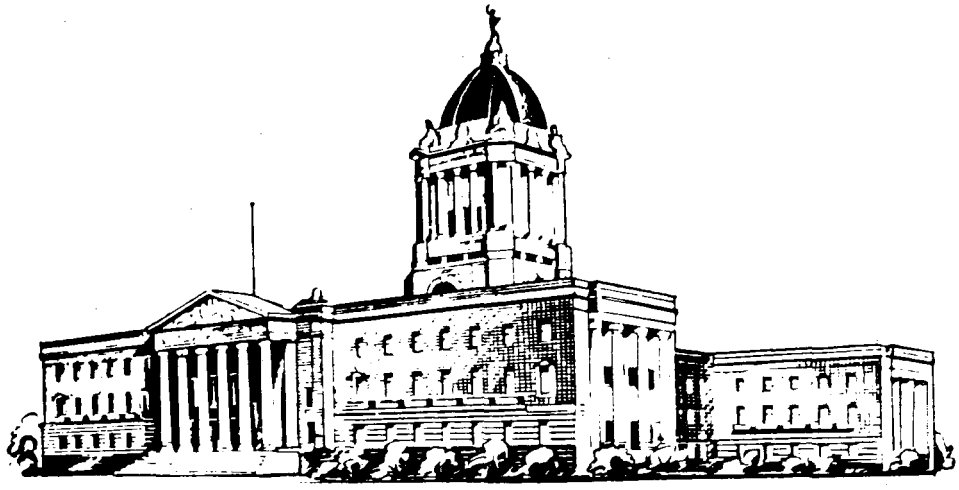
Legislative Assembly of Manitoba

HEARINGS OF THE SPECIAL COMMITTEE
ON
PUBLIC UTILITIES AND NATURAL RESOURCES

Chairman
Mr. Harry Shafransky, M.L.A.
Constituency of Radisson



10:00 a.m., Tuesday, April 1, 1975.

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PUBLIC UTILITIES AND NATURAL RESOURCES COMMITTEE
10:00 a.m., Tuesday, April 1, 1975

CHAIRMAN: Mr. H. Shafransky.

MR. CLERK: Good morning, gentlemen. If I may have your attention. It's now 10:00 o'clock, or a little past. Your first item of business would be the election of a chairman. Do I have any nominations?

MR. GREEN: Mr. Shafransky.

MR. CLERK: Mr. Shafransky? Are there any further nominations? Hearing none, I would ask Mr. Shafransky to take the Chair.

MR. CHAIRMAN: Good morning. The first item is to establish a quorum for the committee. There are 12 members on the committee.

MR. GREEN: Seven.

MR. CHAIRMAN: Seven? Is it agreed that the quorum for the committee will be seven? (Agreed) Okay, we can proceed then. The purpose of the meeting for the day is to hear from the Chairman . . .

MR. SPIVAK: Mr. Chairman, I just . . . so there won't be any question, do we need a formal motion that the meetings be recorded and transcribed? And if that's required, then I would so move.

MR. CHAIRMAN: It's been moved that the meetings be recorded and transcribed. Is it agreed? (Agreed) Then we can proceed to hear from the Chairman of the Manitoba Hydro Electric Board, 23rd Annual Report for the year ended March 31, 1974. Mr. Premier, would you like to . . .

MR. SCHREYER: Well, Mr. Chairman, it was only because it's customary. The Chairman is here and, I'm sure, all prepared to give as concise and informative a summary as possible of the more relevant and important factors that have been under consideration by Manitoba Hydro to the extent of the carrying out of their major construction program, etc. And so, without any further ado, I would suggest, Mr. Chairman, that you turn this over to Mr. Bateman, who has, I believe, some visual aids to present us this morning as well.

MR. CHAIRMAN: Mr. Bateman.

MR. BATEMAN: Thank you, Mr. Chairman, Mr. Premier, members of the committee. I would like just to say a few words of introduction to the Annual Report before you consider it in detail, and I have also, - I'm sure you've noticed, the projector sitting here in the background and the screen. I have a few feet of film that I'd like to show you, which would introduce you to the progress on the various construction jobs that are under way in Northern Manitoba. It's not a sound film and the footage was taken, most of it, very recently. As a matter of fact some of it was taken as recently as last week. There are a few shots of the completed Kettle plant during the time of the official opening, which I would like to say a few words about, and then we have some footage taken of the dredging in Lake Winnipeg channels last November, since the dredge is not operating as yet this spring. I would also like to announce, Mr. Chairman, that I have some senior staff with me that are here to assist as necessary in answering any of the questions or presenting any of the information that you, as members of the committee, are seeking.

Now before we get into the film, then, I'd just like to very briefly review our 1974 operations. It's also interesting that your committee is meeting today on April 1st, which is the start of our new fiscal year. The 1976 fiscal year actually starts today, and I'm going to tell you a little bit about the operations that have been taking place in this past year, as well as dealing with the 1974 Annual Report that is before you for acceptance.

Now during the year for which I'm reporting, that is 1974, the growth in firm energy requirements was 11 1/2 percent. This is somewhat above average, and during the fiscal year ending yesterday, that is March 31, 1975, total demand for the firm electrical energy in Manitoba continued to grow but at a more modest rate, as the result of reduced growth in some of the major load categories.

The energy delivered to Manitoba Hydro's supply areas over the first eleven months of the last fiscal year was about 4 1/2 percent over the comparable eleven-month period which was one year earlier, which was an exceptionally high growth year. And of course this 4 1/2 percent is substantially less than the load growth for Manitoba over the ten-year period from

(MR. BATEMAN cont'd) . . . . . 1963 to '73, which averaged about 7 1/2 percent per annum. The interesting thing, that during the last ten months the domestic and residential growth is still continuing at above our average rate, the commercial is continuing at above our average rate - as a matter of fact at 8 percent; the power is just off slightly less than one percent, and the farm load is still growing above our average, at something in the order of 12 percent. However, when you combine all the factors that were in force last winter, the mild winter and so on, and some of the industrial load down, we had a reduced peak last year to what we had anticipated, but we nevertheless had a peak in excess of 2, 000 megawatts and slightly less than 5 percent growth for the year in capacity. As a matter of fact, the figure is just slightly less than 4 1/2 percent.

Now the total electric energy that was generated and purchased during the fiscal year which has just ended amounted to about 15 percent over the period of the previous fiscal year, which is the report that you have before you. The large increase in total energy produced was due to two main factors: (1) a very ample supply of water; and (2) adequate export markets in which to sell the energy.

Now the estimated Extra Provincial sales for the fiscal year amounted to about 3 1/2 billion kilowatt hours, which was an increase of about 77 percent over the comparable period of the year earlier. The distribution of these sales is rather interesting and I'd like to just show this curve to you. I think if we dim the lights a little bit we could perhaps see it. You notice that on the pie charts that I've got in front of you, that the majority of our export energy, which is the inner curve here, went to the Province of Ontario; 50 percent went to the Province of Ontario. But for 50 percent of the energy we only got 37 percent of the revenue of export sales. Saskatchewan we exported 10.8 percent of our energy - that is of our energy that was exported, went to Saskatchewan, and it only produced 4.6 percent of the revenue. Now the 39 percent that we shipped to the U.S. produced 58.4 percent of our revenue, rather an indication of the value of the various export markets.

Just a word about the rivers and so on. We had all the rivers and tributaries in the Nelson River Basin drain into Lake Winnipeg approached record flows last spring, and in many cases they established new records, making 1974 the wettest year on record. Favourable water conditions on the Saskatchewan River. They were favourable from a hydro point of view and in fact we had more water than we needed because our reservoir filled last spring at Grand Rapids in less than a month as compared to the normal filling period of in the order of six months. And that resulted in the highest generation on the Grand Rapids plant since it was commissioned ten years ago. It was a real substantial record generation last year from the Grand Rapids plant.

Lake Winnipeg registered new high record elevations, in fact throughout most of the year; and as of the end of January this year, the Lake Winnipeg elevation was two feet higher than it was a year ago and as a result, of course, the Nelson River flows were more than adequate for the generation requirements of the Kelsey and Kettle plants.

In the past twelve months we estimate that 52.8 percent of the generation in Manitoba was supplied from the Nelson River. If we had thought in terms of average flow conditions, the average flow would have produced about 44.5 percent of our energy requirements. So thermal plant operation which would normally have made up the difference was restricted mainly to a peaking operation due to these abundant flows that I speak of. Otherwise, of course, we would have been into thermal generation for the requirements of our system at considerably greater cost.

I am happy to report that there were no major wind or sleet storms affecting our major transmission system during the last year under consideration or the year just passed. The blizzard, of course, of January 11, 1975, did cause some minor problems to the distribution system, and I suppose what we consider minor problems nevertheless they were very real problems for those people that were experiencing the outage and wondering when the Hydro man would get there to restore the power. Fortunately these were only relatively short interruptions.

There were eleven occasions from April to date when supply from our northern generation was interrupted because of disturbances on the high voltage D.C. system. Now each of these disturbances resulted in the loss of service to customers in the southern part of the province. It was a load shed program that operates automatically, and of course it also resulted in a separation of the extrapvorincial interconnections. Normally we have been able to restore customer service within a few minutes of these interruptions. The longest outage that we've

(MR. BATEMAN cont'd) . . . . . experienced in this period of time has been 23 minutes for an isolated group of customers. Now the fast restoration of customer service really is due to the fact that we can reconnect with the U.S. tie-line and restore service to our market area by importing power for that short period of time. It's one of the advantages of interconnections.

Now if we just take a few moments to look at the financial picture, I will deal first with the year ending March 31, 1974, for which copies of our Annual Report have been made available, and because of the additional energy sales that were made during the year, the revenue increases were quite significant. It was an above average growth year, as I pointed out to you. However, they were exceeded by our expenses. The inflation of operating expenses and the higher interest charges on the capital investment in the Kettle Generating Station, which was being almost fully carried on the operating accounts as of the year 1974, were largely responsible for the significant increases in the expense items. As detailed on Page 5 of the Annual Report, a 12.1 percent increase in total revenue brought the earnings, or the revenue, to $102.3 million compared with expenses for the fiscal year ending March, 1974, to $106.4 million, plus an additional 4.4 million provision for reserves, which require a transfer from the Rate Stabilization Reserve to our Contingency Reserve, and covering that reserve requirement and the additional operating costs over the revenue resulted in a transfer of $8.4 million from Rate Stabilization into the operating accounts.

Now the Rate Stabilization Reserve balance at March 31, 1974, was down to $4.3 million. This was insufficient to provide for the transfer which would have been required in the fiscal year just ended if rates had not been increased. On March 20, 1974, an announcement was made of a rate increase for all classes of electrical service, effective on all meters read on and after April 1, 1974. The financial data for the year ending March 31, 1975, is of course not complete yet since the year-end is last night at midnight, but we expect to have ended the year with a sufficient excess of revenue over expenditures to provide for reserves that are deemed necessary by the board.

Now I'd like to just show you what is happening to our costs in the last year, and while we have the lights out here we'll carry on with the movie after a few minutes of looking at these charts. These are the years across the bottom here, this is the calendar year ending 1974, and it's rather a universal scale. They're colour-coded. The percentage scale is on the extreme left. The capacity in service is the curve up here and this, the capacity in service is just about 2,800 megawatts.

