



ISSN 0542-5492

Fourth Session — Thirty-First Legislature
of the
Legislative Assembly of Manitoba
STANDING COMMITTEE
ON
PUBLIC UTILITIES

29 Elizabeth II

*Published under the
authority of
The Honourable Harry E. Graham
Speaker*



THURSDAY, 12 JUNE, 1980, 10:00 a.m.

MANITOBA LEGISLATIVE ASSEMBLY
Thirty - First Legislature

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**LEGISLATIVE ASSEMBLY OF MANITOBA
THE STANDING COMMITTEE ON PUBLIC UTILITIES**

Thursday, 12 June, 1980

Time — 10:00 a.m.

CHAIRMAN — Mr. Warren Steen (Crescentwood).

MR. CHAIRMAN: Committee come to order, please. Tell the members of the committee that we will reconvene the Public Utilities and Natural Resources Committee on the Manitoba Hydro Annual Report and if we don't finish the report by 12:30, I'm glad that we will meet again on Friday afternoon. Any questions or comments? Mr. Curtis.

MANITOBA HYDRO

MR. CURTIS: Mr. Chairman, if I could, there were several questions that were raised at the last meeting of this committee and I agreed to obtain the information in request to those questions.

One of the questions related to the appointment of members of the board and I have the two Orders-in-Council that set forth the appointments. The one dated 11 April, 1979, appointed Dr. Edmund Kuffel and Mr. William Wilton and myself, as members of the board. One, dated 8 August, 1979, appointed myself as Vice-Chairman replacing Dr. Wedepohl, who retired effective August 15 and appointed Donald Ellis as a member of the board.

Another question, Mr. Chairman, that related to the salary remuneration of the President and the Chief Operating Officer; I made a summary of that information and it's available to the members of the committee.

MR. CHAIRMAN: Perhaps, Mr. Curtis, you could elaborate that information.

MR. CURTIS: Yes. In addition, Mr. Tishinski provided some information and I think there were one or two errors in that information. I wondered if, at this time, we could make corrections to the comments that were made at that time.

MR. CHAIRMAN: Do you wish to do it yourself or have Mr. Tishinski . . . ?

MR. CURTIS: No, Mr. Tishinski, if he would.

MR. W. J. TISHINSKI: During the Public Utilities Committee meeting on June 10th, I was asked what the annual operating charges were for Jenpeg. Based on the information at hand and using some simple arithmetic, I replied 14.7 million. Upon further investigation, we found the information used was incomplete as it referred to figures for fiscal year 1978-79. Jenpeg was not yet fully completed as of March 31st, 1979. Updated information indicates that annual operating charges for a completed Jenpeg plant will be 21 million.

Another question raised which requires clarification, pertains to exports. The question was asked whether Manitoba Hydro was exporting hydro power at this time. I replied, we were exporting only

thermal power. This answer is correct only as pertaining to interruptible sales. We have a firm contract for a 200 megawatt sale to Ontario Hydro and this supply comes from hydro power.

MR. CHAIRMAN: To the members of the committee. Any questions pertaining to the corrections that have been made by Mr. Tishinski? Mr. Walding.

MR. D. JAMES WALDING: I thank Mr. Tishinski for updating that information. I had forgotten about the firm export contract to Ontario but apart from that you are telling the committee that we are not exporting hydro power. Would that be correct?

MR. TISHINSKI: That's correct, Mr. Chairman.

MR. WALDING: As far as the update on Jenpeg is concerned, do you arrive at those figures in the same way that we arrived at the 14.7 million by considering the amount of power at a rate of 2.1?

MR. TISHINSKI: No. The figure of 27 million that I have quoted is based on the capital cost from which is extracted the annual operating charges. When I quoted the figure a few days ago, I had done the calculation in reverse. I had the cost of energy and the amount of energy that was produced and I worked backwards. The proper way of carrying out the calculation is to start at the base capital cost and then take the interest charges, depreciation charges and overhead, and by doing that we come up with a 21 million figure.

MR. WALDING: Is the 2.1 cents per kilowatt hour still accurate or do you get a different figure by using your updated figures?

MR. TISHINSKI: It was accurate for fiscal year 1978-79. It will not be accurate for the current fiscal year, which is '80-'81.

MR. WALDING: So if I can get this correct. Because Jenpeg was not fully built and it was not producing at full capacity, certain figures applied which gave us a figure of 2.1 cents and 14.7 million. Now that it is complete and you have the experience of a completed installation, you are telling me that 21 million is the cost — and presumably there is some different figure for the amount of energy produced, so what does that give you for a rate per kilowatt hour?

MR. TISHINSKI: We won't know this until the year is over, to determine what energy is, in fact, generated by the station. We would know this on March 31st, 1981.

MR. WALDING: But you would expect more power to be generated in this year than in the year quoted?

MR. TISHINSKI: Well, we're in a drought situation so you cannot make a correct comparison.

MR. WALDING: I see. Under average conditions you would expect more power to be produced because all of the generators are now ?

MR. TISHINSKI: That is correct.

MR. WALDING: So we will make a note and ask you the same question next year, as to what the updated figure is for Jenpeg.

Mr. Chairman, if I may, Mr. Curtis said he would make available to the committee copies of his opening remarks at the last meeting. I wanted to ask a few questions on the financial report when we get to it, and that would save me having to ask the same questions again.

I had asked Mr. Tishinski some questions about Lake Winnipeg Regulation. I wonder if he has those answers for us now.

MR. TISHINSKI: I believe the question was, what were the extra costs incurred by Manitoba Hydro — let me rephrase that: What would have been the extra costs incurred by Manitoba Hydro during fiscal year 1980-81 if the drought continues and if Lake Winnipeg regulation and Jenpeg had not been built?

Normally, in carrying out an exercise of this type, we would carry out rather extensive computer simulations, but in the interest of time, we had to make some simplifications and these calculations were carried out manually, so this is an approximate answer.

The extra costs would have been approximately 34 million for the fiscal year.

MR. WALDING: 34 million. Do you have a breakdown by generating station, for each of the four?

MR. TISHINSKI: Yes, and I am prepared to show all of our calculations and table these if the member so wishes.

MR. CHAIRMAN: Mr. Walding, would you like that information tabled?

MR. WALDING: If it's not too complex and I can readily understand it, yes, Mr. Chairman. But in the meantime, I wonder if Mr. Tishinski would just give me those four figures, one for each of the plants.

MR. TISHINSKI: I wonder, Mr. Chairman, if I could ask Mr. Gunter, who is the system operating department manager, and who is more familiar with these figures than I am, to . . .

MR. CHAIRMAN: Is it agreeable to the committee? (Agreed)

Just for Hansard purposes, would you give your name, please.

MR. DEREK GUNTER: Derek Gunter. I am manager of system operating. We don't have a cost actually by plant, or revenue by plant. We have put it in total cost because this is the way we operate the system. We don't sell out of an individual hydraulic plant, we sell out of the system, so rather than try and assign a value to each plant, we haven't done that, we've assigned an overall value, but you can

see the energy by each plant, the difference in the energy for each plant.

Would you like to start at . . . I could lead you through probably on the yellow copy. We have two plans. We have a Drought Plan at the moment, which are the first set of figures that you see, and underneath we have what is known as a State of Nature. This is what would have happened to Lake Winnipeg had there been no regulation structures built at the outlet of Lake Winnipeg. We have kept a program going in Manitoba Hydro which determines the elevation of Lake Winnipeg had there been no structures at the outlet, so we quite readily can extract the comparison between the state of nature condition and the present regulated condition.

It just so happens this year that the state of nature at the end of March and the actual elevation at the end of March were then about one-tenth of a foot of each other so it made it fairly easy to do a comparison from there on because there were no storage carryovers in the lake. Both the Actual and the State of Nature then we're assuming are going to start at an elevation of 713.27 at the end of March, and what we've done, we've shown the flow, the total outflow from Lake Winnipeg and the flow through each plant down the Nelson River, and at the end we have summed the energy that we will obtain from each plant under our present Drought Plan.

We have compared this to what would have happened in a state of nature, and I think the significant figures are when you get into the winter months of December and January, you'll find that Lake Winnipeg under a state of nature does fall quite dramatically and of course the outflow is considerably reduced due to the elevation of the Lake and the formation of the ice at the outlet. The total energy produced under a State of Nature vs. the Actual — a state of nature will produce actually more energy than the regulated and that's because there is no control at all during the summer and the lake would naturally start emptying itself in the summer and there would be some rather high flows. You can see these figures if you look at the state of nature outflows in the summer, say June and July, they're up in the 70-80,000 range, whereas in a regulated range, we are hoping to keep them down to a licence limit of approximately 25,000. In a state of nature there is more energy actually goes out of the lake than there is in the present regulated, for a drought condition.

Summing this up and putting some dollars and cents on it, you look at the first white sheet, it said the extra in costs incurred by Manitoba Hydro during the fiscal year, 1980-81, if Lake Winnipeg regulation and Jenpeg had not been built — and we've got two items here that are a revenue and expense item — obviously without the benefit of Lake Winnipeg regulation there would be a loss of winter export sale. I think this shows up because more water can be released during the winter out of Lake Winnipeg than when it's regulated, but offsetting that is a very large loss in export revenue during the summer. Without control on the lake this 80,000 cfs that would be going out of the lake would be generating some energy and would be sold. We're showing a value of that at approximately 21 million, and that's a revenue loss. Without regulation, with the very low flows in the wintertime we would have to supplement

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ir own generation to meet our own firm load plus
y committed firm export, which is the Ontario
dro export at the moment, and we've shown the
sts incurred by the purchase of both energy and
pacity purchase plus running of our own thermal
neration.

There is also one significant item that under a
gulated state we do not completely empty the lake.
s the way that the lake behaves. It does tend in the
nter to pond and that happens in both a state of
ture and in a regulated state. But once winter sets
, the lake does tend to naturally move up because
e're now releasing water from the Saskatchewan
id the Winnipeg River into Lake Winnipeg. That
nnot all get out because there is still some ice
ockage or restriction at the north end. It's a natural
enomenon of the lake.

So we do have a carry-over storage and we've
signed a value to that. The way we are operating
the moment, we would definitely go in for a carry-
er storage right now; we would be not want to
aw all our storages down to minimum not knowing
at the winter is bringing in the way of a snow fall
precipitation, so we would tend to have a carry-
er storage. We've assigned this a value of 10
illion for next year, but it has to be factored into
is overall calculation. We're saying a net of
pense over revenue of 33,800,000 for this year.

We haven't assigned it by plant but if you look on
e next white sheet you will see the difference in the
eneration by plant. Under the drought plan, of
urse, it has Jenpeg in because of the regulation,
elsey, Kettle and Long Spruce. Without the
gulation, of course, there would be no Jenpeg,
at's one assumption we have made, and there is
en some increased generation at Kettle and Long
pruce as the extra water in the summer passes
rough those plants. So the overall energy without
gulation is higher than with the regulation.

R. CHAIRMAN: I was just going to ask you, if you
are going to carry on with . . .

R. GUNTER: No, unless there are any further
estions.

R. CHAIRMAN: Both Mr. Walding and Mr. Filmon
ve indicated that they would like to ask questions.
r. Walding would you like to lead off?

R. WALDING: Let me see if I have this correct
w. The figures that you've given the committee this
orning, and I see there's a lot of work gone into
is, are for the year that we are in now, a relatively
y year, at least according to indications, and you
e comparing a drought year in both cases, are
u?

R. GUNTER: Yes, the state of nature as it would
occurring now, or as we foresee it would be
occurring right now. What we've used - we've used
e same inflows as we're expecting for this year,
id factoring that into our state of nature program
id our regulated program. It's the same input data
far as the Lake is concerned. The same volume of
ater flowing into the lake.

R. WALDING: Now I want to be fair and not take
ie particular unusual year and use that as a model.

Have you worked out similar figures for an average
year, however you might consider average to be, and
I assume that you've done these sorts of simulations.
Do the figures alter on an average year, and if so, in
what direction and what order of magnitude are the
figures?

