

LEGISLATIVE ASSEMBLY OF MANITOBA
THE STANDING COMMITTEE ON PUBLIC UTILITIES
AND NATURAL RESOURCES
Thursday, 16 April, 1987

TIME — 10:00 a.m.

LOCATION — Winnipeg, Manitoba

CHAIRMAN — Mr. C. Birt (Fort Garry)

ATTENDANCE — QUORUM - 6

Members of the Committee present:

Hon. Messrs. Cowan, Doer and Parasiuk

Messrs. Ashton, Baker, Birt, Enns, Filmon,
Maloway, Manness and Scott

APPEARING: Mr. M. Eliesen, Chairperson, Board
of Directors, the Manitoba Hydro-Electric Board

Mr. G. Beatty, President and Chief Executive
Officer, Manitoba Hydro

Mr. C. Goodwin, Senior Advisor to the
President, Manitoba Hydro

Mr. A. Derry, Vice-President of Business
Development, Manitoba Hydro

Mr. P. Thompson, Division Manager,
Marketing, Manitoba Hydro

MATTERS UNDER DISCUSSION:

Annual Report of the Manitoba Hydro-Electric
Board for the fiscal year ended March 31, 1986.

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MR. CHAIRMAN: Mr. Eliesen.

MR. M. ELIESEN: We have some answers to the questions we took as notice at the last meeting of the committee which I can make available now. There was a request for a map of Manitoba indicating the water power reserves and we have the maps put out by the Department of Northern Affairs. These are public maps and we have two copies indicating the water power reserves in Manitoba.

The second question that we took as notice, we didn't have it available at the time, was what was the estimate provided by the Department of Finance with regard to 1987-88 on the hydro rate stabilization. We have copies of the extract from the Budget Speech, which again can be distributed, but the amount as indicated there for the fiscal year 1987-88 is \$23,884,700.00. There are copies that can be distributed on that.

Finally, we were asked to provide the kind of breakdown on Limestone's costs that we provided to the committee last year, that is, for the new estimate of \$1.73 billion and we have copies on that, that we can table with the committee. We believe that answers all the outstanding questions we took as notice.

MR. CHAIRMAN: Mr. Minister.

HON. W. PARASIUK: I'd also like to note for the record that I did provide the Member for Lakeside with three copies of a background piece on projections and on rate comparisons. I will deposit a copy of that material with the Clerk at the end of the Session.

MR. CHAIRMAN: Thank you.

Anyone else have any information they wish to file for the record? No, okay.

Mr. Manness.

MR. C. MANNESS: Mr. Chairman, I thank Mr. Eliesen for giving me a copy of the 1987-88 expenditure estimates that came out of the Budget. I was well aware of the figure that was put in the Budget dealing with the hydro rate stabilization. I think the question I had was whether or not at this point in time there was any indication that this number would change at all, given the fact that we may be one or two months past the time when the Budget was prepared. That was the essence of my question.

MR. M. ELIESEN: Mr. Chairman, well, No. 1, we didn't have knowledge at that time and I think Hansard will record that we were asked for that specific number which we didn't know. We indicated that this is a Department of Finance estimate and really the estimates in this particular area rest with the Department of Finance. Manitoba Hydro itself does not have any idea of whether or not the estimate that was tabled in the Budget is the current one, but that's the one that was provided by the Department of Finance and that's the only one that Manitoba Hydro is aware of.

MR. C. MANNESS: Mr. Chairman, I don't want to prolong this at this point in time because I do want to later in the day or at another sitting ask some specific questions dealing with Manitoba Hydro borrowings. As Mr. Eliesen, in indicating to me, that none of the vice-presidents in Manitoba Hydro have a total understanding as to Hydro borrowings, that indeed all of those borrowings are done or performed by staff in the ministry of Finance.

MR. M. ELIESEN: Yes, Mr. Chairman, we do and we can go into detail and respond to any questions in this area. The point of reference with regard to the hydro rate stabilization amount really dealt with the changes that were announced by the government dealing with ERSA. Manitoba Hydro itself, as members of the committee will recall, we were asked these questions at the last committee hearing and we indicated that the Board of Manitoba Hydro believed that was a responsibility of the ratepayer and not the taxpayer. We had recommended to the government that we assumed that responsibility effective April 1, 1987. That took place.

Now, the government as well chose though to, on a retroactive basis, pass back to Hydro the foreign debt associated with the U.S. denominated funds which make up about 70-75 percent. In order to ensure that we financially - when I say we, Manitoba Hydro - put at the same place, it was estimated by the Department of Finance that a 4.7 percent rate increase effective April 1 would provide that kind of financial amount together with the lower reduction in water rentals. So that was the point of reference, but we certainly can respond to any questions in the context of future borrowing. All I can say is though, Manitoba Hydro, we are not our own fiscal agent. The Department of Finance operates as Manitoba Hydro's fiscal agent. They borrow on our behalf as they borrow, of course, on behalf of all other Crown corporations and agencies as well as the Government of Manitoba.

MR. CHAIRMAN: Mr. Enns.

MR. H. ENNS: Mr. Chairman, just for the purposes of getting some general idea about the direction that Hydro is going on development on the Nelson, we hear different statements coming from different sources from the Minister, from Hydro. We hear talk of the next power station, Conawapa, quite frequently. We are aware that a lot of this is contingent on finalizing or, indeed, concluding firm sales. We're also aware that as of this date those firm sales haven't been finalized, haven't been concluded, so it's in that parameter that I'd like to ask a few questions, for instance, accepting Hydro's projections of a 3.1 percent load growth over the next 10 years, I believe the statement indicates, my question would be - leaving us with the current business we have at hand, the current contracts that we're obligated, including NSP, what would be the earliest date required for Manitoba's needs to consider commencement of Conawapa?

MR. M. ELIESEN: Well, certainly in the context of Manitoba Hydro, there's been no conflicting statements with regard to our own sequence development schedule. We've maintained all along that any new export sales of the kind that we negotiated in 1984 with Northern States Power would have to come from new additional generating capacity built on the Nelson.

Now, Manitoba Hydro's own sequence development, excluding any of these new additional sales, call for Conawapa as the next most economic unit to come on stream in 1997, the first unit, and to be fully operational in 1999.

MR. H. ENNS: What is Manitoba Hydro engaged in now with respect to preliminary work on Conawapa, any work at all, the engineering work? Have consulting firms, have engineering firms been - my question, basically, is money being expended at this moment, at this time, on the Conawapa site?

MR. M. ELIESEN: Mr. Chairman, there is some preliminary work being done at this moment and that would include, for example, arrangements with the Department of Highways for surveying to be done on a road to the site, that sort of thing.

MR. H. ENNS: I suppose what the committee would be most interested in is having some assurance that

to make a decision of that kind, make a commitment, a fiscal commitment of that kind, be entered into only when it can be shown that we have sales for it. We haven't been shown that those sales are there. What I'm really trying to get at is what is going to trigger a firm commitment, a firm decision, on Conawapa? Is it when the Minister announces a major megawatt sale, or just precisely when will that happen?

HON. W. PARASIUK: The Member for Lakeside misses the point that in order to meet Manitoba's own needs, excluding any sales, Conawapa would have to come on stream for service in 1997, full service in 1999. The major reason why we would be pursuing sales is to ensure that you try and manage your hydro system in such a way that you're not left with 90 percent excess capacity when you bring that new generating station on stream to meet your own needs. That's because you can't build one-tenth of a hydro dam, you have to build the whole hydro dam and you're left with all the excess capacity that you then have to sell, and you're not in a good bargaining position at that stage and you sell it on an interruptible basis. You don't get the same type of price that you can if you sell it on a firm basis.

So from Manitoba Hydro's technical assessments, they are saying that they will need a new generating station to meet Manitoba's own needs in 1997. They've looked at Conawapa as one alternative; they've looked at Wuskwatim as another alternative in terms of how one would meet that need. Wuskwatim is a smaller sized plant than Conawapa. It's just that your per unit cost would be higher for Wuskwatim than it would be for Conawapa, so the specific wording is that the next most economic site would be Conawapa. But in terms of the triggering, I think what's going to happen is that we are going to be monitoring, doing our preparatory work for Conawapa, monitoring how the load growth is proceeding, and at the same time pursuing sales because that's the best way to manage the additions to your hydro system.