The next is the net plant in service. This curve right here about - sorry, that hasn't come through as clearly as it should, but I have a print of it here which I can read a little more. That's dollars, net plant in service, dollars, 798. And then the next is the energy that we generated, which is here. Because of these export markets that I've told you about, we're making better utilization of our generation capacity. Its growth is a little better. We generated 11.8 billion kilowatt hours, in fact higher than that; it's closer to 12 billion kilowatt hours here. These figures, of course, you can get from the Annual Report.

And the next curve is the annual net interest, has gone above, even the labour cost increases which are here, our average net interest has gone up to this figure, which in the curves indicate about 43, 44 million dollars last year required for our interest coverage, and our labour costs are now about $27 million roughly. So those are rather some interesting statistics which indicate why we, of course, are forced into rate increases.

Now I'll ask that we show the movie. I'll try and make a few comments on this as we go along. This movie, as I indicated, is of the northern construction projects. We'll start off with a map of Manitoba which will pinpoint the areas that you are going to see. I'll just quickly point them out to you. You'll see the lower Nelson plants at Kettle, Long Spruce and Limestone, and then we'll move to the Churchill River Diversion, Missi Falls, South Bay and Notigi, and then we'll move to the Lake Winnipeg projects. There are a few shots of the new housing at South Indian Lake which were inserted in this film since I have seen it, and I think they come after Notigi. So if we could have the projector now, and this is the map of Manitoba and this is the Kettle plant here, the lower Nelson River, Jenpeg of course, the Eight-Mile and Two-Mile Channels; Notigi control, Missi Falls up there, and the South Bay Channel there. Getting a little closer to Kettle, Long Spruce and Limestone; Long Spruce under construction, you'll see some shots of the plant last week; Kettle, you'll see some shots taken during the official opening. Here's the official opening of Kettle in June of 1973, the plant

(MR. BATEMAN cont'd) . . . . . well on the way to being completed and it was completed last year. This is the Premier starting the Kettle generator No. 4 which you'll see start to rotate here as he turned the switch, and that was quite an event. The plant lit up on the big chart we had at the back of the board, and then here's the President of Atomic Energy, Lorne Gray, now retired, he's going to energize the transmission line, which you'll see he's just done, and the power moved from there to Winnipeg.

Now going down to Long Spruce, this was the south embankment, units 1, 2, 3, 4, 5, up to 10, and the spillway section as you proceed across. You'll get some appreciation of the size of this as we move into areas down in here later on, which will show you the relative size of trucks. This is the intake of the spillway section, a closer shot of it, some of the big cranes. Men are pretty small things here, trucks, and so on, these big whirly cranes. Going back across the powerhouse intakes, some of it hoarded in for winter construction, and this is the south end. It's as high as it's going to be at that point. That is completed; the south embankment is completed. Here's a truck coming along that road that you saw just now at the south embankment, or a car, I should say, and that again indicates the status of the project.

This is the south end again, unit No. 1, 2, 3, and under hoarding for winter pouring were these 4, 5 and 6, and there's some hoarding down at the lower level. Now we're down in the lower end of this, and this will give you some idea of scale here as we get into a picture of some men working, and this crane bucket is just lifting some material out of one of the - I think that's unit No. 1 discharge passages. The upper part of this has not been poured yet, indicating the amount of work that's going on.

This is a view of the spillway which the water will come through on these lower openings, and it will come under this bridge. This is a temporary bridge which will pass the water and this will give access to the south side for the construction of the main dam when the water is diverted through the spillway.

Now let's move down and look a little bit at Limestone. This is the Limestone River which enters the Nelson just at this point, and our project will be just above this point across this point of land across the river, and the Henday switching terminal, which will be the terminal of the DC transmission for Bipole II will be in this general area as well, and the campsite will be up over on the other bank of the Limestone River further down the Nelson. This is just below here where you'll see the next plant will occur when the decision is made to build it. This is the Nelson flowing off to the Bay. You can see that it's completely ice-covered at this time of year due to the ice build-up from the Bay.

This is a shot of the Limestone construction camp, temporary camp facilities here, for doing the work on the Henday Terminal Station.

Now going into Missi Falls, this is Missi Falls where we're building a control structure to control the flow that will go down the Churchill or down the Nelson. This is a construction camp at the Missi Falls site showing some of the married quarters, and here we're getting into the contractor's work area, and then we'll see, this is the cofferdam across the channel which will be replaced with a dam across here. And the main control structure is right here, it's under hoarding, you can see the contractor has hoarded it in, and he's making very satisfactory progress right now with concrete pours at a fairly good rate.

This shows the rock excavation of the channel. This is the channel that was cut through to allow the Churchill to go through here when it's in flood. The helicopter that was taking these pictures you can see just passing over here. That's an excellent job of winter hoarding that will permit him to carry on with his concrete work this next two months or so, before the weather doesn't require the hoarding.

Now going over to the diversion channel where the water will come from South Bay, which is right here. This is a cofferdam and this is a South Bay channel that wanders off down through into Think Lake, Grassy Lake and Issett Lake. It's a six mile channel which is a fairly extensive number of yards; I think there's about 12 million yards of material to be removed in that channel. Over here is the construction camp area. The highway off to Ruttan and the airstrip right there. This is a closer shot of the construction campsite area.

And now, moving from the Diversion Channel down to Notigi, where the control structure is being built. These pictures are taken right down in the rock cut where the hoarding is being put on to permit concrete work, which is advancing right now as a matter of fact. This concrete pouring work is also going ahead at a very good rate. These control structures will be finished on schedule this fall. It shows the rock cut with the three gates that are going in

(MR. BATEMAN cont'd) . . . . .at Notigi with the water discharges down here, down the Rat River into the Burntwood. This is an aerial view of the rock cut. You can see where the gates are up here.

This is where the main dam will be in the river; it's just a little preparation but it's full of snow there now. That work will get under way in the dry once the climate improves. Construction camp area at Notigi, which is accessible by road from the south, and here it looks like our Manitoba Hydro logo on the side of a car at South Bay. I presume this car drove in over the winter road. This is one of the new homes that is being transferred, or was transferred a week or so ago to the residents of South Indian Lake. Here is the old home and the new home. The contrast is quite remarkable. Moving from that home of logs into this nice home which was a design selected, I might say, by the Community Council.

Now moving to Jenpeg on the outlet of Lake Winnipeg, the various channels, Ominawin Bypass Channel, the Eight-Mile Channel and the Two-Mile Channel, and here is the Nelson River last fall, about December, was diverted through the control structure and the old channel is across here which was closed. This is the elevation of Cross Lake, which is some 32 feet, or 34 feet below Lake Winnipeg at the present time. So there's no impediment to water levels of Lake Winnipeg. This is the powerhouse area under construction, with the cofferdam keeping it in the dry. I think you'll get a better shot of that as we move around the job. The Nelson is now capable of being controlled, but we can't increase the flow yet until we put these channels upstream into operation, which are scheduled for later this year.

This is the powerhouse steel going up. The first power is scheduled out of here in the fall of '76. This shows the cofferdam downstream and the cofferdam upstream over here. The campsite is over in the background, up well beyond the top of the picture there. And here is the powerhouse, some close shots of the powerhouse from the cofferdam, and we're going to go down into the area, I think this is unit No. 6, as a matter of fact, and this is unit No. 5 and No. 4. There are six units. You can see this is the discharge passageway. You can see the turbine will sit back in that passage, and this is the flared opening to allow the water to come out. This is no small job either. It's a fairly substantial amount of concrete work and a 50-foot opening, roughly, on the intake.

This is a view of the camp at Jenpeg showing both the single men and married quarters, and here are a few shots of the dredge as of last November. This is in the Two-Mile Channel. We moved the dredge into the Two-Mile Channel last September and have completed about 20 percent of it. You can see the dredge revolves in a radius around one of the spuds. These are the spuds. That one is up and the other one is down, so its focum point is there and it revolves and takes a bite out of the channel ahead of it, and this gives you some appreciation of the size of that . . . Squamish. That's the Squamish dredge. The Ospwagan is in the Eight-Mile Channel, this is the Squamish in the Two-Mile Channel. You can see the spuds here at the back now.

Now what did the Nelson River produce? I told you, under average flow conditions, in '75 it would be about 44 percent; 1980, we're up to about 63 percent of our energy coming from the Nelson River; in 1985 it will be about 77 percent. So the rest of our system, Grand Rapids-Winnipeg River and so on, looks pretty small.

Well, gentlemen, we can have the lights now and proceed with the comments that I would like to make. I thought that that would be a better way of giving you an appreciation of what is going on up North, and also perhaps help you to appreciate the areas that I'll be talking about.

I would just like to make a few comments about the capital costs of these projects. The estimated capital costs of all the projects in the North have increased since the time of my last report to your committee, Mr. Chairman, except, as I mentioned in our earlier comments, the Kettle plant - which we have now completed - has not had any increase in costs, in fact it was completed within the budget which was established in 1969. Now these increases can be attributed to a combination of many things: for instance, unforeseen site conditions, design changes, refinement of estimates by virtue of more up-to-date detailed field information and costs data, and by reason of the increased cost escalation in certain items in excess of our trend of predictions. There has been no downward trend in the escalation applicable for site labour, which averaged about 9 1/2 percent for each of the last two years. And of course labour- these projects have had in excess of 4,000 people at peak, 4,500 people at peak, I think, last year involving fairly substantial labour costs.

Material costs escalation has been dramatic, and varied greatly between individual

(MR. BATEMAN cont'd) . . . . . items. If we ignore any escalation prior to 1973, then three main items which are utilized on all of our projects in fairly expensive quantities have increased over the last 24-month period in the order of 60-odd percent for reinforcing steel, about 19 percent for steelplate, and about 43 percent for diesel fuel. Other items have shown some tendency toward a reduced rate of increase, and we have made some contracts recently for firm prices for such major items as the supply of cement.

Now, for major projects which last for a period of several years, a continuous review of the escalation trends must be made, and capital costs estimates must be adjusted accordingly from time to time. Although we have made provision in our cost estimates for the rate of escalation for site labour presently being experienced, we are deeply concerned that if wage settlements outside the heavy construction industry currently being negotiated are duplicated in construction, then a substantial increase in project costs must result.

Now, if we can just say a few words about each of the projects that I have showed to you on the film, and try and make a few comments about where the cost increases are occurring on these projects.

We look first at Lake Winnipeg Regulation and the control structure and the generating station. As we mentioned earlier when discussing the progress of this project, we had some more adverse conditions with respect to channel dredging and excavation than we had anticipated, and of course some of these have caused us some delays in the project timetable. Some of these have been the result of high flows in the Nelson River which have resulted in higher levels in some of the channels. This and cost escalations for wages and material have increased the construction costs by significant amounts. The current estimate for Lake Winnipeg Regulation Control and Generating Station over that which I gave you last year is up by 9.2 percent to $252 million. Expenditures as of the 31st of December, 1974, amounted to $129.6 million.

