



Legislative Assembly of Manitoba

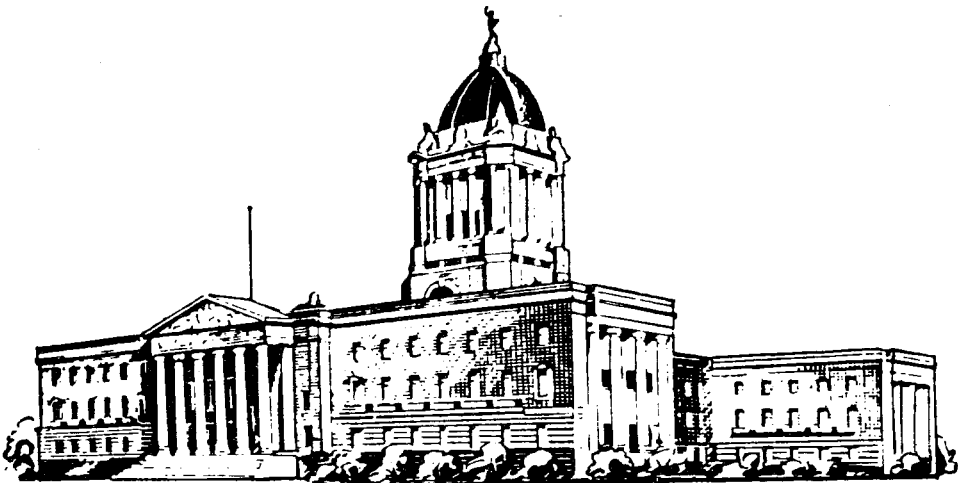
HEARING OF THE STANDING COMMITTEE

ON

PUBLIC UTILITIES AND NATURAL RESOURCES

Chairman

**Mr. Harry Shafransky
Constituency of Radisson**



TUESDAY, March 15, 1977, 10:00 a.m.

TIME: 10:10 a.m.

CHAIRMAN: Mr. Harry Shafransky

MR. CHAIRMAN: We have a quorum, we can proceed. This morning we shall hear from the Chairman of Manitoba Hydro on the Manitoba Hydro Electric Board 25th Annual Report for the year ended March 31, 1976. I shall call upon Mr. Bateman to proceed with his introductory remarks. Mr. Bateman. Mr. Craik.

MR. CRAIK: Mr. Chairman, on a point of order before we proceed. This question has been raised before in the committee and, without reference to you personally, we've indicated that we felt that a member of the Hydro Board should not act as chairman of this committee and I think that before we go further we should indicate our reticence at having a member of the board, namely yourself, act as chairman of the committee and we would move that someone else act as chairman of the Legislative Committee other than a member of the Hydro Board.

MR. CHAIRMAN: Mr. Premier.

MR. SCHREYER: Mr. Chairman, since the motion's been put I would like to hear a substantive reason. All I've heard so far is a procedural argument.

MR. CRAIK: Mr. Chairman, the perfectly obvious reason is that the chairman of a committee is to be objective and at arms length from the operations of the committee and clearly and particularly in the case of the presentation of a report from a Crown Corporation which is under a degree of discussion and has been under a degree of heavy discussion for some period of time, that that objectivity is not going to be achieved by having as the chairman of the committee where there are two sides to be discussed, a member of a side that has already been intimately involved in it. In other words, we're questioning the objectivity that can be brought to the Chair by someone who has been as intimately involved in the proceedings of hydro as the present chairman has been.

MR. SCHREYER: Well, Mr. Chairman, we could easily solve the problem, because there is indeed no problem in having either Mr. Walding or Mr. Johannson chair the proceedings for this particular committee but, rather than do that, I would like an opportunity to search the record and precedent, since it is my recollection that, in most occasions similar to this' if not all, meetings of this kind were chaired by Ministers of the Crown and so, frankly, I would like an opportunity to do that. Therefore, I would ask Mr. Craik to either agree to table his motion until the next sitting or, if he insists that it be dealt with now, I would suggest we simply vote on it right now.

MR. CRAIK: Well, I suggest, Mr. Chairman, that we just vote on it.

MR. LYON: Could I raise a question, Mr. Chairman?

MR. CHAIRMAN: Mr. Lyon.

MR. LYON: The Premier was indicating there was no substantive reason that he could see for alteration of the chairmanship and I reiterate what my colleague has said, it is no personal reflection upon the Honourable Member for Radisson whatsoever, but there is the danger of a potential conflict by virtue of the fact that the Honourable Member for Radisson is also a member of the Hydro Board and it may well be, during the course of these proceedings, that the Member for Radisson may well be called as a witness before this committee as a member of the board and I think, if you're looking for one substantive reason, there is one substantive reason by itself.

MR. SCHREYER: Well, Mr. Chairman, I think that procedures would certainly allow in the event, however likely or unlikely, that you are called as a witness before this committee, it can be arranged for a deputy chairman to be selected for that particular point in time. I repeat, we're not insisting now in turning aside this suggestion. We would like an opportunity to search a record of previous committees, this and other committees, to see what, in fact, the long standing practice has been. In the event that my recollection is wrong, then we might well accede to the suggestion. So the honourable member can either table his motion until the next sitting or if he persists, we can vote on it now.

MR. CHAIRMAN: What is the will of the Honourable Member for Riel? Mr. Craik.

MR. CRAIK: Well, Mr. Chairman, if I thought that the answer would be otherwise at a later date, I would be willing to withdraw but I can't really see that it's going to change the position of the government just on the basis of the rationalization that's been given here already and I think, therefore, that it should be dealt with.

MR. CHAIRMAN: A question has been called whether this chairman can remain as chairman of the Public Utilities Committee. I guess I should properly vacate the Chair at this particular time and let somebody else move that motion, since the Chair has been challenged. The Clerk call the vote.

MR. CLERK: Since the Chair has been vacated temporarily, the question before the House is, as I understand it, as to whether the present chairman should be removed and a new chairman elected. All those in favour of the motion, please say aye or raise your hand.

MR. G. JOHNSTON: On a point of order, Mr. Chairman, I would like the names of the members of the committee to be read out so we can insert them as a vote.

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MR. CHAIRMAN: The Members of the Committee: Honourable Mr. Schreyer, Mr. Uruski, Messrs Axworthy, Barrow, Craik, Enns, Johannson, Lyon, Petursson, Spivak, Walding and the chairman, myself, Shafransky.

A COUNTED VOTE was taken, the result being as follows: Ayes 2; Nays 6.

MR. CLERK: I declare the motion lost.

MR. CHAIRMAN: Mr. Bateman.

MR. BATEMAN: Mr. Chairman, Mr. Premier, members of the committee.

We have distributed copies of our Manitoba Hydro-Electric Board Annual Report for the year ending March 31, 1976. If they haven't been distributed, the Clerk will now see that they are and I will be very happy to answer questions from you on this report. Today I am accompanied by a number of senior officers and staff of Manitoba Hydro who are available to help provide the answers to your questions as that is necessary.

Now as is customary, I will give you a summary of the highlights of our operations to date, that is since I last reported to you and I believe that was last June 1st.

First, a word or two about our sales growth. Our firm electrical energy, in Manitoba, has increased by 4.7 percent in the year ending March 31, 1976. However, the current year is showing somewhat slower growth. This is a phenomenon that is common to a large number of utilities across the world as conservation and economic slowdown are factors in that use of our product. However, the increase has been high in the residential and farm sectors, reflecting the general increase in electricity usage and new installations of electric heat, particularly in locations where heating oil is the alternative source. For instance, last year we connected 6,922 new homes to our system, that is for the year ending March 31, 1976, or an increase of 3.8 percent in our customers.

Growth in our total sales has been at a somewhat slower rate than the early 1970s and slower than the average for the last twenty or thirty years. This slower growth is attributable to reduced consumption by a number of customers in our general service and power categories. Sales outside of Manitoba have decreased in volume compared with the last two years because more of the energy is being used in Manitoba and because in the past eight months we have had a severe drought condition and, of course, we have not added any new generation in that period of time.

A word or two about our recent operations. When last I appeared before your committee on June 1st, I told you about our concern for the lack of rainfall that had been evident during the spring. After that, however, June rainfall was generally average and that, of course, as I am sure you are well aware was the salvation of the crops in the west here. However, after June it became apparent last summer that very low water conditions were imminent and, in fact, we are experiencing the worst drought that we have had in Manitoba in 90 years. Action was taken by holding water in our reservoirs, by running a thermal plant at base load and by buying power from outside of Manitoba. This has been successful and it has not been necessary to curtail load in any way. During January 1977, demands on the system on several days exceeded any past demands and these were met without need for any voltage reduction, any brownout or any disconnection of any of our customers. At this time I would like to assure you, Mr. Chairman, and your committee, that we intend to have an adequate supply of electricity in the future also and this will be at the lowest possible costs.

Our thermal plants sustained a very significant period of operation. The continuous running of the thermal plants at Brandon and Selkirk, together with the Winnipeg Hydro plant at Amy Street, has caused these plants to produce more electricity than in any previous year. They are currently contributing approximately 15 to 20 percent of the power generated in Manitoba. A generally good operating performance of these plants has proved their worth and also tested the quality of the plant and the operators to the fullest. We have recognized the valuable contribution that these staff have made in this severe drought condition. The cost of coal, which has increased between two and a half and three times in the past 10 years is, of course, a very significant factor in our system costs.

Now Lake Winnipeg Regulation. As you are aware the project is now complete and in operation. Water held back in Lake Winnipeg last fall and water being released into the lake through the various hydro stations this winter, is now being channelled into the Nelson River in substantially larger quantities than nature would have allowed. I'd like to just take a moment to point out, of course, the natural outlet of Lake Winnipeg was through this Warren's Landing which has a natural restriction to the outflow of Lake Winnipeg. Manitoba Hydro, as part of the regulation project, excavated several channels but the important one is this two mile channel in from Lake Winnipeg into Playgreen Lake and, of course, the eight mile channel from Playgreen Lake into Kiskittogis which helps get the water into the Nelson River which is what we are anxious to do. Now, just as a matter of interest and to put this in proper perspective, this two mile channel is excavated to a depth of 685, that is the elevation 685. Currently the water in Lake Winnipeg is just below 712, that means that there is 27 feet depth of water 27 feet flowing through that channel. Now, how wide is it? It's between 385 feet and 400 feet wide at the base and between 600 feet and 800 feet wide at the surface, depending upon the level of the ground through which it traverses. So the flow of water in that two mile channel this winter is about 30 times greater than the flow in the Red River at Lockport today. The importance of the Regulation project to our operations during the current drought situation is most significant. The

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Nelson River is flowing at a rate approximately 50 percent greater than would be the case if we had not dredged the two mile channel.

