of the forecast is based on pure median inflows adjusting for storage effects.

And then for the third year onward, the forecast is based on the average of all eighty-six (86) flow conditions. And -- and it has very little to do with the current state of the power system.

MR. MICHAEL ANDERSON: Thank you. That was essentially what I'm interested in right now.

You -- however, the -- in terms of determining -- as -- as you described it on the June 15th in the reference that I came to earlier, about maximizing the financial position. It is generated using computer models that maximize the profit of the Corporation over the planning period.

And in this reference, Mr. Cormie, I refer you to page 330 of the transcript of June 15th. And I'll just read. And this is what I was really getting to:

> "We go through an operation planning process that involves preparing an operating plan for the power system as much as a year long and then we update that plan weekly. And weekly updates are necessary because the power system conditions are constantly changing; rainfall, markets, maintenance, contracts are being negotiated."

So, my earlier question was that this analysis is dynamic and reflects currently changing conditions, basically at all times; Manitoba Hydro's annual operating cycle. Is that correct?

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

MR. MICHAEL ANDERSON: And in addition to the reservoir forecasts that are shown on MKO-14, you also

have the modelling done for maximizing the revenues as a result of the water reservoir conditions that we've just discussed?

MR. DAVID CORMIE: Yeah, there -- there are many inputs to the -- the modelling. They include the water supply forecast, the load forecasts, the market conditions. Also our need to ensure that public safety is maintained at all times, that reliability is ensured and our citizenship obligations are -- are met.

Having laid out all those constraints, then we try and achieve that at least cost, or at maximize profit. And that optimization recognizes that these all are -- all these other obligations are constraints. And we're not trading off safety versus economics. We -- safety is a given. License conditions are a given. Our obligations under our -- our agreements with communities are a given. They must be met.

But we have flexibility in meeting those and we want to operate the power system in a way that meets them at -- at maximum profit.

So, any addition to that, we have discussions with those people in Manitoba Hydro who are involved with the communities and have a direct knowledge of the impacts and there are some issues that we don't model in -- in the process and they need to be considered.

And -- and that's why we have production planning meetings that involve people from all areas of the company that have the stakeholder issues close to their, you know, that's -- that's their responsibility.

And we temper our operations based upon those -- those concerns.

And -- and a good example of that was when we made the decision to reduce the outflows from Lake Winnipeg last summer, and the effects on Split Lake.

The people who were knowledgeable about those effects, who were in contact with the community, who had the relationships, were at the table, and understood the issues and made us aware, as operators, of the implications of our decisions and -- and we were able to provide them a forecast so that the necessary communication and advisories could be made to the public.

MR. MICHAEL ANDERSON: Thank you for adding that additional information regarding my questions about Split Lake.

If -- if we could finally now, with this information, turn back to one (1) of my -- the electricity forecast IFF, and it's MH-03-1; it's in Volume II of the appendices. It was marked page 32.

Excuse me, I hope that didn't catch anybody wearing an earphone.

(BRIEF PAUSE)

MR. DAVID CORMIE: Can I get that reference again?

MR. MICHAEL ANDERSON: Sure. It's in the Application, Volume II Appendices. It's at the Tab which is marked Electricity Forecast, MH-03-01. And it's the one (1), two (2), third page in; page numbered, lower right hand corner, 32.

(BRIEF PAUSE)

MR. DAVID CORMIE: Yes, we have that.

MR. MICHAEL ANDERSON: Okay. Taking into account the discussion that we've just had regarding PUB-MH-I-28, and the IFF planning process, which is where I was going, with the questions, you would confirm that the forecast for the year ending 2005, no longer reflects the current circumstances the Corporation is facing in its hydraulic operations?

MR. DAVID CORMIE: We believe that our best estimate is that the net export revenue indicated in '04/'05 is still -- aligns with our expectation for this year.

MR. MICHAEL ANDERSON: I -- subject of

course to a review of the transcript, my recollection -- my note anyway, was that you were confident that the export forecast -- the extra-provincial revenue would be achieved?

MR. DAVID CORMIE: The net extra-provincial revenue would be achieved.

MR. MICHAEL ANDERSON: Is it based on the information that you have and the dynamic analysis that we discussed in the transcript reference, that you're -- currently your expectation that this will now be exceeded?

MR. DAVID CORMIE: I indicated that we are -- we believe that net export revenue will be as forecast. The -- we believe that extra-provincial revenue will be higher than forecast. We believe that our power purchase and fuel costs will be higher, but the net -- the difference between the four fifty-one (451) and the 106 million is -- is our best -- still our best estimate, and -- and recognizing current condition.

MR. MICHAEL ANDERSON: And though -- and though you have discussed this before and just so that I'm clear on it, although we are anticipating an improvement in extra-provincial revenue, based on the current reservoir conditions that we've just described as being near normal, why would fuel and power purchase not be adjusted downward, as a result of that?

MR. DAVID CORMIE: Well, a large portion of the fuel and power purchases are those that we make in the off-peak to resell into the on-peak when off-peak market has moved up in step with the on peak market so, that the differentials are still there. And so we will still continue to purchase off-peak, to resell then to the on-peak.

So, our revenues will go up and but our costs will also go up. And in addition to that, we have some significant costs that have been incurred through April and May, that -- that will hit -- still have to be -- we're -- we're above forecast for the first two (2) months of the year.

So, those costs are -- have to be paid, and -- and they will offset some of the additional revenues that we will generate, due to the improved flow conditions that we're seeing now.

MR. MICHAEL ANDERSON: Is it -- we've discussed this and you've indicated that these numbers are firm but is it possible to undertake to produce a revised statement for the integrated electrical forecast that reflects the current reservoir conditions as -- as existing and forecast?

MR. DAVID CORMIE: The results wouldn't be -- the net results will not be different. The net income

won't be any different if we do that than what's indicated in that table.

MR. MICHAEL ANDERSON: And just for my clarification, the table that does appear that we're discussing at page 32 was prepared when?

MR. DAVID CORMIE: It was prepared in the fall of 2003.

MR. MICHAEL ANDERSON: And the near term water flow forecast at that time was low water conditions?

MR. DAVID CORMIE: No, this forecast wasn't prepared based on the water conditions. It was based upon the assumption that we would have median conditions in all our watersheds.

And, just to go back to the year 2002, we -- as an example of how you can have extreme events, we have extremely high water in the Winnipeg River, near record flows, and we had record low flows on Saskatchewan river. The average of which turned out to be a pretty normal year.

So we've been looking at the Winnipeg River as an example of it being very high but we haven't looked at the flows on the Upper Saskatchewan or in the Upper Churchill. You haven't brought those to the -- as -- as exhibits.

So, you know, we're only looking at a

partial picture here and then you're implying from that that our financial results will reflect just the conditions on the Winnipeg River.

Our best estimate now is that we will achieve the net revenue targets shown in the -- in the -- in the forecast based upon an overall assumption of median flows.

MR. MICHAEL ANDERSON: I just had wanted to make it clear that, of course, the Winnipeg River information was used as an example of an external source that -- as we had a lengthy discussion of the current reservoir conditions at MKO-14 which are Manitoba Hydro's indication of recorded and forecast flows.

So my inferences, such as they are, and my requests as they are flow from our discussion on Manitoba Hydro's own forecasts and not from the single Winnipeg River forecast?

MR. DAVID CORMIE: Manitoba Hydro provided yesterday Exhibit 28 that showed our storage position and on the first of June we were approximately 1 million megawatt hours below forecast. Our -- we -- we now believe that that line for the end of June is -- is slightly above the normal but for the -- but not significantly different.