Just a word about dredging. In mentioning the subject of dredging and showing you these pictures, I think it's necessary at this time to note that our award of the dredging contract was made in accordance with Manitoba Hydro's normal tendering practices for awarding construction contracts. That is, we call for bids, we have a public opening, and the job goes to the low tender. So bids were called for the construction of the Two-Mile and the Eight-Mile Channels back in 1971, with our specifications allowing the bidders to quote on either conventional earth-handling methods or on dredges. We broke up the job so that it gave opportunity to smaller contractors to bid on portions of those channels, on the Two-Mile particularly. The Eight-Mile was not conducive to anything but dredging, we felt, but we gave them the opportunity to bid on both types. The lowest bid was received from a consortium made up of the Dillingham Corporation and Sceptre Dredging Limited. These are two West Coast companies with extensive dredging experience. The bid offered by these companies is for the work to be done substantially by dredges backed up of course by some conventional earth-handling equipment, and recently we made inquiries of the two parent companies of this consortium and find that they have not had any contracts in the St. Lawrence River area of Eastern Canada.

Now a few words about the Churchill River Diversion. Over a year ago I said that the costs would perhaps be in the order of $150 million. I couldn't give you an exact price at that time because some of the tenders had not been in. For instance the Notigi control structure had not been let when I was before your committee last year. Our present estimate for this job is $170 million, and as of December 31st last, we have spent about $73 1/2 million. That I think is up in the order of 14 percent.

The Kettle Station, I'm happy to say, was completed and placed in commercial operation in November of '74, that is completely placed in commercial operation in November of '74 ahead of schedule and within the budget of $324 million which was virtually unchanged since 1969. This of course I would say would be largely possible because most of the heavy construction on which escalation has been occurring, relative to steel prices and so on, was completed before the high inflation rates hit our construction programs.

Now the Long Spruce Generating Station, according to our latest estimate, the total costs are going to be just about $500 million, of which 120, 721, 000 has been expended as of January 31, 1975. This represents a 12.9 percent increase over the 1974 estimate.

Now I mention that we may have some delays in completion of Lake Winnipeg. We hope to get the Eight-Mile Channel and the Ominawin Bypass Channel, and the control works of

(MR. BATEMAN cont'd) . . . . . course are operational now, but we expect to get these two channels completed some time this summer so that we can put them into operation and help reduce the levels of Lake Winnipeg. But because we have very favourable water conditions in Lake Winnipeg this year, and providing our projected elevations of Lake Winnipeg which bring it down to something in the order of 714.3 or 4 feet by the end of this year, providing those are realized, then we should be in satisfactory position next winter for energy production as far as our firm loads are concerned. So we wouldn't be in any supply problem area such as we could have been had we had low waters on these watersheds.

Now we might also say that if we have some . . . our schedule calls for Churchill River Diversion by next fall, and we think we can anticipate that the contractor at this point in time will not complete the South Bay Channel in time for that project to be put into operation by next fall. However that again, because of the high water in Lake Winnipeg, will not represent a serious energy problem to us but if we are not able to get the South Bay Channel and all those components of that project operational by the fall of 1976, then it is a different condition. Under those conditions we would have to place a very considerable reliance on interconnections through neighbouring utilities to import the energy that we would require to see us through our energy deficit position. These same conditions of course if we had serious droughts occurring by the '76-77 period, which at this point in time don't seem too reasonable to anticipate, we could also be into an energy supply position.

Well now just a word about transmission projects. We have had some escalation of course on transmission line projects, both in the south and in the north, and these have averaged about 29 percent over each year for the last two years which is rather largely affected by the increases in the steel and aluminum conductor components. Escalation on terminal stations has been only slightly less.

Now a few words about the DC transmission project. Insofar as the High Voltage DC project is concerned, costs have certainly increased but it is not possible to determine what the escalation rate is because we don't place orders for DC equipment that often. It's spread out over . . . the first one was placed in 1967, and we're just placing another one now. But costs on the terminal stations that I can tell you are associated with the DC construction, have doubled since we began designing our DC terminal back in 1967. This would be an average escalation of about 10 percent each year for the past seven years.

During 1974 the original phase of the Nelson River transmission system was accepted by Manitoba Hydro from the Federal Government to operate and to start repayment of the costs of it under the terms of the 1966 agreement. Now the terms of that 1966 agreement covered the transmission from the Kettle Station to the south, the Dorsey terminal which is out here in the area of Rosser, and it covered the transmission of about 1,000 megawatts of power from the Kettle Generating Station. Kettle itself is capable of producing more than 1,000 megawatts of power, it's about 1,275 megawatts. And that first thousand megawatts of capacity in the DC transmission was to be financed 100 percent by the Federal Government but of course all of it repaid by Manitoba Hydro over a 50-year period. Now because of the expansion of the DC negotiations, the need for expansion of the DC, negotiations took place over the period of 1974 upon a new Federal Government policy which indicated that 50 percent federal financing over a 30-year pay-back period would be given for regional transmission inter-ties which the Nelson River would qualify under. We believe that this qualification will apply to extension to the Nelson River transmission system.

We called for tenders in June of 1974 on the basis of a very comprehensive specification prepared jointly by Manitoba Hydro and Teshmont Consultants for the Bipole II equipment which will make use of that same transmission line. It's adding additional input and receiving equipment to utilize the generation in the north, to put it into our 230 kv system in the south. Now the tenders for that equipment, which we called for in June, we had to allow a very adequate tendering time, they closed on October 15, 1974, and each of the four firms that submitted tenders indicate to us that there was a very substantial cost in the preparation of the engineering work done to tender. In fact some of the people indicate that the tenders cost their firms in the order of $200,000.00. Now the consultants evaluated that tender and they indicated that the low tender was the Brown Boveri Company of Canada Limited by some $7 million, and when evaluated to include the cost of the buildings, and other things that were necessary to be associated with this tender and other tenders, the Brown-Boveri bid was some $16.6 million lower than the next alternative, consequently Manitoba Hydro has awarded the contract to the low tender. This is the most favourable over-all arrangement for Manitoba Hydro and for the Province of Manitoba.

(MR. BATEMAN cont'd) . . . . .

Now a word about financing. The large on-going construction program needed to meet future increased demands has to be financed mostly by borrowing. In addition debt which matured during the year of course has to be refunded or repaid; so-called internally generated funds, that is that portion of the revenue which is assigned to charges that do not require an outlay of funds, such as depreciation and so on, provide only about 7 percent of our capital requirements, consequently more than 90 percent of our capital has to be borrowed. And in the fiscal year ending March 31, 1974, Manitoba Hydro borrowed $134.8 million by way of long-term bonds and 40 million from the proceeds of the Province of Manitoba bond issues. And in the fiscal year ending March 31, 1975, yesterday, $260 million of long-term bonds were issued, and 24 million was advanced by the Province from the proceeds of Province of Manitoba bond issues. One issue we had ran as high as 10 percent interest.

The high interest rates that have to be paid are high because we are into a high inflation period throughout the world. In turn the high interest rates are forcing the costs of the products and the services of our rather capital intensive industries up when the expansion is needed to provide the increasing load, and this expansion requires that we put additional facilities in place. In other words, the expansion of the economy requires that we must prepare to meet the loads that that economy requires, and of course we are then into large debt financing. We must borrow the money. So the effect on the cost of electric energy production is severe - I showed you the curves - especially when we are in a fast-growing utility. The fast growth rate means that the ratio of expensive new plant to existing cheaper plant increases faster than our average rate of growth has increased. With respect to annual interest charges, this change is even more rapid, not only is the principal much larger because of the inflation that we're experiencing, but also the annual charge for each dollar that is invested in our system is much larger. In other words, we're paying higher interest rates today than we paid five years ago as you saw on those curves. The effect of course of these higher charges for money on our revenue requirements is well known, we must have rate increases.

Technological progress and the economies of scale permitting greater efficiencies in the use of manpower and fuels have made it possible in the past, when inflation and interest rates were modest, to operate without increasing the price of the product that we sell. At the present however, and as far as we can foresee in the future, this is no longer the case.

During 1975 a number of interesting events have taken place in the environment field, and I'd like to just draw these to your attention. First the Canadian Electrical Association, of which we are members, has completed a set of guidelines for electrical utilities covering all environmental aspects of electrical utility operations in Canada. These guidelines have been reviewed by most of the governments in Canada and by a number of interested organizations in the environmental field. These guidelines I think will be available about June of this year - they're presently in the process of being printed by the Canadian Electrical Association - and they will be available at a price of approximately $4.00 a copy - we have ordered a number of copies. These guidelines of course will be of great use to Manitoba Hydro in our future construction and operations, and I might add that the staff of Manitoba Hydro assisted in preparing these guidelines, a job which was done almost entirely by the utilities in Canada.

During 1974 the Manitoba Clean Environment Commission investigated operations at our thermal electric plants at Brandon and also at Selkirk. Due to earlier research that we had been doing on the Brandon station, that is on the quality of water, and so on, we have been in a very good position to provide the information that has been requested by the commission.

In preparing an application to the National Energy Board for the certification of international transmission lines, which was a new requirement as of last July, the regulations of the National Energy Board were changed to require that an environmental statement must be made on all international transmission lines. So Manitoba Hydro has been making environmental inventory, and an assessment of impact, in order to find the best routing for our interconnection lines and, I refer here to the 230, 000 volt line that we're building from Ridgeway Station out near Bird's Hill to the International Boundary near Sprague, and to the two 500, 000 volt lines that are planned to go into service between Winnipeg and the Minneapolis area.

Manitoba Hydro continued to assist the work of the Lake Winnipeg, Churchill, Nelson River Study Board during 1975, and I understand this joint Federal-Provincial study will present its report some time during the current calendar year.

(MR. BATEMAN cont'd) . . . . .

Manitoba Hydro also co-operated with the Provincial Government in supplying information and assisting with field work carried out during the summer of 1974 for an environmental study on the lower Nelson River.

Useful negotiations have also been taking place in 1974 with a number of northern communities both to explain our northern projects to them and to discuss compensation where our activities have affected these communities. For instance, you saw in the film today at the community of South Indian Lake we have provided 18 new homes, in addition to new homes that are being provided under various other government programs, and discussions with the community leaders there have included fishing and trapping compensation where the Churchill River Diversion may affect these occupations.

Discussions have also been taking place with the residents of Nelson House and it is hoped that these matters will be resolved in 1975. Investigations are nearing completion at Churchill and Thompson into the remedial works that will be needed in these two communities.

I'd like to just say a word about industrial relations, a subject that we can be proud of in Manitoba Hydro. We have successfully negotiated two major contracts with Manitoba Hydro Employees' Association and with the Association of Manitoba Hydro Supervisory and Staff Employees. The Manitoba Hydro Employees' Association which has affiliated as local 998 with CUPE, represents over 950 of our office employees. This contract was ratified in '74 and runs to December 24 of the year 1975. We also negotiated a two-year agreement with the Association of Manitoba Hydro Supervisory Staff Employees in '74 and this agreement expires in March of 1976. This Association represents about 350 of our senior staff.