A word about the Churchill River Diversion. The major part of the Churchill River diversion is complete and the diversion has been operating at one-third its capacity through this past winter. Operation has been limited by the need to phase-in the project on a gradual basis and because mitigation works along the route were not finished and negotiations are not yet complete with the Indian Band at Nelson House. At this time, I am pleased to report that these negotiations are proceeding well and we expect to achieve a settlement within a very few months. The additional water arriving at the Kettle plant as a result of the diversion of the Churchill River, is very valuable during these drought conditions and I can assure you, Mr. Chairman and members of the committee, that the diversion project has been working well this past winter.

A word about interconnections. In November, 1976, we brought into service our second American interconnection, which runs from Winnipeg to the Duluth area. This interconnection has significantly increased the reliability of our system and interconnections. It also connects us with a very important utility area from which we can buy and sell electric power. Now during this past winter, the line has been used very heavily to purchase power from American utilities to supplement our own resources during the drought period that we have experienced. We also have similar interconnections with Saskatchewan and with Ontario and we have been able to buy and sell significant quantities of electricity.

A word or two about the financial situation. In the year ending March 31, 1976, as dealt with in the Annual Report, which has been distributed to the members of the committee, a combination of good water conditions and stringent limitations at Manitoba Hydro on our operating expenses enabled us to make transfers to reserves of nearly \$10 million. During the present year we shall have to draw upon those reserves to an estimated amount of \$5 million because of the extra costs of purchasing power and generating it from thermal plant during these low water conditions. On Page 6 of the Annual Report before you, there is a statement on the significance of water conditions to our financial operating statement.

Now a few words about the northern projects. Long Spruce — the construction at that site continues ahead of the original schedule and within budget and the first generator is expected to be on line this summer. This will further help our energy position next winter. The schedule looks very good, in fact, the job looks good. I visited it on Saturday last, that's March 12th, just three days ago and was very impressed with the progress that they are making on that job.

I can't say the same about Jenpeg. Delays in the installation of the generators at the Jenpeg station continue. And for those who have not seen the Jenpeg site, I would strongly recommend that they do so because it is a very impressive installation. We begin testing the first machine within the next month or two and hope to have it in service in July.

On Limestone, our present load forecast indicates that new generation will be required from this site by 1983 and we are continuing the initial construction activities at the Limestone site in order to bring it into service in that year, if it is needed. We are carefully assessing our load growth with a view, possibly, to making another deferment on this site. We do not need to make a firm decision for nearly two years, when it would be necessary to place the main construction contract for the civil works. As I told you last year, we have been able to postpone the Limestone station until 1983 through negotiating an agreement with the Northern States Power Company to exchange seasonal diversity power. As a result of that agreement we shall be relying on U.S. utilities for winter peak power in 1983.

I am very pleased, Mr. Chairman, to report to your committee again, that Manitoba Hydro's safety record stands high among the major Canadian electrical utilities.

And during 1976 we negotiated new agreements with our three unions. The first agreement is the agreement that comes due in March with The Association of Manitoba Hydro Staff and Supervisory Employees. The next is the agreement that comes due in June with The International Brotherhood of Electrical Workers, Local 2034. And the third is the Manitoba Hydro Employees Association, coming due in December, being affiliated as Local 998 of the Canadian Union of Public Employees. The Board and I are especially pleased with the conscientious efforts made by our employees to ensure that Manitoba's power needs are adequately met.

A word about the rates that we have announced: The rising costs associated with new construction and operation, will require us to obtain an additional revenue of \$24 million next year, that's the year starting April 1st, 1977. And, of course, we announced an increase on January 17th, that we would be implementing new rates. We are going to accomplish that increase in revenue by rate increases that vary between 10 and 20 percent. This is rather less than the forecast that I gave to you last year and is due to the deferment of all possible capital investments, and to holding the line on controllable expenses. It does not reflect the full effect of the current drought situation. Much as I regret the need to increase rates for electric service, I note that rates in Manitoba are still among the lowest in Canada.

In conclusion, Mr. Chairman, I would like to say that the Board of Manitoba Hydro is satisfied that

the corporation has pursued the correct course of system development in bringing into service the various elements of the Nelson River Project over the last ten years. Mr. Chairman, this has been a short summary in order to allow committee members more time to ask questions of matters of interest to them. Thank you.

MR. CHAIRMAN: Thank you, Mr. Bateman. Mr. Schreyer.

MR. SCHREYER: Well, Mr. Chairman, as the Minister reporting to the Legislature for Hydro, a number of questions arise which can best be dealt with in detail, and here, and accordingly I'd like to pose four questions which could be dealt with by the Chairman of Hydro in whatever order it is appropriate. Perhaps I could pose them all and then repose them as you answer each in turn.

The first would be to ask you to indicate to the committee the specifics as to the quantity of coal that has been utilized, consumed in the past twelve-month period, and the cost and then to give some idea as to the dynamics of coal cost, including freight cost.

The second question would be to ask you to indicate whether there is anything unusual in the financial statement which indicates that interest coverage makes up 40 percent of total costs; whether this is rather commonplace or rather in line with most electrical utilities, particularly those that are heavily hydro-oriented.

The third question would be to ask you to comment with respect to the contention that, depending whose figures you use, that Manitoba Hydro has spent either \$600 million or \$245 million — I've seen both figures used — more than really need have been spent in order to achieve system reliability.

And finally I would ask you to report to the committee as to the comparative movement of electrical utility costs or rates, across our country, including specifically whether our hydro rates here bear approximately the same relationship to a sort of weighted national average as has usually been the case in the past.

MR. BATEMAN: Thank you, Mr. Premier. I have made notes of those questions and I will attempt answers for them.

I think the first one, dealing with the specifics on coal utilization in the past twelve months, I believe Mr. Atchison, our Director of System Operations who is responsible for that area of the corporation, probably has some figures available. If you would like to come forward, Jack, could you

MR. CHAIRMAN: Mr. Atchison, you can come forward and take that microphone right here.

MR. ATCHISON: Mr. Chairman, gentlemen, up to the end of February 28th, 1977, the total consumed at Brandon was about 760,000 tons, at Selkirk it was 375,000 tons. This was a combined cost, delivered to each of the stations, of approximately \$11.8 million.

MR. SCHREYER: That's for what period, Mr. Chairman.

MR. ATCHISON: Well, April 1st, 1976, to February 28, 1977.

MR. CHAIRMAN: Thank you, Mr. Atchison. Mr. Lyon,

MR. LYON: Assuming the normal variables in weather in March, are you expecting coal consumption to be above normal for March of 1977, or what is your expectation?

MR. ATCHISON: We expect to keep both Brandon and Selkirk on what are called base levels, which is factoring in the fact that there will be overhauls necessary over the summer. We expect to keep plants running and consuming coal at about the level of 160,000 to 180,000 tons per month. This is because of the drought, strictly.

MR. LYON: That's working out at approximately what price per ton now? I know the cost of coal has gone up rather considerably.

MR. ATCHISON: The coal price at the moment is about \$5 a ton at the mine. It's about \$4.75 a ton freight to Brandon, and \$9.17 per ton freight to Selkirk. This works out at about \$10 a ton delivered to Brandon, and about \$14 a ton delivered to Selkirk.

MR. LYON: And how would that consumption, say April 1st, 1976, to February 28th, 1977, that you've given us (\$11.8 million), how would that compare with the previous twelve-month period?

MR. ATCHISON: Considerably higher. Perhaps a better comparison might be to consider the coal consumption in what we call a medium flow year. In which case we would expect to be burning, in both stations, no more than about 300,000 tons. This has been one of the roles of the thermal plant, of being there to peak. In a dry year then the joint plants consumption can go up to the order of 1.6 to 1.7 million tons, for a dry year operation. And of course what we're looking at, in effect, the previous year — the 1975-76 year — was rather a wet year, actually. We had high levels on Lake Winnipeg, as you may recall, and this particular year since late June, early July, when it was identified that it would be a dry year the plants have been on baseload and therefore the coal consumption has followed.

MR. LYON: You could perhaps get that dollar figure for us for the previous year. - **MR. ATCHISON:** Yes.

MR. LYON: Thank you.

MR. CRAIK: I wonder, Mr. Atchison, could you give us some indication what the fuel cost is in terms of the cost per kilowatt hour of production.

MR. ATCHISON: Yes. It's a function of the efficiency of each of the stations as well as the coal costs delivered and in the case of Brandon, the melded figure would be about 10 ½ mills per kilowatt

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hour. In the case of Selkirk . . .

MR. BATEMAN: That's fuel cost.

MR. ATCHISON: That's fuel cost. Yes. Sorry. And in the case of Selkirk it would be 14 mills per kilowatt hour.

MR. CRAIK: This is sort of related to the question that was asked, what you would burn in a normal year if this had been a so-called normal year. Can you indicate how many kilowatt hours or what unit of electrical power was produced, extra, above normal as the result of the . . . ?

MR. BATEMAN: In a normal year these plants would produce 2 or 3 percent of our energy requirements, as last year I think the statistics in your Annual Report, if you turn to the graph you will see that the thermal plants produced 3.9 percent. Now we're telling you, in my opening remarks, that the thermal stations this year produced about 20 percent of our energy.

MR. CRAIK: Well, Mr. Chairman, just in very round, rough, ballpark figures, the extra cost of the coal-burning this year is really the figure and the amount and number of kilowatt hours. You've given us the rough production price for the coal. In other words, the extra cost of having to burn the coal this winter, in the last season and No.2, the amount of energy you produced, extra energy produced by this technique.

MR. BATEMAN: Well, Mr. Atchison, if you have those figures, give them.

MR. ATCHISON: I can give you the energy produced in year ending, twelve-months ending, and these are February end figures. These are the only twelve-month figures that are available at the moment. Twelve-months ending February, 1976, was 511 million kilowatt hours produced by all the thermal plants. There was a little bit of gas turbine in there and a little bit of diesel but not a very important enough amount.