MR. H. ENNS: I take it that Hydro's conclusion about the dates for Conawapa or the need for a next most economic generation station that Hydro would require is based on the projection of a 3.1 percent load growth, certainly over the next five or six years. At that rate of growth - let me try and come at it from a different point of view. At that projected load growth, when are we looking for power that we don't now have, capacity that we don't now have?

MR. M. ELIESEN: As the Minister explained, we are monitoring the current situation and no decision has been taken yet by the Board of Manitoba Hydro to recommend to the government that the Conawapa or any other generating station proceed.

But clearly, on the basis of the current load growth forecasts, we are looking at that kind of activity taking place around the beginning of 1997 and fully operational in 1999.

The member asks, when is the actual decision made? When do we have to make that decision in order to ensure that generating station be taken? Obviously you're given much greater comfort in making that

decision if you know that you have successfully negotiated some firm export contracts for that period of time. That gives you greater certainty with regard to some of the risk factors that are involved on your domestic load forecast. And on domestic load forecasts, Manitoba Hydro, just like every other utility, has high, low and medium averages on the kind of demand that is anticipated in the future. We check, as well, and double-check with Federal Government agencies, such as the Department of Energy and Mines - or the National Energy Mines and Resources, excuse me, or the National Energy Board, on their independent forecasts, just to make sure that we're all in the same step.

I won't anticipate that the board would have to deal with that kind of major decision for another couple of years. In the interim, though, if we are successful, we are continuing the kind of planning that the president indicated to put us in the necessary position to make that decision.

MR. H. ENNS: Mr. Chairman, I thank the president for that information. I just place on the record that it would appear that firm sales, further export sales would have to be concluded prior to any further serious planning on Conawapa.

MR. M. ELIEN: Let me be very clear on this. We have to, at Manitoba Hydro, protect a 1997 in-service date for our own utilization. Obviously, it gives us greater assurance if we know, just like when Limestone is coming on stream, that 500 megawatts of 1280 goes toward the export market in the form of firm power sales and gives us an incredible and very profitable price. In the same sense, if we knew that we had a similar kind of arrangement with Conawapa obviously that as well gives us great assurance, but Manitoba Hydro has to protect right now a 1997 in-service date for its own utilization.

MR. H. ENNS: Mr. Chairman, I just don't want us to be blinded by the prospect, as alluring as it is, the next major construction project on the Nelson River. There are a number of ifs involved, the principal one being the acceptance of 3.1 percent load growth over the next period of years as projected. It wasn't that long ago that we had a net 2 percent loss in growth experienced by Hydro. Of course, there are many other options in terms of the amounts of dollars that are involved, the carrying charges, the interest charges involved, that may have Hydro looking at a number of other options, one has been mentioned, Wuskwatim, the smaller one, if no further sales materialize.

It may be a question, in terms of money markets, deciding that it may be more prudent to enhance or improve our thermal capacity for a year measure or a two-year measure or, indeed, to hopefully work with interchange business that may or may not be available to us, or ought to be available to us, before we commit Manitobans to what I would assume to be a multi-billion dollar project.

I raise these questions only that the lying that we're getting from the Minister and from the government is Conawapa, and Conawapa only. I'm suggesting that is perhaps somewhat misleading in the sense that planners, for different reasons, financial, cost of money,

the successful conclusion or not of export sales, all will trigger very seriously into the kind of decisions that Manitoba Hydro will have to make before that kind of a commitment is made to the Conawapa site.

HON. W. PARASIUK: I think that the president has some specifics to raise, but I'd just like to make a general statement. I'd be quite happy to try and deal with the specifics of where I've been talking about Conawapa, Conawapa. I have said that we have a very good opportunity for future development, that our own needs require that Conawapa apparently, or further generation would be needed by 1997; that decision has not been taken yet.

I've said that we're doing a whole set of things, that we take a balanced approach with respect to energy in Manitoba; that we look at conservation; we look at production, as well, in a balanced way. I'm not sure what the Member for Lakeside is alluding to when he says that somehow we're on a one-track mind with respect to a Conawapa development.

I think that we have said that there's probably a year and one-half or two years before Hydro has to make any recommendations with respect to any further generation, and we certainly would expect Hydro to monitor, very closely, developments in load growth. The Member for Lakeside referred to a situation where there was a 2 percent net decline, and that's right. I think it was followed up by an 8 percent increase in subsequent years, so one has to look at those things and judge him over a period of time.

Let me assure the Member for Lakeside, I am as interested in load-growth projections as he is, not only for Manitoba, but load-growth projections in any other province, in any other jurisdiction, and we monitor that very closely. I think the president had a specific point.

MR. CHAIRMAN: Mr. Beatty.

MR. G. BEATTY: No, Mr. Chairman, my point is just that I take very seriously the points the member has raised. They are very important considerations, but we are looking at all of these concerns. We are looking at all of these options, all of these possibilities, and we do watch the load growth, as you've said, very carefully and we make adjustments on that basis. But I want to assure him that, while we are protecting next-generation options now, which is to say Conawapa and Wuskwatim, we are constantly building into the assessments of all the factors that were very well raised by the member. New information constantly, and the situation at the moment is as it's been described, our requirements are for further generation in '97 and, at the moment, it seems to be Conawapa, but that may not turn out to be the case.

MR. CHAIRMAN: Thank you. Mr. Manness, you had your hand up?

MR. C. MANNES: Yes, Mr. Chairman, I support what my colleague, Mr. Enns, has said. I can't help but notice, for instance, on the handout of information provided by the Minister, dealing with a whole host of forecasts, that within the Capital Expenditure area, starting in the year '94-95, that there is a major increase in capital

required, so there is no doubt in my mind, at least, that Manitoba Hydro has made the decision that there will be a major expansion at that point in time. It's built into the thinking.

But, more importantly, Mr. Chairman, is the load-growth forecast, and I look at the chart as provided and I see the major drop-off - and when I say drop-off because this graph covers the years 1971 to 1986, it covers roughly 25 years - it seems to me that the graph itself begs a number of questions. Firstly, the 3.1 percent 10-year average of forecast of load growth, has that come from basically an economic analysis? Has it been done basically on the basis of trend coming through with a high and low growth and somewhere in between, as indicated by Mr. Eliesen? It would appear to me in looking at the graph that it would be very difficult to make simply a linear extrapolation, as indeed has been done, on the basis of the information provided. I would like to now ask a few questions with respect to the method by which the 3.1 percent load-growth forecast for the next 10 years has been developed.

HON. W. PARASIUK: Before the questions, I just wanted to deal with one point that you raised and that's in the 10-year projection, you have capital borrowings going up. Obviously one has to do forward planning and contingency planning when you're looking at something like hydro development. So when you have these forecasts, the forecasts indicate that at present, given our load growth demand as exists, we would have to bring new generation on stream for 1997 and, yes, that is built in. It certainly doesn't mean that it is a blueprint that is frozen in stone.

MR. G. BEATTY: Mr. Chairman, the load forecast is terribly important. What we have today is based on a fairly thorough, we believe, economic analysis and the best forecasting techniques that we have available to us at the moment, but there is no question that it is critical. It might be desirable, Mr. Chairman, if we took a few moments and had Chris Goodwin, who heads up our corporate planning area, take us through the critical assumptions in the load forecast process, unless you would like to proceed on a basis of questions and answers.

MR. C. MANNES: Well, no, I'd like to see them read into the record, if possible; I imagine that could be done.

MR. C. GOODWIN: The load forecast is not produced on trends anymore. Historically this was a preferred and general forecasting technique in the industry, but it was changed over approximately 10 years ago to what's referred to as an econometric model which has become fairly standard in the industry.

The trends are now turning toward forecasting in-use, more specifically, and we are certainly investigating that as a technique. We wouldn't change to it until we have proven that out. Our experience over say five years of using the econometric methods has been that they seem to be producing forecasts that are reasonably accurate. Our five-year and eight-year forecasts today seem reasonably accurate. In the past, we've had times when they have been significantly above the actual loads, and significantly below the loads.