In July 1973, Manitoba Hydro and the International Brotherhood of Electrical Workers, Local 2034, concluded a 35-month agreement which runs until June of 1976; Local 2034 represents about 2, 700 field staff. This agreement was arrived at following the acceptance of both parties on the recommendations for settlement by a mediator, Senator H. Carl Goldenberg. Cost-of-living adjustment formulae are built into the three collective agreements that we've just referred to. National trends clearly indicate to us that these formulae are a necessary and desirable part of union agreements today.

During 1975, the latter part of this year, we will be negotiating a formal agreement with our Manitoba Hydro Employees' Association which we hope will be ratified prior to the expiry of the present agreement in December.

I am pleased to report to you that our safety record in the past year has been very satisfactory, in fact Manitoba Hydro was first in Canada among utilities. The lost-time accident rate was reduced again and there were no fatalities nor serious work injuries to employees. The frequency of preventable motor vehicle accidents, however, increased again, but, there were no serious or disabling injuries to our employees or to the public.

Now what about the future. In the past we have got used to an anticipated annual load growth of about 7 percent for the long term with intervals of several years or even higher rates of load growth such as we have experienced in the late '60s and the early '70s, and the exceptionally high one that we experienced the year before last. More recently the well known worldwide changes in the economic situation have also had their effect on the demand for electric energy, and as I mentioned at the beginning energy use in the industrial sector as represented by power and mining customers grew only moderately. The most important question that we have to face is at what rate will the demand for electric energy increase in the future, and this question is receiving very careful study. It is obvious that the relative competitive position of electric energy compared to the direct use of other energy sources has been improved by the general realization of the limited known reserves of fossil fuels in the form of liquid hydrocarbons and gas, and the high cost of extracting the liquid hydrocarbons from the tarsands or coal gasification for instance. Therefore, there is a great incentive for users to convert to electricity from other energy forms. We know of course that this requires capital investment by the consumer and because of the number of conversions will take some time to become a major factor. Perhaps several years.

As the total energy demand grows now at a small rate and may continue to do so for several years in the future, the growth of electrical energy demand has also slowed somewhat recently, but we expect it will resume a faster rate of growth early within our planning horizon. As the use of electrical energy permits greater efficiency in many applications, some inherent energy conservation will be associated with the switch from other forms of energy to

(MR. BATEMAN cont'd) . . . . . the electrical energy without reduction in production.

With lead times of 8 to 10 years that we need for construction of economic electric energy generating plant, it appears we cannot afford to be unduly influenced by temporary slowing of demand growth and we must prepare for the likely resumption of growth. It is of course wise to remain as flexible as reasonably possible. With this in mind we continue to plan our resources for a long term growth for the firm energy load of about 7 percent per annum; or nearly doubling of our facilities every ten years. Even that is quite a significant rate of growth.

While we expect that the firm load increase in the year 1975-76 fiscal year will be in the order of 5 to 6 percent, we are confident that the demand for our casual surplus energy from outside of Manitoba, the three areas that I showed you on the screen this morning, will remain high and with favourable water conditions, if we have them, we may expect to achieve similar revenues to what we achieved last year.

Now if we look at the total energy situation in Manitoba with the increasing shortages and the related increasing prices of the fossil fuels and the relative position of electricity among the fuels that are used by Manitobans, we get some interesting comments here. The approximate share of Manitoba's energy requirements met from these various sources are approximately 52 percent using petroleum products, about 29 percent using gas - that's natural gas, and 14 percent using electricity. That is of the total energy requirements in Manitoba these are the major users, the major supply sources, and coal represents about 5 percent as a primary energy source, not to be confused with coal used in the production of electricity.

With the 1975 demand for electricity peaking at about 2, 100 megawatts, the electrical equivalent of the oil and gas used in the province would total about 12, 000 megawatts or six times as much as our present electrical load. Close to half of the oil that's used in Manitoba is used in the transportation sector with the remainder supplying residential, commercial and industrial requirements, generally for heating.

Illustration: If we were to completely convert all of the gas demand and the applicable half of the oil demand that represents the commercial, residential and industrial heating load, and even taking account of the lower efficiency at which those fuels are utilized, would require Manitoba Hydro to roughly quadruple the electrical capacity in the province. This is apart from any additional demand from new customers or from expansion. The efficiency with which we use the various fuels is of course very important. Typical efficiencies for home heating using electricity are 100 percent. Natural gas in the order of 70 percent and oil in the order of 60 percent. Although the efficiencies of furnaces that are in good operating conditions would be around the 80 to 85 percent for a check on their efficiency, the over-all utilization efficiency on a seasonal basis including all the starts and stops that a furnace normally has to go through during the course of its heating season, would vary from about 35 percent in the low case to as high as 75 percent for the oil, and about 60 percent to 70 percent for gas. Now these are the generally accepted figures by the Ashrae Society, which is the Association of Heating and Refrigeration Engineers of North America. However, in good industrial installations somewhat higher efficiencies may be realized in larger installations. In the case of electricity however baseboard heaters will supply just the heat that is required with no loss in a chimney and there will be no change in efficiency from one season to the next.

Now in the transportation sector efficiencies are generally much lower. For instance, the old steam locomotive that you now have seen phased out in our Canadian transportation system, but which is still used in China very extensively, had an efficiency of about 3 to 5 percent, and the present range for diesel locomotives is about 25 percent. Now electric traction would represent a somewhat higher efficiency than the 25 percent. Also, you can put larger power plants into position, you don't need three locomotives to haul a train such as you do with diesels if you have a good electric traction railway.

So discussions have been taking place with both railway companies and it is possible that at some future date electrification of lines in Manitoba will take place. The efficiency of the conventional automobile is not very high and Manitoba Hydro has been making some rather interesting investigations of the possibility of using electric automobiles. We have one unit on order and we expect to get that some time this year and we're going to use it to make an assessment of the driving conditions under Manitoba conditions.

We are also examining the possibility for substituting electrical energy for energy now

(MR. BATEMAN cont'd) . . . . . being produced from some of these scarcer fuels in order to assist the province in becoming less dependent on outside sources of fuel for important uses such as heating and mass transportation. In the past year I'm sure you're aware that our Corporation has been taking a very passive position in promotional advertising of our product. However the Corporation may in the future be more aggressive in encouraging substitution of electrical energy for the non-renewable energy forms. We're going to do this for two reasons: One is, in the face of the declining reserves of petroleum and natural gas and with their sharply increasing prices, not only the reduction in the supply but the increasing prices, it is imperative that this substitution of electrical energy be very carefully analyzed. And our customers who are making these conversions are doing so in increasing numbers even without any aggressive advertising policy on our part. However one of the main things that we can point to because we are blessed for a good number of years with a very satisfactory source of renewable energy resources, we're focusing our main attention on the development of these renewable resources in spite of the very large capital requirements that you can see being associated with them. And we hope to be able to introduce energy from the Jenpeg plant in 1976 and from the Long Spruce plant in 1977, and we'll realize the completion of Jenpeg in '77 and the Long Spruce plant in 1980. Full output from these two plants will increase the Manitoba capacity by 1, 148, 000 kilowatts to a total of over 4 million kilowatts by the year 1980.

Construction periods of 5 years are normal in these hydro developments and when we plan for the future sites that we must have on the lines connected to our system by the year 1981, we must examine all of the alternatives that are open to us. So with the long construction time we must get into planning well in advance of the five to six year time frame, and to meet the load-growth demands beyond 1980 we're doing planning and exploration work on future plants such as the Limestone that you saw in the picture today. The current construction activity at Limestone is associated with a DC terminal that will be located nearby, but we're also doing further site investigation work at the Conawapa site which is downstream from Limestone, and we're doing work on the Burntwood River at Wuskwatim and Manason and First Rapids in order to be able to bring those plants to a design stage, having all the field information that's necessary.

So the 1974 work program included some detailed drilling of foundations and construction, and really the design detail requires an adequate source of the construction material so you must prove-up where the materials are going to come from. So material sources at these sites is just as important as the final design because they must be taken into account in the final design of those plants. Preliminary investigation work is going on then at some of these locations and we expect more of this work will be under way this summer to bring these to a completion.

Now I have a few comments I'd like to leave with you, Mr. Chairman, on the other sites on the Nelson. We have, as you know, been concentrating on the lower Nelson but there are some sites upstream of the Kelsey plant which are also available and that is the Bladder site which we'll be spending some more time on within the next few years.

In the field of the transmission I'd like to just cover besides the large project that we have, the DC project that you have heard so much about, I'd like to just make a few comments about the other things that we have been doing, and will have to do in this next few year period. For instance, we're going to have to build about 500 miles of sub-transmission operating at about 66 kv during the next ten years. This is the basic sub-transmission voltage that we use for supply to our distribution stations and this will be required to look after the projected increases in load in that period of time.

We're also doing some rather interesting development work in the distribution system voltage levels. We're planning to use higher voltages and where we had previously had 4, 000 volts or in some cases 8, 000 volt healers we have now decided to go to a 25, 000 volt distribution voltage level in the interests of economy and in the interests of looking after the higher load demands that we anticipate will be there in the future. This is the trend in utilities of course across the country as the electric demand increases. At the higher voltage distribution lines carry more power and this of course allows a wider space in between the distribution stations and also results in lower losses and lower capital cost. We hope to gain some substantial benefits by going to this higher voltage of distribution.

In the next 10 years we expect to convert about 20 towns and 10 rural areas from the 8, 000 volt systems that are now becoming overloaded to the 25, 000 volt systems, and we have

(MR. BATEMAN cont'd) . . . . . started this conversion in the urban Winnipeg area. I think some of you probably have noticed that we are going to an aesthetically pleasing transmission line design for use in metropolitan areas. We have the tubular steel poles in the western part of Winnipeg which are carrying power into the more heavily congested and developed area around the Polo Park Shopping Centre.

I would like to just say a word about interconnections. In November 1973 Manitoba Hydro and the Minnesota Power and Light Company of Duluth, Minnesota agreed to construct a 230 kv line from the Ridgeway Station near Winnipeg to a station near Hibbing, Minnesota. Manitoba Hydro is going to construct the portion from Winnipeg to the International Boundary near Sprague. The planned in-service date of this interconnection is November 1 of 1976. This new interconnection will assist Manitoba Hydro in improving the reliability in case of disturbances on the high voltage transmission system, and there is also provision for Manitoba Hydro to buy energy from the United States utilities during low river flow conditions that occur in Manitoba. In return, of course, Manitoba Hydro will sell surplus hydro electric energy during a 10-year period and 100 megawatts of capacity for 2 years beginning November 1, 1976. Part of this capacity will come from the previously committed Long Spruce Station. The cost of the line in Manitoba is estimated to be in the order of $7 million. Studies have shown that the net benefits to Manitoba from the interconnection will exceed the cost during the first four years of operation. In other words, we should have a four year payoff on that investment.

An agreement we have reached with Ontario Hydro for the sale of firm power during the period '78 to '82 will come from the Long Spruce Station during the load build-up period on that station. The maximum quantity that we are going to export to Ontario under this contract is 200 megawatts which is really the same as we're currently exporting to them. No additional interconnection lines will have to be built for these transactions with Ontario. The price to be charged for the sale of this power is better than we have been able to realize in the past, it's based on the average cost of the Long Spruce Station plus transmission costs to southern Manitoba. This should result in a significant benefit to Manitoba Hydro.