MR. GUNTER: We have not done a similar
simulation to this for an average year. Of course
there were simulations done, I presume, by our
planning groups earlier in the stage. It is our opinion
that the maximum benefit of Lake Winnipeg
regulation will occur in a drought year and that's
pretty well true of any reservoir, that it's maximum
benefit occurs during drought, in a dry year. The
benefit, if under average flows, we would expect to
be somewhat lower than we're showing on this sheet.

MR. WALDING: So, if you did this same calculation
for last year when there was abundant water, you
would think that the figures would be somewhat
lower than . . .

MR. GUNTER: We would expect a somewhat lower
figure, yes.

MR. WALDING: I see. I had wanted to ask you also
if similar calculations have been done for the benefit
of Churchill River diversion?

MR. GUNTER: We have not done any such figure.
In the operating group we have not done a cost
benefit analysis like this.

MR. WALDING: I recall a figure of 30,000 cubic
feet per second being used from Churchill River
diversion. These figures were done in the past.

MR. GUNTER: Yes, we haven't done an evaluation
exactly like this on the Churchill River diversion.

MR. WALDING: Okay, one other question on this
matter. You mentioned to me, or Mr. Tishinski did a
couple of days ago, that Kelsey has a limited ability
to — or can only pass through a limited amount of
water. I understand further that changes were made
in the planning at Kettle and Long Spruce to put in
additional generating units because of the additional
flow.

MR. GUNTER: It's not in my area but I'll — yes.

MR. WALDING: Would it be true to say that in the
state of nature without Lake Winnipeg regulation that
there would not have been sufficient water for those
additional units that were put in at Kettle and Long
Spruce.

MR. GUNTER: There would not have been
additional, and I think this is illustrated, again going
back to Page 1, the yellow page, that under a state
of nature, when the lake can only pass between
30,000 and 25,000 during the winter period, that
even combined with an average flow on CRD of
30,000 would not sustain the total generation at
Kettle and Long Spruce, no.

MR. WALDING: It would not sustain it at the
moment, or not under state of nature conditions.

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MR. GUNTER: In the state of nature, they should be a smaller plant if it was under a state of nature, Kettle and Long Spruce. They were designed for the Regulation and CRD.

MR. WALDING: Has that, what you have just explained to me, has that been taken into account when arriving at these figures? In other words, when you have considered the state of nature figures, were you doing that on the basis of a smaller amount of generating capacity at Long Spruce and Kettle?

MR. GUNTER: No, we just took the water that was available under a state of nature and passed it through the units that are there. Obviously, we weren't passing it through all the units, if we were only getting 75,000 total inflow to Kettle, then whatever would be generated by the 75,000 cfs passing through the plant, that's the figure we used. Now that could be as low as seven units, depending on how you distribute the water and on the time of day, but as far as energy is concerned, it would be equivalent to about a seven unit plant.

MR. WALDING: So should we be adding to the value of Lake Winnipeg regulation, by the energy produced from the additional units at Kettle and Long Spruce? I'm speaking of an average year.

MR. GUNTER: The additional units were designed for average flow conditions, the system was designed for average flow conditions, not for a drought condition.

MR. WALDING: But was it designed with or without Lake Winnipeg regulation?

MR. GUNTER: I'm not sure.

MR. WALDING: It's my understanding, in doing some research, that the plants were originally designed with a certain number of units and a certain size. When it was decided to go for Winnipeg regulation and Churchill diversion, that because of the extra water going down there, it was possible to use that water by putting in extra units. Is that correct?

MR. GUNTER: To the best of my recollection, you're getting a little bit out of my sphere here, but the original plan to go on with Kettle was done in 1969 and was predicated on some planning considerations there that I am not personally familiar with.

MR. CHAIRMAN: Maybe Mr. Craik can answer the question.

MR. CRAIK: I guess it's more by way of an additional question. It used to be that when Kettle was designed and put into construction that South Indian Lake diversion was quite different than the ultimate South Indian Lake control.

MR. GUNTER: I believe that's correct, that at that time they were still looking at what was then called the high level diversion.

MR. CHAIRMAN: Mr. Walding, can I move on to Mr. Filmon now, or do you have some more questions?

MR. WALDING: I have a number of other questions, Mr. Chairman, but if it's on this particular topic, I'll yield to Mr. Filmon.

MR. CRAIK: I wonder if Mr. Walding is going to shift to another topic at this point, other than the information before us? Other than the table of information that Mr. Gunter has presented?

MR. WALDING: I just wanted to follow that up then, apparently it's not sure whether the extra units at Kettle were put in because of the diversion of water. Can you tell me for Long Spruce, were there extra units put in there because of the additional water that could be handled?

MR. GUNTER: For Long Spruce, yes. Long Spruce was designed on a regulated flow out of Lake Winnipeg plus the Churchill River diversion.

MR. WALDING: Would it be true to say that the next generation station that was built on the lower Nelson could also be built larger because of an extra amount of water going down the Nelson River?

MR. GUNTER: Yes. It will be designed on the average flow, regulated flow plus CRD.

MR. WALDING: So there would be an additional value from the next plant that would not be there under state of nature conditions.

MR. GUNTER: Yes, that's correct.

MR. WALDING: And that would apply, presumably, to every subsequent generating station built on the Nelson.

MR. GUNTER: Yes.

MR. WALDING: So if one were to assign the cost of Lake Winnipeg regulation to a generating project, every new station takes a share of that amount, and it's spread over a larger number of stations. Would this be correct to say?

MR. GUNTER: Yes, that would be correct.

MR. WALDING: No further questions on this particular section.

MR. FILMON: Just following up on that, could similar benefits, in terms of increased firm flows, have been gained by say, an additional three feet of storage on South Indian Lake?

MR. CHAIRMAN: Mr. Blachford.

MR. BLACHFORD: Yes, Gary. Any water that you store in a hydraulic system results in generation and the South Indian Lake generation is certainly much more, has certainly a much more profound effect on the design of generating stations on the river than Lake Winnipeg would.

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MR. FILMON: Thank you. I wonder if Mr. Gunter could explain, for the benefit of the committee, how you get a negative inflow to Lake Winnipeg in August and September of minus 18,000 cfs and minus 22,000 cfs?

MR. GUNTER: Yes, that is due to the intense evaporation that takes place from shallow lakes in August and September in Manitoba. In other words, the water flowing out of the lake when you meter it, and the water flowing into the lake, which also we have metered, at least on the major streams, and there is are negative quantities going up in the air.

MR. FILMON: What are the inflows for this year, in this analysis, based on the projected inflows?

MR. GUNTER: We have based the projected inflow on a repeat of the 1976-77 inflows that occurred on the Winnipeg and Saskatchewan River, which appears the state that we're in now with what we call an unregulated flow into Lake Winnipeg, that's all the streams other than the Saskatchewan and the Winnipeg River, about a 5 percentile, which is our best calculation at the moment.

MR. FILMON: What would the effect on the water level at Cross Lake be under state of nature conditions versus under regulated conditions today?

MR. GUNTER: They would be approximately three to four feet higher than they are now, probably about 677, 678, with the higher flows going out in the summer.

MR. FILMON: So those severe problems which the Member for Churchill referred to at the last meeting would not be being experienced at the moment without Lake Winnipeg Regulation.

MR. GUNTER: The flows in the summertime would certainly be higher, and the corresponding elevation of Cross Lake would be higher in the summertime.

MR. FILMON: Several feet you'd say?

MR. GUNTER: Several feet.

MR. FILMON: Yes. Okay. Are you using all of the water that's passing through Jenpeg for power generation at the moment?

MR. GUNTER: At this present moment, we are.

MR. FILMON: Has there been a time during the past while when you haven't?

MR. GUNTER: That has been correct, yes.

MR. FILMON: Could you explain that to committee, please?

MR. GUNTER: Yes, when the flow is reduced to approximately 25,000 — we actually got it down to, we think, 26,000, with the best accuracy we can judge — the elevation of Cross Lake falls significantly and at that time there is an insufficient tailrace elevation at Jenpeg to operate the plant. However, we are looking at some remedial measures

which involves dropping a stoplog into the outlet of the turbine and we hope that we can operate with at least one unit under the low flow conditions.

MR. FILMON: I see. So you've been spilling a fair bit of water that hasn't been going through the turbines in order to try and keep the tailrace elevation up.

MR. GUNTER: No, right now, I think as Mr. Tishinski mentioned on Tuesday, we are putting more water out of Lake Winnipeg at the moment to alleviate the conditions at Cross Lake and floating the barge, etc., and by doing that we have been able to commence generation at Jenpeg and there is no spill at the moment at Jenpeg. All the water that's flowing down what we call the west channel is going through the unit.

MR. FILMON: During what period of time were you spilling then?

MR. GUNTER: Approximately two weeks ago we were spilling at the plant and we had the generation shut down at Jenpeg.

MR. FILMON: For just two weeks?

MR. GUNTER: Approximately, yes approximately two weeks.

MR. FILMON: That's a design problem, I assume, with the turbines, their elevation?

MR. GUNTER: Yes, it's a design problem.

MR. FILMON: Okay. The benefits and the costs, the revenues and expenditures that you show on your summary sheet — the winter capacity purchases, where do they come from?

MR. GUNTER: We've assumed that those capacity purchases would be available from the U.S. market during the winter.

MR. FILMON: Could any of the additional generation of energy come from the Winnipeg River plants that is presently being considered as not being able to be generated, or would not be able to be generated from the Nelson River plants on state of nature basis?

MR. GUNTER: No. This study looks at the lower Nelson only and the Winnipeg River would be unaffected. It's completely independent of this particular calculation.

MR. FILMON: So you're saying that regardless of what is happening on the Nelson River, it wouldn't have any effect in terms of more generation or less generation occurring from the Winnipeg River plants?

MR. GUNTER: That is correct.

MR. FILMON: Does that mean that they are operating flat out 24 hours a day, 365 days of the year?

MR. GUNTER: No, the Winnipeg River plants at the moment, because we're experiencing flows as low as

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14,000 cfs, cubic feet per second, on the Winnipeg River — we expect that flow to even diminish somewhat, probably to about 12,000 and at that point we can probably only get an average of 280 megawatts out of the Winnipeg River where under normal conditions, we'd be looking at about 530 megawatts, average. So approximately half the generation of the Winnipeg River will be just lying idle under the present water conditions.

MR. FILMON: Is that expected to improve before winter?

MR. GUNTER: Yes. The Winnipeg River system is basically — and I think this was also mentioned last Tuesday by the Lake of the Woods Control Board upon which both Manitoba and Manitoba Hydro have representation. It is our endeavour that we will operate, through the Lake of the Woods Control Board, both Lac Seul and the Lake of the Woods reservoirs so that we can sustain the higher generation during the winter period. In other words, they'll be releasing more water during the winter period.

MR. FILMON: More water than you normally would during the winter period?

MR. GUNTER: No, it will be considerably less than a normal year, but it will be a greater flow than is occurring at present. We would probably be looking up to about between 17 to 20,000 cubic feet per second this winter, assuming this present drought continues.

MR. FILMON: Okay, thank you.

MR. CHAIRMAN: Mr. Walding.

MR. WALDING: Mr. Chairman, I'm not sure whether these questions should go to Mr. Gunter or someone else. I'll address them to Mr. Curtis if I may. The annual report indicates that the DC line from the Nelson to Winnipeg is about 2,500 megawatts and it said that it's carrying the output from Kettle and Long Spruce. Is that now a maximum that that line can handle?

MR. CURTIS: Mr. Chairman, I think that the line can handle one more major plant. It could handle Limestone if that were the next plant being constructed.

MR. WALDING: If that is, say, 1,000 megawatts, then that one line could handle 3,500 megawatts.

MR. CURTIS: That's correct.

MR. WALDING: Is that power being carried on a single line of towers with several wires strung across them?

MR. CURTIS: Two.

MR. WALDING: Two wires on one line of towers?

MR. CURTIS: Maybe I could ask Mr. Blachford to

MR. BLACHFORD: There are two transmission lines, two lines of towers and they each have two conductor ducts.

MR. WALDING: Carrying approximately an equal amount?

MR. BLACHFORD: Yes.

MR. WALDING: So if there was some problem or accident where one tower came down, you could still transmit about half of that amount for . . .

MR. BLACHFORD: That's correct.

MR. WALDING: The Radisson and the Henday Converter Stations, I take it that they can handle now all of the Kettle and Long Spruce output. What about the output expected from Limestone, can they handle that as well?