So water conditions for the system as a

whole energy storage is pretty well normal when you look at all eighteen (18) reservoirs. And it's all eighteen (18) reservoirs that contribute to the future well being of the Corporation and not just a few select.

MR. MICHAEL ANDERSON: I'm certainly happy for that clarification, thank you. So, just to be clear, so all of the sequences on page 32 of the IFF were prepared using median water flows?

MR. DAVID CORMIE: No. Only the second year of the forecast is based on median. The third year and the subsequent years are based on the weighted average of all eighty-six (86) flow conditions.

MR. MICHAEL ANDERSON: I have that from your earlier discussion. I just wanted to confirm that. Thank you. I had a couple of housekeeping questions and then some short ones on perspective.

The housekeeping question was simply, on the settlements that we had referred to earlier in respect of your export operations using your -- where would they appear in the electric forecast projected operating statement?

MR. DAVID CORMIE: What do you mean by "settlements"?

MR. MICHAEL ANDERSON: They were your -- it was your word and for those customers that you were --

when we were discussing the buy-downs, and you described them as, as I recall in the subject of the challenge,

> "through the winter season we bought down our export operations so that it would be -- we would be able to meet our commitments."

And that's when we were discussing the combined reservoir operation for Southern Indian Lake and Lake Winnipeg?

MR. DAVID CORMIE: Yeah. Yes, so, for example, if we had a -- a long term firm sale contract with a -- a customer, and there was a hundred (100) megawatts at a hundred dollars ($100) a megawatt hour, there would be revenue there of ten thousand dollars ($10,000). The revenue would show up in the ex-provincial sales.

If we had to buy that energy back, that would be -- show up as a power purchase and the two (2) would net out and the difference between the purchase cost and the -- and the revenue would affect the net revenue.

MR. MICHAEL ANDERSON: Okay. The -- the perspective matter was just something I was just trying to wrap my mind around what the corporation had dealt with in terms of what's been described as a shortfall in PUB/MH-I-30B. It actually appears at tab 7, page 3 of the

Application, in the second paragraph.
Manitoba Hydro presented that there would be a seven thousand eight hundred nine (7,809) gigawatt hour energy shortfall.
MR. DAVID CORMIE: Could we have the reference again?
MR. MICHAEL ANDERSON: Yes, it's PUB/MH-I-30B.

(BRIEF PAUSE)

MR. ROBERT MAYER: Looks like the reserves have deserted.
MR. MICHAEL ANDERSON: Yep.
MR. ROBERT MAYER: Their -- their strength is falling off there.
MR. DAVID CORMIE: I'm sure they're all busy working on undertakings.

(BRIEF PAUSE)

MR. MICHAEL ANDERSON: And Manitoba Hydro responses to the Public Utilities Board, to the Round One (1) Request, should be identified as such on the --
MR. MICHAEL ANDERSON: It's Volume IV,

excuse me.

(BRIEF PAUSE)

MR. DAVID CORMIE: Okay, we have the reference. What was your question again?

MR. MICHAEL ANDERSON: I'll have to frame it. It was just a matter of perspective and -- and trying to -- if -- if you go to -- while you're there, to I -- PH -- PUB/MH-I-32C, and I-32E. Sort of -- I just wanted confirm that I'm -- I understand these numbers correctly.

MR. DAVID CORMIE: We have all those.

MR. MICHAEL ANDERSON: Okay, good.

So, it's correct then that the shortfall of seven thousand eight hundred nine (7,809) gigawatt hours, if we go to PUB-I-32E, represents 1.7 times the annual dependable capacity of Kanawapa.

MR. DAVID CORMIE: Yes. That -- that's -- I don't why you would frame it that way, but that's correct.

MR. MICHAEL ANDERSON: While I just -- in terms of the significance of the energy.

MR. DAVID CORMIE: Oh yes, seven thousand eight hundred (7,800) it's a large number.

MR. MICHAEL ANDERSON: Yeah and that if we

compared that to the dependable capacity of Wuskwatim, it's -- I calculated that it would take 6.2 years for Wasquatum at 74.96 months to generate the same amount of energy.

MR. DAVID CORMIE: Yes, it's a very large shortfall, yes.

MR. MICHAEL ANDERSON: And the reason that I keyed to those is that they are capital projects that are being forecast, you have to also indicate the significance of a shortfall of that energy magnitude in terms of the Manitoba Hydro system, to projects that we're familiar with, just to give it a concept?

It'll take twenty-four (24) -- twenty point four (20.4) months for Kanawapa to replace that shortfall energy.

MR. DAVID CORMIE: Probably more relevant is that seventy-eight hundred (7800) is probably very close to the annual output of Kanawapa, under average flows.

MR. MICHAEL ANDERSON: I was just going to say on average flows, because the current number it looks like you have about a 41 percent time factor there.

Okay, well that was my perspective, as I found that it indicated also the significance -- well, I'll draw my own conclusions later.

There was one (1) other reference in the Annual Report though, that I just wanted to make some reference to, and Mr. Warden, if you could -- or if you could help me with this. It appears at Appendix 2.2, of Volume II, and it's page 72 of the Annual Report. And it's at the bottom:

> "Working relationship with Aboriginal peoples."

There are numerous references in this Annual Report to various projects with Aboriginal peoples and I don't intend to pursue them here. And I do note that there was an undertaking just recently filed, but is it -- I noticed that there are achievement records in terms of the various targets for corporate and northern.

Can you indicate why the 33 percent target for the northern -- Manitoba Hydro's northern operation was selected, how that number was arrived at?

Just based on your knowledge?

MR. VINCE WARDEN: Based on some judgment, where we are today and what we think is attainable, what we think is a stretch target within the time frame indicated there.

MR. MICHAEL ANDERSON: And is it possible by job category, to provide a breakdown of number of employees for these two (2) categories --

MS. PATTI RAMAGE: Mr. Chair --
MR. MICHAEL ANDERSON: -- that are Aboriginal.
MS. PATTI RAMAGE: -- there's no great impacts on these -- in this line of questioning.
THE CHAIRPERSON: Mr. Anderson, how do you relate this to the matters before the Board?
MR. MICHAEL ANDERSON: Well, actually there was one (1) item that I had wanted to refer to, given that there seemed to be some motion of achievement in the 1992 proceedings, there was considerable discussion about this, and the former Chairman and Mr. McCallum had indicated it would be a personal objective of his, to reverse the rather sorry numbers at that time, and the Board commented on it.
I had wanted to incorporate in my final argument, some reference to the transition in time, as a result of that discussion then and the Board's expectations for an ongoing report, in fact, in the '92 Order on the status of Aboriginal employment in its operations.
MR. ROBERT MAYER: Mr. Anderson --
MR. MICHAEL ANDERSON: So --
MR. ROBERT MAYER: -- you're going to see a lot of that in the report of the Clean Environment

Commission, that was the subject of extensive examination. It's hardly relevant here.

THE CHAIRPERSON: In brief, Mr. Anderson, are you -- can you be brief, and I presume your linkage would be to meet the targets that you're seeking, there would be a cost consequence?

MR. MICHAEL ANDERSON: There is a cost consequence, and also if I might describe it in that way, your discussion with Manitoba Hydro about dividends to the shareholders. And in a manner of speaking, employment with the Corporation provides dividends to the northern citizens, who not only are customers, but affected by their operations, so --

THE CHAIRPERSON: Mr. Anderson, I don't want to damage your ability to make a closing argument, but -- so could you -- could you restrain your inquiries in this area, and try and cover off your major point?