Now in May of 1974 Manitoba Hydro and Northern States Power Company of Minneapolis signed a Letter of Intent to construct two 500, 000 volt transmission lines from the Winnipeg area to the Minneapolis area. The benefits of these two lines included improved reliability, the ability to purchase energy during dry periods, reduced capital requirements by exchanging Manitoba's summer surplus capacity for the Northern States surplus winter capacity, and of course the sale of any surplus energy that was available on the Manitoba system due to hydraulic conditions. The estimated cost of the interconnection facilities in Manitoba is $66 million. It's in excess of $300 million of capital requirements in the United States, and because of the rising costs in the United States the difficulty of raising capital and the uncertainty of the future Northern States Power have suggested that this project be delayed pending a further review. In the meantime, Manitoba Hydro is reviewing with other American utilities the possibility of those utilities taking part in these transactions or undertaking some different form of interconnection.

Discussions between Manitoba Hydro and Saskatchewan Power Corporation continued during the past year and several possible power exchange programs are under review. In view of the statement of Government policy that was made in the Throne Speech I felt it would be useful to the staff of Manitoba Hydro to have a statement from the Board indicating the general terms that the Board policy and plans relate to the entry into the nuclear field, and I could give you a quick summary of that Board policy statement.

In order to meet Manitoba's increasing electrical energy needs, particularly as energy users convert from oil and gas to electricity, Manitoba Hydro must expect to be building nuclear power stations in the 1990s when the remaining economic hydro electric sites have been developed. Tentative plans for generation expansion indicate that 600 megawatt nuclear units should be used. Requirements in the 1990s will be for 1 unit of 600 megawatt each year. It is considered essential in order to develop staff expertise in this new technology to have a three year spacing between the first two units. Because it would not be possible to bring a nuclear unit into operation in less than 10 years the date for the first nuclear unit will be somewhere between 1985 and 1988. The exact date will be determined as a result of more detailed planning studies. A nuclear development department has been established in Manitoba Hydro within the system planning division. The first tasks of this department are to

(MR. BATEMAN cont'd) . . . . . maintain an up-to-date schedule of the necessary activities leading up to commercial operation of the first nuclear units, to evaluate Manitoba Hydro staff requirements and to begin the process of site selection. A decision does not have to be made in the next several years upon the actual type of nuclear unit. However it is expected that it would be of the CANDU type and generally similar to the Pickering design of Ontario Hydro which has proven so successful.

Now the financing requirements for the projects that I have described today, I have commented on them briefly but they are very large. It is of course in the nature of a hydro-electric utility that capital investment has to be large. In the fiscal year beginning April 1, 1975 our capital requirements to be obtained through long-term borrowing will be approximately $300 million. As I noted earlier, the rate increase that was put into effect on April 1, 1974 provided the necessary extra revenues during the year that was just ended. Now in the coming year despite the expected increase in usage we shall require an additional $18 million of revenue. It was therefore necessary to announce a rate increase effective April 15, 1975 to yield the necessary additional revenue. It is also apparent that a further rate increase will be necessary in one year's time. The rate increase will become effective with meter readings taken on and after April 15th, 1975. The increase is 19.2 percent over all, but with considerable variation depending on the class of business and the size of the community. The effort being made at reducing the number of rates was continued this year, so we consequently have a lower number of rates this year than we had last year. The additional revenue that we expect from this new rate will be in the order of $18 million in the fiscal year which has just begun today.

Now to put our rates into perspective I should start by summarizing our position on cost escalation. In the current year the cost of material has increased by about 25 percent, labour by about 9 1/2 percent, which imposes upon us an effective escalation in our costs of roughly 19 percent. In addition to this, interest rates on the long-term bonds have been as high as 10 percent and we do not anticipate that they will fall below 9 percent in the next year or two.

While I do not consider that a rate increase of nearly 20 percent can be taken lightly, I do want to emphasize that the increase is upon a remarkably small base. By contrast a 20 percent increase recently granted to Consolidated Edison in New York where the average rate is just above 5 cents a kilowatt hour amounted to an increase of 1 cent per kilowatt hour, which is not much less than our average rate on its own. The cost of residential electric service in the past 10 years when expressed as a percentage of disposable income has been steadily dropping and now is approximately 1.2 percent. This last rate increase, Mr. Chairman, does not place Manitoba in an adverse position relative to other utilities in Canada. We are still very competitive. As a matter of fact we are still low in some categories of service, although not in all categories.

Mr. Chairman, that concludes the formal comments that I wanted to make.

MR. CHAIRMAN: Thank you, Mr. Bateman. I have Mr. Craik.

MR. CRAIK: Mr. Chairman, there's a number of important questions that I think in view of the time limits I'd like to ask Mr. Bateman a couple of specific ones related to the information he's given us this morning.

First of all, with regards to the contract that's been let for the conversion equipment, did I gather Mr. Bateman's remarks correctly, him saying that the contract has been let on the Brown-Boveri equipment?

MR. BATEMAN: That is correct.

MR. CRAIK: Has this just been done, Mr. Bateman, or is it . . .

MR. BATEMAN: The contract was let yesterday, the purchase order was delivered yesterday.

MR. CRAIK: Is this subject in any way to Provincial Government action or is this now for all intents and purposes completed.

MR. BATEMAN: Our normal purchasing procedures were followed Mr. Craik.

MR. CRAIK: Well I assume they were but I'm just . . . perhaps the government should be then indicating is there any further provision or requirement to be met by you, the provincial or federal government to complete the transaction?

MR. BATEMAN: No, not to my knowledge.

MR. CRAIK: Can I ask you on this. You indicated that the difference as far as Manitoba Hydro is concerned was a difference of something like - $7 million one way you looked at it and 16.6 million depending if you looked at it another way.

MR. BATEMAN: The evaluated price, the consultant's recommendation based on his evaluation of the bids was $16.6 million.

MR. CRAIK: Then from the information that we've gathered so far this indicates that the development of the plant at Brandon by Canadian General Electric is not likely to go ahead or . . .

MR. BATEMAN: I don't like to comment on what General Electric are going to do because I don't think the bid that we received from General Electric had any strings attached to it at all. It was strictly a bid on the equipment that we were purchasing. Subsequent to that bid I think there were some comments made relative to a plant in Brandon, which are not to be confused with what we were doing relative to purchasing equipment for the second Bipole in the interests of Manitoba Hydro customers and also the Province of Manitoba.

MR. CRAIK: I understand that, Mr. Bateman, I'm not questioning in any way, shape or form Manitoba Hydro's commitment to working to the tender system, but it seems to me there are other factors involved here. Is there not also a factor of federal financing of some of this that enters the equation?

MR. BATEMAN: Well it means, Mr. Craik, that we have foregone federal financing for the offshore equipment that we have placed the order for, but the federal financing at current Crown corporation rates during the drawdown period of the money, which would be between now and 1981 or '82 thereabouts; when paid back over 30 years, the saving to Manitoba Hydro was estimated to be in the order of $2.4 million, compared to the increase in cost of some $16.6 million, it just did not make economic sense to try and attract or to try and place business with a higher priced company for that sort of difference in dollars.

MR. CRAIK: What sort of total dollars are you referring to in calculating 2.2 million?

MR. BATEMAN: Well, the contract that we let - I think in my notes I said was about $86 million - it's a contract of $86 million, half of which we have foregone federal financing on. We're only getting in this policy, federal financing, for 50 percent of the contract.

MR. CRAIK: Well, does the federal financing not come into the installation and other costs involved with this, apart from the direct purchase of the equipment?

MR. BATEMAN: Yes, there would be some additional dollars involved in that. But the project itself which involves, you know, a collection system in the north, a converter station in the north and the expansion of the Dorsey Terminal Station in the south, is the total project of putting Bipole II into service between the years 1978 and '82. And the cost of doing that, we anticipate to receive 50 percent federal financing on, except for that portion of the equipment that is purchased offshore and there will be some escalation on that equipment purchased . . .

MR. CRAIK: Can I conclude then, that you still get the preferred financing rate from the Federal Government on that portion of the work or equipment that is purchased or done in Canada?

MR. BATEMAN: We haven't settled that sort of detail yet, but I would fully anticipate we will.

MR. CRAIK: Has the Federal Government not indicated to Manitoba that there is substantially more than the half of 86 million that's available to Manitoba at the preferred interest rate if the conversion equipment is made in Manitoba? Or in Canada?

MR. BATEMAN: No, I think that the federal people in their regional transmission policy have indicated the availability of 50 percent financing of an approved project. And this 50 percent financing doesn't mean they're giving you the money, they're loaning you the money at about half of one percent better than you can do yourself on the open market, maybe three-quarters of one percent. But Manitoba Hydro has a pretty good bond rating - somewhere between half and three-quarters of one percent difference in interest rate.

Now, the question really boils down to, are we to buy a more expensive Canadian product at increased cost to Manitoba Hydro in order to get the promise of a plant in Manitoba? We had received a promise of a plant in Manitoba before this tender closed, not related to any ties to this job.

MR. CRAIK: I agree that that's not Manitoba Hydro's decision to make and you shouldn't be burdened with it. My question is whether or not the Federal Government has not offered either to you or to Manitoba substantially more than the 40-odd million dollars at the preferred interest rate, if in fact the plant were located in Canada, preferably in Manitoba.

MR. BATEMAN: No. No, they're not relating that. What Canada has offered, as I told you, they're proposing to loan us 50 percent of the cost of Bipole II, which I outlined included

(MR. BATEMAN cont'd) . . . . . the collection system up north, the building of the Henday Converter Station North and so on and so on. Now these items, including the switch yard and associated equipment in Dorsey amount to quite a few millions of dollars, and we would be eligible for 50 percent financing of that total Bipole II job less the offshore equipment.

MR. CRAIK: Well let me - does the total of what you're referring to less the equipment come to - it comes to substantially more than the 86 million you're referring to.

MR. BATEMAN: Oh yes, yes.

MR. CRAIK: It's probably maybe of the order of $400 million.

MR. BATEMAN: In the order of $400 million. Right.

MR. CRAIK: Now are you saying that the preferred interest rate offered by Canada is still there available for that 400 million?

MR. BATEMAN: It's available for the 200 of the 400, only 50 percent of it.

MR. CRAIK: For half of it.

MR. BATEMAN: For half. And then if we exclude the 86 million, take that in half too because they're not going to finance the whole of the 86 million, they're only financing 43 million of the 86. We take that 43 out of the 200.

MR. CRAIK: Fine. Take the 43 out of the 200, the remaining 157 million.

MR. BATEMAN: It's our understanding that this will be eligible for federal financing under the Regional Transmission Policy that they have enunciated.

MR. CRAIK: Has the Federal Government committed itself to that, or it's still to be negotiated as you said earlier?

MR. BATEMAN: We believe the Federal Government has committed itself to that.