MR. CHAIRMAN: Who are you directing that question to?

MR. WALDING: Whoever can answer it, Mr. Chairman.

MR. CURTIS: Mr. Blachford perhaps would be the one that would respond to these questions, if that's all right.

MR. BLACHFORD: There is an addition to be made at Henday and at Dorsey in order to be able to carry the output from Limestone, as well as the existing lines, and allow for some outage, some malfunction of the systems at each end.

MR. WALDING: So if I have this correct, with the extra work that has to be done, you could build one more plant, using Henday and the existing lines, and after that, you would have to build another line and another converter station, would that be correct?

MR. BLACHFORD: That's correct.

MR. WALDING: What's the approximate length of that DC line? About 600 miles?

MR. BLACHFORD: 560 miles to the farthest converting station.

MR. WALDING: The line now to Minneapolis that I understand has now been energized and is working, the committee was told last year that one limit on our exports to the south was the capacity on the existing lines and that this new 500 kV line would increase that dramatically.

Can you give me an order of magnitude as to the capacity. Has it doubled the export capacity, or tripled it, or a 50 percent increase?

MR. BLACHFORD: Approximately doubled it.

MR. WALDING: Approximately doubled it?

MR. BLACHFORD: Yes. Excuse me, the new line has a capacity of approximately double the other two lines, so really it's tripled.

MR. WALDING: So it's tripled the capacity?

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MR. BLACHFORD: Approximately tripled the capacity, yes.

MR. WALDING: I see. That is not a DC line, I assume?

MR. BLACHFORD: No.

MR. WALDING: What is the length of that, from here to Minneapolis?

MR. BLACHFORD: I understand it is about 370 miles to Duluth, but there are extensions on the line beyond that.

MR. WALDING: We are told that there are power losses on A.C. lines, and at a certain figure it becomes more economical to go to DC because of the less power loss. Can you give me an approximate length as to when it becomes economical to do that?

MR. BLACHFORD: Not really, Mr. Walding. It depends not only upon the length of the line but also the voltage and the amount of power to be transmitted. That's a complicated question to give one answer to. It depends on many parameters.

MR. WALDING: So it's not so much a factor of the length?

MR. BLACHFORD: The length is involved, the amount of power is involved. From that you extract the voltage and the kind of system one should use.

MR. WALDING: To help me understand it more, can you give an indication of how much longer this 370 mile line would have to be, under its present conditions, to indicate a change to DC, or, on the other hand, how much more power would have to go through this one before it would be economical at this distance?

MR. BLACHFORD: No, I can't give you an answer to that. As I say, it depends upon so many conditions of the line that you just can't give an answer to a hypothetical question like that with any precision. It depends on the number of taps that you want on the line, as well as the length of it and these other parameters.

MR. WALDING: When you build an AC line, do you need similar facilities at each end that you need for a DC line? I know it is very expensive to have a converter at one end and a deconverter at the other. Do you need similar sorts of installations for AC lines?

MR. BLACHFORD: You don't need the facilities that are as expensive as they are for a DC line.

MR. WALDING: So this would become a factor as well, then, in deciding whether to go DC., I presume?

MR. BLACHFORD: Yes.

MR. WALDING: Can you tell me the relative costs of building a mile of AC line as opposed to a mile of DC line. Is there very much difference?

MR. BLACHFORD: Yes, you are just asking about the towers and the wire that goes on them? I'll get you the answer to that question, Mr. Walding. It's considerably cheaper.

MR. WALDING: Can I ask you what the cost per mile of the line is from here to the border? Would that be obtainable?

MR. BLACHFORD: It's something like about half-a-million dollars per mile, in that order of magnitude.

MR. WALDING: That's for an AC line.

MR. BLACHFORD: Yes.

MR. WALDING: You are indicating to me it would be more than that, considerably more, for a DC line?

MR. BLACHFORD: No, it would be less for just the line.

MR. WALDING: I'm sorry, I missed the last.

MR. BLACHFORD: You asked about the cost of a DC line, just the transmission line that you see in the fields, as compared to the same thing for AC. The answer is, the DC line will be considerably cheaper.

MR. WALDING: Why is that?

MR. BLACHFORD: Because there are less conductors and therefore a less heavy line. Now, the same, forgetting about the end converters, deconverters, etc., the cost of the AC line I am estimating to be in the order of 500,000 per mile. The fellows tell me here that the cost of the DC line is about two-thirds of that.

MR. WALDING: 350,000, perhaps, in that order of magnitude, somewhere around there?

MR. BLACHFORD: That's not the complete cost of putting in a transmission line and making it work; this should be clear. You still have to buy the terminals and they are more expensive for DC than they are for alternating current.

MR. WALDING: Yes, I understand that. Can I just ask when the official opening of Jenpeg will be?

MR. CHAIRMAN: Who is that question directed to?

MR. WALDING: Whoever can answer it, Mr. Chairman.

MR. CURTIS: So far there has been no date set for an official opening.

MR. WALDING: Is it intended that there will be an official opening?

MR. CURTIS: We haven't come to a conclusion; we haven't rediscussed it at the board at this point.

MR. WALDING: But Jenpeg is now completed, is it?

MR. CURTIS: It's now operative, yes.

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MR. WALDING: I can recall attending the opening ceremony at Long Spruce just about a year ago, and that was not finished. I am wondering why the two facilities are being treated differently.

MR. CURTIS: I suppose largely it's because of the difference in locations and the availability or access to them. Long Spruce is more accessible than Jenpeg.

MR. WALDING: That is the only reason?

MR. CURTIS: No, that's one of the factors. We just haven't come to any decision as to when and or if we should have an opening for it.

MR. WALDING: About the opening at Long Spruce last year, there were a lot people there and I understand it was quite a weekend. Was that arranged and paid for by Hydro or by the government, or a joint facility?

MR. CURTIS: Mr. Chairman, I understand it was paid for by Hydro.

MR. WALDING: Was it organized by a public relations' department?

MR. CURTIS: I'm not certain, Mr. Chairman. Mr. Chairman, I'm advised it was a committee of the staff of Manitoba Hydro.

MR. WALDING: I see. Mr. Chairman, I'd like to ask whether Mr. Schreyer was invited to the opening. There were two other former Premiers there. Note was made of their contribution, but I didn't see Mr. Schreyer there and I wondered, was he invited and . ?

MR. CURTIS: I don't have that information, Mr. Chairman.

MR. WALDING: I'd also like to know whether Mr. Bateman was invited to the opening.

MR. CURTIS: Mr. Chairman, I'm advised that our understanding was that Mr. Schreyer had been invited but wasn't able to attend.

MR. WALDING: I'm very pleased to hear that, Mr. Chairman. I'm rather surprised that he wouldn't fit it into his busy schedule, knowing how interested he was in Hydro matters.

MR. CHAIRMAN: Perhaps, Mr. Walding, if I could interrupt now, Mr. Craik wanted to ask some questions relating to the sheets that were distributed by Mr. Gunter, so that we don't go on to new subjects when Mr. Gunter is still available.

Mr. Craik.

MR. CRAIK: Mr. Gunter, I think you said when you started out that you used the assumption that you were starting out from March of 1980 with equal level, whether it was under natural conditions or under controlled conditions.

MR. GUNTER: There was about a 1/10 to 2/10 difference between the state of nature and the regulated conditions, so for this purpose, and

knowing the accuracy that we can work within, yes, we assumed that they would be identical.

MR. CRAIK: In the questioning last day, the Member for River Heights asked a question as to whether it was possible that under natural conditions that the water level in Lake Winnipeg at the present time may in fact even be higher than it was under the controlled conditions. Does this suggest that since then you have confirmed that it would not have been?

MR. GUNTER: Under the present inflow conditions that are existing right now in the lake, the state of nature elevation would be lower than the regulated. It is a function partly of the inflow to the lake, and how we determine we're going to regulate the lake.

MR. CRAIK: You are suggesting in your assumptions here that, as of March of 1980, they would have been the same.

MR. GUNTER: Well, it has happened like that. We have kept the state of nature record, the hypothetical state of nature record. We developed a computer program for this some time ago and we have kept a running program to say what would the state of nature elevation have been had there been no regulation. Now, obviously, if you had sort of asked this question last year, it would have been quite a different answer. It happens that it is coincidence that this year they have come together. It's not by design; it is strictly coincidence.

MR. CRAIK: At any rate, you feel that the assumptions you have made to draw up these figures are reasonably supportable in terms of assumptions?

MR. GUNTER: Yes, we do.

MR. CRAIK: You would agree probably that the assumptions you make can have a drastic bearing on the conclusions you draw?

MR. GUNTER: Very much so, and I think we said we are assuming (a) that this present drought will continue, and we have assumed that, really, a repeat of the 1976-77 drought. It could be quite different under a different assumption.

MR. CRAIK: I would think that, for some, it would be a very revealing observation that with or without control on Lake Winnipeg, with the history of the last two years, the levels would be probably nearly the same on the lake. The flow conditions at the present time, out of the lake, would be probably quite different inasmuch as you are holding back the flow at the present time.

MR. GUNTER: There would have been quite a different distribution of outflow, though, over previous years. The winter/summer flows would have been quite different.

MR. CRAIK: I think you said in your comments that — well, you have obviously demonstrated here that you intend to gain financial advantage from here on in, at this point in time. We will know better 12 months from now than we know right now whether,

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in fact, there has been that kind of advantage but let's look at history, which it's possible sometimes to be a little more accurate than it is in trying to forecast.

If the levels would not have been dramatically different, in fact probably would have been within a half a foot of one another at the present time on Lake Winnipeg, if that's not too blatant an assumption since they would have been almost identical in March, two months ago. Let's go back to last year. I think you said that the benefits last year would have been less, which is fairly easy to see because now you are holding back the water for use at the times you want it because you're in a difficult drought period. Would it not have been also possible to say that in fact benefits last year may have been negative from control?

MR. GUNTER: I don't think I could make that statement without looking into it fairly thoroughly.

MR. CRAIK: Last year, in order to get to where you were in, say, September of last year, down to your 715 level, didn't you have to spill water for a large period of the summer through all of your plants or over all of your plants?

MR. GUNTER: Yes, we spilled last year for approximately two months, I believe.

MR. CRAIK: During that heavier spring runoff.

MR. GUNTER: There was very heavy spring runoff. The lake elevation rose to . . . Our licence tells us that we have to keep the lake within the elevation of 715 to 711 and last year, with a major flood facing us, primarily from the Red River, although the Winnipeg River did have a modest flood, but the primary source of our problem last year was the Red River, we had to release large quantities of water out of Lake Winnipeg in order to contain it within the licence range.

MR. CRAIK: Right. If you had not had to operate within licence because you had no control whereby you could have honoured a licence, what you would have had was a surge on Lake Winnipeg last year that would have given levels higher than the controlled levels, but on the other hand, the water would have remained there for a sufficient number of months that you would have ended up at roughly the same level on Lake Winnipeg now under natural conditions as you have under controlled conditions. But in order to meet your licence, it was necessary to spill the water through all of your structures down the Nelson River and to let it run off.

The point I am trying to make is that you are demonstrating here sufficient gains during a drought period, but if you go back 12 months, you were spilling. I think I asked the question last year at this committee, and I didn't get this kind of a detailed answer. I think I got sort of a confirmation that, yes, a lot of water had been spilled. If you were spilling water through all your structures at the rate of some zero to 50,000 cfs, that it would normally have been left on the lake for future use, is it not reasonable to assume or is there something wrong with my arithmetic that would have said it was in fact in

effect creating, over some period of time, a negative return.

MR. GUNTER: It is certainly creating a lot less return under a flood condition than it does under a drought condition. I don't know the exact figure but generally, I think, the nearer you are to a flood condition or a very high inflow condition to Lake Winnipeg, the less the benefit will be of the regulation, that's true, in absolute quantities, without doing a similar exercise to this, using last year's value.

MR. CRAIK: If, Mr. Gunter, you are forgetting about control, under no control, under natural conditions, if the water remained under natural conditions in some storage reservoir that eventually had to run through all of the same plants, the benefits may not have been what you demonstrated here but would in fact — it's still money over the dam, is it not, when you spill unnecessarily?