The forecast is not one which deals in one simple equation with the economic situation and forecast demand, in total. We are able, because of this computer age and so on, to produce an awful lot of information which can be quite usefully handled. So in the residential area where we use entirely an econometric model, it is in fact something like 100 separate models where we can look at end uses, such as, electric heat and water heating, and where we can look at customers in various areas of the province, city, town, rural areas, north, south and so on. We feel that is a sensible approach. It certainly requires more time, more effort and more computing and so on to produce, but we feel more confident about the result because of that level of detail.

The industrial and commercial demands which, of course, are a very significant part of the total are dealt with in two ways. The smaller demands are aggregated; forecasts made recognizing trends in the industry, a trend toward a larger component of the economy being based on the service industry, for instance; and general forecasts for the economy of the province. Then the larger industrial demands are dealt with on a customer-by-customer basis where we are looking, ourselves, at trends among the industries, among the sectors of the industry, for instance, the mining industry; where do we think it will be going in 10 years; what will the markets be and so on? Forecasting and consulting with our own business agents and with the larger customers themselves to find what direction they are taking. So that gives us a forecast of the existing industry.

Another category of forecast is what we term uncertain major loads; those larger industries that may locate in the province or may not; those industries that may or may not expand, where today we cannot produce a commitment from a company for which there is some probability that it will come in the future.

I suppose an interesting one that's been on the horizon for more than 10 years now is that the gas pipelines across the province, which consume a quite a significant amount of energy, are presently fired by gas and some of the stations, not in Manitoba yet, have been built using electric drives. This would appear to be the trend for the future. We have to try working with the TransCanada to assess when they may likely change, when their market would justify an expansion, or when the age of the equipment might justify replacement, and to when they will go to electric drives. This same sort of technique has to be used with a number of the potential customers to get a reasonable estimate of future demand.

If you would like I could run quickly through some of the assumptions that we use, in terms of population, economic growth, fuel availability and this sort of thing, if this would be of interest.

MR. C. MANNES: Is it a long list, sir?

MR. C. GOODWIN: It needn't be.

MR. C. MANNES: Yes, if you could quickly go through it.

MR. C. GOODWIN: A two-minute version. In the area of residential demands, the availability of natural gas

is important. Our assumption is that gas will not significantly extend its market into towns not now served, but that, within the area now served by gas, its price will be such that there won't be significant changes toward electric heat.

We're assuming, too, that the more efficient gas furnaces will replace the current models, and that that will help them maintain their competitive advantage. We're fairly certain that oil prices will maintain its price sufficiently high that it is not a competitor with electricity.

In the area of conservation, we're assuming that capital investment will be made, but that is associated with corporate or personal profitability or levels of personal income that people can actually afford that conservation. We're assuming that public awareness will continue to be promoted by provincial and national programs.

In the shorter term, we're assuming a 3 percent to 4 percent real growth in the economy. In terms of population, we're assuming about a half percent per year increase in Manitoba's population until the mid-1990's and declining slightly after that.

We're assuming, of course, that our electricity prices will remain at or below the rate of inflation, that there will not be real price increases in electricity. Net housing additions, we're assuming will average about 5,000 per year in the province, but ranging somewhat cyclically between 4,000 and 6,000.

MR. CHAIRMAN: Thank you, Mr. Goodwin.
Mr. Manness.

MR. C. MANNES: I thank Mr. Goodwin for a review of those assumptions and also some of the methodology that is put into place. It's the first time I've had an opportunity to have an in-depth discussion within that area.

Mr. Chairman, would Mr. Goodwin care to indicate, in spite of the fact that there are a whole host of econometric models that gradually work down to one figure, would he concur that there seems to be a large element of subjective analysis that also comes into this load-growth forecast; and would he care to indicate whether there is greater weight on the subjective factors, or indeed, some of the more objective factors as measured within the forms of models and the numbers of models that are in place?

MR. C. GOODWIN: Mr. Chairman, the assumptions which go into the models are the most important components of that model. Those assumptions must be made, as far as possible, on factual matters and upon consensus of what is likely to be happening in the area we serve over the following 10 or 20 years. In that respect, we ensure that those assumptions are tested thoroughly within the company and are checked against assumptions being used by others making economic forecasts, and particularly by other utilities. Through the Canadian Electrical Association, our forecaster is in touch with other utilities and we participate in an American group, as well, to find out and follow what other utilities are doing.

I think it's important also that we follow the economic forecasts being made across the country, whether it's Stats Canada, the Conference Board, or others. We

try to keep in touch with those and try to find some consensus among those on some of the basic assumptions to make on such things as future economic growth.

MR. C. MANNES: Mr. Chairman, that begs the question, Mr. Goodwin, if indeed, through all this process of all these models, and all the attempts to measure future demands within industries, a number, let's say, comes out on average, a forecasted load growth of 2 percent, does the corporation has the leeway to move that up to, say, 3.1 percent on the basis of what other jurisdictions are forecasting, indeed what appears to be the general economic trend in the nation? To what degree can the number, the hard number that's been brought about by analysis, be varied upwards or downwards?

MR. C. GOODWIN: I think there's a misunderstanding here. I said it's the assumptions that go into the forecasts that must be checked out and compared with others. The end result would not, I think, ever be changed, although if our forecast was 2 percent and some other province has a forecast of 4 percent, then we would want to look very carefully at the assumptions that we and they have made. But it would be through going back to those assumptions that we would want to make any change in the forecast that we would make. Each year we go over these assumptions and through the year we watch them and try to arrive at consensus for where we shall go next year.

MR. C. MANNES: Two specific questions to Mr. Goodwin, Mr. Chairman. Firstly, the econometric models, on what year, on what base of years are they dependent? How far back do they capture load growth or firm energy requirement statistics?

MR. C. GOODWIN: We have statistics going back almost forever, I suppose. But really, the econometric model is using the statistics of the economy, the number of people, the number of people per household, to arrive at numbers of households in an area, for instance, and so these sorts of statistics would be going back 10-20 years.

MR. C. MANNES: Specifically, to March 31, 1987, it seems to me that, in spite of the methods used, the presentation offered to us and the way that we, as lay people, understand it best is the Manitoba Firm Energy Requirements Annual Percentage Change, and that's graphed neatly before us. It seems to me that, basis historical data, that March 31, 1987, percent changes in load growth are very important. I would have to think that they are available at this time as to give a further indication whether there's a trend up or a trend down, because following through 15 years and noticing, putting an eye to - and I hate to use the word "trend," because you say it's not that simple anymore - but the net result, of course, is as presented on this graph, and I'm referring to - it doesn't have a page number - the Manitoba Firm Energy Requirements.

HON. W. PARASIU: This is the annual percentage change?

MR. C. MANNES: That's right. It would seem to me that what has happened in 1987 is sort of a landmark as to whether or not the 3.1 percent, as has been used over the last year or two, indeed is being used at this point in time, it must be a critical time in either supporting the 3.1 percent load-growth year over year percentage increase or not. Can Mr. Goodwin or the corporation indicate to us what was the experience for 1987?

HON. W. PARASIUK: I think that can be provided, but I wonder when the Member for Morris says that 1987 would be our "typical year," or our "landmark year." We've experienced probably the warmest winter in Manitoba's history. It's either been the warmest winter or the second-warmest winter in the last 50 or 60 years.

Now, if the Member for Morris is saying that's your standard benchmark year, I would wonder about that because we've been dealing with other electrical utilities; we've been dealing with the natural gas utilities and people involved in the selling of natural gas, and they have said that this is a most unusual year from the weather perspective.

I think that information could be provided, but I would just take issue with the Member for Morris's statement that 1987 somehow is a benchmark year.

MR. CHAIRMAN: Just before recognizing Mr. Manness, Mr. Goodwin did you wish to make any comments?

MR. C. GOODWIN: If I may.

MR. CHAIRMAN: Yes.