MR. MICHAEL ANDERSON: Well, Mr. Mayer is correct in terms of the discussion at the CEC proceedings, I'm happy to find those -- I have -- find those references, request a Rule 17 disposition and incorporate it into final argument.

THE CHAIRPERSON: Very good, thank you.

MR. MICHAEL ANDERSON: And those are the questions that I have for this Panel at this time, Mr.

Chair. Thank you all for your accommodation and patience, I very much appreciate it. And thank you again for your consideration of the matters earlier today, all Members of the Panel, I appreciate it.

THE CHAIRPERSON: Thank you, Mr. Anderson, we'll have a ten (10) minute break, and then we'll return with Professor Miller of TREE.

(BRIEF PAUSE)

THE CHAIRPERSON: Oh, I see. Then we will -- then when we return we'll move on to the setting up for the Cost of Service Rates and DSM Panel if that's all right with you, Ms. Ramage?

MS. PATTI RAMAGE: Yes.

--- Upon recessing at 2:35 p.m.
--- Upon resuming at 2:50 p.m.

THE CHAIRPERSON: Welcome back. With Mr. Anderson completing his cross-examination and TREE does not wish to cross-examine this Panel, so what I'm going to ask first if Mr. Peters could bring us up to date on the schedule. Mr. Peters ...?

MR. BOB PETERS: Thank you, Mr. Chair. I

-- I wish I had the easy task of predicting water flows on the reservoir system for Manitoba Hydro but instead I've had the task of planning the schedule.

And I -- I've handed out, Mr. Chairman, a calendar that I would like to speak to and it probably would be appropriate to allow other parties to speak to it as well if there's any issues or questions. And I prepared this at the break.

If you look to June the 23rd, which is to date. I am processing that in the next fifty-five (55) minutes, Manitoba Hydro finish introducing, swearing and the direct evidence from their Cost of Service, rate design and DSM Panel that's gathered before us.

If their direct evidence finishes today, which we hope it will, then going over to the 28th of June, cross-examination of this Panel would commence nine o'clock on the 28th with TREE being the Intervenor cross-examining starting at nine o'clock in the morning.

And as soon as Mr. Miller is finished his questioning of this Panel, the Board would be asked to stand this Panel down to allow Mr. Lazar to provide his direct testimony and to be cross-examined by anybody in the room who wishes to cross-examine Mr. Lazar.

When Mr. Lazar's evidence and cross-examinations have finished, then we would revert back to

the outline of procedures and pick up the cross-examination of the Manitoba Hydro Cost of Service rate design Panel with the Intervenors preceding Board counsel.

And just going alphabetically unless it's organized otherwise, I would see that CCEP would start cross-examining Manitoba Hydro sometime on Monday, June 28th. That may or may not carry over to the 29th.

On the 29th, my friend Mr. Williams, on behalf of CAC/MSOS, would have his opportunity to cross-examine this Panel and depending on the time available, MIPUG, through Ms. McCaffrey, would have an opportunity to start, perhaps, on the 29th. And if not, start then on the 30th, start and finish. Followed by MKO and lastly PUB.

There is also a presenter to be heard on June 30th, which is tentatively one (1) that Mr. Anderson and I will discuss. There may be other dates but we'll keep talking about it.

When you flip to July, the schedule may ease up a little bit.

I should say, before flipping it, is that we must make and we have to make every possible minute valuable so that this Panel can be finished by the end of business on June the 30th. There are commitments that the Panel Members have that make them unavailable subsequent,

and we have to -- have to honour that.
THE CHAIRPERSON: You recognize that we have a ten o'clock start on the 30th, right?
MR. BOB PETERS: Yes, I appreciate that, and we have also some time restraints earlier in the week as well.
But going over to July, on the 5th is a date that all parties and the Board are available, and I've pencilled in here, and I apologize to Ms. McCaffrey, I didn't speak to her at the break on this, but putting the MIPUG witnesses perhaps on the 5th, and have them start and finish on that date, and then again to My Friend, Mr. Williams, I also didn't speak to him at the break, but I believe we previously discussed the possibility of his witness, Mr. Harper. I'm pretty sure it's not the politician, testifying on the 8th.
And -- and recognizing that Mr. Williams' witness on behalf of CAC/MSOS is coming from out of town, so we again have to provide a date certain for him to arrive, and plan his schedule.
The July schedule has the 15th of July as the next available date, and there's nothing scheduled, although there may be requests from counsel, and I would ask them to speak to myself and Ms. Ramage, if there are any requests for further questioning of the Revenue

Requirement Panel on any undertakings that have been filed or to be filed, and the date on July 15th, could be used to accommodate that.

And finally the 16th is the date that has been scheduled for closing submissions, and parties can work to that end with some certainty, according to my draft schedule.

That's enough of my predictions, I'm quite sure it's more accurate than the weather forecast, but I'm not sure by how much, Mr. Chairman. And subject to any comments you may have, or other parties, I hope we could work towards this and accomplish it.

THE CHAIRPERSON: Thank you, Mr. Peters. Ms. Ramage, are you all right with this?

MS. PATTI RAMAGE: Yes.

THE CHAIRPERSON: Thank you. Mr. Williams...?

(BRIEF PAUSE)

MR. BYRON WILLIAMS: Mr. Chair, we'll always accommodate the PUB. I do have a few comments, just brief ones.

In terms of Mr. Harper's availability, he is available on the 8th, he also is available on the 15th.

So we're not going to be booking any flights in the -- just knowing how the schedule of this Hearing has gone. So, we will keep both of those dates open for him, in terms of that.

In terms of the proposed order for next week, we will certainly work with it, if that's the decision of the Panel.

Speaking for myself, not for my clients, I'm -- I'm not sure I consider it the most efficient way to go about things, and in particular, we find it of great assistance to have Board Counsel go first, because it serves to narrow the issues from -- from our perspective, efficiency wise. And so that we can come in and kind of cherry pick on the -- on the back of Mr. Peters.

So, I would -- and you know, we'll -- we'll certainly work with whatever the Board, in its wisdom decides, in terms of order, but our concern would be that it may -- it may be an attempt to shorten the time frame, but it may inadvertently lengthen the time frame.

THE CHAIRPERSON: Thank you, Mr. Williams, we'll take that under advisement. Mr. Anderson...?

MR. MICHAEL ANDERSON: Excuse me, Mr. Chair, the schedule that Mr. Peters has proposed, after discussing, appears fine to me at this stage. And I guess we'll chat about a time slot for possible presentation on

the 30th, and we'll do that later, but otherwise, it looks fine.

THE CHAIRPERSON: Thank you, Mr. Anderson. Mr. Feldschmid...?

MR. JURGEN FELDSCHMID: The schedule's fine from the perspective of CCEP, thank you, Mr. Chair.

THE CHAIRPERSON: Thank you. Ms. McCaffrey...?

MS. TAMARA McCAFFREY: We echo Mr. Williams' comments with respect to the order of Public Utility Board counsel going first. We agree with that. We will of course accommodate the schedule of the Board, and -- and otherwise the schedule is fine, thank you.

THE CHAIRPERSON: Thank you very much, we'll take the comment on the order very much under consideration.

Ms. Ramage, do you think that we could get done with the introduction of the Cost of Service Rates and DSM Panel by 4:00?

MS. PATTI RAMAGE: Yes, I do.

THE CHAIRPERSON: Okay.

MR. BOB PETERS: Mr. Chairman, if I could interrupt carefully, Mr. Miller -- while I spoke to him at the break, he may have a comment that he wants to provide to the Court as well.