In the year ending February 20th, 1977, it's 1,368 million. So you have a difference, then, between 511 million and 1,368 million, for the comparative years. Now the costs — I'd have to obtain those figures — because the coal costs on that previous year were somewhat different. There has been a huge escalation in coal and therefore one would . . .

MR. BATEMAN: Mr. Chairman, I think that Mr. Atchison has given you figures for twelve months ending February. So that would be part of the previous fiscal year, as well as the fiscal year in question.

MR. CRAIK: No, that's okay. As long as the 511 is representative, you feel, of the normal year. Would Mr. Atchison be the person that would be involved in the questions regarding the import of power from other utilities?

MR. CHAIRMAN: Mr. Craik, we do still have people that . . . You wish to be on the list? I'll put you on the list. Thank you, Mr. Atchison. Mr. Bateman.

MR. BATEMAN: Well, Mr. Chairman, getting back to the Premier's questions. The next one had to do with the amount of our expense dollar that goes into interest payment. I think the question was: Is there anything unusual in this relative to operation of our utility or other utilities across the country? We have with us this morning Mr. Alex McKean, who is a chartered accountant and who is the Assistant General Manager in Charge of Finance. I would ask Mr. McKean to answer this question for you, Mr. Premier.

MR. McKEAN: Mr. Chairman. I don't really think it's unusual that a high percentage of our revenue dollar goes towards interest. We have always been a hydraulic system, basically, in Manitoba. And, for instance, our increase of interest to total revenue has increased from approximately 37 percent to 41 percent in the last few years. During that time rates of interest were jumping significantly, so I don't think that is an unusual increase. When the hydraulic decision is made in the utility, I think we know it will result in higher interest costs but lower operating costs and fuel costs if the thermal alternative had been taken. Those fuel costs could be either oil, gas or coal. However, the total overall cost of hydraulic generation is lower than thermal generation in Manitoba. Another advantage of interest, rather than fuel and operating costs, is that in general they are not subject to the same future effect of inflation as operating costs on fuel.

I think we should remember that we are supplying electricity for the buildings of Manitoba and therefore we are providing the capital expenditures that are part of the housing or building capital expenditures. I think you will agree that interest is a very high portion of the cost of housing to most of us who have purchased houses on borrowed capital and we are in the same category.

MR. BATEMAN: Thank you, Mr. McKean. I move on to the next question, Mr. Chairman.

MR. CHAIRMAN: Order please. Mr. Premier.

MR. SCHREYER: Well, Mr. Chairman, that information dealt with one aspect of my question. I was thinking it rather important to ascertain whether the amount of 40 or 41 percent revenue dollars is in any way unusual in relation to what are the comparative proportions involved with other utilities that are principally hydraulic. I'm wondering if either Mr. McKean or Mr. Bateman have some information on that.

MR. BATEMAN: I think we do have some information on that, Mr. Chairman.

MR. CHAIRMAN: Mr. McKean.

MR. McKEAN: I think in general, Mr. Chairman, we are on the high side of interest, probably the

other very significant hydraulic system in Canada is Quebec. Quebec does internally generate more funds and they internally generate it through rates. The amount of internal generation very much depends upon your concern about borrowing and I think Quebec, as a matter of policy, has raised more funds internally. They are about the only utility that is as much hydraulic as we are. I think B.C. has more thermal etc., but in general, I think to answer your question, hydraulic utilities have a much higher percentage of interest compared to a full income than thermal systems. But we are on the high side.

MR. SCHREYER: Mr. Chairman, one further supplementary on that. I'm aware of course that hydraulic systems are by their very nature involving higher amounts of capitalization and therefore higher interest but I would ask those who are involved in utility operations in a daily way, whether it is a valid comparison to look at both interest coverage plus fuel costs in the case of a total utility system and on that basis of comparison, is the combination of Manitoba Hydro's interest plus fuel costs how does that compare with other major utilities east or west of us?

MR. BATEMAN: Well, Mr. Chairman, just in general, on that point, I think that we could indicate that when the Hydro Board was established in 1951 and this is the Twenty-Fifth Annual Report that you're dealing with, Mr. Chairman, the policy of power at cost for Manitobans was one that was laid down by the administration of that day and succeeding administrations have followed that same policy. Now to deviate from it and have a lower interest payment out of our dollar would mean that you would have to, as Mr. McKean said, increase our rates or generate more funds internally and the one way to do that is by increased rates and that has never been a favourable policy for any administration to follow, particularly when the government, backing the bond issues that Manitoba Hydro secure has achieved an improvement in the rating of the utility and the province in the last few years which would indicate that the bond lenders are supportive of the policy of being able to raise the rates to cover the costs that we incur. I think that's a very important point that because Manitoba Hydro Board has the ability to raise the money that it needs to cover the bond issues, it is able to achieve that favourable bond rating. Now, if we had deviated from this, if we had gone to a less capital intensive development system such as Saskatchewan, for example, with a small amount of hydro and a large amount of thermal, yes, the capital cost invested would be less because the cost of thermal plant is marginally less than the cost of hydro plant. But we have to indicate that in that case, that Saskatchewan utility has a high fuel component as opposed to a high interest component. The important question that you must look at is what is the final cost of power to the consumer and in that case of Manitoba, you will find that our power costs to the consumer are significantly less than their power costs to the consumer in Saskatchewan and we will deal at more length — I believe that was one of your questions, Mr. Premier, that we could deal with on the question of power costs.

So if we could move on, Mr. Chairman, to the fourth question since we are on the subject of costs now and we could look at the comparative movement of — I believe I paraphrased your question, Mr. Premier — comparative movement of our electrical rates relative to others and are our rates comparable to the national average. Was that the substance of it? Well, I'll . . .

MR. CHAIRMAN: Mr. Craik.

MR. CRAIK: Mr. Chairman, I hesitate to interrupt Mr. Bateman but on the matter of interest cost is it the intention to come back to matters such as this or is it appropriate to ask further questions concerning the interest costs?

MR. CHAIRMAN: Well, Mr. Craik, the questions have been posed by the Premier. If you wish to ask questions, I will put your name down on the list here and I'm sure that any questions that you have in mind can be directed on the same matter when your turn comes up.

MR. CRAIK: I see, so the issues won't be dealt with according to the issues themselves. You're going to deal with each individual and he can ask different questions. We're going to have a regimented order of that procedure are we?

MR. CHAIRMAN: Well, it depends on the will of the committee. Mr. Premier.

MR. SCHREYER: Mr. Chairman, I think that here it's entirely discretionary. Frankly either way I think is equally productive so long as a person has a chance to get to his or her questions. I would not see much point in the Chair resisting Mr. Craik's request to ask supplementary questions on a specific subject matter, in this case interest costs, fuel costs, and a combination thereof. So I can only respectfully suggest to the Chair that, since it is related subject matter, it be posed now and handled as a line of supplementary questions.

MR. CHAIRMAN: If it is agreeable with the committee to proceed on that basis, I don't intend to regiment any kind of procedure as Mr. Craik would like to suggest. Mr. Craik, you have a question concerning this same matter.

MR. BATEMAN: Mr. Chairman, could I just say in passing on this point that we have come here to Mr. Craik, to answer the committee's questions and I want you to understand that, you know, we're quite happy that you ask questions any time if that's acceptable to the Chair and all we're here for is to make sure that you get all the information you want about Manitoba Hydro.

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MR. CRAIK: Mr. Chairman, the question on the interest costs was . . . I wanted to find out what was the amount of the costs that were still being capitalized, the interest costs being capitalized on all the various projects that are under way or have been completed. I wondered if the Comptroller would have those figures.

MR. BATEMAN: Yes, Mr. Chairman, I'll ask Mr. McKean who is our Assistant General Manager of Finance to try and provide that information. The policy of Manitoba Hydro is to capitalize interest during construction as is the case with, I think, most utilities in North America and, if it's a ten unit plant, when each unit is put on the line, then that unit shares its proportion of the total cost including the capitalized interest of that plant. I think in the estimating, they estimate the capitalized interest to the completion of the job and share it on an equal unit basis as well. Now could you proceed with

MR. CHAIRMAN: Mr. Craik, that, Mr. McKean?

MR. CRAIK: I will ask you specifically, what percentage of the Jenpeg and Lake Winnipeg control structure is now on stream as far as paying interest charges and what percentage is still being capitalized?

MR. McKEAN: At the present time, the total estimate of Lake Winnipeg regulation and control and generation is \$285 million and we have now got transferred to our operating account, all but the estimated generation which is \$160 million. So we have transferred to the operating account the estimated costs of \$120 million which is the channels, the dikes, everything but the generating station.

MR. CRAIK: Yes, Mr. Chairman. So the interest charges are still not showing up in terms of paying for it out of daily operating . . .

MR. McKEAN: Not of the generation.

MR. CRAIK: The interest charges are still being paid here by further borrowing of capital to pay the . . .

MR. McKEAN: Interest during construction has traditionally always been considered part of construction and we transfer it to operating account. I think you will notice in our financial statements we have a note on our financial statements where we indicate what we have transferred and we transfer it on the basis of when it gets transferred into service. The generation has not been transferred into service.

MR. CRAIK: If the Jenpeg plant is operational in the next year, would this come on then onto your operating account?

MR. McKEAN: With the case of generating stations, we transfer them into operating account as we bring the units in. This is what we did at Kettle. The total costs of Kettle were transferred to operating account. As each unit came in we transferred 1/12 of the cost of the station.

MR. CRAIK: What about the Churchill River Diversion?

MR. McKEAN: Churchill River Diversion, we are transferring it to operating account as we achieve the diversion. In this case, we have transferred 1/3 of the cost to operating account because we have achieved 1/3 of the diversion, roughly 10,000 of a potential 30,000. This was done when we started the conversion last fall.

MR. CRAIK: What is your — one-third of what amount?

MR. McKEAN: Thirty thousand is the amount in dollars. The estimate of Churchill Diversion is approximately \$210 million, \$214 million, I'm sorry. We have transferred one-third of that into operating on the basis of the achieved flow, that we have achieved one-third of the flow.

MR. CRAIK: And so if the Churchill River Diversion becomes operational in the next year, the full \$214 million would go on . . .

MR. McKEAN: Our plan is to transfer into operating account as we achieve the flow.

MR. CRAIK: Well, very roughly, will they say on this that there's roughly \$260 million of in-place costs that are still being capitalized but will probably, if all goes well, be on stream in the next year or so?