MR. CRAIK: If you had gone to - or had somehow gone along with a provision where there would have been a plant put in Manitoba for the equipment required, the basic equipment, was Canada in that position to guarantee that you would get the full amount of the $200 million at the preferred interest rate?

MR. BATEMAN: I don't think . . .

MR. CHAIRMAN: Mr. Schreyer.

MR. SCHREYER: . . . if there isn't implicit in that a request in effect for a legal opinion. It seems to me that there is very clear provision in the Hydro Act that it must adhere to the lowest cost alternative in terms of placing orders for equipment, or any work whatsoever.

MR. CRAIK: Well, Mr. Chairman, for the third time, I'm not questioning that. I said I'm not questioning Manitoba Hydro's commitment to keep to its tendering system. What I'm asking is, trying to illicit information from Mr. Bateman or from anyone else that can shed some light on it whether or not the Government of Canada hasn't provided a substantial incentive through a preferred interest rate to see that the plant goes in Canada, and in this case in Brandon, Manitoba.

MR. BATEMAN: Well, Mr. Craik, the financial incentive just is not there.

MR. CRAIK: As far as Manitoba Hydro is concerned. Was there any discussions, Mr. Bateman, of the possibility of the province as such, rather than Manitoba Hydro entering into an arrangement that could guarantee advantage through the loans from the Canadian Government to see that this happened?

MR. BATEMAN: I'll defer that one, Mr. Chairman, to my Minister.

MR. SCHREYER: Well, Mr. Chairman, it is something which I don't think lends itself to any particularly short answer. The fact of the matter is that the proposal that was made by Canadian General Electric was, if accepted would have been a very real and drastic departure from the bid system and from the ethics of the bid system. That's point number one.

Point number two is, that the work that would have been done in Canada is relative, it is not absolute. For example the amount of work that would be done in Manitoba under the Canadian General Electric bid would be significantly less than will be done under the lower bid from the Berry Group. The second aspect of this is that Canadian General Electric is also a relative term since some of the work really will emanate from Pennsylvania and if one wants to take this into rather profound political considerations, it seems to me that two Prime Ministers of Canada in a row, not in succession I'm sorry, but two Prime Ministers in the last 15 years have declared the matter of cardinal policy for Canada that it attempt to generate more trade with western Europe so as to reduce dependency on trade with the United States. Now I don't know if that's a fond dream or whether it holds out any prospect of realization but

(MR. SCHREYER cont'd) . . . . . when there is a very real substantive opportunity to allow this to happen by merely following the bid system, it seems to me this ought not to be thwarted.

And the final point I make, Mr. Chairman, is the assumption that there is some very real benefit as a result of taking federal financing on this particular order. As Mr. Bateman has already indicated very clearly, the advantage is largely - well, it is in fact, elusory; it doesn't exist; for reason of the fact that the federal financing rate is not dramatically more favourable than what we can obtain in the normal money markets, nor is it in itself any more favourable than we can obtain in European money markets within the course of the next 12 months, it's a reasonable assumption for us to make. I feel that there is a good deal involved here, which makes me wonder about the ethics that are practised in terms of governments expressing solicitude for one firm at the expense of a whole raft, or a whole context of bid systems and the ethics that surround big systems.

MR. CRAIK: Mr. Chairman, I think on this point, perhaps it's a point well taken, regarding fostering trade with other countries, but I think in this particular instance the evidence is that on this type of equipment Canadian manufacturers aren't even allowed to quote on this type of equipment, so I think you can gloss over it quite easily and say, well, it should be a complete and wide open world market on bidding of this sort of equipment, but in this particular case, in fact, the Canadian companies are not even allowed to bid in Europe on this type of equipment. Or as in reverse here, we have a company come in, and albeit they're low as far as Manitoba Hydro is concerned, but we have nevertheless, on all the evidence, foregone a plant at Brandon which would not just be devoted to conversion equipment, it would have been a plant which had this only as a part, and in the long run a small part of its operations, a plant devoted to high technology and new technology in a solid state equipment that has been developed and bred in Canada and it is now spreading to other parts of the world and would have had export from Manitoba into such other things as the Churchill Falls development in Labrador and in other parts of the world.

MR. CHAIRMAN: Mr. Premier.

MR. SCHREYER: Mr. Chairman, I would merely like to make this further observation that, let there be no mistake, the Government of Canada was asked whether they were prepared to make a direct capital contribution so as to reduce the differential in price of some $16 million plus or minus, so that in fact there would be no net penalty to Manitoba Hydro whatsoever in proceeding with the alternative. And the answer to that was that the Government of Canada was not prepared to follow such a course of action. That being the case, the allegedly favourable federal financing, because it is so marginal in interest rate terms, would have been insufficient in and of itself to eliminate the unfavourable gap or differential in price as between the two bids.

The other observation I must make, Mr. Chairman, is that if it is being suggested that Manitoba Hydro should be paying 16 million more in order to allow a company to build a 16 million dollar plant, then surely there must be a better way to handle the problem, or an opportunity of that kind. It can be cloaked in many different ways. I don't think that anyone will deny, any of the principals involved will deny, that when asked directly whether we were to assume that there was any connection between the suggested building of a plant in Brandon with the bids with respect to the high voltage direct current Bipole II, I was assured most profusely: perish the thought that there was any connection. I mean, I think some people are playing games here, to put it bluntly.

MR. CHAIRMAN: Mr. Bateman.

MR. BATEMAN: Mr. Chairman, could I also make the comment . . . Mr. Craik, I'd just like to clarify the point on what your understanding is relative to this technology being a Canadian technology. This is not a Canadian technology. It was developed - first of all, Canada spent a lot of money in a competitive company to develop a Canadian technology, and that company went out of business as far as this particular phase of DC transmission is concerned. And while they were still putting money into the development of one company, they literally cut the rug out from under it by giving another company the Eel River job. Now then, that company is an American company, and they also have licensed a French company to manufacture this same equipment in France. So how could a Canadian subsidiary of an American company expect to compete in the European market? There's no way.

MR. CRAIK: Well, isn't the high voltage DC transmission system that you find here in Manitoba, is it not probably the largest in the world that's ever been undertaken?

MR. BATEMAN: It's the largest operating, the . . .

MR. CRAIK: The largest operating.

MR. BATEMAN: The current Cabora Bassa scheme will - it's just going through its commissioning stages now - will, when it's operating, be at a higher voltage and a slightly longer transmission. Now we are likewise stepping up the voltage level a little bit on our DC system, but this technology I'm sorry to say, Mr. Craik, the German working group that is represented in Canada by Brown-Boveri have stolen a three-year march on the rest of the industry in the world that is relating to this particular type of equipment.

MR. CRAIK: Well, I'm not going to debate with you, Mr. Bateman, on the nuances of the development of the technology. It is my understanding, though, that high voltage DC and particularly the solid state conversion, was pretty deeply rooted in Canadian technology and it was one area in which Canada may well have made some substantial contributions in the world, and I know that many groups are looking outside of Canada and elsewhere from Manitoba to carry on this development.

MR. BATEMAN: Well, if I could just clarify that one point further. You see, it is true that Canada financed the first all solid state, back to back, DC conversion station in New Brunswick - the Eel River Station. They financed it on some sort of a research program which benefitted the New Brunswick Power Commission. It also benefitted the Canadian General Electric Company somewhat. But the technology for that, when the papers were prepared and presented at the World Power Conference in Paris, who presented the papers? The authors were three Americans and one Canadian. You know, I chided them, I'm on the national committee of CIGRI and I chided them for, you know . . . Here it was argued that they were presenting a Canadian development and yet it was three American authors presenting it. There's no question about where the technology is centred. It's centred in the United States.

MR. CRAIK: Mr. Chairman, I want to get back and ask Mr. Schreyer, based on his comments. Then, if I gather correctly, he says that there were no incentives offered to Manitoba to locate this plant in Manitoba.

MR. SCHREYER: That is substantially correct, if by incentive you are referring to other than the marginal differential in interest that is available as the result of the standard, the new, now standard national policy announced approximately 11 months ago . . .

MR. BATEMAN: January, 1974, Mr. Chairman.

MR. SCHREYER: Yes, January '74, approximately 14 months ago, of 50 percent federal loan financing of long distance transmission and inter-regional transmission, and I believe 50 percent loan financing of the first unit of a nuclear reactor. Now prior to that, I think, it was pretty well ad hoc, but as of January '74 apparently this is now the standard, uniformally available across Canada, federal loan financing. Other than that, there was no incentive offered. The answer is negative.

MR. CRAIK: Was the incentive on the loan half percent or one percent?

MR. SCHREYER: Well it's not something that can be pinpointed for all time. It is a moving phenomenon. I mean, it varies in a band, I would think, of roughly, well very roughly 1/2 to 3/4 of one percent.

MR. BATEMAN: Or zero to one percent, Mr. Premier.

MR. CRAIK: And over the period of the $200 million loan, wouldn't this add up to somewhere around 13 (?) million dollars.

MR. BATEMAN: Yes, but it's not over the $200 million loan. It was just over the . . .

MR. CRAIK: That's right, it was on the 43, assuming you're going to get the remaining amount.

MR. SCHREYER: Well there's no reason to assume, Mr. Chairman, that we would not; that is a standard federal policy. And if I thought for a moment that there was some sug - gestion that subsequent contracts are now predetermined as to federal financing because of the letting of one contract, I have a word for that, and that's intimidation. Let there be no mistake about it, that's what it would amount to.

MR. CRAIK: Mr. Chairman, then, wouldn't a straight grant from the Federal Government also be intimidation if it's interpreted that way?

MR. SCHREYER: No, not if it's being requested and being turned down. Not if it's being asked for as to whether this would be constant or consistent with their overall national policy with respect to technological development. In what way does intimidation or retaliation enter into it? It doesn't enter into it at all.

MR. CRAIK: Can I ask Mr. Schreyer then, further: was the Federal Government specifically requested for incentives other than the interest rate incentive to locate the plant in Manitoba?

MR. SCHREYER: It was asked through one of its ministers whether it would be possible to extend some form of extraordinary financing to deal with what seemed to be an extraordinary desire on the part of the Government of Canada to have the order placed with a particular firm, whether in light of that any special financial consideration would be forthcoming. And I've already indicated that the answer was that it could not, it couldn't be possible.

MR. CRAIK: Was a complete study done of the proposed plant that Canadian General Electric was planning to build at Brandon?

MR. SCHREYER: Mr. Chairman, there was a very complete study done with respect to the relative acceptability. Here I will certainly leave this with Mr. Bateman to elaborate on, but there was a very detailed study done, evaluation done, by independent outside consultants, consultants I might add who were deemed acceptable by both Manitoba Hydro and the Government of Canada with respect to previous HVDC technology; and in the opinion of the consultants, the engineering consultants, the merits of the technology, of the Brown-Boveri technology, were certainly better than the alternative. So that's yet another dimension that has not been raised by Mr. Craik, and I believe that that merits some further elaboration insofar as a study being done of the proposed construction of a plant at Brandon. It had nothing to do with the equipment that would be involved in Bipole II or only peripheral . . .