THE CHAIRPERSON: I'm sorry. Professor Miller...?
PROFESSOR PETER MILLER: This is certainly our preferred schedule and I do have to phone Mr. Lazar back to -- to confirm it and -- and perhaps you can let me know when -- when you will determine that he is available that he can testify on the 28th.
THE CHAIRPERSON: That's the intent for -- the schedule's been moved around so that we can accommodate him on the day that he can come.
PROFESSOR PETER MILLER: Okay. Then that's definite now?
THE CHAIRPERSON: That's the whole purpose.
PROFESSOR PETER MILLER: Okay, you're not taking that under advisement or anything?
THE CHAIRPERSON: No, under advisement was whether Mr. Peters started or completed cross-examination.
PROFESSOR PETER MILLER: Okay. Thank you very much. I certainly appreciate the flexibility of all concerned.
THE CHAIRPERSON: Thank you, Professor Miller. Okay, Ms. Ramage, I guess we would start off if Mr. Barron would -- you could introduce the Panel to start with and the Members that have yet to be sworn.

MS. PATTI RAMAGE: I believe you're familiar with Mr. Warden, Ms. McCaffrey's favourite witness. Mr. Wiens was introduced briefly in the Revenue Requirement Panel and Mr. -- I would note that Mr. Wiens has already been sworn.

To Mr. Wiens' right is Chic Thomas and Mr. Thomas is here to provide evidence with respect to the preparation of the Cost of Service Studies and to the far right is Mr. Lloyd Kuzcek. Mr. Kuzcek will be our DSM witness. He is the division manager of consumer marketing and sales with Manitoba Hydro.

THE CHAIRPERSON: Thank you very much. Mr. Barron, would you proceed to swear the new witnesses.

MR. ROBERT MAYER: While that's happening, Ms. Ramage, the original schedule also showed Mr. Derksen on this Panel; has that changed?

MS. PATTI RAMAGE: I believe that was in error.

VINCE WARDEN; Previously Sworn,
ROBIN WIENS; Previously Sworn,
CHIC THOMAS; Sworn,
LLOYD KUZCEK; Sworn,

THE CHAIRPERSON: Thank you, Mr. Barron.

Welcome Panel. Ms. Ramage...?
MS. PATTI RAMAGE: Thank you, Mr. Chair.

EXAMINATION-IN-CHIEF BY MS. PATTI RAMAGE:
MS. PATTI RAMAGE: I'll begin with you, Mr. Warden. Manitoba Hydro is seeking an interest in general consumer rates of 3 percent effective April 1st, 2004; are you requesting the same increase for all classes of service?
MR. VINCE WARDEN: No. Manitoba Hydro has structured its proposed class rate increases to achieve balance between the key rate objectives of gradually realigning class revenue with cost while being sensitive to customer impacts.
For classes with revenue to cost ratios less than 100 percent revenue increases greater than average are proposed. And for classes with revenue to cost ratios greater than 100 percent lower than average rate increases are proposed.
For 2004/05 the following class -- class rate increases are proposed in this application: residential 4.01 percent, general service small non-demand 2.15 percent, general service small demand 2.09 percent, general service medium 2.57 percent, general service large less than 30 kV 4.0 percent, general service large 30 to

100 kV 2.11 percent, general service large greater than 100 kV 1.95 percent and area and roadway lighting 2.03 percent.

MS. PATTI RAMAGE: Now, this next question I posed, Mr. Warden, when you were on the Revenue Requirement Panel but now I'd like to give it the Cost of Service twist and that is; these increases were sought to be effective April 1st, 2004, since that date will be -- is obviously past before the time any order can be issued on this application how does Manitoba Hydro intend to obtain recovery of its revenue requirement?

MR. VINCE WARDEN: Yes, at the time of approval Manitoba Hydro intends to file for confirmation of new rates that will recover the overall revenue -- revenue increase allowed for 2004/05 during the remainder of the fiscal year.

If the request of a revenue increase of $28 million is approved and if implementation -- implementation takes place August 1st, 2004, the affect of cost rate increases on that date will be as follows:

Residential, 5.52 percent and general service small, 3.04 percent, general service medium 3.81 percent, general service large, less than 30 kV, 5.91 percent. General service large, 30 to 100 kV, 3.12 percent, general service large, greater than 100 kV, 2.83

percent, and area and roadway lighting 3.04 percent. The overall average of that being 4.32 percent.

MS. PATTI RAMAGE: Now, the rates you've quoted have been for the '04/05 year. Has Manitoba Hydro applied the same balanced approach to its proposal for class rate increases in 2005/2006, that is the second year covered by this Application?

MR. VINCE WARDEN: Yes, the differentiation between class revenue increase is sought for April the 1st, 2005, is similar to that requested for April the 1st, 2004, with most class increases for 2005 at about one half (1/2) percentage point lower than the 2004 increases.

MS. PATTI RAMAGE: Thank you, Mr. Warden. And just as a housekeeping matter, and out of an abundance of caution, to ensure we have all the technicalities correct.

Do you adopt the application material in respect of rate design and Cost of Service, as your evidence before this Board?

MR. VINCE WARDEN: Yes, I do.

MS. PATTI RAMAGE: I'm going to now direct my questions to Mr. Wiens, but there is an exhibit that we would like to distribute that will just assist parties I think, in following through some of the evidence.

(BRIEF PAUSE)

THE CHAIRPERSON: The exhibit is Selected Cost Coverage Ratios? Ms. Ramage, what number would you -- do you have us at?

(BRIEF PAUSE)

MS. PATTI RAMAGE: I have us at 39, Mr. Barron seems to be nodding.

THE CHAIRPERSON: Very good, 39 it is.

--- EXHIBIT NO. MH-39: Selected Cost Coverage Ratios.

CONTINUED BY MS. PATTI RAMAGE:

MS. PATTI RAMAGE: Mr. Wiens, could you state your name and responsibilities at Manitoba Hydro?

MR. ROBIN WIENS: Good afternoon, Mr. Chairman, Members of the Public Utilities Board, Intervenors and Colleagues, my name is Kurt Robin Wiens, I have been employed at Manitoba Hydro since January of 1989, and for most of that period I've been manager of the Rates Department.

I'm currently the Division Manager of Rates and Regulation, and in that capacity I have responsibility

for electricity and gas rates, Cost of Service analysis, load research, and for electric service extension policy.

I have overall responsibility for services in support of Manitoba Hydro's regulatory compliance and proceedings, and for enterprise risk management.

I hold a Masters Degree in Economics from the University of Manitoba.

I've appeared before this Board in support of Manitoba Hydro's General Rate Applications in the years of 1990, '91, '92, '94, '96, and in the Status Update proceeding of 2002.

I've also appeared before this Board in support of Applications for specific rate offerings, including surplus energy and earlier similar programs, and Manitoba Hydro's curtailable rate offerings as well.

MS. PATTI RAMAGE: Mr. Wiens, which aspects of Manitoba Hydro's 2004 General Rate Application were prepared by you or under your direction?

MR. ROBIN WIENS: I had overall responsibility for coordinating the preparation of the General Rate Application and all supporting documents, including appendices and responses to all Information Requests.

In addition, I had specific content responsibility in that all rate design and Cost of Service

material covered in the Application and the supporting material was prepared by me or under my direction.

In addition, Tab 11 of the Application, which includes responses to specific Public Utilities Board directives in previous Orders, was prepared by me or under my direction.

The ex parte orders in respect of the Curtailable Rate Program, and the surplus energy program, for which Manitoba Hydro is seeking confirmation, were issued in response to applications which were also prepared under my direction.