MR. McKEAN: Yes. The Churchill River — I expect all the costs of the Lake Winnipeg control will come on stream when all the units of generation at Jenpeg come in and all the costs of the Churchill River Diversion will hit our operating account when we achieve the 30,000 which is expected to happen this coming fall. And I might say this is the basis upon which our estimated costs have been based and which was the basis of our rate increases.

MR. CRAIK: If you take a very rough debt servicing cost of ten percent on this, it would appear that this will impose an additional roughly \$26 million of interest charges for your operating account to carry just on those two. If that were included, does this not change significantly your percentage of your operating that is debt? Would it not change the portion . . .

MR. McKEAN: It will increase. I expect the 41 percent to go up.

MR. CRAIK: It will go up significantly.

MR. McKEAN: But I also come back to my original answer. I think in just making the hydraulic alternative we recognize that we are going into a capital intensive alternative rather than the less capital intensive alternative.

MR. CHAIRMAN: Mr. Bateman. Proceed with your . . .

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MR. BATEMAN: Is that all the questions you have on that area, Mr. Craik?

MR. CRAIK: Well, the only other question that might be, Mr. Chairman, is if the current debt carrying costs are 41 percent of your operating revenue, do you have any indication yet what impact it will have bringing these projects onto stream and the other projects that you're now going to write off in the next year or so?

MR. BATEMAN: With the exception of the drought costs that are not factored into our rate making yet, this does not have any significant impact on the rate increases. The rate increase next year will be according to our present estimates, less than the rate increase that we have imposed this year.

MR. CRAIK: But what impact does it have on the percentage of your revenue that goes to paying interest?

MR. BATEMAN: Well, you can see that in the financial statements.

MR. CRAIK: No, I know it's in but I'm asking is it possible to give an estimate of whether this 41 percent or 42 percent is going to increase significantly?

MR. BATEMAN: I would expect this year it will decrease significantly. Then, next year, it will increase significantly. It's a function of the total expenses. We're faced with higher fuel costs this year as a percent of our total operating cost so consequently it will be down, I would expect, from the 41 percent. Now, whether two points is significant, I don't know but I don't anticipate the interest costs out of our revenue dollar going more than — and it depends entirely on how much we're able to put aside as reserves. I wouldn't expect that to go higher than 50 cents on the dollar.

MR. CRAIK: So it could go as high as 50 percent then?

MR. BATEMAN: It could go as high as 50 cents I would think in the future. Not within the next three or four years but beyond that.

MR. CHAIRMAN: Mr. Bateman, proceed with . . . I believe you have another question. Mr. Lyon, on the same point.

MR. LYON: Mr. Chairman, on that same point. I understood Mr. McKean to say that when the costs about which he and Mr. Craik were speaking, the two-thirds on the CRD and the balance of Jenpeg of \$120 million are brought into the operating account, that will take place presumably in the next fiscal year, that is the fiscal year beginning April 1st, 1977. That you expect then a considerable rise of the carrying charges say from 41 up to what approximately? I realize it's just a projection.

MR. McKEAN: Yes. This coming year, for instance, say approximately 43 percent.

MR. LYON: In fiscal 1977-78? Now, Mr. Bateman was just saying that he expected a decrease. That would be in this current fiscal year?

MR. BATEMAN: The year ending this month, yes. I would think there would be a . . .

MR. CHAIRMAN: Order please. Mr. McKean, please.

MR. McKEAN: I think you should understand and I think you will agree, Mr. Bateman, that that percentage is going down because our fuel costs have gone up because of drought. I hesitate to say that's a good comparison.

MR. BATEMAN: No, no. It isn't a good comparison. I'm not saying it is.

MR. McKEAN: We spent extra dollars on something else.

MR. LYON: If the others were on line, then of course the interest charge might go up slightly but that would be more advantageous to the overall system?

MR. McKEAN: Right, very definitely.

MR. CHAIRMAN: Mr. Bateman.

MR. BATEMAN: All right, Mr. Chairman. Getting back to the next question. I think we were talking about rates and if we perhaps continue on with the comparative movement of electric utility rates, we have had Mr. Goodwin our Corporate Planning Officer looking at the relative position we hold with respect to other utilities in Canada over the last ten year period and I would ask Mr. Goodwin now to answer the Premier's question.

MR. CHAIRMAN: Mr. Goodwin.

MR. GOODWIN: Mr. Chairman, the comparative movement of the costs or rates for electric power is best approached I believe by looking at the Statistics Canada figures which are produced each year on a calendar year basis and they are produced for each province and for the nation as a whole. We have some comparative indexes to compare electricity with other matters but if I could use this overhead projector a moment, I could show you what the Statistics Canada figures are to compare costs in Manitoba with Canada as a whole.

It is not of course easy for you at the far end of the table to see these figures perhaps but on the customer classifications, the top grouping is termed Ultimate Customers which is Statistics Canada's definition of all customers within the province. The second two lines, then, are breakdowns, first into domestic and farm and then into the general service and power, or the basic category of industry and commerce. Here we've given you a picture of the Manitoba situation and the Canada situation for the calendar years 1965 and 1975. 1975 figures are the most recent available; they've just been released by Statistics Canada.

The costs, as you can see, across the nation have risen. The specific costs are in the middle there; on the right hand column is the increase here from 1965 to 1975. So all customers in Manitoba as in

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Canada have faced an increase of something between 37 and 39 percent in that period. The figures for Manitoba in 1965 show that our costs were below the national average then and today they are still below the national average.

The same remark applies for the domestic and farm where in 1965 rates in Manitoba were significantly below the national average; today they are still over two mills below the national average but they are somewhat closer to it and the increase has been somewhat higher and that is a reflection of our overall costs of supplying domestic and farm customers.

The cost of supply to general service and power customers in 1965 here was fairly similar between Manitoba and Canada as a whole and the increases have been somewhat smaller in Manitoba than in Canada and our rates today are approximately one mill below the Canadian average rates.

A comparison perhaps with the average for Canada does not tell you very much about where we stand relative to everybody else and I have these same three categories drawn up.

MR. LYON: Mr. Goodwin, a question on that first chart just before he leaves it. I think it's self-explanatory. You used the expression "the costs today" you mean the costs in 1975?

MR. GOODWIN: The 1975 costs, yes.

MR. LYON: Now, are those figures as at March 31st, 1975?

MR. GOODWIN: They're for the calendar year 1975.

MR. LYON: Calendar, 1975 so as at December 30th, 1975.

MR. GOODWIN: No, they're actually an average for the year.

MR. LYON: Of the year.

MR. GOODWIN: Yes.

MR. LYON: So are we looking for updated figures which I realize you don't have from Stats Canada, we would be looking at what, one or two increases that Manitoba's had since this time? That is, presuming that the increase that was announced in January is . . .

MR. GOODWIN: Basically, one increase really. Our fiscal year is somewhat later than the calendar year. There's a displacement of three months from the calendar year. Various utilities use different years and, of course, some have increases in various times during the year.

MR. LYON: Our last increase, unless I'm mistaken, was April 1st, 1976 and we're facing another one March 17, 1977 or thereabouts?

MR. GOODWIN: That's right.

MR. LYON: Thank you. So the figures essentially do not include the last year's increase or the one about to hit us.

MR. GOODWIN: The 1976 rate increase is not. Right.

MR. SCHREYER: I think that Manitoba Hydro faces somewhat of a dilemma here because this data is admittedly in the order of 15 months out of date. On the other hand, it is complete and authoritative insofar as Statistics Canada is concerned. It is true to say that there are rate changes for Manitoba that are not reflected here; similarly, it would be true to say that at least four utilities to my personal knowledge have had rate increases in the order of 30 plus 22 — 52 percent — the sister province to the east which would not be reflected here either so that the whole dynamics really would have to be updated for the whole country.

MR. GOODWIN: Yes, the rate increase situation across the country makes it not possible to duplicate Stats. Can. figures ahead of them gathering those figures. We are doing a bit of a survey at present to try and rationalize the effect that the various different provinces face increases at different times. I think in two weeks time we could produce some more information on how Manitoba stands.

MR. CHAIRMAN: Thank you, Mr. Goodwin. You have indicated you have some other charts that you would like to show.

MR. GOODWIN: I would like to show for the two years that are available, a decade apart, 1965 at the top, 1975 at the bottom. Along the base here is the cost average energy price in mills per kilowatt hour across the nation by province. Quebec has had the lowest cost in 1965 and 1975; Ontario in 1965 was lower cost than Manitoba but today is not. Manitoba is in second position and you can see our costs related to the national average compared with provinces east and west of us and the unfortunate Maritimes, of course, it's quite obvious.

Some explanation of the Quebec situation I think can be answered. One major reason is the Churchill Falls contract which Quebec has with Labrador and the price of that power is significantly cheaper than Quebec could be producing today and I think if they did not have that average, their costs would be identical with ours.

While that is the total the ultimate customers, I do have two sheets just to illustrate . . .

MR. SCHREYER: I wonder if I could ask Mr. Goodwin a question that is more out of undeniable curiosity. I'm just hoping that Mr. Goodwin might be able to at least venture an opinion. You made passing reference to the Churchill Falls output in the rather peculiar if not unprecedented agreement that runs to the year 2033 as between Newfoundland and Quebec. If in fact that agreement did not exist and it were more a matter of current value pricing, would it be fair to say that Quebec and Newfoundland could probably on that chart be transposed?

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MR. GOODWIN: Take a wild guess, yes?

MR. CHAIRMAN: Mr. Dillen, you have a question on this?

MR. GOODWIN: Churchill Falls represents something in the order of 30 percent of the power requirements of Quebec so its costing is certainly a very significant factor in the power

MR. BATEMAN: I think for the benefit of the committee members, Mr. Chairman, it would be advisable to indicate how low that cost is from Churchill Falls Power. The first 30 years of the 50 year contract is 3 point some odd mills per kilowatt hour and the re-negotiated price at the end of 30 years is 2.3 mills a kilowatt hour so it's a very unusual and substantial benefit to the Province of Quebec having negotiated the purchase of that power when the Brinko Company who is developing it was close to folding up. Quebec really made it possible for that project to go ahead and are now reaping the benefit. Carry on, Mr. Goodwin.

MR. CHAIRMAN: Mr. Goodwin. You have another chart.

MR. GOODWIN: General Service and industrial customers in 1965, as I said earlier, we were slightly above the national average cost. Today we rank second to Quebec and somewhat below the national average. To complete the picture, briefly the average farm and household costs while in 1965 we had the lowest costs, our increases have been somewhat similar to a little less than Quebec and we are now running slightly higher costs than Quebec. A matter of one mill.