MR. C. GOODWIN: In the longer term, I think this graph doesn't illustrate particularly well. If it were to go back another 10 or 20 years, perhaps 50 years, it would have shown the very steady rate of growth that applied in those times, of around 7 percent for decade after decade. We see at the beginning of this graph, the tail end of that as we change, perhaps with the oil crisis, the inflation crisis, and so on, down to a much lower level, and I think it's accepted that in the 1980-82 period, we had a significant recession in the world economy and the dip in load growth at that time would be certainly expected and it shows on that graph.

It's interesting to see the 1983 dip. I think that was the one where we again had quite a warm winter, and so the following year shows an unduly high rate of load growth. So some sort of smoothing of that is necessary. I don't think I have those figures immediately available, but smoothing off for the weather is a useful tool to use if you want to look at these trends. I don't think that they're so meaningful in themselves.

Your specific question of 1987, I think our analysis shows a rate of growth or a load growth in the past 12 months, in the order of 1 percent or less. Correcting for weather, we come close to the 3 percent.

MR. CHAIRMAN: Mr. Manness. I'm sorry, Mr. Goodwin were you through?

MR. C. GOODWIN: Yes.

MR. C. MANNES: Well, Mr. Chairman, that's my point exactly. How can one correct for weather? That's an

experience. I mean, I know one can do it. It reminds me of crop yields when some people throw out some bad plot trials because, indeed, excess water came along and they flooded. Well, that's the experience, you can't throw it out because it happens in the real world.

So I say to the Minister, who hastily rose to answer the question before, and said, well don't consider 1987 a landmark year because it doesn't represent the reality in the sense that we had a mild winter. But, Mr. Chairman, if you look on the graph, 1981 had a significant dip, and so did 1983.

The only point I'm trying to make is can we, realistically, say 3.1, given the fact that we are on some very basically volatile times. I would submit to the Minister, who wants to jump here now, that we cannot throw out a year as being atypical, because we don't like the results.

HON. W. PARASIUK: No, I don't want to say that at all. What I want to caution the member against is going the other way, as well. I would hate to change all the forecasts because one year we had an 8 percent increase; or I would hate to change the forecast if next year we had possibly the coldest winter on record. I would not want that to then lead people to think that we're going to have this for the future, the 5 or 10 years. I think that's probably been a mistake in past years when people try to extrapolate a trend line. What you try and do is put your potential demand together on the basis of what the end usage might be, and you try and be very careful in doing that, taking into account certain areas where you do have to make assumptions about how the economy might perform over a 2-, or a 5-, or a 10-year period.

We've gone over this with a number of people. I'll give you one example and I want to explain it just a little bit, because people might think that when we sit down and talk with the financial institutions, that they have a vested interest in terms of trying to promote developments, because they raise the money for them. To one extent that's true but, at the same time, there's another side to the financial institutions.

They have large research organizations who provide research to pension funds and other groups like that who also make investments in these bonds; or secondly, who also make investments in utilities, especially investor-owned utilities in the United States. They themselves do their own assessment of load-growth forecasts, and we ask them a lot of questions about load-growth forecasting, especially the difference between trend-line analysis, extrapolation, and the other type. What we're finding is that the approach used by Hydro is the approach that virtually everyone agrees is the proper approach to take. I think utilities were probably burnt, 10, 5 years ago. I think they've learned a lot there.

At the same time, what we're being told is that, in some areas, the fact that you have to deal with a very difficult area of forecasting, and who can predict what interest rates will be specifically in 2 or 5 years from now, or what the exact economic growth rate will be, or what the financial performance will be, and I think it's the Financial Post or the Financial Times that does a little report card on how well the various institutions

have done in forecasting the previous year. They take their forecast and they do an assessment to see whether they were accurate or not.

But that doesn't mean that you don't do the best possible job you can of forecasting and take on your responsibility of trying to plan for the future needs of Manitoba, in hand; you don't become paralyzed, saying there is uncertainty in forecasting, therefore, we will become paralyzed. You don't do that; you do the best possible job you can, you check it with all possible other sources, and then you have to make judgments about how you meet the long-term demands of this province.

MR. M. ELIESEN: Just an added comment with regard to board policy in this area.

The Board of Manitoba Hydro reviews the load forecasts each year. That's why, going over the last three or four years, when we had experiences of 8.5 percent or 6 percent, the long-term load forecast did not change at Manitoba Hydro. In fact, it maintained itself around the 2.83 percent. It was only when we had experienced slight increases for a number of years, above that long-term forecast, were small adjustments made.

When I say small adjustments, they were small adjustments. We believe we have a very conservative 10-year forecast when we compare it with what's happening with other jurisdictions, and that's really a very good check on us, whether we're out of kilter with what other utilities are forecasting, what the Federal Department of Energy, Mines and Resources are forecasting, and what the National Energy Board are forecasting. That's why we don't change our forecasts, notwithstanding that we may.

Over the last two years we had an average of over 5 percent. I think, for example, over the last six years now, we've averaged around 3 percent. To us, that is a very conservative forecast going into the long run.

MR. C. MANNES: Mr. Chairman, I'll end here, but I just wanted to rebut something the Minister said, because he used to word "paralysis" and, of course, what we don't want is to paralyze the ratepayer of Manitoba Hydro through decisions that are made based on faulty load-growth forecasts.

So, Madam Speaker, I just want to point that out, and I suppose it was the statistics that were provided at the last sitting of this committee that causes me some concern. I notice that the Province of Ontario has load-growth forecasts in the area of 2.5 percent. We know there's a booming economy there, we know that there's a tremendous drift of the population, of the Canadian population, in that province and on the surface something just doesn't make sense when the load-growth forecasts in that province are so much lower than ours.

MR. M. ELIESEN: Both of us can comment on the Ontario situation because Ontario had a significant surplus, and had a significantly lower rate of increase than most other utilities up until the last two years. Slowly, but also significantly, they've been increasing their long-term load growth from around 2 percent to 2.4, to 2.6, because they have been experiencing higher

increases, because the amount of capacity that they've had is, while large, has not been sufficient for the kind of increase that they're forecasting for the future.

So their current 10-year forecast is at 2.6 percent. But when we look at other provinces similar to Manitoba; Alberta 4.1 percent, and Alberta is not going through a tremendous economic recovery, but that's the load forecast that they are forecasting; Saskatchewan is around 3 percent, and the economy of Manitoba is performing much better than the economy of Saskatchewan, and yet we are at the same level of increase is around the 3 percent; in New Brunswick, they are forecasting a 3.4 percent; in Nova Scotia at 3.5 percent. Again, our basic check, we go back to the Government of Canada, they are forecasting for Manitoba a 3 percent increase. The National Energy Board, they are forecasting a 3 percent Manitoba. This at least gives us comfort that we're within the range of what we anticipate for the future.

MR. C. GOODWIN: I think there are two points, perhaps the Ontario rate of load growth has been lowered from 2.8 to 2.6 percent, but their forecast of future demand has actually been increased slightly. I think that just illustrates that there are some dangers in comparing the rates of load growth because of the unexpected and large load growth in Ontario last year, their base has risen and so the future rate of load growth looks rather lower. Therefore, a similar or slightly larger future expected demands.

Their forecasts of the industrial commercial growth appear to be very close to our own. Their forecast of their residential component is much lower, and the explanation would appear to be that there will be less proportion of growth in the electric heating than we're expecting in Manitoba.

MR. CHAIRMAN: Mr. Filmon.

MR. G. FILMON: Did Mr. Goodwin just say that he's forecasting a growth in electric heating?

MR. C. GOODWIN: Certainly we're getting close to 100 percent of home or building heating in areas where gas is not available.

MR. G. FILMON: What does that amount to in terms of overall areas of the province in which new housing construction is taking place?

MR. C. GOODWIN: I don't have numbers handy on the total amount of electric heat that we're expecting.

I suppose about one-third of the homes would be in areas where gas is not available. So if there are 6,000 homes being built, approximately 2,000 would be going to electric heat. In addition, the number of apartments that go to electric heat, of course, is larger because of the economies of electric heat over gas for an apartment block, easier to distribute the energy and easier to control the use of it.

MR. G. FILMON: Conversely, is there still a trend on the part of some areas where there is a choice between gas and electricity for people who had previously gone for electrical heat to remove that electrical heat?