Finally, I coordinated the preparation of rebuttal to the testimony of Mr. Harper on behalf of CASMSOS. Messrs. Osler and Bowman on behalf of MIPUG and Mr. Lazar on behalf of TREE RCM. And I prepared or directed the rebuttal insofar as it addressed matters of rate design or Cost of Service.

MS. PATTI RAMAGE: Mr. Wiens, on Monday, one (1) of the MIPUG members made a comment in his address to this Board to the effect that MIPUG members pay rates that are more than 14 percent of their cost. Do you have any comment on this?

MR. ROBIN WIENS: Mr. Turner would have drawn that number directly from the cost service study for 2004, filed with this Application.

Actually it is developed by adding an allocation of Manitoba Hydro's net export revenue to the revenue which is forecast to be obtained by rates paid by the class and then dividing the sum of those two (2) by the allocated Cost of Service for that class.

If we were to do the same calculation prior to applying any export revenue credit, it would show that, that particular class paid rates equal to only about 67.7 percent of the allocated costs.

But that class is not alone in that respect. No class of service pays rates sufficient to cover their costs, without an allocation of a share of net export revenue.

This allocation accounts for fully 33 percent of the cost which was incurred to serve domestic customers overall and 47 percent for the class of service to which most MIPUG members are a part.

MS. PATTI RAMAGE: So, are you saying that the revenue cost coverage ratio cited by MIPUG is dependent on the method chosen to allocate export revenue?

MR. ROBIN WIENS: Yes, I am. Manitoba Hydro was directed in Order 7/03 to prepare its perspective Cost of Service study for 2003/2004 according to a number of specifications that were laid out in that order.

One (1) of those specifications was that net export revenue be allocated on what amounts to the same basis as the allocation of generation and transmission costs to the different customer classes.

This is the long standing method used by Manitoba Hydro to allocate these revenues prior to 2002. In 2002, Manitoba Hydro filed a Cost of Service study that allocated these revenues on the basis of total cost to serve each class thereby crediting some of the net export revenue on the basis of distribution costs as well as generation and transmission costs.

Manitoba Hydro's position at that time was that export revenue had become so large relative to domestic costs that allocation on the long-standing methodology was no longer appropriate and resulted in average energy prices falling below the short run marginal costs of electricity, particularly for the largest users.

However, in Order 7/03, these proposed changes were denied and Manitoba Hydro was directed to prepare it's 2004 perspective Cost of Service study on the basis of the long standing method for crediting net export revenues.

Manitoba Hydro has prepared that Cost of Service study pursuant to the direction in Order 7/03. But does continue to believe that the critical issue of

the allocation of net export revenues needs to be further considered.

MIPUG's clients have not seen a rate increase since 1992 and indeed this Board provided a slight decrease of about 2 percent in 2003.

Over the same period, not considering the impact of the uniform rates legislation. Uniform rates -- pardon me, the rates to residential customer class increased about 9 percent.

So, had those increases and decrease been applied in 1992 Cost of Service study, the residential revenue cost coverage would have been about 95 percent. And the general service large over one hundred (100) KV revenue cost coverage would have been about 109 percent.

The remaining gap in revenue cost coverage between those classes which we see in the 2004 Prospective Cost of Service Study, is explained by the increases in export revenue since 1992.

MS. PATTI RAMAGE: Mr. Wiens, I'd like to take you now to Exhibit 39, because I think we'll -- if we can walk through that, it will assist in understanding -- in the Panel's understanding of where you're coming from.

First of all, can you tell me what were export revenues in 1992?

MR. ROBIN WIENS: In 1992, export revenues

were at 127 million; were about 16 percent of the total cost to serve Manitoba domestic customers.

MS. PATTI RAMAGE: And what are export revenues forecast to be under the Prospective Cost of Service Study?

MR. ROBIN WIENS: In the Cost of Service Study for 2004 file with this Application, we have included net export revenues, totalling 419 million. And these net export revenues, about three (3) times the level of 1992 account for fully one (1) third, of the total cost to serve Manitoba domestic customers.

MS. PATTI RAMAGE: And just for clarity, Mr. Chair, you'll -- on Exhibit 39, you will see the $127 million dollar figure and four hundred and nineteen (419) on the first line.

Over those same periods, that's the 1992 to current, can you advise what proportion of generation and transmission costs were offset by export revenues?

MR. ROBIN WIENS: Yeah, the offset in 1992 was 20 percent and by 2004, it had increased -- it had increased to 47 percent.

MS. PATTI RAMAGE: In 1992, what was the revenue cost coverage for the residential class before export revenue allocation?

MR. ROBIN WIENS: Without considering any

allocation of export revenues in 1992, the revenue cost coverage of the residential class was 75 percent.

MS. PATTI RAMAGE: And what is it today?

MR. ROBIN WIENS: Today it is 64 percent.

MS. PATTI RAMAGE: And in 1992, what was the industrial class's revenue cost coverage before export revenue allocation?

MR. ROBIN WIENS: It was 91 percent.

MS. PATTI RAMAGE: And what is it today?

MR. ROBIN WIENS: It is 68 percent.

MS. PATTI RAMAGE: Now, to put this in a different perspective, if we take out the export revenues, can you -- can you then adjust the numbers to a base of a 100 percent -- of 100 percent and illustrate what that means?

MR. ROBIN WIENS: Yes, if you were to take the revenue cost coverages of the two (2) classes, prior to the allocation of export revenues, and then adjust them upward to a base of 100 percent, you would have a revenue cost coverage for the residential class.

The schedule says 90 percent. I did a quick check just prior to coming in, and it is 89 percent and the general service large over 100 kV, would have been 108 percent.

And I emphasize again, this is the revenue

cost coverages without any apportionment of export revenue, but adjusted to a base of 100 percent.

MS. PATTI RAMAGE: Now, following up on that; if export revenues are included in your 1992 calculation, what does that do to the calculation?

MR. ROBIN WIENS: Well the revenue cost coverages for both classes do not change greatly from the -- from the -- the revenue cost coverages prior to allocation of export revenue on a base of one hundred (100). The residentials would drop from 89 percent to 88.5 percent, and the general service large over 100 kV, would increase from 108 percent to 111 percent -- 111.8 percent.

MS. PATTI RAMAGE: But, turning to our Prospective Cost of Service Study for 2004 now, can you provide the revenue cost coverages for the residential and industrial classes, adjusting those numbers again to a base of 100 percent, and again prior to the allocation of export revenues?

MR. ROBIN WIENS: Yes, taking the revenue cost coverages prior to any apportionment of export revenues, and adjusting them to a base of 100 percent, results in the residential class having a revenue cost coverage of 94.4 percent, and the general service large over 100 kV, revenue cost coverage of 100 percent, which

is a gap of less than six (6) percentage points.

MS. PATTI RAMAGE: Now, I would like you to make that final calculation here, and advise what will happen in -- at present, when we now add in the export -- or allocate the export credits to those two (2) classes?

MR. ROBIN WIENS: We saw that prior to allocating the export credits, and on a base of a 100 percent, the gap between the two (2) was less than six (6) percentage points.

After allocation of the export credits, the relative revenue cost coverages are 90.6 percent and 114 percent, which represents a gap of about fifteen (15) percentage points.

MS. PATTI RAMAGE: Thank you, Mr. Wiens.

Mr. Wiens do you continue to believe that requesting a lower than average rate increase for general service small and general service large, greater than thirty (30) Kv and a higher than average increase to the residential class in Manitoba Hydro's Application is appropriate?