MR. CHAIRMAN: Thank you, Mr. Goodwin.

MR. BATEMAN: Well, Mr. Chairman, to continue with the fourth question I believe that was raised by the Premier which indicated that there is a contention that Manitoba Hydro has spent \$600 million or \$245 million — \$232 million — to achieve system and liability and so on. Well, I've heard or read of that allegation too that Manitoba Hydro has wasted money by pursuing its present course of development on the Nelson and Churchill Rivers. As near as I can indicate, the logic that goes into that sort of an allegation is that we developed higher cost facilities than could have been developed by some other route, that is, by developing our Lake Winnipeg regulation and generation facilities at the outlet of Lake Winnipeg and by developing a low level diversion of the Churchill River and by developing Kettle Rapids and Long Spruce generating stations on the Nelson River, that these are more expensive than the alternative, but the fact is that this last winter we were very glad we had the Lake Winnipeg regulation project.

Those who are in disagreement with this course of development have stated that it would be more economic to have developed a medium level diversion of the Churchill River in conjunction with the Kettle generating station on the Nelson River and Wuskwatim generating station on the Burntwood River. Now this course of action might have been reasonable if Manitoba had been able to develop the Wuskwatim generating station by 1978 and if Manitoba Hydro's commitments to provide power to Manitobans did not go beyond 1978. However, that isn't the situation.

We have a commitment to provide for the continuing needs of this province. It should be noted that Manitoba Hydro's present development plan for which it has borrowed capital which will be reflected in our rates will provide for generating facilities which will meet Manitoba's energy requirements not until 1978 or 1980 but until 1983. Now, conversely, the alleged 600 million saving is based on generating facilities which would only have carried the Manitoba load until 1980, and then there would have been other expenditures. Now it is my understanding that this alleged saving of 600 million would be reduced when the additional plants were installed to meet the load demands, in Manitoba, beyond 1980.

Now one of the big differences between the plan that we are embarked upon and the alleged plan that was more expensive is that at least we know what our costs are. We have these things built now. However, the things that were proposed to have been built assumed a cost less than, perhaps, may have occur— our experience has been that we are facing extreme inflationary factors. But, even assuming that those costs had been compensated for the inflationary prospects, the projects that have been alleged would cost us less money have not been designed. There has been no fundamental assessment of the environmental damage. We don't know all of the engineering detailed information although we have spent many, many dollars in field exploration work and we will have to spend considerably more before the final design of those Burntwood River sites is achieved. I think to say that there is a saving I must concede that the proponents of this course of action have the big advantage; that their things or their scheme hasn't yet been built and therefore they don't have to defend the overrun on costs.

Now we thought, of course, that some of our facilities that we were putting in place would be considerably less expensive than they turned out to be but we did not count, four years ago, on the tremendous change in the price structure that we've experienced.

Well, it should be recognized, I think, that the suggested development plan could not have been realized. And that is a very important difference between the alleged plan and the one that we have embarked on. The development of Wuskwatim generating station by 1978 would not have been possible. If it had been possible, Manitoba Hydro would have undertaken the construction of that station for 1978. In this regard it should be pointed out that Manitoba Hydro has had the Burntwood River Generating Stations under study and under review at considerable cost, since 1965. Most of the

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patterns of development studied by the Manitoba Hydro task force, which is reported on by professional engineers, postulated development of the Burntwood River Generating Stations in advance of the Long Spruce Station. However, Manitoba Hydro was not able to pursue this course of development as we could not be sure of the magnitude of the development which would be allowed in the Burntwood River until the disputes surrounding the diversion of the Churchill River were settled. As a result, Manitoba Hydro advanced the development of the larger Long Spruce Generating Station on the Nelson River.

Now, we had to guarantee the integrity of power supply and in the period we made that commitment the load growth was significant. However, we recognized because that station, that Long Spruce Station, resulted in the installation of capacity that would be excess of Manitoba's requirements between the years 1977, when it comes into service, and 1980, we arranged to export this excess capacity to Ontario Hydro and, in doing that, Manitoba Hydro will realize some \$60 million in additional revenue from this export over that four year period, a very substantial improvement in our financial operating picture.

Now the next issue which has been raised, of course, is between whether it should have been a medium level diversion or a low level diversion. That is, with the South Indian Lake sitting at elevation 854 ½, or as we have built it, at 847. Economic analysis has shown that the total project costs, inclusive of social, economic and environmental resource values varies relatively little between these two elevations. Now given these facts, and in light of the public concern and government objections, and the uncertainty about actual mitigation costs, Manitoba Hydro undertook the development of the Churchill River Diversion with South Indian Lake at elevation 847.

Further item of contention is the development of regulation facilities at the outlet of Lake Winnipeg. This is reputed to be part of the \$600 million, as I understand the allegation. Now I don't think any responsible engineering report we have, with the exception of perhaps one, has ever stated that regulation is not required. It was a basic condition of the agreement between Canada and Manitoba in 1966, and as you saw from the information I presented earlier, the Lake Winnipeg regulation did prove its worth this winter. I think really if we accept the fact that Lake Winnipeg regulation was part of the original programming board studies that were pursued throughout the sixties, with all of the engineering back-up that went into those, with the additional engineering that went into these projects with the Crippen Report of 1970, and the Underwood Report of 1970, and the Task Force Report of 1970, that it is not a case of whether they should be built, but whether they should be built one before the other or one after the other. As the load on the system in those earlier studies indicated, in order to be able to provide for the firm, reliable energy content that this province needed we had to have both those diversions and the Lake Winnipeg control when the load on this system came close to the nine billion kilowatt hours a year. Now this year the load on our system is almost twelve billion kilowatt hours. There is no way you can supply that type of load, in a firm sense, with the prospect of the minimum flow occurring without having both the Lake Winnipeg Regulation Project in place to help you get the water out in the wintertime when the energy requirements are greatest and the diversion of the Churchill River.

Now, the studies that were undertaken by Manitoba Hydro's Task Force in 1970 indicated that it would be just as economic to develop these control facilities at the outlet of Lake Winnipeg, prior to construction of the Churchill River Diversion, as would the converse case be. In view of the uncertainty that surrounded the diversion of the Churchill River, and we did have a lot of uncertainty, it was decided to proceed with the regulation of Lake Winnipeg to be followed by the Churchill River Diversion. Hindsight now indicates this step was indeed a correct procedure to follow. And as I have said several times, and I repeat it, we would have had great difficulty in meeting this winter's energy requirements if we had not been able to regulate the outflows of Lake Winnipeg. In fact, our operating people tell me that during the few weeks of maximum energy demand, during the winter period, that with all of the available lines into the province of Manitoba loaded to their capability, if we had not had the additional water available out of Lake Winnipeg we would not have been able to meet the firm energy requirements of this province.

The last item of contention surrounds the development of the Jenpeg Generating Station. When this station was initially proposed it was estimated that it would cost some \$58 million and at that price it was competitive with the Long Spruce Generating Station. Accordingly, the board of Manitoba Hydro decided to proceed with the construction of Jenpeg. Even when that estimate was refined and the initial decision made in 1973, in August, and the refinement of the capital estimate, and so on, and a more detailed appraisal of what the indirect cost of the camp and air-strip and those sorts of things would be at that site, the first official budget estimate for the Jenpeg Station, as I explained to you at some length in one of our previous meetings I believe in the year 1973, was set at \$93 million. But being that as it may, the decision was made that it was economic and a good alternative to Long Spruce at \$58 million and is still that way, although the cost of Long Spruce power will be somewhat less. However, the board decided to proceed with the construction of Jenpeg. And, as you know, the figure quoted this morning has been the estimated cost of the station, when it's

finally completed, with the capitalized interest during construction, which of course is going up because of this delay, it will be in the order of \$159 million.

Now, although that station has increased in cost, it remains competitive with other energy sources from future Nelson River Plants. For example, our Limestone Generating Station on the Nelson River which there's no question about being an economic source, as our next site to develop, instead of developing thermal or nuclear. The Limestone site is an economic site, including the cost of transmission, and the Jenpeg power will come in at a price less than that station. So as such it is still a viable undertaking today.

In summary I can say that the board of Manitoba Hydro is satisfied that the present course of development, which the utility is following, is the correct course of development. Accordingly, Manitoba Hydro intends to continue its present course of hydro development on the Nelson River, and on the Burntwood River. Manitoba Hydro has not wasted \$600 million but rather has invested \$600 million in regulation, diversion and hydro facilities to ensure that the cost of power to Manitobans will continue to be among the lowest in all of Canada not only to 1978 but to 1980 and to 1990. I would wager that when we come here, if we do, five years from now you'll see Manitoba Hydro will be still the lowest, if not the lowest one of the lowest cost power sources in Canada. I think, Mr. Chairman, that covers the Premier's fourth question.

MR. SCHREYER: Mr. Chairman, I had a question which is, I think, vitally important but it's rather a different subject matter. It has to do with the whole strategy area, policy area if you like, of marketing and conservation — the conservation ethic. Is Manitoba Hydro, could the chairman indicate to the committee, pursuing a strategy in that regard, that is somewhat different in light of changing time and circumstance that the present day industrial world finds itself.

MR. BATEMAN: Well I think, Mr. Chairman, the Premier is alluding to the relative position of hydraulic energy in the realm of the energy world, as we know it today. Is that . . .

MR. SCHREYER: That's part of it. I was thinking more specifically as to whether Manitoba Hydro is doing what it can, in the limits of common sense, to encourage, through its marketing force and its sales force, a greater awareness of insulation standards and a better awareness of patterns of consumption. Bluntly what I'm getting at is, are you doing anything that is directly intended to make customers more fully aware of how you attempt to manage load?