MR. C. GOODWIN: I'm sure that there are a number going that way as there are, of course, a number of homes that are electrically heated in the city here. We don't have specific statistics on those change-overs, however, they don't appear to be very many.

MR. G. FILMON: Given that an increase like 9.7 percent in one fell swoop is likely to perhaps startle some people into reevaluating the economics of energy consumption and type of energy that they use, what in your forecasting, what account is taken for either conversion or conservation. I say to you that when there is a major increase, as we saw of course in the late '70's, a major increase in the cost of one form of energy, that all of a sudden, it's not all of a sudden but it's over a period of a year or two, in response to that people re-evaluate the economics and begin to look at alternatives to electrical energy. I think that my colleague from Lakeside pointed out last year where some Hutterite colonies in his area were converting from electrical energy in heating their barns to burning of coal, I believe; soft coal or something that they made conversions at that time.

It seems to me, given an almost 10 percent increase in one year, that that will call to the attention of a number of people the need to re-evaluate the economics of electrical energy for heating purposes in particular.

Is that taken into account in the forecast of load growth?

MR. C. GOODWIN: Yes, Mr. Filmon referred to the tendency towards conservation. Certainly, the majority of homes being built today and the majority of buildings that are going up are much more tightly insulated, much more airtight than they were a few years ago, and the amount of heat required for a given volume of building is going down steadily, and we expect further trends in that direction and these sorts of matters go into the forecast.

MR. G. FILMON: I know that Manitoba Hydro has in its possession a number of reports - it's probably working on some even currently - that continue to address conservation as a major opportunity for most users to control their electrical energy costs.

I wonder if the forecast, for instance, makes the, what I would consider "valid assumption" that as you replace older housing with newer housing in the market, that inevitably that newer housing will be considerably more energy efficient and in fact won't add to your load demand but it may even detract from it?

MR. C. GOODWIN: Yes, there's a very definite trend towards conservation. Homes and buildings today use less energy as they are replaced; then the new units require less energy to operate. We note this trend, and this is an important factor in any forecast, certainly.

MR. G. FILMON: I wonder if Mr. Goodwin can indicate - I had made a note from our discussions last year and the year before that the TransCanada Pipelines conversion to electrical usage was assumed in the load growth forecasts that were provided to us previously.

Is it still assumed in the 3.1 percent load growth forecast for the next 10 years?

MR. C. GOODWIN: There are a number of these uncertain major loads which are included in the forecasts with a certain probability. TransCanada is in the forecast. I would have to refer to the forecast to tell you which year it's assumed now.

MR. G. FILMON: 1988 was in last year's forecast. 1988-89, I think it was.

MR. C. GOODWIN: The TransCanada system would have cost-convert gradually station by station, unit by unit. We have assumed that there's some probability of those things happening and that this is equivalent to one-third of a station converting to electric pumping in 1989 and one-third of a station each year thereafter until three out of the five stations are converted by 1997.

MR. G. FILMON: On what basis do you have any reasonable assurance that that would take place?

MR. C. GOODWIN: Only the assumption that gas will continue to be used and to be pumped, that the old pumps are getting older, that electricity should be the preferred alternative to gas for pumping.

MR. G. FILMON: Is electricity cheaper than the gas?

MR. C. GOODWIN: It's our understanding that the overall cost of pumping gas electrically needs less than the overall cost of pumping gas, using gas as a fuel, making assumptions about the capital investment requirements. That, of course, doesn't mean that the gas company would run out to change equipment as long as the existing equipment is operable. It is probably more economic than changing the new equipment. However, this equipment will have to be changed at some year, at some point in the future, and we may assume that the amount of gas being pumped will increase.

TransCanada is an active marketing agency trying to get export contracts. If this is achieved, they may need additional pumping, and it's our assumption that that will go to electric drives.

MR. G. FILMON: Have they actually come to you and begun negotiations on price, on availability, or any of these things?

MR. C. GOODWIN: TransCanada some years ago, two to three years ago, actually paid us to make provision for service at three of their stations. In order to meet their schedule at that time, we had to investigate routes for transmission and we had to make certain studies and certain provisions and that was done at their cost.

MR. G. FILMON: What investment do they have in those preliminary measures?

MR. C. GOODWIN: I'm sorry, Mr. Filmon, I missed part of the question.

MR. G. FILMON: What investment have they made in those preliminary measures?

MR. C. GOODWIN: Mr. Chairman, the TransCanada Pipelines paid us approximately \$200,000 for those initial provisions and investigations.

MR. G. FILMON: I wonder if Mr. Goodwin could indicate what is the current load growth or demand rate of increase in American utilities, say, in the Midwest, in the United States.

What is the average increase they're projecting?

MR. C. GOODWIN: In the agricultural areas, it's pretty low.

MR. G. FILMON: Let's say all of the midwestern utilities that certainly don't just deal with agricultural areas but major cities included, such as Minneapolis or Kansas City or any of those?

MR. M. ELIESEN: Mr. Chairman, we can provide copies of projections that have been made by the U.S. Department of Energy, going into the next 10 years and particularly during the period 1991 to 1995.

The latest study, which just came out within the last couple of months, according to the U.S. Department of Energy, they are concerned about electric utilities meeting their peak demand between 1991 and 1995. They specifically go on and say adequate supply during summer peak periods at that time is questionable. They do say, up until 1990, the electric power supply looks good, but afterwards it deteriorates, and by 1992-93, there has to be more construction than there is coming on line in order to maintain adequate reserves.

Now we can provide copies of that study, and there are two or three other studies with regard to load growth in the United States, and we can make that available to members of the committee.

MR. G. FILMON: Actually, I was looking for a percentage figure such as 3 percent, 2 percent, because last year it seems to me that they were projecting 2 percent pretty well consistently throughout the United States electrical utilities.

MR. M. ELIESEN: There is the Northern States Power, which is the main utility we've been dealing with, which has a load forecast of about 2.2. I understand they've just come out with a new load forecast which we don't know the details yet. They are the main utility that we deal with and they are the main utility that has to bring on additional capacity to meet with their load forecasts as they see it in the future and particularly for the period of time that I have referred to.

MR. G. FILMON: I'm not looking at it from a viewpoint of knowing whether or not they will be customers of ours. Just so the chairman understands, I'm on the same point that my colleague from Morris was, and that is that load growth forecasts for a booming province such as Ontario are not nearly as generous as ours. The load growth forecast in most American utilities are not nearly as generous as ours. Ours appears to take into consideration a questionable assumption of electrification of pumping stations on the TransCanada Pipelines.

Looking at it historically, there was this long continuance of growth of 7 percent or so over a period of more than a decade, perhaps, and then we seem to have fallen dramatically, really, since about 1975 and stayed in the range of just over 3 percent or around 3 percent over that period from 1975 until now.

It seems to me that there is a prospect that because of conservation, because of conversion, and let's face it, other energy costs have been dropping in relation to hydro-electric energy or electrical energy - talking specifically natural gas - and they may indeed drop even more; given deregulation and other opportunities that are being discussed at the Public Utilities Board today, that there is the overall awareness of people that they can help their own cause by making drastic changes in the way in which energy is consumed in their buildings - commercial, industrial, apartment, single family - that there is a very real case to be made for another notch down to a continuum of a decade or more at say 2 percent and 1.5 maybe, my colleague says.

There is no doubt that the continuing insistence on keeping load growth forecasts at 3 percent distorts all of the economics of looking at Limestone or Conawapa or everything else, and puts us in a position, in my view, of only having to rely on exports for justification of those plants coming on stream as early as this administration has decided they should.

MR. M. ELIESEN: Mr. Chairman, I can only comment on the technical studies that have been made available, those at Manitoba Hydro and those by utility and energy planners not only in Canada but also in the United States.

At Manitoba Hydro, the Board of Manitoba Hydro does not insist on a particular load growth in the context of any development sequence in the future. In fact, three years ago, we had a load growth on the books at 3.4 percent, which is higher than the one we're carrying right now.

What we do look at and evaluate very seriously is the kind of trends that do take place, and I can only repeat what I mentioned earlier. We are satisfied ourselves that what we are doing internally in Manitoba is consistent and is on the conservative side with regard to future load growth forecasts.