MR. ROBIN WIENS: Yes. Although I have just noted that Manitoba Hydro has concerns with the results of the prospective study for 2004, most of the alternatives which we think might be considered, would still show revenue cost coverage for the general service

large class in excess of 100 percent and perhaps even in excess of 105 percent.

Similarly they would show the residential class below 100 percent and likely below 95 percent. Even if the net export revenues are not considered at all in the presentation of Cost of Service results, the general service large class RCC stands at a hundred (100), as I noted earlier and the residential at ninety-four (94).

If we go to the example provided in the response to TREE RCM second round question number thirteen (13) and you can check that now, or check it later; it will show general service large at 108 percent and residential at 94 percent.

MS. PATTI RAMAGE: Mr. Wiens, are there benchmarks other than the final results of the Prospective Cost of Service of 2004 which contest the reasonableness of the class rate increases proposed in this Application?

MR. ROBIN WIENS: Yes, the -- the class revenue cost coverage prior to the allocation of export credits, which I've discussed and put on the record, is one (1) such benchmark.

Another is the relative rate advantage of the different domestic classes of service compared with other Canadian utilities also served by hydro electric resources.

In my rebuttal evidence, which was filed earlier with this Board and Intervenors, we've included a schedule which shows that benchmark residential customers of Manitoba Hydro have an advantage of up to 9 percent, depending on their loads, relative to BC Hydro's residential customers.

For the large industrial group, the customer benchmark has about a 20 percent advantage relative to BC Hydro's benchmark industrial customer.

And these different relative advantages are not explained by BC Hydro's Cost of Service results, since the most recent results we were able to obtain from BC Hydro showed the residential revenue cost coverage at 92.5 percent, which is higher than what our Cost of Service study results for 2004 are showing for that class.

And the industrial revenue cost coverage 101.8 percent. Which is lower than what Manitoba Hydro is showing in the prospective study for 2004.

MS. PATTI RAMAGE: Mr. Harper, on behalf of CASMSOS, appears to be telling us that the residential rate increase does not have to be as much as one (1) percentage point higher than the average increase. Do you agree with this position?

MR. ROBIN WIENS: No, I don't. Some of the rate differentials is, to some extent, a matter of

judgment. Manitoba Hydro's rate objectives as enunciated in Tab 9, Section 9.2 of the Application would allow for a class rate increase exceed the average rate increase for all classes by as much as two (2) percentage points in order to align class revenue with allocated costs.

Manitoba Hydro elected to limit the differential to 1 percent to mitigate class impacts.

MS. PATTI RAMAGE: Does Manitoba Hydro support the recommendations made by TREE in respect of inverted rates for all customer classes?

MR. ROBIN WIENS: Manitoba Hydro believes that there is a legitimate case to investigate the merits and impacts of inverted rates for all domestic classes.

Pursuant to Directive 7 in Order 154/03, Manitoba Hydro is expecting to file, by December 31st of 2004, a study on the merits, or otherwise, of inverted rates and if appropriate, a plan to implement such a rate structure.

If the study supports the implementation of an inverted rate structure, and if Manitoba Hydro's executive and Board concur with those recommendations, Manitoba Hydro will include in its next subsequent General Rate Application, provisions to implement inverted rates in accordance with the recommendations of that study unless, of course, we're otherwise directed by the Public

Utilities Board.

Thus, Manitoba Hydro generally supports the position of TREE RCM, but may ultimately differ substantially in terms of the details such as the size of the first block, the pricing provisions in each of the blocks and the factors that shape those provisions. And some of our specific concerns, as of this date, have been outlined in our rebuttal evidence.

MS. PATTI RAMAGE: Thank you, Mr. Wiens, that's all the questions I have for you and I'm going to turn now to Mr. Thomas.

Mr. Thomas, would you please outline your areas of responsibility with respect to this application.

MR. CHIC THOMAS: Good afternoon, Mr. Chairman and Board Members. My name's Chic Thomas. I'm the Supervisor of the Cost of Service Section at Manitoba Hydro. As such, I am responsible for the preparation of the Electric Cost of Service Studies.

This includes the actual 2003 and the prospected 2004 Cost of Service Studies as filed in this application. I'm also responsible for the Diesel Cost of Service that isn't part of this proceeding.

I have participated in several regulatory hearings and appeared on the Manitoba Hydro Panel for the first time during the Diesel Rates application heard

January 2004. I've a Bachelor of Arts Degree from University of Manitoba as well as being a Certified Management Accountant.

MS. PATTI RAMAGE: Thank you. Could you please outline the Cost of Service Studies included in this application?

MR. CHIC THOMAS: Volume III, Tab 10 of Manitoba Hydro's 2004 General Rate Application contains both the actual Cost of Service Study for fiscal year ending 2003 and the Prospective Cost of Service Study for fiscal year ending 2004.

Both studies have been prepared in a manner consistent with Board Directives ordered in 07/03 as well as 154/03. The major changes to the Cost of Service Studies since the 2002 study, as a result of these directives, are allocation of net export revenues on the basis of generation and transmission costs, incorporation, where possible, of Winnipeg Hydro financial and load data and allocation of transmission costs classified as 100 percent demand on the same basis as generation demand costs or to coincident peak.

MS. PATTI RAMAGE: Mr. Thomas, are any of your recommendations of the NERA Report on Classification and Allocation Methods for Generation and Transmission included in the Cost of Service Studies filed in this

application?
MR. CHIC THOMAS: No. The report on Generation and Transmission Classification and Allocation Methods in the Cost of Service Study was ordered by the Board in Order 07/03 and completed after Manitoba Hydro filed it's 2004 General Rate Application.
While the Corporation, in principle, supports the recommendations in that report, none of those recommendations have been incorporated into the Cost of Service studies included as part of this -- as part of this application.
Pending the decisions of this Board during the current proceeding some or all of those recommendations may be included in future Cost of Service Studies.
MS. PATTI RAMAGE: Could you outline how the acquisition of Winnipeg Hydro was handled in the Cost of Service Study?
MR. CHIC THOMAS: Yes, Winnipeg Hydro data has been incorporated into the Cost of Service as accurately as possible. However, as explained in the Application, while most costs and revenue data was incorporated into Manitoba Hydro's records there are a couple of items that will be addressed in future Cost of Service Studies that were not included in the studies

filed with this -- with this Application.

These include, functionalization of capital related items were still not finalized at the time the prospective and actual -- actual Cost of Service Studies were prepared.

For example, a preliminary list of Winnipeg Hydro assets was used to functionalise the acquired assets of former Winnipeg Hydro. This preliminary listing was at some variance to those values actually loaded into Manitoba Hydro's accounting system. Future studies will now have the true values of Winnipeg Hydro assets functionalised appropriately.

Number two: Operating costs were also functionalised on preliminary information. Settlement cost centres used to functionalise costs in the Cost of Service Study had not yet been defined as -- as specifically as existing Manitoba Hydro cost centres are.

Instead, non-specific cost centres were initially established to ensure that all Winnipeg Hydro costs were captured by Manitoba Hydro with the intention that specific settlement cost centres would be set up at a later time when proper information was available. This process is now complete.

While the overall effect on the Cost of Service results are minimal, the area and roadway lighting

customer class was most affected due to its small size relative to other classes.

First round response to CAC/MSOS-I-50-B, outlined that the overall effect is to overstate this class's RCC by between 5 and 10 percent.

The last major effort that is outstanding regarding complete integration of Winnipeg Hydro data, from a Cost of Service perspective, is the availability of load research data, which includes all those Winnipeg Hydro customers.