MR. BATEMAN: Yes, we are doing a great deal of that, Mr. Premier, and as a matter of fact, we have just announced some reorganization within our executive group. We now have a division of energy utilization and this will direct its attention to these sorts of things which have been covered in the past through our marketing forces, and so on. If you go into any hydro regional office or district office you will find a display in the front lobby, or in the vestibule, or beside the counter, or even on the counter, depending on how large the facilities are, which indicates the advantage of adequate insulation, which also indicates the advantages of conservation of energy. We also have a group of people who we have indicated are prepared to go to any industry, any community club, any commercial establishment, and, if necessary, even to any house, to advise the people on the proper utilization of our product. We have had great success in advising some of the various recreation facilities in the country on proper load management. What we are trying to impress upon people is the importance of their consumption of our product being such that it does not aggravate the installation of new capacity that we have to make. If we can get these people educated to conserving our product over peak, then it does defer the time when we have to invest in new plants to carry that peak and consequently it will inure to their benefits and to our benefits, in that their costs will be less because we have to invest less money to provide those new facilities. I think you'll find that this is the sort of attention that not only are we giving to our supply in Manitoba, but this is the sort of attention that a great number of people in the energy business are commenting on today. We also distribute a book on 100 Ways of Saving Energy In the Home and I think that would be a good volume to peruse. I also would like to extend that information to you, Mr. Premier, somewhat by asking Mr. Arnason, who is the General Manager of Corporate Operations who is really speaking today for the Resource people because our General Manager of Corporate Resources is away today, but Mr. Arnason could outline to you the policy that we have in this area, if that is your wish.

MR. SCHREYER: Well, Mr. Chairman, I would like to, before Mr. Arnason deals with that, perhaps try and be a little more specific still. I know that some honourable members of the committee and, for all I know, on both sides of the House, are quite curious. Perhaps I could use a stronger term, about demand metering and I'd like Mr. Arnason or yourself, Mr. Chairman, to indicate whether demand metering is something entirely new, entirely old or whether it has been used for a long time but in limited circumstances, is now being widened in its application and whether demand metering has a justification relating to encouragement of the conservation ethic. That's really the specific pinpoint of my question.

MR. BATEMAN: Well, Mr. Premier, perhaps I could start that one off. Demand metering isn't new. We have had demand metering as long as I can remember being in the business. In fact, that's how we charged the power loads that were connected to our system when I first joined the business. Any country grain elevator in the province you'll find has its demand metering and if you want to know

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what it looks like, there's a big picture of one right here. This is a demand meter, there's nothing magic about it. This meter probably is, one like it you'd expect to find in service more than 30 years old and what happens is, that as the user uses the power not only does the disc go round and register on the dials the kilowatt hours he's using, but it registers the rate at which he's using them. So this red needle comes up and takes the black needle up and if he establishes a demand up there, then this goes down to wherever the load is after he's established that demand and that's the reading that he established for that month.

Now at the end of the month the meter reader comes and reads that and reads the dials and finds out how much energy he used and the maximum rate at which he used it. That's what we have to provide new generation plants for. So the seal is broken, the meter reader resets the dial and then it comes back up to wherever the load is at that time and he reseals the meter and so on to the next month. Now that is not new, that's as old as I am and the only thing that's new is that we are applying this now to lower levels of load because in 1969, when we were before the Public Utility Board on our rates, the board in its report in 1970 recommended that Manitoba Hydro apply demand metering to loads of lower level than we were up to that time doing doing. We have undertaken now to provide demand metering on any load that's 55kVA and above.

Now this does encourage good management. It encourages you to, when you're running an ice-plant in a curling rink, for example, to make damn sure you haven't got the ice plant on when you're cooking the evening meal, like if you're having an evening meal or all the ranges are on, turn the ranges off or turn the ice plant off, but don't have them both on together. This is what could be referred to as good load management and there are devices that can be bought that will tell the operator of such a facility, when and how to control the load within his plant to save him money. There are actually many cases where the installation of demand metering has resulted in a lower bill for the customer.

There are lots of cases however where the demand metering, because it is completely misunderstood, even though the bill is lower, may be thought to be higher because they've got demand metering. Something new. They're frightened of it. There's nothing new about it, as I say, it's older than I am.

MR. CRAIK: Mr. Chairman, I wonder on this . . .

MR. CHAIRMAN: Mr. Craik.

MR. CRAIK: . . . point if we could ask a question here. Mr. Bateman has indicated that it's just a case of applying it to the lower level of, I presume, annual consumption?

MR. BATEMAN: Yes.

MR. CRAIK: But in a particular case now where you're applying this to apartment buildings that haven't been on it as a result of lowering it, the indications here are that apartment structure if it is on all electric heat, its entire electrical accommodation, in order to get this degree of economy that you suggest is possible by programming your use, it means that you've got to tell the people in the apartment building that, unless they do certain things at certain times, that they are going to get penalized with a higher consumption or a higher cost.

Now the other part is, if this applies on an annual basis, which I presume it does, this means that your consumption on an entire electric heated apartment building whose peak consumption would be sometime in January, then has a bearing on what you're going to pay in July.

MR. BATEMAN: I'll have Mr. Cartwright explain the rates to you but there are two points I'd like to make on your observations, Mr. Craik. First, that in the interests of the conservation ethic, we would not recommend any apartment block be built without individual metering in the individual suites so that each person would be responsible for his own energy costs. Now, if there was an apartment block where you had a single meter, and there are lots of these, there are many ways in which the load can be controlled.

For instance, there's a big water heating load in that apartment block if it's all electric. There's a big parking lot plug-in load that can be regulated. The point is that you know that these things occur. People's habits are quite constant, that they get home at night and they start cooking supper, which is on top of the other load and if the apartment block manager spends a little money in controlling the diversity of this load, he can cut the winter peak down considerably on that apartment block, to his ultimate advantage. He will save money on a year round basis. Now he pays two components. It's like you buying a car. You have to pay the cost of the car, you pay the down payment on the car every month whether you're in it or not, until you pay for it. It's the same with us. We want people to pay for the generation equipment that we put in place. When you use the car, you then go to the gas station and get the gas put in the gas tank and that's the energy you're using to drive the car around. Now you can find that if you conserve on the use of your product so that you don't, in our case, put it all on at the same time and use all that energy at the same time as you're driving the car at maximum speed, so to speak, then you will get the advantage over the year.

MR. CRAIK: Mr. Bateman. You're argument perhaps is not to be questioned if it's the case of an individual; one person, two people, a very small organization that has control over the use, but if you take the case of an apartment building that's on one meter, which are the older buildings or the ones

that have and perhaps been built up until recently, you now have a policy that prevents this. The indications are of people that are on total electric heat on one meter that were perhaps built in the last eight years, ten years, that the impact of this change in metering is running as high as about \$8.00 per month per suite in rent. Well, the proposals are going before the rent review board, based on their calculations of what their energy costs are and this is a very significant impact. Now doesn't it have to be recognized that, perhaps you can clarify this, the bills in the summer period are going to be based on what that building did in January.

MR. BATEMAN: Two components. One, the demand component which was established in January, he pays, and correct me if I'm wrong Mr. Cartwright, 80 percent of that bill throughout the year and the other is the energy component. Now, you can see the advantage then of limiting the peak demand and you could limit the peak demand on one of these apartment blocks by having the switch of the water heating load off over that time if you have sufficient storage of hot water during that period, there's no problem if you switch the car parking lot off. You know, everybody goes in plugs their car in, those represent a demand that could be levelized. There are ways of improving that.

MR. CRAIK: Right. And I agree with you that they're not new. I don't know if you still have the dumping devices on the special rate water heaters that existed many years ago which I believe were phased out by hydro over a period of time where you got a special rate on your water meter because you could dump them centrally at certain times of the day. All you are suggesting is that you're getting back to that but the individual is going to have to do it himself.

MR. BATEMAN: No, we still do some of that ourselves. We have a lot of water heaters under control in some parts of the system. Winnipeg Hydro has a lot of water heater load under control.

MR. CRAIK: But are you in the new buildings now that where you're suggesting you go on individual meters are you going to require dumping devices on the hot water heat and on parking lots and so on, so you can control it?

MR. BATEMAN: We wouldn't require that. No. That would be to the customer's advantage. The apartment block owner could still demand. You limit the see if all the suites were individually metered in that apartment block, then all you've got left is some water heater, you might even have their water heating. You could make a big saving in apartment block construction by running one water line instead of two water lines throughout the whole thing and put the water heater in each suite. That's being done quite effectively today so that the tenant pays for his own energy consumption. With electricity that's very easy to do.

Now, the only thing that would be left then in the common category would be apartment hall lights, elevator and the apartment lot plugs for the cars. Now those would likely be on, not the power demand rate because they likely wouldn't have a high enough demand, they wouldn't be over the 55kVA connected load and consequently would be in the commercial general service rate. Is that correct? Yes, it has to be over 55kVA.

MR. CRAIK: But it still doesn't get around the problem of the existing buildings.

MR. BATEMAN: No. I appreciate that. But there are ways of getting some help in existing buildings. Mr. Cartwright, would you like to say anything on the experience with some of the existing buildings? Are they indeed all going up in price or are some of them managing their load so that the price can go down?

MR. CHAIRMAN: Mr. Cartwright.

MR. CARTWRIGHT: Thank you. Mr. Chairman, our experience has been that demand metering, when applied to existing loads, will either increase, decrease or make the bills the same, depending on the load factor of the customer, his utilization. With good utilization, the chances are his unit cost will be lower and his bill will be lower. We have found that in many apartment blocks they have actually experienced a decrease in what their bill would have been on the former general service rate. There are cases, of course, where the bill has gone up. This applies to all the loads on our system that have demand metering or being transferred to demand metering, regardless of end use. End use is a form of rate making that has been discontinued in Manitoba Hydro. The demand form of billing gives the customer the opportunity to regulate his costs through load management. In this way both the customer and the utility can benefit.

MR. CHAIRMAN: Mr. Lyon.

MR. LYON: While we're on this same topic, demand metering, could we get an estimate on a fiscal year basis of what the implication will be in product of increased revenues for Manitoba Hydro of demand metering on community halls, curling clubs, skating rinks and other public institutions of that nature, including elderly persons housing if it's gone into that area? What do you expect the increased product of your revenues will be from that one item alone?

MR. CARTWRIGHT: We have not done that analysis, Mr. Lyon.

MR. LYON: I wonder, would it be possible to give us some indication of — you must have had some projections before you implemented the procedure, some projections as to what additional revenue this would bring you?

MR. CARTWRIGHT: Not on an individual customer basis.

MR. LYON: No, but I mean collectively. You're imposing demand metering on lower usage

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institutions or community facilities or whatever. There must have been some revenue projection as to what this would do for you.

MR. CARTWRIGHT: Not on a particular class of that kind.

MR. LYON: Could we find those figures?

MR. CARTWRIGHT: I suppose with time we might be able to do that and with the permission of the customer.