We have independent agencies with no vested interests in the context of building generating stations, whether it's federal departments of energy or the National Energy Board or in the United States for that matter, who are forecasting significant shortages in the middle 1990's.

Now we don't adopt their particular forecasts because that's what they are calling for. We do a very systematic review and analysis of the various main areas here in Manitoba. We look at our past experience, our current experience, and that's the basis upon which we forecast for the future. Again, I can only repeat; we believe our current forecast is a very conservative one.

HON. W. PARASIUUK: I just wanted to add a couple of points because of a couple of nuances of the Leader of the Opposition. The load growth forecast is not done by "this administration." It is done technically by Manitoba Hydro. It is done technically by the National Energy Board.

I do not believe that is a forecast that is done by the Conservative administration in Ottawa. When we have a load growth forecast done by the federal Department of Energy, I believe it is done by the technical people in the federal Department of Energy.

I do not believe it is done by the Conservative administration in Ottawa. The same thing holds true here.

Secondly, with respect to another nuance, I believe the way in which uncertain projects are dealt with, they're dealt with as a category where you have a whole set of possibilities that might take place either with TransCanada Pipelines or other actions that are being contemplated by a number of other firms, either conversions - and I don't think it's proper to list the names of the companies - but those companies certainly have been in contact with me and I know that they have been in contact with Hydro for discussions as to what their load might be if they do X. They are looking at whether in fact they'll do X or Y.

So you have a whole package of those and I think only a certain portion of those is in a sense taken. It's almost like a weighted average and you take a portion of that. It certainly doesn't mean you take your uncertain projects and say, yes, they're going to happen; but out of a package of uncertain projects, there is a probability that X-number of that package of uncertain projects may in fact proceed, so you have to take that into account.

I don't know how you would do it otherwise. If you did it otherwise, you may find yourself in a position, as I believe some of the American utilities may indeed find themselves, where they may not have allowed sufficient lead time for themselves to meet energy requirements that they can't supply. This was a topic of conversation with some of the American administration energy officials when they said that if they have a shortage in 1992-93, given their particular regulations for environmental review, they may not be able to get those plants in place on time.

The other thing that holds is that when you look at load growth, especially in some of the American jurisdictions, the area jurisdictions, you have some old and obsolete thermal plants that they are having difficulty with, that they will probably have to decommission. I think that's another factor that one has to take into account when one examines what their potential need might be.

I think my final point on this, in respect to Mr. Filmon's comments, is that I believe if he's saying that one should be cautious, that one should make sure one reviews everything on a year-to-year basis and shouldn't be optimistic and should look very carefully at the conservation option, I agree with him on that. We in fact are doing that.

I've had discussions with the Federal Minister, Marcel Masse, about looking at the whole energy conservation thrust and we certainly have said continuously that we in fact want to pursue that. We want to get the biggest bang for our energy buck. I certainly wouldn't disagree with the member if he says that that is what his objective is as well.

MR. CHAIRMAN: Just before we resume questioning, Mr. Eliesen had indicated he was prepared to make reports available, I think from the U.S. Energy Department. Is it the will of the committee to have them tabled?

A MEMBER: Surely, surely.

MR. CHAIRMAN: Okay.

MR. M. ELIESEN: I'm sorry, I don't have them here but we can easily make them available.

MR. CHAIRMAN: I can appreciate that. It was the offer, I just wanted to make sure whether or not it should be extended.

MR. G. BEATTY: Mr. Chairman, there is one other point I'd like to make, at risk of repeating what might have already been implied. But the load forecast, there's no question about it, it is absolutely critical in terms of generating sequence development with all of the financial consequences that are involved there within the company, the process of developing that forecast goes on throughout the year, but at some point we have to arrive at a forecast number that we then use in creating our estimates. That process involves the team producing its forecast in roughly the early part of the year, May, being subjected to, if you like, challenge and evaluation by management groups and other groups within the corporation throughout the summer period, and I say that's a fairly rigorous challenge in terms of current assumptions and modifications and the whole question of methodology is up for discussion at any time on any part of it.

That ends with the board finally approving a forecast in the early fall, so that we are now heading into a period where we are becoming very much involved with the forecast. I just want to assure the committee that each of the points that have been raised here today are given very extensive consideration in that process.

MR. G. FILMON: Just in response to those comments, let's make no mistake that the forecast of load growth is extremely critical and it could involve one year advancement of a plant such as Conawapa without the justification in terms of demand. It involves hundreds of millions of dollars of additional interest and carrying costs to the ratepayers of Manitoba Hydro.

So we're not saying this out of some abstract economic analysis or desire to get into some abstract economic debate here about forecasting, we're trying to ensure that it is indeed a conservative forecast. When the Minister says that American utilities are taking risks in not being able to meet demand on time, it's because they have made a business decision that says that they don't want to have to pay interest costs on building capacity before it's needed. They have the very fortunate circumstance of being able to rely on Canadian utilities, most of whom have an over capacity to be able to provide them with a safety valve they need and they can always buy it - they know if they get into a situation - because we are the ones who are building the excess capacity, enabling the Americans to make their good business decisions. So that's why we're talking about these things and that's why I'm raising the issue, and I'm glad that the Minister has made the point for me, perhaps better than I did.

I want to go into the discussion, Mr. Chairman, of the rate increase that has been applied for this year by Manitoba Hydro, the initial 5 percent increase and the subsequent 4.7 percent increase. It's my understanding that approximately 50 percent of the

cost of Manitoba Hydro's operations in the course of a year are on interest payments. Before I proceed with that, is that approximately the case?

MR. G. BEATTY: Yes, approximately.

MR. G. FILMON: Approximately the case. It's also my understanding that given that interest rates are not increasing, but that overall the trend is of course to reducing interest rates, that we shouldn't assume that there's going to be automatically a 5 percent increase on those interest costs in the forthcoming year.

So that when we talk about, as was stated in the media after Tuesday's meeting, the fact that Manitoba Hydro's expected rate of inflation, which might be slightly different than the expected rate of inflation generally across the Province of Manitoba, is 5 percent, what we're saying is that the portion of the increase on its operating costs is actually probably closer to 10 percent, because I don't believe that there's going to be that 5 percent increase unless the staff can show me otherwise in the interest payments that Manitoba Hydro's going to make this coming year.

So consequently, the application of a 5 percent increase, aside from the 4.7 percent increase, is going to have I think the effect of giving Hydro considerably more revenues in the forthcoming year, and admittedly, and I know that in everything I've seen, including an article, part of Mr. Beatty's - a business magazine, Mid-Canada Commerce not too long ago, that the effect is that Hydro is working towards increasing its reserve funds and all of these things.

But I think that should be made abundantly clear that when you talk about a 5 percent increase in expected costs, that's only applied to half of the costs of operation of Manitoba Hydro, that half of that is your actual operating cost, not the interest portion. So that when you apply an overall 5 percent increase, it probably gives you a 10 percent increase on your actual operating costs, and I say that is something that people should be aware of.

MR. M. ELIESEN: Mr. Chairman, with regard to the rate increase of 5 percent, which the board recommended to the government, effective April 1, we believe that the 5 percent would give us net revenues of profit for the year of about \$12.9 million, which would slightly increase our reserves. The policy is quite clear - and we've made no bones about it all along - we believe that the reserve position of Manitoba Hydro has not been as prudent as it should be, and when you take a look at our reserves, the reserve balances of Manitoba Hydro, compared to all the other public utilities in Canada, Hydro Quebec has almost \$7 billion; Ontario Hydro, \$4.4 billion; B.C. Hydro, \$509 million; New Brunswick Power, 365; Newfoundland Power, 338; Saskatchewan Power, 223; Manitoba Hydro, 124; and Nova Scotia, 68.6.

We believe that the reserves which have been drawn down by about \$63 million over the last four years during the rate freeze was not a prudent policy, and it is necessary for the corporation to have sufficient reserves at minimum to withstand the impact of a drought condition.