MR. GUNTER: Yes, that's correct.

MR. CRAIK: It's like throwing a barrel of oil away or anything else.

MR. GUNTER: Yes, yes.

MR. CRAIK: So in last year's flood conditions, in order to meet your licence, you were in fact spilling water that would have remained, apart from evaporation, in your system?

MR. GUNTER: That is correct.

MR. CRAIK: This is the kind of . . . You know, we see one side of the coin here and I think last year I asked the question and perhaps we can look in the record, and I don't recall getting a dollar figure because I think mutually we felt it was too speculative to try to calculate it. However, it appears that you are able to do a fairly definitive calculation when you run into the other cycle. Perhaps it would be valuable to confirm that it would just be a lesser return that you got and not a negative return, because it is very hard for someone who is not involved in this to see where it is not a negative return when you spill this resource to meet a man-made condition, namely the conditions of your licence.

I wonder if I could ask one more thing. You were talking about the design of the plants on the Kettle, Long Spruce and others. Is there a latitude in those designs that will allow for different conditions with regard to South Indian Lake storage?

MR. GUNTER: No, they are built with an average flow out of the CRD of approximately 30,000. They are built with that in mind, plus, of course, the regulated . . .

MR. CRAIK: But carrying that argument through, the control on Lake Winnipeg provides no more water; it provides a latitude, a range over when you take the water. If you include that further latitude in South Indian Lake, by having more latitude of storage but no more flow, but having a greater range of the period over which you can control that flow,

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would you not have the same thing, maybe not to the same extent, but the same?

MR. GUNTER: Providing we could store as much and providing the Burntwood River would be able to carry the extra flow at the time. I think it would sort of involve a planning type study. I don't think I can give a direct answer to that.

MR. BLACHFORD: May I just add one thing to that, Mr. Craik. If it were possible to obtain more water through doing something with South Indian Lake, we could increase the plant factor of Kettle and Long Spruce in order to benefit from additional water, and at the times of year we would want it, too.

MR. CRAIK: By plant factor, meaning giving a greater maximum use of those plants so you get a greater amount of energy totally but not changing the plants.

MR. BLACHFORD: That's correct. You want more energy but no more peaking capacity.

MR. CRAIK: I wonder, Mr. Chairman, I just wanted to ask about the assumptions that went into this calculation. I wonder now, since you've produced this on fairly short notice, if you could now confirm or otherwise the suggestion I made that you go back and find out how much unnecessary water was spilled in 1979, in order to get down to the condition in March 1980 where you have equal conditions to start from. I wouldn't ask for a detailed thing like this but a rough, perhaps, calculation on the value of the resource that was built to meet your licence.

MR. BLACHFORD: Yes, that could be done.

MR. WALDING: Mr. Chairman, I think that's an interesting question that Mr. Craik is asking. I would like to see those figures, too. But still on that same point, and we are on the report of that year, I'd like to ask you whether, under the flood conditions of last year, was the reason for spilling the water that the turbines could not handle the additional flow or was it that you had no market for the produced power?

MR. GUNTER: I think it's partly both. We have considerably increased our extra-provincial transmission capability since last year.

MR. WALDING: That was, I think, the question that Mr. Craik asked last year and, as I recall, the answer he received was that Hydro was exporting all the power it could during the summer months and the lines to the south were at capacity but that the new 500 line would make a big difference as far as that is concerned. Had this line been in place last year, would the additional power that could have been generated by that additional water have been handled by that line and would there have been sales for it?

MR. GUNTER: We don't know whether it would all have been harnessed. We'd have to do a reasonably detailed calculation to determine whether all the water could have been harnessed or not.

MR. WALDING: Is it your educated guess that half of it could have been used?

MR. GUNTER: No, I couldn't take a guess on that, it's quite involved.

MR. WALDING: Would there have been sales for the power, if you could have generated it?

MR. GUNTER: There would have been sales for the power.

MR. WALDING: So we're looking at this figure of 21 million in revenue for gained export sales, which you say would not have been there with Lake Winnipeg Regulation.

MR. GUNTER: That's correct. That's because the . . .

MR. WALDING: So with the extra water that you could have used and could have sold, that would presumably bring in a further number of dollars in the summer months, would it not?

MR. GUNTER: Based on last year's . . .

MR. WALDING: On last year's conditions.

MR. GUNTER: Yes.

MR. WALDING: So when you do these calculations, Mr. Craik, that presumably would be something you would take into account, would it not?

MR. GUNTER: To get a true comparison, I think we have got to use the same extra-provincial transmission capability. Otherwise, you will get two quite different answers, because we have, as Mr. Blachford said, we have increased our extra-provincial transmission capability by approximately 3 times. This has a significant impact on the results of a study of this nature.

MR. WALDING: You would expect the additional sales to come during the summer months, I presume.

MR. GUNTER: It would be in the summer months, yes.

MR. WALDING: By the way, I did ask if Mr. Bateman was invited to the opening at Long Spruce and I didn't get an answer. Is that something that will be . . .

MR. CHAIRMAN: Mr. Curtis.

MR. CURTIS: I was asking staff and they didn't recall whether or not he had been invited. We don't have that answer.

MR. WALDING: While we are on that point, by the way, I looked through the report to see an acknowledgment or to read an acknowledgment of Mr. Bateman's service and record to the Corporation, and I didn't see it mentioned anywhere. There was an acknowledgment on the back page of all its employees and other people, but nothing for Mr. Bateman. Can you tell me why the Public

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Relations Department slipped up in not putting that in the report?

MR. CHAIRMAN: Mr. Craik.

MR. CRAIK: Mr. Chairman, I think perhaps I should answer that. When the report was drawn together, the Hydro staff had asked whether it would be appropriate to include an acknowledgment in the Annual Report last year. I advised them that, in my opinion, that with the Tritschler Inquiry still sitting that it would not be appropriate; anybody who had key involvement in the Tritschler Inquiry Commission, it was perhaps better judgement to, at that time, not include it. The Hydro Board, in view of that, I presume, decided not to. I was checked with on that and asked for advice on it precisely because the Inquiry Commission was sitting.

MR. WALDING: I see, Mr. Chairman, so it was the Minister's decision not to put in an acknowledgment of Mr. Bateman's service; is that true?

MR. CRAIK: Mr. Chairman, it was not my decision. I was consulted on the matter and advised the Hydro that, in my opinion, that since they had raised the matter that perhaps they should take that into consideration.

MR. WALDING: I am sure that they did, Mr. Chairman, if the Minister gives his opinion on something.

Mr. Chairman, I wanted to move to a couple of other items and I notice the time is moving along. Perhaps Mr. Blachford can tell me about the Burntwood River Environmental Study. Can you explain to me what is being studied, where and why?

MR. BLACHFORD: In general terms, this environmental study on the Burntwood River is to give the Corporation an overview of what has to be taken into consideration in any future Hydro development of the Burntwood River. That is approximately the limit and the objectives of this study. It is not a site selective study of suppose we put a dam here and investigate everything about what happens if we put a plant there; it is an overview of the whole river to see what the possible implications are of putting plants in various places and what it will involve.

MR. WALDING: So what you are studying is what could be the effect in the future, or is what is happening now, because . . .

MR. BLACHFORD: What could happen in the future if it was designed in accordance with various alternatives.

MR. WALDING: I see. So Hydro then presumably has given some indication to the consultants of what could happen or where it could happen.

MR. BLACHFORD: That is correct.

MR. WALDING: When does Hydro require the report to be finished.

MR. BLACHFORD: It is expected we will have a finished report in approximately 18 months, the fall of 1981.

MR. WALDING: You are looking for the effects on the river banks or possible flooding, is this the type of thing that is being investigated?

MR. BLACHFORD: It will include a look at what could happen to the river banks, what contours of land will be flooded with the various alternative ideas, and what this will do to mining, for example, what it will do to transportation, what it will do to the lumbering, if there is any there, all aspects that have to be taken into consideration when one gets site specific for a plant.

MR. WALDING: Were the terms of reference laid down for the consultants of what they had to do?

MR. BLACHFORD: Yes.

MR. WALDING: Can you tell me about the process of selection of consultants? There were a lot of rumours going around and a lot of things being said about that. There was a rather unusual delay involved. Can you give me some background on that and tell me how it came about?

MR. BLACHFORD: I think we have to preface this by saying here that this type of study (a) is one that has never been done in Manitoba before. It is not a scientific type of study as we know, as you are accustomed to when you go and say you want a plant built and these are the specifications for that plant. It is therefore a bit more nebulous than it is for a specification that can be drawn up with some precision.

A number of consultants were asked to quote on this study; they did. After the quotations were in, the studies were evaluated by not only the people who were involved specifically in the environment in Hydro, but also the people who were also periphery to the idea, the people who look into the design of power plants and the hydraulics, etc. They evaluated the bids; they called the consultants back and talked with them about their bids to see what they meant on the various aspects of the study and, on that basis, a selection was made.

MR. WALDING: Would proposal be a more accurate term than bid? In other words, was there some latitude for the consultants to come forward and give their ideas or suggestions?

MR. BLACHFORD: That is a better word.

MR. WALDING: I am told that the date for receiving bids closed early in November, but it wasn't until about April that a firm decision was made.

MR. BLACHFORD: That is the right order of magnitude, yes.

MR. WALDING: I presume that those people within Hydro who assessed the bids did so quite promptly in reporting their recommendations to the Board, or was that where the delay was?

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MR. CURTIS: Mr. Chairman, perhaps I could respond to that. Since the final decision of selection was the prerogative of the Board, all through the development of the proposals the Board felt very strongly that this was the sort of study that should be undertaken and supported the staff towards this end. The staff came up with a series of, as Mr. Blachford mentioned, reviews. The Board felt that it was of such an important nature that this first study go ahead properly and that a good selection be made, that it spent a number of special meetings reviewing the different options that we might look at and finally made the decision, based largely on the recommendation that the staff had provided.

One of the concerns that we had, as a Board, was the Manitoba content of the proposals and we had a concern that we made a selection that would provide as much benefit to resident firms as was possible. This was one of the major concerns that we looked at and did take some additional time in our selection.

MR. WALDING: Mr. Chairman, I don't understand Mr. Curtis' use of the words "options that were considered"; were there not guidelines, something laid down before the companies proposed their . . .

MR. CURTIS: By options, Mr. Chairman, I meant the options of selection that were provided by staff. They had graded and rated the different proposals and, of course, there were some problems with certain of the proposals and some pluses in others. It is just not a matter of saying this is the very best selection, it is all a matter of judgement, and we felt that there was a choice before the Board as to which of the proposals would have the more advantage to Hydro and the province generally.

MR. WALDING: So when you say options, it is not an option of what could or could not be carried out, or should be carried out; it was more an option of who was doing the work.

MR. CURTIS: No.

MR. WALDING: Was it really necessary to ask for two or three delays on the acceptance of the bids. I expect that such delays are highly unusual, even for one delay.

MR. CURTIS: I don't feel that it was an untoward delay. You have to keep in mind that the board members generally are all new. We felt the study was vitally important. We wanted to make certain that whatever decision we made, would be the best decision for that reason primarily. We took more time than perhaps normally it would take in making that kind of decision.

MR. WALDING: But you ended up in accepting the recommendation that was given to the board in the first place. Is that correct?

MR. CURTIS: That's correct.

MR. WALDING: I wanted to ask you about Limestone and the commencement of construction there. The committee was told last year that the cofferdam is in place and there were certain capital costs involved to the tune of some, almost 100

million dollars, if my memory is correct, and that there are ongoing costs of 300,000-odd dollars a year. If the decision were made today to proceed with Limestone, can you outline to me what would happen this year and next year, what does Hydro do once they're given the go-ahead?

MR. CURTIS: Mr. Chairman, I think perhaps Mr. Blachford could respond to that.

MR. BLACHFORD: If the decision were made to go ahead immediately, it is possible that the Limestone could be put in service in 1987.

MR. WALDING: But what are the steps from here to 1987? What happens first?

MR. BLACHFORD: The first thing that happens is to complete the specifications for the plants in order to get the equipment ordered and to get larger contracts placed for the construction of the plant.

MR. WALDING: Is that a big job?