The Cost of Service studies filed in this current Application are based on load research results from fiscal year ending 2001 and '02, and does not include any Winnipeg Hydro customers.

It is expected that a representative sample will be available in the '04/05 load research results. However, these results would not be incorporated until the Prospective Cost of Service Study '07.

MS. PATTI RAMAGE: Finally, Mr. Thomas, can you comment as to the effect on the overall results of the Prospective Cost of Service Study of 2004, due to the Winnipeg Hydro data, when studies were prepared?

MR. CHIC THOMAS: As mentioned earlier, the greatest impact was to area and roadway lighting class. And which was estimated to be overstated by between five

(5) and ten (10) percentage points.

In terms of the other classes, the overall effect will be minimal, as the annual cost of Winnipeg Hydro is not large, relative to the cost of Manitoba Hydro.

In addition, it is important to emphasize that all relevant costs were captured in Manitoba Hydro's accounting system. Only the functionalization of those costs was not completed at the time the studies were prepared.

Incomplete load data is another area of concern in the current study. However, this inconsistency is limited, in that Winnipeg Hydro customers are exclusively Zone 1, and it is only the demand data of those customers, that was not available.

Forecast energy data of Winnipeg Hydro customers was matched with the appropriate Manitoba Hydro customer classes, in developing the Cost of Service Study allocators.

It is important to reiterate again, that Winnipeg Hydro consumption relative to Manitoba Hydro is small, for example, Winnipeg Hydro customer class totals as a percentage of Manitoba Hydro customer classes are as follows.

In the residential class, 9.3 percent, the

general service small class, 16.9 percent, general service medium class, 34.2 percent, general service large, 4.4 percent, and the overall system total only 12.6 percent.

MS. PATTI RAMAGE: Thank you, Mr. Thomas. I'm now going to turn to Mr. Kuzcek, and this is Mr. Kuzcek's first time in front of this Panel, although perhaps not in front of all Panel Members.

Mr. Kuzcek, could you please outline your qualifications and area of responsibility with respect to this portion of Manitoba Hydro's filing?

MR. LLOYD KUZCEK: Good afternoon, Mr. Chairman, Members of the Board, Intervenors and others present. I am a professional engineer, registered with the Association of Professional Engineers and Geoscientists of the Province of Manitoba. I have a Bachelor of Science Degree in Electrical Engineering from the University of Manitoba, and also a Masters of Business Administration Degree, also from the University of Manitoba.

I have been employed by Manitoba Hydro over the past twenty-three (23) years, with Bristol Aerospace for approximately two (2) years preceding this period, and again, with Manitoba Hydro two (2) years prior to that.

As Ms. Ramage mentioned, this is the first time I'll be testifying before the Public Utilities Board.

My present position at Manitoba Hydro is Division Manager of Consumer Marketing and Sales. I have been in this position since 2001, prior to which I was the Manager of the Export Power Marketing Department.

In my current capacity, I have broad responsibilities for the design and energy efficiency and consumer service programs that target the residential and consumer markets, for retails sales services, including the delivery of energy efficiency and customer service programs to the residential small, commercial, multi-side and institutional customers, for evaluation of energy efficiency programs, for end use customer perception and customer behaviour market research, for the Corporation's load forecast, and also for the Corporation's customer contact centre.

MS. PATTI RAMAGE: Mr. Kuzcek, could you please comment on the nature of Manitoba Hydro's Energy Conservation Program?

MR. LLOYD KUZCEK: Manitoba Hydro currently offers one (1) of the most aggressive DSM plants in North America. As part of this Proceeding, Manitoba Hydro has supplied an abundance of information to support this position.

In summary, this information clearly shows that Manitoba Hydro offers one of the most aggressive and

long standing commitments to DSM in Canada. Manitoba Hydro's DSM efforts are comparable to leading edge US States' utilities and agencies.

And Manitoba Hydro's programs exhibit best practices for energy efficient program designs in today's markets.

MS. PATTI RAMAGE: And since providing the information in the filing has Manitoba Hydro become aware of any additional information to support this position?

MR. LLOYD KUZCEK: Yes, in two (2) areas. The first is in support of the Corporation's -- Corporation's position that our efforts are among the most aggressive in Canada and that our programs exemplify best practices.

In this regard, Manitoba Hydro has been verbally informed by the Canadian Energy Efficiency Alliance that a number of the Corporation's PowerSmart Programs will be receiving an award for best practices.

The second area where updated information was obtained is in support of the Corporation's position that our efforts are comparable to leading edge states as measured by -- by energy conservation efforts.

Manitoba Hydro previously provided information based on 2000/2001 data that was part of a study undertaken by a US organization known as ACEEE or

the American Council for an Energy Efficient Economy. This was, and still is, the most recent formal study on this subject undertaken by this organization.

Updated information on -- on studying by leading US states was obtained through direct conversations with ACEEE and also during a recent conference call organized by AESP or the Association of Energy Service Professionals.

These types of conference calls are offered on a regular basis as part of AESP's service to its members whereby current information is provided on a number of energy efficient related matters.

Based on the updated information Manitoba Hydro is still within the top ten (10) US states in terms of energy efficient efforts as measured by dollars spent per capita and dollars spent as a percentage of revenues.

In terms of trends, some US states since 2000/2001, such as Vermont and California, have continued increasing their spending while others have previously -- others, which were previously leading edge energy efficient companies such as Wisconsin and Connecticut, have dramatically reduced their spending with Wisconsin's budget being cut by 50 percent and Connecticut's being cut by 33 percent.

MS. PATTI RAMAGE: Thank you. Can you

please comment on the impacts of Manitoba Hydro not formally updating its PowerSmart Plan since 2001?

MR. LLOYD KUZCEK: The decision to forego updating the Corporation's formal plan was judged to have minimal negative impacts on the Corporation's energy conservation efforts.

This decision was part of a broader and long term strategic planning decision which involved undertaking a comprehensive market potential study which would provide the Corporation with an updated assessment of the electrical efficiency potential in Manitoba including technology opportunities and also the opportunities available in the traditional Winnipeg -- Winnipeg Hydro service territory.

Potential negative impacts associated with not formally updating the PowerSmart plan were minimized by a decision which involved Manitoba Hydro concurrently continuing to aggressively pursue available DSM -- DSM opportunities in the marketplace regardless of whether those opportunities were included in the 2001 PowerSmart Plan.

For example, during this period Manitoba Hydro has launched an aggressive $28 million redesign of its PowerSmart commercial and industrial lighting program. We've launched a $1.4 million PowerSmart chiller program.

We've launched an aggressive $14 million PowerSmart new home program. We've launched an aggressive $10 million PowerSmart insulation program.

We've continued to expand our human resources dedicated to PowerSmart. In 1999 Manitoba Hydro had eleven (11) design and support staff. There are now twenty-six (26) staff dedicated to this function.

This is two (2) more than previously reported in response to one of the first round of Interrogatories in this process. Again, an indication that Manitoba Hydro is continuing to aggressively pursue DSM opportunities.

Manitoba Hydro has also added a dedicated sales force. In its first year this group has worked with over three hundred (300) customers in efforts to implement energy efficient measures and reduce customers' energy bills.

The Corporation also partnered with EnergyStar to jointly promote the EnergyStar brand in Manitoba. PowerSmart standards were developed which also achieved considerable success in the public health and education sector where now all new buildings and major retrofits are constructed to these standards.

In addition, the Corporation continued to aggressively pursue a number of other energy conservation

related initiatives, including providing customers with convenient -- convenient financing under the home comfort loan and earth power loan programs.