MR. BATEMAN: Some of the equipment or the valves would have been assembled in Brandon plant. As the Premier indicated to you, the total Canadian content was evaluated, as was the Manitoba content evaluated, and I think the order that we have placed results in as much Manitoba content as any other competitor was prepared to put in.

MR. CRAIK: But did the consultants' report referred to - my question was whether the government had evaluated the plant, not just in relation to what they were going to provide for you on the Hydro project, but whether they had evaluated what they were going to manufacture for export outside of Manitoba, which may or may not have been in the HVDC field. Would your consultants have covered that part or just the part that affects Manitoba Hydro directly?

MR. BATEMAN: We did not evaluate that because there was no guarantee that the plant was going to be a long term entity although, you know, I would hope that it would, but put it the other way: When we first were approached by the General Electric Company . . . We are a very substantial customer of General Electric Company up until they tried to exert this influence upon us to buy their product as opposed to the low bid, and we have placed a tremendous amount of business with General Electric Company over the various years, and we would like to think that we prefer to buy Canadian when we can, except under these circumstances where we're being pressured into buying something more expensive. But the information we had was that they would be quite attracted by the prospect of presenting a plant in Manitoba because, as I understand the Chief Executive Officer of the Canadian General Electric Company indicated to the Premier in my presence, that they had a need to spin off some of their Peterborough works because they were becoming congested down there, and what better place than Manitoba for a plant? Now that was before the tenders closed.

MR. CRAIK: Well, my question still is not in relation to. . .

MR. BATEMAN: Well, the other is . . .

MR. CRAIK: . . . what has been answered, but my question is whether or not a general feasibility study of all the things that were planned to be done at Brandon was taken into account in dealing with the matter. Perhaps I have to ask it in the Legislature rather than here, Mr. Bateman, because I assume it's a government matter and I'm prepared to leave it, but I think that . . .

MR. BATEMAN: I can also assure you that, as far as I understand it anyway, the normal type of evaluation of a plant such as that which is considered by the various federal agencies that are open to granting grants, the DREE grant for example, there was no reason why that plant would not receive a DREE grant if it was to go ahead.

MR. CRAIK: Well, I gather from Mr. Schreyer's remarks, though, that there wasn't any apparent willingness on the part of the Federal Government to support it through DREE or any other means other than this preferred interest rate.

MR. SCHREYER: That is correct. But I sense that there may be some misinterpretation

(MR. SCHREYER cont'd) . . . . . here. There was involvement of DREE but not in connection with the order relative to Bipole II. It was in connection with the possibility of a plant in Brandon with the possibility of DREE funds in the order of 1. 2 million or some such amount. But that in no way could be regarded as directly related to the problem of how ethically and best to carry out the decision-making with respect to the large order for Bipole II.

MR. CRAIK: Mr. Chairman, I think perhaps I'd better pursue this further through the Department of Industry and Commerce or other means in the Legislature. But I would gather that the thing is a closed case now, the tenders have been let and we're getting the equipment, and it's not likely we're going to get a Brandon plant.

MR. BATEMAN: I wouldn't conclude that. I wouldn't conclude that.

MR. SCHREYER: Well, Mr. Chairman, unless the English language is something completely alien to me I would think that that is not an assumption that can be drawn at all from what was told me by senior principals of Canadian General Electric, that I was not to deduce that there was a connection between the pros and cons of building a plant in Brandon and the bids that were under seal for opening. Now unless the English language is something that is very difficult to understand then I have to answer that there is no connection, unless people don't say what they mean.

MR. CRAIK: I'm not fluent in another language, Mr. Chairman, so we won't ask . . .

MR. SCHREYER: Neither am I.

MR. CRAIK: I think the statement that was made here that the portion that would have been manufactured in Manitoba would only be a portion, small or large of the total requirement, therefore the Manitoba plant would not have been, could not be considered to be manufacturing the total requirements of this contract of your 90 million dollar, 86 million dollar contract. There's only a portion of that that would have been manufactured in Manitoba anyway.

MR. BATEMAN: That's correct.

MR. CRAIK: Right. On the other hand, I'd like to determine from the government what portion of the plant in Brandon would have been aimed, over the projected period of its existence, what portion of it would have been aimed at Manitoba. I think that if you are going to use rationalization that only part of it could be done here anyway. We have to also legitimately ask to what extent the Brandon plant in manufacturing in that part of Manitoba is looking only at Manitoba as a market.

MR. BATEMAN: I would hope, Mr. Craik, that the Brandon plant would be established and that it would be established in time to permit the company to take advantage of the Canadian market. If they don't establish the plant they're not going to be in a position to take advantage of the Canadian market if what they say is true about being crowded at . . .

MR. CRAIK: Mr. Chairman, I'd like to ask Mr. Bateman with regard to his announcement on the Hydro rate increases, can he give us a breakdown of the 19. 2 percent overall increase. He indicated that they were different in different categories. Did he intend to table this with the committee today?

MR. BATEMAN: I could perhaps give you a rough breakdown on that, Mr. Craik.

MR. CRAIK: It seems to me last year, Mr. Bateman, that you handed out a complete breakdown listing by category.

MR. BATEMAN: I can get that for you next week if that's . . . I don't have any, but there's a new rate schedule you could - that's a copy of there, is it? Yes. I think that approximates it.

MR. CRAIK: If my memory is correct, last year it was indicated by you at the Utilities meetings that we could probably look at a ten percent per year increase over a period of about six years.

MR. BATEMAN: I don't think I put a period of six years in, Mr. Craik. My hope would be that one more year at an increase somewhere perhaps in the order of the increase that we've announced this year, depending upon how things develop in this year, which we'll have a better appreciation of as we develop in time, but I would expect that after that our rate increases should be more modest because, you see, what we're doing now, we've added in . . . the rate increase that you're looking at today is really the effect of the decisions we made back in 1966 to build the Kettle Plant, and so on. Now the Kettle Plant is all in our operating accounts, which indicates the depreciation and interest payments are all coming out of the

(MR. BATEMAN cont'd) . . . . . ratepayers as against it being capitalized.

The prospect is of course that as we depreciate that plant over its life we reduce the cost of power from Kettle, so the decision to go to the Nelson is a good one because the highest cost power out of the plant is the first year's cost. From then on because of your straight line depreciation it's less, and now we have to add the Lake Winnipeg regulation works and the Churchill River Diversion capital costs to our books over the next year or two as these projects are completed and put on our operating accounts. And they of course will be shared by Long Spruce and Kettle and Kelsey and as we bring in the next plants they'll be shared by each succeeding plant, so this will be a couple of years of, this year and next year, followed by I would hope some more reasonable increases.

MR. CHAIRMAN: Mr. Bateman, I believe we do have some rates that can be distributed.

MR. BATEMAN: All right. If they're here let's distribute them.

MR. CRAIK: We'll probably want to have a look at these because they're pretty big and voluminous, so perhaps we could have any questions on them be asked another time.

MR. BATEMAN: Well just to answer your question. I now have handed me here the residential, the average residential increase is about 17.4, the general services 21.1, the farm is 20.5 and the power is 20, making an overall of 19.2. Last year, you know, we put a higher increase on the power. I think it was 25 percent. 25.7 percent.

MR. CRAIK: What happens to our power rates . . . then we haven't felt the full impact of the Lake Winnipeg and Churchill River overexpenditures of 300 or 400 million dollars that wasn't originally planned in 1966 that you referred to? When do we get the full impact of that great boondoggle?

MR. BATEMAN: I think you're confusing the issue here, Mr. Craik. I think the original project that we had an estimate of 50-odd million dollars for, without the cost of studies, was not the project we built, that as you know that was the Whiskey Jack Project. We moved downstream on the advice of consultants to avoid ice problems and therefore we were talking about an 80-odd million dollar project. Now we added generation which is going to be a godsend to us in 1976 because without it we would be deficient, and we're just not really confusing 400 million, which is a fictitious figure really because I've never known where you got the 400 million dollar figure from, but we're really comparing the cost of Jenpeg Generation and the control works for Lake Winnipeg, all of which were required in the federal agreement with Ottawa. Now granted, some people said it shouldn't be built when it was, but that's another argument.

MR. CRAIK: I think the latest figures you gave us this morning in the total cost of Lake Winnipeg and Churchill River come to $422 million.

MR. BATEMAN: Well, if you want to add them both, yes, all right.

MR. CRAIK: So I . . .

MR. BATEMAN: 252 and 170. And I'm not saying the Churchill River Diversion will end up at $170 million. It may end up higher than that.

MR. CRAIK: The figure you used of 252 million on Lake Winnipeg, do you have a breakdown of all the costs that go into the 252?

MR. BATEMAN: Yes.

MR. CRAIK: Jenpeg versus the channelling, versus the power lines and so on?

MR. BATEMAN: Sure, I have an approximate breakdown of it. I have a broad breakdown but I can get a more definitive one if you like. The control channels are presently estimated at 45 million, the Jenpeg structures themselves are estimated at about 18 million and the powerhouse and control at 79 million, and that's the direct costs. Now then there are indirect costs that we have to account for: The preliminary studies which amounted to 6 1/2 million; the camps, access community roads, etc., 17.3 million; engineering and administration 21.4 million; interest 33 million; and stores, catering, etc., 15 million; contingencies almost 18 million. Those are the detailed breakdown.

MR. CRAIK: This doesn't include then, or does it, the power?

MR. BATEMAN: Yes, that's the full powerhouse and control works, and channels, everything.

MR. CRAIK: The transmission lines?

MR. BATEMAN: The transmission line, I don't know whether that transmission line is in there or not. The transmission line was built as you know to provide construction power

(MR. BATEMAN cont'd) . . . . . so I presume it is in here, in the access and camps, community, etc. It's used to supply the community, it's also used to tap off into the Cross Lake area and it will be used in the reverse direction to bring the power out of Jenpeg back into the system.

MR. CRAIK: Mr. Bateman, on the arrangement with Northern States Power that you've indicated and which we have received a copy of your agrement with . . .

MR. BATEMAN: Of our Letter of Intent.

MR. CRAIK: Your Letter of Intent, with Northern States Power. Did you say that this has now been delayed?

MR. BATEMAN: It has now been delayed, that's correct. They have asked to delay it, or to re-examine it. We are currently in the process of re-examining that interconnection with Northern States Power, at their request.

MR. CRAIK: What does this do to your plans with regard to the total development?

MR. BATEMAN: Well, it could do several things. We were hoping to be able to buy some power in 1981 off that interconnection, so it may force us into an earlier decision on the next plant on the Nelson River. But we are just in the process of discussing these matters now with Northern States so it's too early yet to indicate what or how they will affect our plans.

MR. CRAIK: Does this mean that you don't have an application for the National Energy Board for export?

MR. BATEMAN: We don't have an application at the moment before the Energy Board, that's true. We have one that's almost ready to present but we haven't presented it yet, pending whether we have to go for a single application for a 230 kv line, which we would prefer not to do, or a single application for the 230 plus the 500 kv line. It literally means going through the work twice if it can't make the application at the same time and I would prefer not to have to do that.

MR. CRAIK: You referred in your comments to a possible agreement with another province rather than the American interest. Is that . . .