MR. BLACHFORD: It's a good sized job.

MR. WALDING: And it would be done in-house at Hydro.

MR. BLACHFORD: And with the assistants of consultants.

MR. WALDING: Does Hydro still have the staff to do that work?

MR. BLACHFORD: It has the staff to do the work that is necessary to guide the project. As I say, we have to use consultants for a lot of this work.

MR. WALDING: What happens after that? It goes to tender?

MR. BLACHFORD: Goes to tender.

MR. WALDING: When would you see that happening in time?

MR. BLACHFORD: I haven't got the schedule with me, but I believe the tendering could begin in the first quarter of 1981.

MR. WALDING: So you're looking nine months down the line.

MR. BLACHFORD: Approximately.

MR. WALDING: How soon after that would you see construction beginning?

MR. BLACHFORAD: In 1982 there would be a good number of people on site.

MR. WALDING: So a further year?

MR. BLACHFORD: Yes. In 1981, there would also be people there preparing for the construction itself, but not on the construction, per se.

MR. WALDING: And the time of the first unit being completed would be . . .

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MR. BLACHFORD: 1987.

MR. WALDING: 1987. And the last one completed, two years later, or?

MR. BLACHFORD: A year to two years later, yes.

MR. WALDING: What is the state of the cofferdam at Limestone at the moment?

MR. BLACHFORD: It's completed.

MR. WALDING: And full of water, still?

MR. BLACHFORD: Full of water. I don't know if it's full, there's water in it.

MR. WALDING: Water in it. Has the state of its stability been checked lately?

MR. BLACHFORD: Not to my knowledge.

MR. WALDING: In other words, would it still hold up once you pump the water out of it and use it for another seven years or so?

MR. BLACHFORD: There's no reason to think it would not.

MR. WALDING: Someone suggested to me there had been some deterioration with ice pressure and movement of water and this sort of thing.

MR. BLACHFORD: The ice knocked off the top layers a year ago. No problems.

MR. WALDING: You're convinced it is perfectly safe for men to work inside?

MR. BLACHFORD: Yes.

MR. WALDING: Do you have an up-to-date figure on the amount that has been spent on Limestone to this date? Are the figures I quoted a few minutes ago still accurate?

MR. BLACHFORD: They're approximate. They're in that order of magnitude, yes.

MR. WALDING: I see. When you mentioned '87, if you started today, is that for an average construction time, or is that a slow construction time, or speeded up, what are your options . . .

MR. BLACHFORD: That's relatively an ideal construction time. It's not a crash program, and it's not a delayed program either. It's a scheduled, laid out construction program.

MR. WALDING: If it were policy to advance that date, how much could you cut off the time for completion?

MR. BLACHFORD: We haven't made a study to answer exactly that question. If it were to be suggested, some areas of the construction would probably fall into the area of a crash program.

MR. WALDING: Could you maybe cut a year off that order of magnitude?

MR. BLACHFORD: I wouldn't like to answer that, because I don't know. It hasn't been studied, because we don't go into all of the alternates.

MR. WALDING: Thank you. I wonder if I could just, with some trepidation, go to the financial reports and ask a question or two about them. Just looking over my notes from last year, I think it was either Mr. Fraser or Mr. McKean produced copies of a couple of financial papers for the committee.

MR. CHAIRMAN: Mr. Walding, before you get your line of questioning answered, what is the wish of the committee? How do you want to deal with this report? Are we going to pass it in its entirety when all members have had their questions answered to the best of the ability of the Hydro personnel? Or are we going to go through it page by page?

MR. WALDING: I would expect so, Mr. Chairman, that's what we did last year.

MR. CHAIRMAN: So we will not go through it page by page then.

MR. WALDING: I will have no need to . . .

MR. CHAIRMAN: Because if we are going to go page by page, then we'll start right at the first page and treat them one at a time.

MR. WALDING: We would prefer to carry on the way we are going, Mr. Chairman, if that's convenient to the committee.

MR. CRAIK: Mr. Chairman, I'm looking at the Member for Radisson here who has chaired many of the committees. I believe we did approve it all in one motion last year, but the usual practice in the past has been to go through page by page. I think it perhaps makes it a little straightforward for staff people anyway, if we're going to now jump into the financial section, there are some advantages if we simply move along. The usual practice has been to have the wide-ranging discussion under the Chairman's opening remarks and then to move on through the report.

Maybe we should follow that, Mr. Chairman, and just move on until we get to the financial statement.

MR. CHAIRMAN: I'll ask Mr. Walding then, I know that Mr. Cowan has some questions. Are your questions on the financial aspect?

MR. JAY COWAN (Churchill): No, Mr. Chairperson, my questions are of a general nature.

MR. CRAIK: On a point of order then, Mr. Chairman, I really think, for the purposes of the committee, we should handle Mr. Cowan's general questions and then the financial part of it is usually the one that comes along at the end or as we progress through the report.

MR. CHAIRMAN: Is that all right with Mr. Walding if we let Mr. Cowan ask his general questions?

MR. WALDING: That's fine, Mr. Chairman. I have some general questions too, questions I had on the

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financial, I thought just general as well. If Mr. Craik wants to go through page by page, I can certainly wait until we get to this part before asking any questions on this aspect.

MR. COWAN: Thank you, Mr. Chairperson. We were discussing earlier in the day-to-day costs of transmission lines. I had just returned from the community of Churchill this week-end and had spoken with a number of people in that community, as well as with a number of people in Gillam, who informed me of a rumour of a transmission line being built to service Churchill. I'd like to use this opportunity to perhaps ask Mr. Curtis if there is any basis or foundation to that rumour, and if so, when we can expect such construction to begin.

MR. CURTIS: Mr. Chairman, perhaps I'd ask Mr. Blachford if he would respond.

MR. BLACHFORD: Yes. The corporation studies periodically the idea of connecting isolated communities in Manitoba to the integrated electric system, and there is such a study for Churchill.

MR. COWAN: Should we take inference from the fact that there is such a study that it is under active consideration, or is this a background study that is a normal part of the process of developing a more integrated system?

MR. BLACHFORD: This particular study is under active consideration at this time.

MR. COWAN: I would ask, Mr. Chairperson, then if there would be any dates that one could attribute to the possibility of the start of construction of such a line.

MR. BLACHFORD: There are no dates on this particular one.

MR. COWAN: I would ask, then, if we would be talking in general terms of next year, the year after, within ten years. I'd like to pinpoint it in a bit more detail, because there is, of course, a great need for such a line to be built and there is a great deal of anticipation consequently on the part of those who would be serviced by such a line. I feel it's incumbent upon me to relieve that anticipation as much as possible by trying to form up some dates, if they are available.

MR. BLACHFORD: There are no dates available, and I don't think we can put any dates on it at this time. If this project is to go ahead, a very considerable contribution to the line is going to have to come from either the federal government or the provincial government, or someone, in order to make it a viable project as far as Hydro is concerned.

MR. COWAN: Perhaps I can ask the Minister then if it is the intention of the provincial government to provide that substantial contribution and if discussions have been made.

MR. CRAIK: Mr. Chairman, we've had representation from the community of Churchill very recently on the same matter, so we are looking for

the same information from Manitoba Hydro as to their cost benefit analysis and study that they may have available for us, and until we have that, we have no way of really looking at what might be involved.

MR. COWAN: What I would ask then, Mr. Chairperson, from the Minister, is a general commitment that the province has not closed the doors on its opting into and funding arrangement with Manitoba Hydro, and perhaps also with the federal government, which might have responsibility in this regard also, to a tripartite funding agreement in order that this line may be constructed at the earliest possible moment.

MR. CRAIK: Mr. Chairman, it's too early to give that sort of commitment. We'd like to first of all see the study from Manitoba Hydro. We were hopeful that there may be some rationale, of course, for the line to stand on its own. The information that Mr. Blachford has given here would indicate that that's not the case, but until we've seen it, I don't think there's further more that I can really add at this point, except that we are aware of it, we can see distinct advantages for the community, and we'll certainly have a look at it.

MR. COWAN: I would ask Mr. Blachford then, when they would expect the study to be completed.

MR. BLACHFORD: The study, per se, has just been completed.

MR. COWAN: Would it be possible then, to see a copy of that study?

MR. CURTIS: Mr. Chairman, I think that's, to a large extent, an internal document. Certainly, the board hasn't even seen the results of the study, and I think we'd want to look at it first, to direct staff as to which way to progress.

MR. COWAN: It would be my understanding of the study that it be a cost-benefit study. There would be a cost-benefit analysis, also, probably a study in regard to the feasibility of such a line. I would ask Mr. Blachford if he believes there is anything confidential in the study that should not be made public?

MR. BLACHFORD: I don't think there is anything confidential that should not be made public. However, we would like to be able to change our minds if there is anything we have missed in it.

MR. COWAN: I would then ask if Manitoba Hydro would be willing to table, without prejudice, such a study?

MR. CHAIRMAN: Mr. Craik.

MR. CRAIK: Well, Mr. Chairman, perhaps I could give the undertaking that if the study is made available, or maybe not the study or at least a summary or a recommendation to the government from Hydro, that we will provide as much information as we can, and I think we perhaps have an obligation to indicate to the community, in general, from their

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representation as to what Hydro's position is on it. At any rate, whether the study referred to . . . It may be an internal document; if it's not, we have no reservations about tabling it or making it available.

MR. COWAN: Well, I, for one, and I know the residents of that community, as well, as other communities in the north, would certainly appreciate seeing such a study, because while we are talking in specific about Churchill now, I have received representation from almost every community, without fail, as to the feasibility of bringing line power into their particular area, and it is an issue of extreme interest to northerners. So that study could provide those persons, as well as myself, with a better understanding of the situation, the cost factors involved, some of the engineering factors that might be either positive or negative, and could be used as a general discussion document for the provision of line power into other communities and full integration of all communities in northern Manitoba into the system. So I would hope that we would be able to see the full study.

I would ask, right now though, as that does not seem to be a possibility today, if Mr. Blachford or Mr. Curtis, or the Minister, feels comfortable with providing us with information as to whether the study in fact did recommend that such a line be built.

MR. CHAIRMAN: Mr. Curtis.

MR. CURTIS: Mr. Chairman, I haven't, and the Board of Hydro, has not had the benefit of seeing the study, so I have no idea what the conclusions are or what the position of the board would be in that respect.

MR. COWAN: I would ask if the figures that were used before, the 500,000 per mile for an AC line and the 330,000 per mile for a DC line, would be attributable to a line going into Churchill, also, or would the cost factor be different because of different terrain?

MR. BLACHFORD: It would be different because not only the terrain is different but the voltage is different, the amount of power to go to the line is different and the type of construction is different.

MR. COWAN: Would it then be constructed at a greater or a lesser cost than those figures which I have just been . . .

MR. BLACHFORD: I am sorry, I don't remember what the costs were.

MR. COWAN: I would ask Mr. Blachford, then, if he can indicate if the line power was brought into Churchill, could that then be used as a jumping off point to bring line power into other communities in the area? And offhand the only ones I can think of would be the Tadoule Lake area and the Shamattawa area going off at Gillam, which would be a separate line. Could that all be integrated into one construction phase?

MR. BLACHFORD: I have an idea where Shamattawa is and the answer to the specific

question regarding Shamattawa is no. I don't know where the other place is.

MR. COWAN: Tadoule Lake is west and perhaps a bit north of Churchill, but almost, I would say, due west, if the map in my mind is essentially correct.

MR. BLACHFORD: How far?

MR. COWAN: Somebody would have to help me on exactly how far. I have always come in from Lynn Lake, being the air connection, so I have never travelled it from Churchill. Approximately half way, a little bit less. It would be quite some distance.

MR. BLACHFORD: I would think this would have to be studied.

MR. COWAN: I would ask, Mr. Blachford, where they anticipate, by their study, starting the line. Would it be from Gillam to Churchill? Would that be the route?

MR. BLACHFORD: I believe it was Henday.

MR. COWAN: If nobody has any other questions on that particular area, I would like to go on to another one.

Earlier Mr. Curtis, in reply to the Member for St. Vital, suggested that Jenpeg was not as accessible as Long Spruce, and that was the reason that there had not been an official opening at Jenpeg. I would ask Mr. Curtis if he could elaborate on that to explain exactly the inaccessibility that is associated with Jenpeg that would not be associated with Long Spruce.