The technical estimates on that is about \$180 million, so our policy with regard to rate increases is to cover

our costs and also to try to build up our reserves to meet the kind of conditions that obviously take place some time in the future with regard to drought.

MR. G. FILMON: There's one other thing, and I scribbled so many notes as people were making comments and I forgot to mention it with respect to the load growth forecast, but I believe that the president of the corporation just said that the board approved the load growth forecast in early fall of each year.

Why in heaven's name would the board need to approve the load growth forecast if it's merely a technical presentation of the corporation?

MR. M. ELIESEN: Because the board believes it's important to review all the aspects that are brought forward, to examine the evidence and to give it a stamp of approval. If we disagreed, we would tell management we disagreed, but the important point is for the board to review, to get the explanations, and I'm not aware in the past - certainly in my experience with Manitoba Hydro - has the board of Manitoba Hydro ever changed a load forecast that has been brought forward by management. But it is important for the board to review the various factors that go in to bringing the load forecast every year, but we have never changed, the board of Manitoba Hydro itself has never changed the load forecast brought forward by management.

MR. G. FILMON: Mr. Chairman, so what Mr. Eliesen is saying is that the board has never advocated that, for instance, the corporation reduce its forecast of load growth.

MR. M. ELIESEN: We have never asked for an increase, nor have we asked for a decrease.

MR. G. FILMON: Okay, Mr. Chairman, I accept that. I wonder if the corporation, any representative, could tell me if Manitoba Hydro, either directly or indirectly, is doing any work or planning to do any work in Egypt at the present time?

MR. G. BEATTY: Yes, Mr. Chairman, as part of our current export services program, we are participating I believe in a training component of export services that have been arranged with other utilities.

MR. G. FILMON: I wonder if the president could describe what this export services agreement is and just what Hydro's doing and what are the economics of the venture.

MR. G. BEATTY: Mr. Derry, who is vice-president of marketing and familiar in great detail with the program and this particular question, could probably enlighten us.

MR. CHAIRMAN: Mr. Derry.

MR. A. DERRY: Mr. Chairman, this is a contract funded by CIDA, the Canadian International Development Agency, and we are associated with Ontario Hydro, who is the main contractor in this arrangement.

The involvement of Manitoba Hydro will involve two people for approximately two years who will assist in

lineman training in Egypt; and this has been covered on page 17 of the annual report. This project will call for our Canadian utility to train instructors and set up facilities for a transmission training school that the Egypt Electricity Authority is establishing in Cairo.

We will be paid by CIDA the full amount of the participants' salaries, plus a mark-up.

MR. G. FILMON: So is Mr. Derry saying that there's no risk to Manitoba Hydro? You understand why I'm a little sensitive about these things.

MR. A. DERRY: Under that condition, we will be paid fully and make a profit.

MR. G. FILMON: Is Manitoba Hydro involved in any direct current transmission work or bidding on any direct current transmission work with respect to any other areas outside of Manitoba?

MR. A. DERRY: Yes, we're involved with Teshmont Consultants, Moneco and Ontario Hydro in China in a study where we are providing three people for seminars and three of these people have attended a one-month seminar in China already. This is to do with the HPDC.

MR. G. FILMON: Is there any risk to Manitoba Hydro involved in any of these? Are they bidding on contracts or on work on any of these areas?

MR. A. DERRY: Mr. Chairman, this again is a CIDA contract, and the same pricing for the project is, in this case, the same as the Egypt one where we're paid our costs, plus a mark-up.

MR. G. FILMON: On another topic, Mr. Chairman, should any of the currently under negotiation or discussion arrangements with respect to further power sales come to fruition, to do with any of the four or five or however many utilities that we're talking about, can any of them be accomplished without construction of another transmission line to move the energy from Manitoba to the U.S. border?

MR. M. ELIESEN: Mr. Chairman, with regard to the discussions with U.S. utilities, the kind of transactions that we are talking about with them, and hopefully will conclude, does necessitate additional interconnections and does necessitate new capacity from Manitoba.

With regard to Ontario Hydro, as well as in Saskatchewan, there are some arrangements on a short-term basis which may not require any new interconnections. In other words, may utilize the existing interconnections, but we are still in negotiations with those two Canadian utilities, both Saskatchewan Power and Ontario Hydro.

MR. G. FILMON: So I understand we could do some short-term sale of power to Saskatchewan and Ontario without additional transmission facilities, but if there was any major, long-term agreement, we would need additional transmission facilities and, if we make any other agreement for sale to U.S. utilities beyond the 500 megawatt NSP sale and the interchange sale that was the \$46 million that was announced last summer, we would need additional transmission facilities.

MR. M. ELIESEN: That's correct with one addition. There is one particular set of discussions with Ontario Hydro which could utilize the existing interconnections but which would require new capacity to be built.

MR. G. FILMON: What is the stage of planning for any additional transmission line facilities and what approvals are going to be required and how long might that process take place for (a) U.S. sales; (b) Saskatchewan; and (c) Ontario?

MR. M. ELIESEN: On the existing interconnections, obviously, if there are sales like the one we negotiated and signed a contract with Minnesota Power and Light and announced that last week, I believe, for a 50 megawatt diversity that's going over existing lines, that requires solely an approval by the National Energy Board here in Canada and a presidential permit in the United States.

With regard to new interconnections, particularly in the United States, there is a process for them which they have to undertake and assuming, for example, the proposed arrangement with upper Mississippi Power Group goes through, a new line would be built between the vicinity of Winnipeg to the vicinity of Minneapolis, Minnesota, in which Manitoba would be responsible for the line to the border and the American utilities would be responsible from the border on to Minneapolis. In that particular case, the U.S. authorities would require approval from the state authorities, the state of Minnesota, as well as a presidential permit from Washington for that to take place.

In Manitoba's case, we would have to follow the usual rules of the Cabinet Committee, PLUC, with the hearings that normally take place in the community for such interconnections to take place. In this particular area, we are looking at the siting, the routing, which would be perhaps adjacent to the existing interconnections going into Minneapolis. In other words, we already have a 500 kV line, so we are looking for a routing that would be obviously quite close to that current routing.

MR. G. FILMON: Does the utility anticipate any difficulty in getting approvals on the American side for a new transmission facility?

MR. M. ELIESEN: We've been informed if the majority of the utilities, for example in the state of Minnesota, are desirous of an arrangement which would obviously be attractive to the people of Minnesota, then they feel quite confident that they would get the necessary approval. But clearly, it's a process that has to go through the state regulatory commission as well as the U.S. Department of Energy on the presidential permit.

MR. G. FILMON: What's a likely time frame for that? How long would it take for that process?

MR. M. ELIESEN: Roughly the process could take anywhere between one to two years.

MR. G. FILMON: That's just for the approvals.

MR. M. ELIESEN: For the approvals of the line.

MR. G. FILMON: And they don't involve any extensive environmental impact studies or anything of that nature?

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MR. M. ELIESEN: Yes, they do, Mr. Chairman. They have quite a rigorous process there with hearings and with environmental impact statements that have to be filed. There's quite an examination that does take place.

MR. G. FILMON: And Manitoba Hydro is confident that process would not be unduly lengthy. I only hearken back to the Mandan situation that seemed to evoke tremendous negative public response in the United States and the outpouring of opposition from farmers and residents throughout the states that were involved. It seems to me that one to two years is a highly optimistic forecast of just simply going through the approval process, knowing the kind of public awareness there is of environmental matters, land use matters, facilities such as major transmission lines.

MR. M. ELIESEN: Mr. Chairman, that's quite true except in this particular proposed scenario there are different parameters that are at play, the main one being that the proposed interconnection goes directly to the state desirous of wanting that energy and capacity.

In the Mandan Line, we had a situation where a major utility in the state of Nebraska wanted to bring the Manitoba power through two states, that is North and South Dakota which did not have any access to any of the supposed benefits of Manitoba power. Clearly this caused considerable consternation. If those states felt that they weren't getting any benefits from the proposed transaction, then they felt that - at least that was one of the main reasons. But we are going on the basis really of the statements that have been provided to us by the people we are negotiating with and while the process will be lengthy, they believe it could be accomplished within a one- to two-year period.