MR. BATEMAN: No, I didn't refer to another province but I said we are currently discussing with Saskatchewan. See, Saskatchewan and Manitoba have traditionally sold power back and forth on a year-about basis, for some, well since we put the first interconnection in, and we anticipate that they may want to sell part of a new thermal unit they're putting in down near the Willow Bunch Coal Deposits. They may want to sell part of that to Ontario, which would involve Manitoba Hydro system. So there are negotiations and discussions under way with Saskatchewan about this and many other matters relating to our present and planned future interconnections with that province.

MR. CRAIK: Is it possible that this will take the place of your larger connection with U.S. ?

MR. BATEMAN: No. No, no. The shape of their market is exactly the same shape as our market. In other words, they peak in the wintertime and we peak in the wintertime. A great value in the high voltage interconnection with the U. S. south of Minneapolis or Minneapolis and South is because of this seasonal diversity that I spoke to you about last year. That we can materially benefit each other's systems by us selling some of our summer capacity and buying some of their winter capacity and vice versa. And one of the conditions, as you probably noticed in the Letter of Intent, covered that to the tune of 500 megawatts of summer surplus capacity plus a growing amount seasonal diversity capacity.

MR. CRAIK: Is your present hold-up with the American interests then, is it anything to do with the terms of this agreement or is it, you mentioned the present high costs . . .

MR. BATEMAN: They undoubtedly think that agreement's too good from our point of view and they want to re-examine it.

MR. CRAIK: Well they had . . .

MR. BATEMAN: It's not an agreement, it's a Letter of Intent.

MR. CRAIK: Letter of Intent, but . . .

MR. BATEMAN: Which they signed.

MR. CRAIK: Which they accepted?

MR. BATEMAN: That's right. What they're saying in effect to us though is that instead of building two lines they would prefer to build one line now and hold the other line for some time in the future. That does change the conditions under which we would be prepared to enter such an agreement, and those are the things that we are discussing now. It could be that we come back to that Letter of Intent. I don't know at this point in time.

MR. CRAIK: So it turns out that the Letter of Intent really isn't binding, it's just wide open at the present time?

MR. BATEMAN: At the present time you could interpret it almost any way.

MR. CRAIK: Isn't the intent of this interconnection to provide stability insurance to your system rather than for really the export of power in terms of the dollar . . .

MR. BATEMAN: It will help materially improve our system reliability, those two big interconnections; just as the one 230 kv interconnection that we're building now for in-service in '76 will improve our system reliability. The big interconnection would be much better. We may have to pay more for that reliability.

MR. CRAIK: The terms of this agreement indicate that although they're building the line in the American - you're building it to the American border and the Americans are building it from there to Minneapolis . . .

MR. BATEMAN: Right.

MR. CRAIK: . . . you actually have a clause in here where you're paying them for their portion of the line over the period of the twelve year agreement.

MR. BATEMAN: We're giving them an allowance of each surplus kilowatt hour we sell that's transmitted from the border to a point deemed to be midway providing there are no interconnections other than the two of us on that line. Once they interconnect some other utility on that line then our benefits to them are re-examined.

MR. CRAIK: So despite the fact that you're paying them a fixed amount for the amount that it's used . . .

MR. BATEMAN: Fixed per unit kilowatt hour rate.

MR. CRAIK: Then they're still saying at this point that it's too costly from there to build the line?

MR. BATEMAN: That is correct.

MR. CRAIK: When you use the figure 300 million dollars in the States and 66 in Canada, is that a current figure that they're basing their decision on or . . . ?

MR. BATEMAN: That's probably an outdated figure. I mean, I think those are the costs that we had initially. I don't know precisely what their costs are now but I would think in the order of 325 million dollars and ours will be perhaps as high as 70 million dollars. That is for the two circuits, of course.

MR. CRAIK: Do you expect a decision or an agreement with them in 1975?

MR. BATEMAN: Well, I certainly hope so. I certainly hope we can within the next few weeks hammer out an understanding on any change conditions that may be necessary to implement.

MR. CRAIK: You haven't in the agreement with the American interests spelled out the price of power except to say that it's in terminology of your incremental costs plus theirs divided by two, minus allowance for the use of the line. What do you estimate that the incremental costs for Manitoba will be on water power?

MR. BATEMAN: Well it will depend on where we are on the storage reservoir curve. Our value of power changes with the reservoir storage curves. If we have a spill situation then the energy isn't worth very much. If we have to at some point in time replace it with coal, then it's worth as much as coal energy. So it's a variable.

MR. CRAIK: Well you're selling it in the summer so it's not likely you'd use coal.

MR. BATEMAN: Oh it is, depending upon the runoff conditions, we could be into a reservoir replenishment condition the following winter and therefore we would not want to sell summer energy at incremental hydro rates if we in turn had to replace it with coal energy later on. So it's a variable situation that is established by our operations people on a computer program based on the storage and load growth and a great number of other figures.

MR. CRAIK: Are you saying that you can't indicate what roughly you think this incremental cost will be?

MR. BATEMAN: Well the incremental cost of our system as I said will vary all the way from somewhere in the order of half a mill or thereabouts to as high as perhaps 6 1/2 mills.

MR. CRAIK: But if it's water it's probably in the lower range of that?

MR. BATEMAN: No, not necessarily. No, it depends entirely on the reservoir.

MR. CRAIK: Well, what's coal - 6 1/2?

MR. BATEMAN: Well, currently, I would have to ask Mr. Atchison what it is. -- (Interjection) -- It's eight mills for coal right now.

MR. CRAIK: What's the incremental rate in the United States on coal?

MR. BATEMAN: Well, depends again on the plant that you're talking about. If it's a large thermal unit I would think it would have, I would think somewhere around the three mill rate.

MR. CRAIK: Well do you expect to, as a result of when you plug everything into these - you surely, I would assume have done some dollar calculations on this.

MR. BATEMAN: Oh yes.

MR. CRAIK: Are you going to . . . on this exchange of 2 1/2 billion kilowatts south in the summer and possibly back north in the wintertime, is the cost going to work out about equal, do you think, between us and . . .

MR. BATEMAN: I would be very happy if we had signed agreements to tell you exactly what those costs are, but I think if I gave you the detailed cost data now publicly, it might prejudice our negotiations with Northern States Power. But I can assure you, Mr. Craik, that the benefit to Manitoba Hydro of that interconnection over the 12-year agreement period that it anticipates is very substantial indeed.

MR. CRAIK: From a dollar point of view or . . .

MR. BATEMAN: From a dollar revenue point of view. From cash in the till, so to speak.

MR. CRAIK: Growth, because you're going to sell them larger amounts than you're going to take back in, but are your rates going to be roughly the same?

MR. BATEMAN: Rates, I'm not sure that I understand what you mean.

MR. CRAIK: Well, your kilowatt hour rates.

MR. BATEMAN: Oh! No, the Letter of Intent provides the kilowatt hours that we purchase, or sell, will be related to the cost of production or a minimum of so many mills plus 10 percent.

MR. CRAIK: Well, if we average out, and this may be taking it out of context, I don't know, but if you average out you're talking about 3 1/2 mills export rate to United States. Are we going to get our power back at 3 1/2 mills?

MR. BATEMAN: Oh, again, it would depend upon when we wanted it back. If we were buying it back from a nuclear unit at night, we might get it back at 1.8 mills.

MR. CRAIK: 1.8 mills, you think would be the upper . . .

MR. BATEMAN: Well I must question you though. When you said when we sell ours at 3 1/2 mills, where did you get the understanding that it's three and a half mills we're selling it at?

MR. CRAIK: Well I'm averaging between the 1/2 and 6 1/2 that you indicated.

MR. BATEMAN: Oh, well, I think that's going to give you some erroneous conclusions. I don't think the Letter says that.

MR. CRAIK: All I'm asking you is, without prejudicing your bargaining position, what you expect to sell at per kilowatt hour in mills and what you expect to pay for in kilowatt hours.

MR. BATEMAN: Well, maybe I could do it the other way. Over the life of this agreement I could indicate to you that we would not have been into this arrangement if we hadn't had a better than three to one benefit cost ratio.

MR. CRAIK: Well now, that all depends what you've got in your benefit cost ratio, doesn't it, Al? All I'm trying to figure out is how many mills a kilowatt hour you're selling for and what are you paying for it.

MR. BATEMAN: Let me tell you . . . well, you see Mr. Craik, the value of energy in an electrical utility varies from hour to hour. In our utility and in the U. S. utility. So when you ask me what are we paying for it, I have to frankly tell you I would have to check what the going price for energy is. It's very similar to the stock market, you know.

MR. CRAIK: Well, I have from you, the incremental cost of Canadian is 1/2 to 6 1/2 mills and the, I haven't got any . . .

MR. BATEMAN: Eight, I think 8, I was corrected there on the . . .

MR. CRAIK: Eight on coal?

MR. BATEMAN: Yes.

MR. CRAIK: And the decremental rate you refer to, which is apparently the American incremental rate I assume, not knowing the terminology, that I'd like to get, if you have it, some idea on what that spread is likely to be.

MR. BATEMAN: Oh, that spread currently, I could tell you currently, is as low as 1.8 mills I believe and as high as 30 mills.

MR. CRAIK: Well, then it would appear that the mill rate . . .

MR. BATEMAN: If you want a hypothetical example I could give you one. Supposing our incremental cost of production was 10 mills and the American decremental cost of production was 30 mills, the average price would be 40 mills. Now we would each . . . we would pay 20 mills for that. So they would save 10 mills on their decremental cost and we would make 10 mills on our incremental cost. Then we would pay the reading charge that we spoke about on that transmission circuit for surplus energy, and that would amount to 2 1/2 mills. So we would make 7 1/2 mills a kilowatt hour.

MR. CRAIK: The price of the power coming back in is stated as being set at their operating cost, plus 10 percent, plus the transmission loss.

MR. BATEMAN: This is normal utility accounting.

MR. CRAIK: Out-of-pocket operating costs. What do you estimate their out-of-pocket operating cost, plus 10 percent, plus transmission would be?

MR. BATEMAN: Oh, a fraction of a mill.

MR. CRAIK: Pardon?

MR. BATEMAN: A fraction of a mill.

MR. CRAIK: Less than one mill.

MR. BATEMAN: Well, I would think less than one mill.

MR. CRAIK: Does that not include the cost of their coal?

MR. BATEMAN: Well, you see, you said, and their out-of-pocket operating costs. Their out-of-pocket operating costs, depending upon whether you define it as including the price of coal or not including the price of coal, would be different. See our incremental . . .

MR. CRAIK: What did your . . .

MR. BATEMAN: Well, our incremental out-of-pocket costs in a lot of utility agreements relate to the incremental cost of maintenance.

MR. CRAIK: I'm trying to get a figure for their NSP's, out-of-pocket operating, plus 10, plus transmission loss. Is that going to be 5 or 6 mills?

MR. BATEMAN: No.

MR. CRAIK: Is there no ballpark figure you can use?

MR. BATEMAN: Yes, it varies again from day to day and hour to hour.

MR. CHAIRMAN: Order please. The hour being 12:30, the next meeting will be held on April 8th, 10:00 o'clock. If there are any changes they will be announced in the House. Committee rise.