MR. CURTIS: Mr. Chairman, the flying in arrangements I think are substantially different than it would be if we were going into, say, Gillam, which has a bigger and larger airstrip. As I mentioned, I think the board hasn't really given it special consideration, at this stage.

MR. COWAN: Yes, Mr. Chairperson. I am not exactly addressing my questions to the issue of the official opening but I have been approached in regard to the possibility of flying workers into Jenpeg on a rotating schedule. In other words, changing the system as it is now, where they are housed in the area, and instead flying them in for a four-day week or a five-day week and then flying them out for four or five days, and then flying them back. I would ask Mr. Curtis whether that is under active consideration at the moment.

MR. CURTIS: Mr. Chairman, I would have to ask Mr. Blachford if he could respond to that.

MR. BLACHFORD: Yes, it is under active consideration.

MR. COWAN: I would ask assurances from Mr. Blachford then that if a decision is made it will not be an arbitrary decision but that it will be a decision that is made in full consultation and co-operation and a consensus decision with the union involved.

MR. BLACHFORD: It will be done that way.

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MR. COWAN: I would ask Mr. Blachford when we can expect a decision as to the possibility of those changes being implemented.

MR. BLACHFORD: An agreement has been completed, but there is no letter of understanding been signed as yet. This happened two days ago.

MR. COWAN: Mr. Blachford's information is a couple of days newer than mine, then, and I would ask him, as an agreement has been reached, if he can explain Manitoba Hydro feels it is appropriate to make such a change at this time.

MR. BLACHFORD: This has been extensively studied by Hydro, and the conclusion has been that the number of people that will be required at Jenpeg on a permanent basis does not make a viable community. There will be too few people there, and therefore the idea of flying people in and out; the small number of people that are required to keep the plant in operation would be happier this way.

MR. COWAN: I would ask Mr. Blachford what will happen now. Are we faced with another ghost town situation in regard to Jenpeg?

MR. BLACHFORD: The community, as it now exists, will be almost entirely dismantled, with the exception of the restaurant and sleeping facilities that will be required for the people who will operate and maintain the plant.

MR. COWAN: I would ask Mr. Blachford if there was any private enterprise at work in the community of Jenpeg, then, stores and facilities other than those operated by Manitoba Hydro.

MR. BLACHFORD: Not to my knowledge.

MR. COWAN: So there would be no impact on private owners, etc. I would ask Mr. Blachford what impact that would have on the road system. As that road system is used for other communities also, would it indicate that there might be a downgrading of the road system because it will not be servicing Jenpeg anymore, or do we have assurances that the road will be maintained to previous levels, without any change in maintenance or improvement schedules?

MR. BLACHFORD: I believe this falls into the category of the Highways Department, not Hydro.

MR. COWAN: I would ask, then, if Manitoba Hydro will make representation to the Highways Department asking them to maintain and make improvements on that road, as in previous, and not to consider the closure of Jenpeg as in any way effecting the downgrading of any highway system. If they would be kind enough to do that, I am certain it might have some impact on the Highway Minister's future actions in this regard.

MR. BLACHFORD: If this is necessary, in the view of Hydro, Hydro will do so.

MR. COWAN: I just want to make certain, in my own mind, that the agreement that is made has been

made with the union, itself, and that they are fully advised and have fully approved the new plan.

MR. BLACHFORD: Yes, they have.

MR. COWAN: If there are no more questions on that, I would like to go to another area, if I could. There is an article today about PCB spill in Gimli, which resulted from the change of a substance called askarol in a transformer. I would ask whoever would like to answer this question what procedures Manitoba Hydro has in place in regard to the use of PCBs, what would be the quantity of PCBs that would be in the area of Gillam, and also how many would Manitoba Hydro have under storage in Winnipeg.

MR. BLACHFORD: I understand that in Winnipeg there are two barrels of PCB material in storage.

MR. COWAN: And in Gillam?

MR. BLACHFORD: Yes, I understand Hydro has no PCBs material in Gillam.

MR. COWAN: To seek further clarification, would that be taken to mean that there are no PCBs in transformers currently in use in the Hydro system?

MR. BLACHFORD: There are PCB materials in some of our equipment.

MR. COWAN: Does Hydro have any inventory as to the quantity of PCBs that are currently in use in materials utilized by Manitoba Hydro?

MR. BLACHFORD: No, we don't have a figure on that.

MR. COWAN: Well, if I can make a suggestion, rather than pursue the questioning at this point, I would suggest that that inventory be taken. I would also hope that Manitoba Hydro would have a procedure in place for the removal of PCBs from materials where it is currently being used, and a safe substitute being provided. It's well documented that PCBs are an extremely dangerous substance. It's well documented that in most jurisdictions now there is a tendency, as a matter of fact there is a very strong move afoot, to replace PCBs with safer substitutes, wherever possible, and it is my knowledge or I have been informed that there are safer substitutes in fact available at a cost factor which is comparable.

I would ask, then, if Manitoba Hydro is pursuing a policy of replacing PCBs whenever they renovate a transformer, or whenever they have cause or reason to go into a transformer, and will replace it with a safer substitute at that time?

MR. BLACHFORD: Yes, Hydro already has embarked on such a program some time ago.

MR. COWAN: Then I would ask what Hydro does with the PCBs that they remove from the old transformers.

MR. BLACHFORD: It's in storage in Winnipeg.

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MR. COWAN: As many of these transformers are in places other than Winnipeg, a number of them in Gillam, I would ask for a flow route of how the material is taken from Gillam. Is it stored there for a period of time? Is it then removed and brought to Winnipeg and, if so, how is that accomplished; is it by train? And what proper procedures are put in place to ensure that along the routes of transportation people are fully aware of the substance they are dealing with and also the workers involved themselves, at both ends, are fully aware of the proper safe handling procedures that should be used with PCBs?

MR. BLACHFORD: In due course we will provide you with this.

MR. COWAN: I would appreciate that, because it is a very important area. Also, I have been informed by a worker for Hydro, and I brought this up in the environmental estimates, that from time to time a transformer may explode or may leak and spill polychlorinated biphenyls at that time. As that is a problem that demands immediate attention, I would ask whomever here wishes to answer what is Manitoba Hydro's procedure in the event of a rupture of a transformer or the explosion of a transformer, or an inadvertent spill of PCBs into the area?

MR. BLACHFORD: Ask Mr. Fraser to give us an answer to this question.

MR. CHAIRMAN: Mr. Fraser.

MR. FRASER: Yes, Mr. Chairman. Manitoba Hydro has been aware of the danger associated with this material for years and we do have detailed operating procedures for cleaning up any spill that might occur. You shouldn't get the impression that these things rupture and spew the stuff around. What normally will happen is that the material, and they're not transformers, they are capacitors, but the case may rupture and a leak may occur, which is then wiped up. The rags are put in these drums that Mr. Blachford refers to and they are stored and they whole thing is handled through procedures that are set up by the Clean Environment Commission.

MR. COWAN: I would like very much if, at a later date, I could be provided with a copy of the written instructions in regard to the disposal, the cleanup, and also the use of PCBs by workers at the facility itself.

MR. BLACHFORD: We will provide you with the instructions we have.

MR. COWAN: I would appreciate that. I thank you for that commitment. I would then ask, if the spill takes place outside in a capacitor, and you have to excuse me for not being fully aware and conversant with all the technical terms, although I realize the difference between a transformer and a capacitor is probably significant and I should have used the proper terminology. My apologies to the committee. But I would ask, in the event of a spill from any piece

of equipment outside, what procedures are then followed?

MR. FRASER: The procedures that are prescribed by the Clean Environment Commission. The earth that is contacted and contaminated with material is scooped up and it's added to the material in the drums. The gloves and workers' material is all contained in the drums.

MR. COWAN: After the PCB contaminant material is shipped to Winnipeg, what is the procedure for disposing of it from here, because if there are only two barrels on hand, obviously some of it has gone somewhere else?

MR. FRASER: In past years, we had a contract with a firm, I believe in Oregon in the United States, and we have shipped material to them in the past. The most recent shipment was made to a firm in Edmonton and it was arranged by the provincial government and added to material that they were shipping out for disposal by that same firm. So it was taken from our storage on Waverley and added to the provincial shipment and sent out of the province.

MR. COWAN: It is my understanding that the United States have closed their borders to the transportation of PCBs from Canada a correct understanding of the situation as it stands now?

MR. FRASER: I don't know.

MR. COWAN: I believe it is, Mr. Chairperson. I may stand corrected on that. I would ask Mr. Fraser if the outfit that was taking PCBs from Manitoba to Edmonton is still performing that service, as it is my understanding that, if it is fact a certain firm, that firm is undergoing some constrictions financially and in providing service and there may not be, at this point, and I'm not saying that there isn't; I'm just trying to find out if the situation exists where there may not be a way to dispose of those at present.

MR. FRASER: I can't answer the question. We work with the Clean Environment people of the province, as I explained. The shipment was added to a provincial shipment and the arrangements were made by the province, and whether they can arrange with this particular firm or some other in the future as the need arises, I couldn't say.

MR. COWAN: I would just then ask where the two barrels of PCBs are stored presently in the city.

MR. FRASER: At the Waverley storehouse.

MR. COWAN: Are they under lock and key?

MR. FRASER: Yes, they are.

MR. COWAN: I thank you very much for that information and look forward to receiving the more detailed document in regard to the handling of this substance.

If there are no more questions on that, I would like to go on to another area then, and that is in regard to the northern preference clause and hiring

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practices in Gillam. I have been approached by a constituent in regard to hiring practices there. I have been approached by the Fox Lake Band in Gillam, who believe that they are from time to time not receiving the benefit of promotion within Manitoba Hydro and also the benefit of being hired for the jobs.

I would ask Mr. Curtis if he could advise us as to, in his opinion, how the northern preference hiring clause is being implemented at this time.

MR. BLACHFORD: Excuse me a moment, Mr. Chairman, we have a man who knows the answer to these questions.

MR. CURTIS: Mr. Chairman, if we could, we would ask Mr. Manning, who is the head of the Personnel Division in Hydro, to respond to the question.

MR. CHAIRMAN: Mr. Manning, did you hear the question from the member?

MR. MANNING: I wonder if I could have it repeated, please.

MR. CHAIRMAN: Mr. Cowan, would you repeat the question, please.

MR. COWAN: To the best of my ability. Mr. Manning, as I had informed the committee just previous to your coming to the table, I have been approached by some persons in Gillam, as well as the Fox Lake Band, representatives of that Band, in regard to the use of the northern preference hiring clause in the hiring practices in Gillam. It has been their suggestion that they are not receiving the full benefits of that clause.

They are concerned in two areas, the first area being that they are not hired for the jobs, that southerners are brought in for the jobs in many instances. And their second problem is that they feel once they are hired, those that do get hired, for reasons known to others than themselves, are passed over for promotion if they are not proceeding through the ranks as they would have wished to.

So I would ask for some comment on that in regard to, in your opinion, is that northern preference hiring clause being followed, and is there any way in which we can improve upon it to make certain that residents of the area are in fact hired in appropriate numbers and, when they are hired, are provided with opportunity for promotion.

MR. MANNING: I'll answer the question in generalities in the first place. First of all, we have union agreements that we must follow, with unions that have representation in the field. We then have a section here that is laid out in the specifications and if you care, I could read it out for you, the highlights of it.

"The tenderer is asked to set out, to the extent practical, the aspects of work or service related thereto which it may expect to have done, or be supplied from Manitoba resources. All things being equal, a preference shall be given to products manufactured or produced in the province of Manitoba."

The selection of personnel then follows: "It shall be a condition of the contract that in selecting persons (other than supervisory personnel) to be employed on the work, those applicants for employment who have been shown they possess the contractor's reasonable requirements as to training, experience and other qualifications for the particular work to be performed, shall be given preference by the contractor as follows: Firstly, persons living in the immediate vicinity of the site; secondly, persons living outside the immediate vicinity of the site but who are normally resident within the province of Manitoba; thirdly, persons living outside the province of Manitoba but who are normally resident within Canada; and fourthly, other persons."