MR. LYON: I fail to see how the permission of the customer is required. I'm not asking for it on an individual basis, I'm asking for it collectively. You must have had a projection of revenues to indicate what demand loading would do for your revenue picture before you increased rates as an example. This is an internal arrangement that you've entered into without the consent of the customer — he's merely the victim to put it in tough words — of an internal rate change from Manitoba Hydro. What would those projected revenues be say to the end of the current fiscal year and maybe projected for 1977? I give you as one example in my own constituency, a new facility that opened up in the town of Wawanesa where there are 700 people. There's a curling rink and a skating rink and they're estimating that their hydro bill alone this year is going to be \$15,000.00 There's no comparison because it opened in 1975 and they've been subject to these rates *abinitio* right from the beginning. That's rather an horrendous impact. That's presumed.

MR. CARTWRIGHT: We have looked at some individual customers to find out the impact and one of the things that we have found out over the last that couple of years, doesn't seem to come to light is that there has been a very large increase in consumption, and the fact that the bill is higher can reflect three things, if you like.

First of all we know a change of rates will increase the bill and certainly an increase in consumption will increase the bill and thirdly a transfer to demand metering may or may not increase the bill. We have looked at some curling clubs and some skating rinks and found that these conditions, on an annual basis, do occur. Some go up and some go down.

MR. CHAIRMAN: Mr. Lyon.

MR. LYON: Are you suggesting that there are cases where the demand metering would not increase the bill?

MR. CARTWRIGHT: Yes, I am.

MR. LYON: I see. It's the rate increase and the consumption increase that has increased the bill rather than demand metering.

MR. CARTWRIGHT: Yes, we have looked at the allegations in that regard and we have found that this is the case. Certainly over the last two or three years there has been a dramatic increase in consumption by these particular clubs, and there is no denying that the rate increases over the past couple of years, in addition to that, have increased the bills.

MR. LYON: That being the case you wouldn't be prepared to abandon the demand metering if it's not increasing the bills.

MR. CARTWRIGHT: I wouldn't think I would recommend abandoning demand metering in any case because it is the only rate form that is universally accepted by utilities in the world as a fair means of assessing cost to individual customers who use the product in the same manner and same fashion.

MR. LYON: It would be helpful, Mr. Chairman, if we could have some indication of projected revenue increases from demand metering. I don't want to ask for the impossible but I'm sure that those projections have to be made before you can impose the system on the consumers.

MR. BATEMAN: I think that's a very difficult question to provide information for, Mr. Lyon, because on the recommendation from the Public Utility Board we have been adopting this form of metering as being equitable in the overall effort to keep the costs to the rest of our consumers at a reasonable level.

If you allow one class of customer who has a load of significant proportions to indiscriminately apply that to our system for short periods of time it affects the cost to all of us, of providing that service.

Now we didn't go into the demand metering with the object of increasing our revenue. We went into the demand metering with the object of reducing our costs and making it the obligation of the individual. If you were to work out, as Mr. Cartwright has indicated, some of these clubs have actually gone down in bill because they are not imposing the type of service on the system that reflects in a short peak demand and then relatively small energy usage over the year. They are relatively big energy users and it's just a matter of controlling how they use it. If they do put their thought and a little effort into controlling their load they can benefit themselves and the rest of the system can benefit. So we didn't go into this with the idea of projecting a revenue increase by going to demand metering, we went into it to try and educate people on the importance of the conservation ethic, and that's really what it's all about.

MR. LYON: It was a whip rather than a carrot though.

MR. BATEMAN: Well, I'm afraid that in this case you are probably right, it was a bit of a whip, but

that's the only way that we can equitably bill power users on the system.

MR. CHAIRMAN: Mr. Premier.

MR. SCHREYER: Mr. Chairman, flowing directly pursuant to the last series of questions from Mr. Lyon and Mr. Craik, I'd like to pose some further questions on demand metering.

If I may be allowed, I say in a half bantering way — but only half bantering — I would be tempted to second Mr. Lyon's motion that we abolish demand metering. I say half bantering.

My question really is this, how even if justified in concept in that it does work as a reinforcement of conservation awareness, it's possible that the specific formula may be out by some degree — and I'm not suggesting it would be major degree but perhaps by some degree — and I'm thinking specifically of — and I really put it as a question — those facilities which are obviously and highly seasonal in nature such as skating rinks and curling rinks.

If I understand the formula correctly, it's 80 percent of a four-month average, and those four months are, I presume, the winter months.

MR. CARTWRIGHT: November, December, January, February.

MR. SCHREYER: Right. Then I can foresee a circumstance in which a skating arena or a curling rink may be used for some other purpose, usually in a larger town or city, for summer recreational use, so there is use. But in the smaller rural towns and villages a skating rink oftentimes is used for no other purpose whatsoever, and therefore the formula of 80 percent of that continuing right through the summer, leaves me querulous. Is it a case of weighing against that the cost of hook-up and of connection and disconnection each season?

Now I don't know if that was a prevalent practice in rural Manitoba. The towns I'm familiar with didn't bother to disconnect, but I understand some did during the summer months.

Now it's been contended and I genuinely ask the question because I'm not sure — and I can't argue the point — that the concept can stand. It's justifiable for major reasons particularly if you look into the future, but that it works relatively equitably in larger communities and perhaps not so equitably in smaller ones because they don't use those facilities at all in the off season.

That's one question and the second is still related. It's to ask whether Manitoba Hydro has made a systematic study of its own or if it has perused the study I understand was made either by the Ontario Hydro or the National Research Council on studying two apartment blocks side by side, or at least in some proximity one to the other — and this was what Mr. Craik was getting at — and it was found in the systematic study that the apartment block that was centrally metered and the one that was individually suite metered that there was a differential in the order of as I recall, 28 or 30 percent in energy consumption in that block which was centrally metered.

Has hydro made a study of those kinds of contentions and has it led to any kind of formulation of a policy for consideration by the executive committee or the board?

MR. CHAIRMAN: Mr. Bateman.

MR. BATEMAN: Well, Mr. Chairman, we have not made a detailed study to the extent that Ontario Hydro has. But the results of that study that Ontario Hydro made I'm sure would be available to us and consequently it wouldn't be worthwhile to repeat at expense to our system something that has already been done.

But I think the general feeling is that that is true, there is a decided tendency on the part of a multi-suite block which is individually metered for the tenants to be somewhat wasteful of the heat in that they leave the windows open more than they would or than they have been found to do so in apartments that are individually metered where they pay all the costs. Do you want to add anything to that, Mr. Cartwright?

MR. CARTWRIGHT: No, I'd just like to confirm that when the user has to pay for the facilities the apartment block owners have found that generally speaking the use of that facility is better managed. This is one of the problems with master-metered apartment blocks, that the owners do not have control over usage in the individual suites. They do have some control over the common facilities.

MR. CHAIRMAN: Mr. Premier.

MR. SCHREYER: Could I ask Mr. Cartwright to comment on the point that has been suggested — and I think perhaps casually suggested, I don't think it's been seriously costed out — as to whether in fact smaller community winter recreation facilities that are on demand metering, by definition, in the summer months really are not used for other purposes, therefore demand metering is a less favourable course of action than disconnecting and connecting again.

MR. CARTWRIGHT: Mr. Chairman, some of the spot checks that we have made indicate that in some cases the bills actually go down, and as I said in some cases the bills actually go up. We feel that there has been little or no attempt at any load management in these particular installations by these customers, and with some encouragement from us and their electrical contractor we feel that some improvement can be made.

It should be appreciated that of some of the spot checks we have made that their bills, during the winter months, are less on demand metering than what they are on general service. The problem, of course, comes in with the winter ratchet that we have — the 80 percent ratchet.

Most utilities have ratchets in their clauses, a ratchet being the 80 percent, known as a ratchet in

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the rate making term. Some utilities have 100 percent of the demand established in any of the previous eleven months. And it varies from that extreme down to around 75 percent. We have one that's 80 percent.

The intent, of course, is to recover the fixed costs over the twelve months, fixed costs averaged over the twelve months and then billed on a monthly basis. If a customer only pays those costs for one or fewer than twelve months of the year we don't recover the full annual fixed cost from that particular customer. And if a utility doesn't do that it means they have to get these costs from other customers to recover the same dollar.

MR. SCHREYER: Mr. Chairman, I don't mean to argue the concept, but rather focussing in specifically with respect to small community winter recreation facilities which are not used at all in the summer, is Mr. Cartwright indicating that even in those cases it is theoretically — well more than theoretically — that it is indeed conceivable that demand metering need not necessarily result in and of itself in an increase if they really watch the load management.

MR. CARTWRIGHT: That is correct.

MR. SCHREYER: Well, I'm surprised, but I'm not in a position to argue the point. Could I just ask one final supplementary on this matter, Mr. Chairman? Does demand metering — is it likely to have a beneficial impact on those recreation facilities where, for example, with the installation of artificial ice-making equipment, and the installation of spectator area heating systems where the practice is of keeping the ambient temperature sort of toasty warm and then the spectators come in and the temperature rises by a degree or two, and the ice machines start cutting in, that kind of working at cross purposes, is demand metering specifically intended or tailored to coping with that kind of problem?

MR. CARTWRIGHT: Is this control of demand metering?

MR. SCHREYER: Yes.

MR. CARTWRIGHT: There's equipment on the market that can identify a given point in the demand of a particular customer whereby there is a warning device sounded or where there's an automatic dumping device activated; whereby these two loads won't come on at the same time. In other words, like a thermostat — set it like a thermostat — so that you can actually control your demand and dump specific loads depending on priorities.

MR. CHAIRMAN: Mr. Johannson.

MR. JOHANNSON: Mr. Chairman, my questions are not related to this specific issue.

MR. CHAIRMAN: I'm trying to proceed on the basis of the people who have indicated their wish to ask questions. Mr. Dillen, do you have any questions?

MR. JOHANNSON: I have questions, but not on this specific matter.

MR. CHAIRMAN: All right, then I'll leave you on the list. Mr. Dillen.

MR. DILLEN: It's not on this matter either.

MR. CHAIRMAN: Mr. Henderson.

MR. HENDERSON: Yes. I'd like to ask the question, we have just a curling rink only with artificial ice — and I've been following what you've been saying very closely where you're talking about a thermostat which would cut some things out — but I was just wondering when you plan a bonspiel you don't know whether it is going to be a warm spell or a cold spell, and if you're having a banquet that night when people are coming in, you can't cut off your heat, you can't cut off your kitchen facilities and your ice plant should stay just wonder working. Now I what sort of a thing would cut back in a moment during a peak like that when people are coming and going, what could you cut out so as to keep that demand meter from going away up? What could you drop? I'm not fooling.