In the first case, over fourteen thousand (14,000) customers have been assisted since 2001, with over 47 million now in -- $47 million in loans provided to customers.

In the latter case, with the earth power loan, Manitoba Hydro has the most aggressive geo-thermal or heat pump program in Canada. During 2003, 19 percent of the total heat pump installations occurred in Manitoba, and although Manitoba only has 4 percent of Canada's population.

Manitoba Hydro partnered with Enercan to provide the home audit services to Manitoba residents, where over five thousand (5,000) home audits have now been provided, with most of these being provided in the last year.

We've integrated this audit program also with the Federal grant program that was announced last fall.

We've continued to promote R2000, by providing customers with information and no cost R2000 certificates in Manitoba.

We've continued to offering customers with

home workshops throughout Manitoba, we've partnered with the Climate Change Connection to deliver climate change workshops, also throughout Manitoba.

We've partnered with the Manitoba Society of Seniors, in offering free home checks for seniors. We've worked with and supported a number of housing, low income and non-profit organizations, to ensure energy efficient measures were being incorporated in their respective projects, including the Habitat for Humanity, Winnipeg Housing and Rehabilitation, the North End Housing Project, Spence Street Neighbourhood Group, and the West Broadway Corporation.

We've also supported a number of research projects, including the Thompson Model Home, demonstrating structurally insulated panel technology, the Churchill Ambient Home Construction, demonstrating composite class technology, ECM Motor -- research in ECM Motor Technology, and other research projects.

Manitoba Hydro has also made significant progress in designing more programs targeting both the commercial and residential market. In the latter case, new Power Smart Programs are in the final -- final stages of design, targeting efficiency, improvements in compact fluorescent lights, refrigerators and Christmas LEDs, they're referred to as, light emitting diodes is the term.

In terms of providing staff with formal direction and guidance during this period, Manitoba Hydro developed an internal working document during 2003, called Manitoba Hydro's Power Smart Strategy 2003. This document provided the general principles and direction to be followed, including aggressively pursuing a number of efficiency opportunities immediately, and in parallel -- in parallel with finalizing the DSM Market Potential Study.

These opportunities included the relaunch of the Commercial Lighting Program, the New Home Program, the Chiller Program, the Refrigerator -- Residential Refrigerator Buy Back Program, the Residential Insulation Program and other initiatives.

MS. PATTI RAMAGE: So, in short, you've been pretty active?

MR. LLOYD KUCZEK: I could have gotten more done if it wasn't for the CEC Hearings.

MR. ROBERT MAYER: Well, we want to take a couple of shots. Want to tell us about that Thompson Model Home? Have you got anybody in it yet?

MR. LLOYD KUCZEK: I don't believe so, no.

MR. ROBERT MAYER: How long has it been?

MR. LLOYD KUCZEK: I don't think it's ready for anybody to occupy at this point. It was originally

set up to be a demonstration home. And --
MR. ROBERT MAYER: To be built quickly, by modular, anybody can put it up in a couple of weeks, how long ago was that? A year and a half?

(BRIEF PAUSE)

MR. ROBERT MAYER: It's certainly PowerSmart, because haven't had to turn anything on.
MR. LLOYD KUCZEK: Well, we're not a leader in that project, we were just there to support it and make sure -- the project was initially a demonstration project to demonstrate the technology, the structurally insulated panels, and we were there to make sure that the house was built to PowerSmart standards and had energy efficient technologies incorporated in it.
So, we don't have a say in terms of how the project moves forward. But if they were going to continue to use that technology, wanted to ensure that they -- they incorporated energy efficient technologies.
MR. ROBERT MAYER: I just noted it with interest, because at the time the Minister in charge, was the Minister who's now in charge of Hydro.
MR. LLOYD KUCZEK: Yeah, I can't comment.
MR. ROBERT MAYER: Thank you very much.

CONTINUED BY MS. PATTI RAMAGE:

MS. PATTI RAMAGE: Mr. Kuczek, just to -- to wrap this up, could you comment on the status now of Manitoba Hydro's PowerSmart Plan?

MR. LLOYD KUCZEK: In parallel with aggressively pursuing a number of energy efficient opportunities I'll just outline. Manitoba Hydro is working on updating the corporation's Power Smart Plan.

This process involves first developing what is referred to as a PowerSmart options. Once this is developed, the options will then -- then be evaluated against alternative supply side options as part of the corporation's integrated resource plan.

Due to the timing of Manitoba Hydro's planning cycle, the -- the detailed power smart options will not be evaluated as part of the 2004 Resource Planning Plan. However, Manitoba Hydro will be including a preliminary estimate of DSM in this process and including a placeholder in the corporation's capital budget to accommodate for increased DSM.

Due to the high and keen interest of consumer and other interest groups, Manitoba Hydro will now be conducting consultation sessions with these groups. These sessions are planned for September of this year and

subject to changes being made to the power smart options as a result of these consultations, the power smart options will be filed with the Public Utilities Board in September.

MS. PATTI RAMAGE: Thank you, Mr. Kuzcek. And as one (1) final housekeeping matter, could you just confirm or -- that you're -- will adopt the evidence relating to DSM matters that -- that have been included in -- in this filing on behalf of the corporation?

MR. LLOYD KUZCEK: I missed the question, sorry.

MS. PATTI RAMAGE: We're ad-libbing.

Could you confirm that you adopt the evidence that has been included in the filing related to DSM matters.

MR. LLOYD KUZCEK: Yes.

MS. PATTI RAMAGE: Thank you, Mr. Kuzcek. And Mr. Mayer, I'm sure if you're handing out gold stars but we're coming in under schedule.

THE CHAIRPERSON: Thank you very much, Ms. Ramage. And thank you much to the Panel, it's a good start. We look forward to next week and nine o'clock and we'll have a very busy week. Thank you.

Oh, sorry, Mr. Anderson?

MR. MICHAEL ANDERSON: Now, that we're on

schedule, I thought I'd -- there was one (1) matter arising from Mr. Peters opening comments on the 14th. It was right at the end of the day. You'd discussed with Mr. Wiens any possible adjustments to the Application in respect of diesel rates.

And you seem to have appeared to have left it in the margins and I can find no other resolution of that in the transcripts. And I'm wondering if there's anything that's come of that.

MR. BOB PETERS: Mr. Chairman, just to edify that a bit further. My recollection is on reviewing the materials, the diesel rate schedules that were included in the filing were prepared, I believe, prior to the Public Utilities Board's decisions relative to diesel rates and certainly that's a matter that Mr. Wiens and his colleagues were aware of.

And my recollection is that Mr. Wiens will be addressing that on this Panel at some point in time.

THE CHAIRPERSON: Thank you, Mr. Peters.

MS. PATTI RAMAGE: I -- I believe we have filed the amended diesel rates as Exhibit 16.

MR. MICHAEL ANDERSON: I have that, thank you.

MR. BOB PETERS: I have that as well, Mr. Chairman. So I -- if Mr. Anderson's asking, it's a matter

that I believe Mr. Wiens is prepared to address during this Panel if he has any questions of Mr. Wiens.

THE CHAIRPERSON: Okay.

MR. MICHAEL ANDERSON: I have the exhibit, Mr. Peters, I just wanted to confirm in that the way the transcript is left, is that there appeared to be in -- in the margins discussion outside of the proceedings. I just wanted to confirm that I've got everything there is to have. Thank you.

THE CHAIRPERSON: Thank you. We'll see you next week.

--- Upon adjourning at 3:54 p.m.

Certified Correct

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Carol Wilkinson, Ms.