Within the corporation itself — this is generally the contractors — now, within the corporation itself, as far as we are aware, where the individual does meet the minimum requirements for the position, he is given consideration for hiring. That could be either into an hourly or what we would term a complement position, realizing of course that there are internal bids within the corporation by people with prior service that are presently on staff.

Unless I would have specifics that I could research out on the second part of your question where people do not receive consideration for promotion or advancement, I would have to take that situation under review and search it through to see where the problem is because a person employed would come under a bargaining unit and he has access to the grievance procedure where he may feel he is not receiving fair treatment.

So we have that available to the individual. Now, whether he (Inaudible) feels it was necessary, but I haven't had any specific situations drawn to my attention.

MR. COWAN: I then would hope that Mr. Manning would undertake to do that study. I have had situations brought to my attention. I have not had the opportunity to validate the complaints or to even investigate the complaints as to their validity or them not being valid. I would hope that Mr. Manning, with his resources, would be able to do that and I would appreciate hearing from him in regard to the average length of seniority of individuals from the Gillam area in the jobs they are currently employed, as compared with the average length of seniority in a particular job for persons coming from outside the area.

In other words, what I am trying to find out is how fast do they pass up the ladder. I think that is probably material that can be drawn from the information banks that Mr. Manning has available to him.

MR. MANNING: You are referring specifically to Gillam?

MR. COWAN: To answer Mr. Manning's question, I have only been approached by persons from Gillam in regard to this problem, so that is where I would wish to confine my investigations.

Mr. Manning mentioned that a person is hired on the basis of them possessing the minimal requirements. Far too often, persons residing in Gilliam, not having the advantage of exposure to industrial situations, may not in fact have those

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minimal requirements, but could very easily develop them. I would ask Mr. Manning if there is any pre-employment program that is available to them so that persons from the area could take this sort of training under the auspices of Manitoba Hydro so that they would in two or three or four weeks, or two months, or three months, whatever is necessary, meet the minimum requirements.

MR. MANNING: I was wondering, to assist me in carrying out this work, if you would have specific names that I could check through to find out what specifically happened to that individual.

MR. COWAN: What I would ask Mr. Manning to do then, in that regard, in trying to avoid an intermediate step between the actual complainant and myself, is to please contact Chief Tom Nahtigal of the Fox Lake Band in regard to his Band's considerations and his Band's opinions on this. I am not suggesting that he is in fact the complainant but I am suggesting that he is the proper representative through which to work in regard to the Band's concerns. I would hope that those sort of conversations would be ongoing, because I know he is very interested in the employment of not only people who are of his band, but people who have lived in the area for some time and would like to see every opportunity made available to them for first, employment in the first instance, and for secondly, advancement once they do become employed by the corporation. He may in fact put you in touch with other persons but I think that would be the proper line of communication.

I would go back to my one question: Is there any sort of pre-employment program available for those who may not meet minimum requirements when signing their application for work?

MR. MANNING: No, they would be assessed the same as on the basis of other applicants to the corporation. I don't envisage any preferential pre-training would be given to a specific group, to my knowledge.

MR. COWAN: Perhaps, then, I can ask for an opinion on the viability of a pre-training program or on the acceptability of a pre-training program. In Mr. Manning's opinion, do you believe that perhaps if such was put in place, it might better enable long-term residents of the area to take advantage of employment opportunities provided by Manitoba Hydro?

MR. MANNING: Over the past, we have had northern developments for a number of years. As an example, at Grand Rapids, we hired a number of people both on our outside staff of . . . utility man category, up to the level of the foreman, and we also took a number of native people and we put them, when they came out of high school, into our electrical training program. I would have to research it but, to my knowledge, we did not have any complete pre-training program, itself, per se. That's a four-year training period.

MR. COWAN: What I was really asking for was an opinion. Do you think that they can play a valuable

role in providing more employment opportunities for residents in the area?

MR. MANNING: Certainly, where possible, we should be able to employ northern people where the individual himself is willing to participate.

MR. COWAN: From that, I would assume that Mr. Manning will look further into the possibility and maybe discuss that also with the Chief as well as the Mayor of the community, because we are not talking strictly about persons about Indian and Metis ancestry here, but we are talking about persons who have been long-term residents of the area, and that includes those outside of the Indian and Metis community.

So I would hope that he might also contact the Mayor, who would represent those outside of the status Indians in the community, in regards to what he would foresee as a possibility of better development and opportunity for the constituents that he represents.

In regard to hiring practices, I suppose the best that we can do, having thrown those questions out, is wait for an answer, and I do look forward to communicating with Mr. Manning in the future on this and trying to develop the system whereby that employment opportunity will be most available to residents of the area.

Having said that, if there is no other questions on that area, I would wish to move to another area now if I could.

Can Mr. Curtis advise us what the status of the assessment of the Burntwood River System is at the moment? To clarify that, I believe there is study ongoing on . . .

MR. CURTIS: I am sorry, the environmental study on the Burntwood?

MR. COWAN: I would like to know exactly what is being done to study the potentiality of utilizing the Burntwood River?

MR. CURTIS: Mr. Chairman, at this point there is a study that is being undertaken to look into all the various environmental problems relative to the Burntwood.

MR. COWAN: Would this be for the purpose of trying to decide whether or not to locate stations on the Burntwood?

MR. CURTIS: It is really to undertake the considerations relative to the environmental problems that relate to the various options for sites that are on the Burntwood River.

MR. COWAN: Is there then consideration being given to locating sites in the Burntwood River in the near future?

MR. CURTIS: Perhaps I could ask Mr. Blachford to answer that.

MR. BLACHFORD: There is, but not in the near future; it depends what you mean by the near future.

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MR. COWAN: I would have to ask Mr. Blachford what he means by the near future. He would probably have a more accurate assessment than I would. What would be the earliest possible date one would see sites on the Burntwood River?

MR. BLACHFORD: I suppose it is a possibility by 1988.

MR. COWAN: By 1988.

MR. BLACHFORD: It could be a possibility.

MR. COWAN: And we would be talking about some flooding that would have to be done in regard to the development of those sites on the Burntwood River System?

MR. BLACHFORD: That is part of the what the environmental study is about.

MR. COWAN: If that is part of the study, what other areas is the study concerned with?

MR. BLACHFORD: The effect on the river, the effect on the river banks, the possible effect on the fishing industry in the river.

MR. COWAN: So we are looking at another situation where flooding might be anticipated. I would ask Mr. Blachford if he could indicate how many acres would be flooded if the site was fully developed or if the site was partially developed.

MR. BLACHFORD: I can't give you an answer to that question. There are a number of possible sites being considered on the river for a number of developments.

MR. COWAN: I would anticipate that these would be developments that would provide less power than the sites that would be continued on the Nelson River System.

MR. BLACHFORD: That is correct.

MR. COWAN: Would they be developed in lieu of development of the Nelson River System, or would they be developed after the Nelson River System had been fully developed?

MR. BLACHFORD: This depends on our System Planning Studies and also what is to be developed in the province from here on, that is to say, what load growth appears.

MR. COWAN: So one should not take inference from the fact that these studies are ongoing, that there will in fact be generating stations on the Burntwood River System, and if one were to take such inference, it would 1988 before the first one would be completed, is that correct? Or would it be 1988 before it is started?

MR. BLACHFORD: No, one of the ideas that is being looked at is to use Burntwood River sites as alternatives for development of some Nelson sites. This is a function of System Planning and it will depend upon the load and it will depend upon the

cost of power from those projects compared to the cost of power from the proposed Nelson sites.

MR. COWAN: Those projects, I would imagine, would be less costly to develop, is that a correct assumption?

MR. BLACHFORD: They are probably less costly to develop, but they are more costly in terms of the energy output.

MR. COWAN: So while there is an environmental study being done, is there a cost benefit or a cost feasibility study being pursued at the same time in regard to that development?

MR. BLACHFORD: Not at this stage.

MR. COWAN: So we are proceeding to determine the environmental impact, and if it is determined that the environmental impact is such that it would be acceptable, then there will be cost analysis done. Is that correct?

MR. BLACHFORD: That is correct.

MR. COWAN: Who will decide whether or not that environmental impact will be acceptable?

MR. BLACHFORD: Hydro is working in conjunction with the provincial environmental people on this.

MR. COWAN: There would be some environmental harm that would come from the flooding though. Is that correct?

MR. BLACHFORD: We don't know yet.

MR. COWAN: Perhaps I can phrase it differently. From flooding in the past, has there not always been some environmental harm in regards to that flooding, which has taken place previously.

MR. BLACHFORD: This has probably been alleged in many cases. I think it depends upon who looks at it.

MR. COWAN: The reason that I asked that statement, is because on the front of the booklet that is given to us to make notes in, there is a statement that said, water power is a self-renewing energy source that can be harnessed for the good of man without harm to the environment. I agree that it possibly can be harnessed for the good of man without harm to the environment, but that one has to proceed very very carefully, and that flooding has been suggested in the past to have resulted in harm to the environment.

MR. BLACHFORD: This is why we are doing an environmental study, Mr. Cowan.

MR. COWAN: Would the results of that environmental study be made public?

MR. BLACHFORD: Not necessarily.

MR. COWAN: I am sorry, I missed that, is it not necessary, or are you saying not necessarily?

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MR. BLACHFORD: Not necessarily.

MR. COWAN: How can we ensure that it will be made public? The reason I ask that, is because I believe very strongly that those persons who are going to be most effected by developments of this nature should have full access to the information, so that they can make informed decisions as to what courses of action they wish to follow, and that they should have full access to the information so that they can provide to the body responsible for the development their expertise and their advice, because people living in the area oftentimes know far better than persons not living in the area what the impact will be of a certain development. They are also, many times, the first to understand and recognize impacts that were not suggested, such as deterioration in fish quality, deterioration in the breeding habits of fur, and that it is extremely important to take their advice into consideration. Not only that, but to seek out their advice, and if you are going to seek out their advice, you want to provide them with information that will enable them to give you the best advice possible, and that is why I would like to see that study made public. So I would hope that Manitoba Hydro would, in fact, make such a study public.

I know that Polar Gas, in their deliberations, has provided libraries in my constituency, and here throughout the province, with massive documents as to the environmental impact as they perceive it and as to the social economic impact as they perceive it, and are in fact seeking representations from individuals in the communities, some of which are not always forthcoming, some of which are, but the fact is that they are making a very positive effort in this respect to seeking input. Now what they do with that input remains to be seen, how they deal with that input remains to be seen, so I wouldn't want to place a value judgement on the entire process, but the fact is they have provided massive documents to communities that might be impacted, and I would hope that Manitoba Hydro would follow that same course of action in regard to providing those documents to libraries in the area, and to interested persons who might seek the information that is contained within, so that they can provide advice and expertise to Manitoba Hydro.

MR. BLACHFORD: I would just like to say, that involved in this study is public input from the residents in the area, and anyone else who is interested, as well as the members of the provincial government, who are responsible for the environment.

MR. COWAN: How is that public input being sought in this specific instance?

MR. BLACHFORD: By public meetings in due course.

MR. COWAN: Mr. Blachford has anticipated my next question. I was going to ask him when they had been held or when they will be held. Can he give me a more specific answer than, in due course, although I realize that I should probably be prepared to accept such answers at this time?

MR. BLACHFORD: I am afraid I can't. I don't have the dates, and I am not sure that they are specifically set yet, but they have begun talking with the people up in the north.

MR. COWAN: They have begun talking to the people in the north. In what way?

MR. BLACHFORD: Specifically the city of Thompson and officials in the city of Thompson.

MR. COWAN: Have they made representation to any of the representatives of Reserve or Metis communities that might be affected?

MR. BLACHFORD: No.

MR. COWAN: I assume they will be doing so in the very near future?

MR. BLACHFORD: They will be.

MR. COWAN: Are there any Indian or Metis people involved with the survey group itself?

MR. BLACHFORD: I don't think the survey group has been made up yet.

MR. COWAN: In other words, there is not a group that has been directed to make the survey at this point.

MR. BLACHFORD: They have been directed to make the survey, but as I say, they haven't made it up, haven't got it going yet.

MR. COWAN: So there may well indeed be Indian and Metis people represented on that group.

MR. BLACHFORD: Possibly.

MR. COWAN: Would you encourage that to take place?