MR. CHAIRMAN: Mr. Bateman.

MR. BATEMAN: With all due respect, Mr. Chairman, I think the obvious thing to do in that case, if you know you're going to have a group of people in that building beforehand, turn the thermostat down before they get there about five degrees.

The people exhale a fair amount of heat, you know, and sometimes hot air, and they generally raise the level of the room, and you can take advantage of that.

MR. HENDERSON: Well then you're turning it down at a time when you aren't up to your demand. Actually when you have a bonspiel going on — which is going on maybe 14 or 16 hours a day on certain occasions — they're coming and going all the time. At supertime when the local group might be serving a banquet there's an awful lot of cooking being done. You can't cut off the hot water they're needing for the cooking; you can't cut off the ice plant because they're all curling; you can't cut off the heat. So what are you going to do right at that period of time so as to keep their demand meter from going away up?

MR. BATEMAN: I suggest to you, Mr. Henderson, that you can judiciously manage those four components of your load that you've told us about by some of this maximum demand metering and alarm or activator either enunciated or activate something that will do something about it and you can put in devices that will actually levelize those four demands over a day and your rink will not likely be aware of those things happening. But if you are not prepared to put those gadgets into your operation, then you are apparently prepared to pay the cost of enjoying the common usage of all

those four elements over the day.

MR. HENDERSON: Mr. Chairman, we want to save all we can but we are just wondering which ones would you think could be taken out when you're having the bonspiel on?

MR. BATEMAN: We'll be very happy to send somebody around to advise you on those sorts of things.

MR. HENDERSON: It almost gets like as if the group are trying to raise a little bit of money by having a banquet when they're having a bonspiel, because of the extra demand by the cooking and hot water that's used that their extra hydro bill for the rest of the year is going to more than wipe out whatever profit they made. Another thing is the curling rink is used for such a small part of the year when there's nothing else connected to it that I think there should be some room there that they don't have to pay on a full year basis even on a demand load because they have so much of the year that they're not using any, where you just have a curling rink only with artificial ice and artificial heating. You see, it's all on just for a short while and then there's . . .

MR. CHAIRMAN: Mr. Cartwright.

MR. CARTWRIGHT: Yes I would like to comment in general. Manitoba Hydro along with most utilities recognize that there are social responsibilities that need to be attended to but along with other utilities and rate-making bodies, social responsibility is impossible to design into rate-making without discriminating against some other user because if you require that type of service at that particular time and we have to put the pump in to supply it when you throw the switch, and then you don't use it for the rest of the year, someone else has to pick up those costs and that's in some cases social responsibility.

MR. CHAIRMAN: Mr. Lyon, I would have Mr. Henderson, Mr. Blake, Mr. Uruski on the same matter. If you have a question, I will put your name down. Mr. Einarson, fine. Mr. Henderson, proceed.

MR. HENDERSON: Thank you, Mr. Chairman. Well, talking about these rinks, I still am having a problem to see how you can do this because which of the things can you really cut out and I just have to go back to the fact that when it goes the whole year round, maybe you could have a charge on the installation or putting the pump in as you call it — you know, an extra charge — but you actually must make money on these rinks because the total of the load in the year, when you charge on a demand basis, it must be much more. So you must really be making money on a rink that's closed up, we'll say, at least six months of the year.

MR. CARTWRIGHT: Not necessarily. They're only picking up the costs that are already there. Those costs are there; they're only picking up their share of the cost on an annual basis and there are things that can be cut out if you look at it. For example, your water heating load, we found in some cases where rinks have water tanks that are too small with a high heater element size in there. Some with elements top and bottom which is a very acceptable way of designing the water tanks with elements top and bottom but we've found in some cases that the top and bottom elements are both on at the same time and where they have more than one tank, sometimes all the tanks are on at the same time and when they look at it, they can actually program these so that the top and bottom elements are not on at the same time and there is a considerable saving to that, particularly if you've got a 4500 watt element top and bottom. So there are some things that can be done and the encouraging thing is that people are now starting to look at what they can do to help us postpone the day when the next plant has to go on the system.

MR. HENDERSON: Taking the whole year into consideration when you have a demand meter, wouldn't your cost be more per kilowatt at that curling rink than if you were paying on the other rate on a kilowatt basis than another user who could average it throughout the year? Wouldn't your kilowatts be far more expensive?

MR. CARTWRIGHT: You're talking unit cost - yes. A customer on the demand billing that has poor utilization will pay high unit cost and that's annual utilization. The curling rinks in January with high utilization in January, February, will likely pay very low unit costs during those months but most certainly during the summer months if they haven't any other activity associated with it such as lighted tennis courts or swimming pools, will certainly pay high unit costs. And that's the purpose of the rate. Over the year, if they load manage well, the possibility is they can reduce those costs.

MR. HENDERSON: In other words, if they can make use of their facilities all year round, they're going to get a deal, but otherwise it's going to be terrible expensive hydro.

MR. CARTWRIGHT: No, not really.

MR. CHAIRMAN: Mr. Henderson, do you have any further questions?

MR. HENDERSON: The rink could be used a lot of times in the summer at this rate and there would be absolutely no cost at all because you've got this here demand meter in there and you're paying anyway.

MR. CARTWRIGHT: May I just correct that "no cost?" Mr. Bateman mentioned two components to the bill; there's a demand charge plus an energy charge.

MR. HENDERSON: But they're going on anyway.

MR. CARTWRIGHT: The only thing that is ratcheted is the demand charge; the energy charge is not ratchet.

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MR. BATEMAN: I would like to explain that, Mr. Chairman, if I could just use this meter. You see, I explained how this hand would go up and record the maximum demand in those four months. The maximum demand that you incur in those four months you're going to pay 80 percent of the demand charge for the balance of the year. Now these dials little here, when the energy is going through the meter, those dials record the amount of energy and in any one month, that is what you pay for as far as energy. If you don't use it in the summer time, you don't pay any energy charge but you do pay the demand charge over the year.

MR. HENDERSON: Yes, I understand that. That will be all for now.

MR. CHAIRMAN: Mr. Blake. Would you come forward please.

MR. BLAKE: Mr. Chairman, it's pretty well been covered. I don't want to get into some of the House business. We have a Resolution that we're going to be debating on this very thing. I really can't see with regard to recreational facilities why they couldn't actually pay the cost of the power used. It would seem to be far more advantageous to them than this demand metering. I have some figures in one particular rink; their bill in about five months is around \$26 - \$27 a month and in their peak months, it's about \$800 so they're going to be paying roughly \$3,000 a year more for the use of that rink when there's no use for it in the summertime, it's strictly a curling rink. So there are many areas I think where it's going to be very costly for them and it was mentioned that if they're not using the energy, then someone else has to pay for it but in the case of recreational facilities in a small town, you know, who is paying? All of the residents are paying anyway regardless of how you spread the load but we have covered, I think, demand metering on recreational facilities pretty well and we'll have a chance to debate it more fully.

On demand metering I just wondered, at what stage farm users are going to be on demand metering — is it on consumption, they reach a certain peak of consumption before they go on demand metering or when do farm people go on demand metering?

MR. CARTWRIGHT: 55 Kva and higher.

MR. BLAKE: Would this be a fairly large operation or would it be a normal farm?

MR. CARTWRIGHT: This would be a fairly large operation. We have three categories — farm rates. Small farm, 200 amps or less which relates to a house; we have a medium farm rate that's over 200 amps — that relates something like general service so they're usually into something more than just grain farming or something of that nature. Then we have where they transfer from that rate to the lower rate at 55 Kva of billing demand, that's not connected load, it's not the size of the transformer. There are very few — comparatively very few — as a percentage of the total farm residential classification, very few customers that could be eligible for that and in their particular case, in many cases, it's very attractive for those farmers.

MR. CHAIRMAN: Mr. Bateman, you wished to comment on this?

MR. BATEMAN: Well, I was just going to say, Mr. Chairman, in answer to Mr. Blake, you said can't we get these people paying for the energy they're using. Well actually that's exactly what we're doing. The concept of demand billing, if they didn't use the power, we wouldn't have to install the generation to supply it. We're only charging them their proportionate share. We're trying to charge service at cost and everybody that is using our service is going to pay the cost of service and that's exactly what demand metering is attempting to do, put those people on the same proportionate cost of service that everybody else has.

MR. BLAKE: But it's going to be a little difficult to explain to one particular rink that have been used to getting a bill for \$26 in June or July and now they're going to get a bill for \$500; it's going to be difficult to tell them that they're only paying for power that they use.

MR. CARTWRIGHT: But on the other hand, you can tell them that likely their bill will be lower in January and February — November, December, January, February — likely their bill will be lower. You can also tell them that on this rate, it gives them the opportunity to do something about their bill. There are very few commodities that when you go up to the pump you can name your own price. And basically, this is what this type of rate does for you.

MR. BLAKE: That's right in rate fuel conservation I don't doubt that there are many things that can be done but, you know, for so many years you advertised "Your Hydro — Use It." My family have certainly taken that to heart because every light in the house goes on at 5 o'clock and it stays on until midnight. But it's pretty difficult to get them going around turning off switches but that has to be done. I realize that if we're going to conserve energy — and there's many things in these rinks that can be doing to conserve energy but I think you've got a real selling job to convince these rural recreational facilities that they are actually getting a break from Manitoba Hydro under demand metering.

MR. BATEMAN: Well that's why, Mr. Blake, we are prepared to go out with staff that are knowledgeable in this field and try and educate the community clubs and curling rinks and other users in the proper use of our product.

MR. CHAIRMAN: Thank you. The time for adjournment has come and I would like to indicate that the Public Utilities Committee will be meeting on March 22nd to deal with the report pertaining to the telephone attachments followed by the Annual Report from the Manitoba Telephone System. We will

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be continuing with the report of the Manitoba Hydro on March 29th. Committee rise. Mr. Lyon.

MR. LYON: Before we rise so that Mr. Bateman and the members of his staff will be on notice, I presume the same gentlemen will be back because we have not even begun to get some of the information that we want to get.

MR. CHAIRMAN: I can assure you, Mr. Lyon, that the intention was given by Mr. Bateman from the outset that he will have his staff here. Committee rise.