MR. BLACHFORD: Yes, we would encourage that to take place.

MR. COWAN: Because again, I think that will provide that group with some expertise that will enable them to make a better informed decision, so I would hope that course of action would be followed.

There are a number of other questions. I don't want to take up too much of the time of the Committee at any one stretch, and I anticipate that we may have to meet tomorrow, so I would relinquish the floor to anyone else who might want to pursue questioning at this point.

MR. CHAIRMAN: Mr. Walding, perhaps between you and Mr. Cowan, with six or seven minutes left to go in the meeting, if we sat for another half an hour, until one o'clock, could we finish, or should we instruct the Government House Leader to schedule a meeting for Friday afternoon?

MR. WALDING: Mr. Chairman, can we sit for another ten minutes and we will get a better idea of how much more we have to ask.

MR. CHAIRMAN: All right, fine. Mr. Walding.

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MR. WALDING: Mr. Chairman, I wanted to ask a question about the power that HBM&S is providing to a Winnipeg community from Saskatchewan, or Saskatchewan is providing it. I am not sure of the details of it. I believe it is in the Flin Flon area. I understand the contract is due to end in the near future and that Manitoba Hydro will be charged with that responsibility. I wonder if I can ask for a few details of what is happening with that.

MR. CURTIS: Hydro has had meetings with them. I would ask Mr. Blachford if he could respond to the question.

MR. BLACHFORD: We have ongoing discussions with both HBM&S and with Saskatchewan on what arrangements will be made in the Flin Flon area for supplying power to Manitoba and to Saskatchewan, beginning approximately April 1st, 1981.

MR. WALDING: Does Hydro have in place the necessary transmission facilities to bring the required amount of power into Flin Flon to take up that slack, and what is the order of magnitude involved?

MR. BLACHFORD: The order of magnitude is about 100 megawatts, and we do not enough transmission to supply the needs of HBM&S and Flin Flon if the Island Falls Plant is taken away from that area.

MR. WALDING: You say if, is there some doubt that it would be?

MR. BLACHFORD: Saskatchewan will take over the Island Falls Plant as of April 1st, 1981. We are talking with them with the idea of Island Falls continuing to supply power to the Flin Flon area, while Manitoba Hydro supplies power to southern Saskatchewan in effect in an equal amount, until such time as they require the power from Island Falls for northern development and/or we get a transmission line into Flin Flon from the Manitoba system.

MR. WALDING: Also, it is still under discussion whether or not Hydro will have to do that. Would that be correct?

MR. BLACHFORD: That is correct.

MR. WALDING: And if Hydro does have to do that, you are saying that Manitoba Hydro is not now in a position to deliver that amount of power.

MR. BLACHFORD: That's correct.

MR. WALDING: In the event that Hydro did supply the power to the city of Flin Flon, would the residents there be paying the same rate as they are now, or some different rate?

MR. BLACHFORD: They'd be paying the same amount. We're already supplying the town of Flin Flon. Not the mill of HBM&S. The town of Flin Flon.

MR. WALDING: So it's only HBM&S that is under discussion here. It's not Flin Flon itself.

MR. BLACHFORD: That's correct.

MR. WALDING: I see. Okay. Can I ask you then about the Inco contract, which I understand is becoming due again. Are there discussions between Hydro and Inco at the moment?

MR. BLACHFORD: There are discussions, yes. Discussions have not been terminated, finalized.

MR. WALDING: Is there any reason why Hydro should not charge Inco the same general rate as any other general rate customer?

MR. BLACHFORD: We're under discussion with Inco and I'd rather not comment on these matters.

MR. WALDING: Okay. I would like to ask about the Mandan project. Can you explain what that is to the committee?

MR. BLACHFORD: Yes. This proposed project is a proposal somewhat similar to the arrangement that is made for the recent 500 kV line that's gone into service. It's justified on the basis of using the diversity of loads between the loads in Nebraska and loads in Manitoba.

MR. WALDING: Is that to be a 500 kV line too?

MR. BLACHFORD: It will be a 500 kV line.

MR. WALDING: AC?

MR. BLACHFORD: AC.

MR. WALDING: And that goes to whom? The Nebraska Power . . .

MR. BLACHFORD: The Nebraska Public Power District.

MR. WALDING: What would be the chief advantage to Hydro of this project going ahead?

MR. BLACHFORD: The chief advantage is that it will delay the construction of approximately 700,000 kilowatts of generation for a number of years.

MR. WALDING: Why is that?

MR. BLACHFORD: Because it revolves around the use of power in Manitoba and in Nebraska. Last year, Manitoba Hydro's peak load was approximately 2,500 megawatts. Within the next two or three months, the peak load will fall to somewhere in the order of 1,600 megawatts. In Nebraska, the opposite occurs. They have their peak load during this time in the next two or three months of the year, and they have their least peak load during the winter months of January, February and March.

So in the winter, Manitoba will use Nebraska's generation when they are not using it, and in the summer, Nebraska will use Manitoba's generation when Manitoba is not using it.

MR. WALDING: I see. Is there an advantage to Manitoba Hydro in having two potential customers for summertime power, as against only northern states power at the moment?

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MR. BLACHFORD: Yes. There should be an advantage to that.

MR. WALDING: Do you anticipate that the price is likely to go up when you have two customers bidding for the same power?

MR. BLACHFORD: On the average, it should.

MR. WALDING: Would Hydro have sufficient excess power in the summertime to fill both of those lines to capacity under average water conditions?

MR. BLACHFORD: Yes, they will.

MR. WALDING: If that is so, then it's not really a matter of competition between the two if they can both take what you have.

MR. BLACHFORD: Yes, but there's also surplus power involved in these lines when it's available from the Manitoba system, and this is where that advantage comes in.

MR. WALDING: Are you still talking of summer power now, or at any time of year?

MR. BLACHFORD: Any time of year.

MR. WALDING: I see. Is it intended to sell power to Nebraska on an interruptible basis, the same as other states?

MR. BLACHFORD: If it's available.

MR. WALDING: I see. I understand that the Letter of Intent was ready to be signed and had been agreed to by both parties a year ago, but there have been some further discussions on the matter. Is this true?

MR. BLACHFORD: It is still under discussion.

MR. WALDING: Can you tell me what additional benefits to Manitoba are now being discussed? Or what better deal we can anticipate.

MR. BLACHFORD: This is a highly technical and complicated matter, but we're discussing the means by which the power will be priced and of course, we're discussing it from our point of view of bettering Manitoba's possible leverage on this power.

MR. WALDING: But they are discussing it from their point of view of paying less, I presume.

MR. BLACHFORD: That's right.

MR. WALDING: How optimistic are you of getting a better deal from Manitoba than was agreed to a year ago?

MR. BLACHFORD: I'm optimistic.

MR. WALDING: When do you anticipate these discussions concluding, and the Letter of Intent signed?

MR. BLACHFORD: Possibly within the next few weeks.

MR. WALDING: Within a few weeks. How soon after that would, or could construction start on the line?

MR. BLACHFORD: There is a timetable, and both sides are currently carrying out environmental studies on the corridors in order to set them now. Two or three years, for construction in the field.

MR. WALDING: Two to three years. Who is carrying on these investigations? Is Hydro involved in them?

MR. BLACHFORD: Yes, they are.

MR. WALDING: What is the government's input into the discussion?

MR. BLACHFORD: The government has been working, shall we say, hand in glove with Hydro, in being sure that Hydro is following the right procedures in these environmental studies in Manitoba.

MR. WALDING: Thank you, Mr. Chairman. I'm moving along quicker than I thought that I would. I'd like to ask, perhaps Mr. Blachford now about the advantages and possible disadvantages of a Canadian Power Grid. How would you characterize the chief advantages of such a grid?

MR. BLACHFORD: When you interconnect power systems, it is a very good thing for the stability of the systems. This is one thing from strictly a system point of view. I'm sure you know there is a feasibility study being carried on now to see whether the line is feasible from the point of view of selling energy, interconnecting of energy.

MR. WALDING: May I interrupt you a moment and ask whether, when you say the system, are you talking about the integrated grid, or are you talking about Manitoba?

MR. BLACHFORD: All of it. Integrated grid and Manitoba. It includes Manitoba.

MR. WALDING: I'm sorry. Carry on.

MR. BLACHFORD: This, of course is the reason for this feasibility study, to see if it's financially a viable proposition. That's all that could be said about that at this stage. It should also, if it is financially viable, and can stand on its own feet, otherwise, it should offer Manitoba yet another opportunity to sell its power at a more advantageous rate and we'll have more competition for the same power.

MR. WALDING: Would it be true to say that a major advantage would be in pooling the reserves of the components so a smaller total reserve could be drawn on by each of the component utilities?

MR. BLACHFORD: That's a possibility, yes.

MR. WALDING: What would you say was the chief disadvantage of a grid system?

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MR. BLACHFORD: I don't think there is a disadvantage if it can be justified financially.

MR. WALDING: Would a completely integrated grid system mean that each utility would give up a fair amount of autonomy, control of its own affairs, and give up control of certain generation transmission facilities to people outside of its own jurisdiction?

MR. BLACHFORD: Not necessarily.

MR. WALDING: Why do you say not necessarily?

MR. BLACHFORD: It just depends upon whether the utility wishes to operate in that manner or not. To give you an example, Mr. Walding, there are many utilities, in fact most of the utilities in the USA are private utilities. They are interconnected and they agree to give up a bit of their control over some generation for a certain period of time for the benefit of both systems. Some of them do not do that, they insist upon building all of their own transmission and generation. It depends on the arrangements that are made at the time the interconnection is made, or later.

MR. WALDING: Then would you foresee a grid system where Manitoba Hydro would still control its facilities, and even if another province made a demand at a certain time, that the province could still say, no, we won't give it to you?

MR. BLACHFORD: Oh yes, that's possible.

MR. WALDING: I see. Okay, I want to ask a technical question, and I hope you can explain it to me in simple terms. I am told that the west part of the continent has a form of interconnection, and that the eastern part of the continent has its own interconnection and that the two are not meshed with each other, or they're somehow out of phase. I don't know what the correct terminology is, but can you explain the system and the problem as to what this means and what difficulties that would present in time, the east to the west through a Canadian link?

MR. BLACHFORD: I know what it means, but it's rather difficult to explain. The way that it is being considered, as I understand it, for the line to the west is to build the DC circuit into the line, and this will eliminate the necessity for having to worry about that kind of a problem in the future. When we say things are out of phase, as you know, alternating current reaches a peak and it breaks down and it reaches a negative peak and goes up again; it's a time problem, and as you get these systems growing to the size they are and the distances between them, this becomes a problem in transmission. It also depends upon how the various transformers in the systems are built. Some systems will build transformers this way and other systems will build transformers that way and you get someone in the middle who has something different, and unless they're all meshed together, you have problems.

Now, putting in a DC link resolves this problem once and for all without more sophisticated machinery.

MR. WALDING: I take it from what you say that the DC link would be needed between Saskatchewan and Alberta. Is that correct?

MR. BLACHFORD: That's what I understand is being considered.

MR. CHAIRMAN: Perhaps I could stop you, Mr. Walding, at this point. At 25 after 12, you said if we went on for another ten minutes, you'd have a better idea as to whether we could wrap it up today or we would meet another time.

MR. WALDING: Mr. Chairman, I only had this item and the financial statements that I wanted to ask a few questions on.

MR. CHAIRMAN: How long do you think you would be on the financial statement?

MR. WALDING: That's hard to say.

MR. CHAIRMAN: What about Mr. Cowan? Have you a number of other questions?

MR. COWAN: Mr. Chairperson, I have a number of questions that I would like to ask. I'm not certain how long they would take, although I'm hesitant to impose upon the committee the need to meet tomorrow. I could follow some of them up, I'm certain, by correspondence, although it's not as efficient a method. If it was necessary, I would be prepared to do that, but if we are going to continue meeting, I could think of a number of questions that I would like to ask that might become fairly detailed.

MR. CHAIRMAN: It's my understanding, to the members of the committee, that the Government House Leader said that if we were to meet, we'd meet Friday at 2:00 p.m. Should we break off now and reconvene Friday afternoon at 2:00 p.m.? (Agreed) Committee rise.