MR. G. FILMON: Just one further topic, Mr. Chairman. I wonder if somebody in the corporation could tell me what is the expected common bus rate of production of energy from Limestone given all of the new information available with respect to reduced capital costs, interest costs and so on.

MR. G. BEATTY: Mr. Chairman, I wonder if Mr. Paul Thompson, who is Division Manager of Marketing could speak to that question.

MR. CHAIRMAN: Mr. Thompson.

MR. P. THOMPSON: We've just looked at it in a very simplistic manner and, if you take the most recent cost estimate of, I believe, it's \$1.73 billion and take an interest rate of 10 percent and add 2 percent for depreciation and operation and maintenance, you come out with 12 percent. If you take 12 percent carrying charges on the 1.73 billion - if you take the resulting number, which I don't have at my finger tips and divide it by the energy that Limestone produces under average river flow conditions which is 6.88 thousand gigawatt hours per year, you come up with approximately 31 mills per kilowatt hour. If you add 10 percent for losses recognizing that would be roughly what losses would be from the generating station to Southern Manitoba, you come up with a number just under 35 mills, which would in fact be the constant number for the entire 67-year life.

MR. G. FILMON: That includes operation and maintenance?

MR. P. THOMPSON: Like I say, it's roughly done but the 2 percent that I utilized was intended to cover both depreciation and operation and maintenance.

MR. G. FILMON: Say it's 1 percent depreciation and 1 percent O. and M., something in that range?

MR. P. THOMPSON: The breakdown is 1.5 percent for depreciation and 0.5 percent for operation and maintenance.

MR. G. FILMON: I'll just leave my questions on these topics for now; my colleagues have some further areas they want to explore.

MR. CHAIRMAN: I have Mr. Baker next and then Mr. Enns, it's a quarter to twelve. What is the will of the committee, that we rise at 12:00 or close to it as possible? (Agreed)

Okay, Mr. Baker.

MR. C. BAKER: Just a short comment. I think that I agree with Mr. Manness in regard to the example of a tendency upon people who are testing seeds to discard a block if it's affected abnormally by a bad year. I think the proper way to apply that would be the same way as the crop insurance. Do they have a 25-year moving average and they dropped . . .

MR. CHAIRMAN: Mr. Baker, could you just hold for a second, we're not picking you up on the mikes. Perhaps if you could pull it closer to you. Okay, try it now.

MR. C. BAKER: Do you want me to start over?

MR. CHAIRMAN: Carry on.

MR. C. BAKER: I was saying, Mr. Chairman, that I agree with Mr. Manness about the example of the farmer or seed plot. I wonder who would have a seed plot anyway, whether it's a farmer or a seed company - throwing out a bad year because it would affect unduly a yield or an average yield. I think that the proper way to put that into use would be like the crop insurance does, they have a 25-year moving average and they always drop off the last 20 years. So if you have a good year or a bad year, it doesn't drastically affect the average for the 25 years. It's really all I wanted to say, Mr. Chairman.

I was wondering, is that the way you do your forecasting?

MR. G. BEATTY: Not just like that, Mr. Chairman, but it is taken into account; that is, it is weighted down.

MR. CHAIRMAN: That's it for you, Mr. Baker. Okay, thank you.

Mr. Enns.

MR. H. ENNS: I'm distracted by the Minister because where I want to engage in and point out a potential

conflict of interest that he may have in this whole matter in respect to energy and energy costing, just coming back a little bit to the growth load factor again - the subject matter has already been raised by Mr. Filmon - but I'd like to deal with it in a little more detail.

Hydro officials have to be aware, are aware of this Minister, this government's very strenuous battle in front of the Public Utilities Board calling for very substantial reductions in the pricing of natural gas, a major competitor as an energy provider.

When I say substantial, we're talking in terms, if I believe my Premier and I like to believe my Premier, anywhere from .33 to .50 percent reduction in the price of natural gas. I'm wondering in the assumption process that went into developing a growth rate, which way did Manitoba Hydro assume that the Minister and the government was going to win the case or lose it?

MR. M. ELIESEN: Mr. Chairman, Manitoba Hydro does its own analysis on what we believe will take place in the substitution between electricity and natural gas. I'll ask Chris Goodwin to indicate what we've assumed in our traditional models in this area.

MR. C. GOODWIN: Mr. Chairman, our assumption on natural gas, scope of market and assumption on price, is that while the gas company will not invest in transmission into new areas of the province, they will continue to supply the market in the existing areas. There will be infill within those areas and the price of natural gas will be sufficiently below the electric price taking into consideration the efficiency of new gas furnaces that gas will retain its market share substantially.

HON. W. PARASIUK: Yes, I'd like to just comment on this as well. As the Member for Lakeside knows, I'm very careful about conflict of interest. I don't believe there is any conflict of interest at all in the sense that I said that what our policy basically is, is to try and get the biggest bang for our energy buck. I know that the Member for Lakeside also believes that consumers should get the biggest bang for their energy buck, and that I don't see these things as either/or as I see them as being complementary.

Frankly, if gas prices go down, and as a result it may become more attractive to possibly extend the accessibility to natural gas for consumers in different parts of the province. That wouldn't be a negative thing at all, if they got a bigger bang for their energy buck. Obviously Hydro would have to take that into account; it would have possibly some implications but at the same time you should understand that if we get lower energy prices, that'll be a stimulus to our economy in terms of how that will be factored in as well.

All those things I think have certain pluses or minuses but ultimately the policy should be and is that we want to make sure that people do get the biggest bang for their energy buck. That's why we're not going around telling people that they should necessarily hook up to electric heating if they've got gas as an option. But if it's a choice between fuel oil and electricity, obviously electricity makes more sense. I think one has to be very careful in that respect and try and ensure that the consumer gets the best break amongst competing fuels,

so we don't see any conflict; in fact, I think that there's a way in which electricity and gas and all these should be complementary to each other.

MR. H. ENNS: Mr. Chairman, I don't disagree for a moment with what the Minister indicated. Of course, that's the honourable objective that we want for all our consumers, energy of whatever source. I caution Hydro officials never to assume what politicians will do in these assumptions.

I, for instance, have encouraged this Minister to do what I know he would philosophically like to do, and that is to nationalize the gas industry. I've gone one step further and I said if he does that, then I want it on every farmyard in Manitoba. I'd like to see a government with a vision that was displayed by early Hydro pioneers in this province, by another administration in '47, '48, '49, called the Rural Electrification Program and provide that low cost highly efficient energy source of which we have a tremendous abundance of in this country, not as renewable as hydro and water I agree, but certainly the closest thing to it. I'm seriously suggesting to the Hydro officials that to assume - I take the challenge of the government before the Public Utilities Board as being serious - certainly the Premier of this province has indicated on many a platform that he intends to see that Manitobans will have their natural gas prices significantly reduced.

As a rural Manitoban, I would of course like to and will press for considerable expansion of natural gas services to areas now not serviced. All of this clearly, should it come to pass, would seriously affect growth projections currently being put before us, upon which we are making - or possibly making in the near future some very fundamental decisions involving many millions, indeed billions of dollars.

HON. W. PARASIUK: I should have brought my sunglasses to shield my eyes from the brilliant red glare that has appeared in this committee room, but I certainly do not disagree with certain points put forward by the Member for Lakeside.

I think it is important that people do get the biggest bang for their energy buck. They should have, within economic reason, access to alternatives and they're obviously not - I don't think these are necessarily philosophical questions; they're one of pragmatism, and I won't comment on the premise or the suggestion that the Member for Lakeside makes that we should nationalize natural gas, although it would appear from his comments that he believes, and I would agree with him in this belief, that a publicly-owned utility probably would look more seriously at the question of providing greater accessibility of a utility service, like telephones historically, or electricity historically, and probably natural gas, than would a privately-owned utility. That has tended to be the history in Manitoba.

But before one gets one's expectations up too far, and obviously there's a lot of water that has to flow under the bridge before one would get to any points like that, but I do say that with telephones or hydro or natural gas, one wants to make sure that there is economic justification to any extensions into areas, and one takes into account short, medium and longer-term horizons when one looks at the economics.

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I think probably the people of Manitoba, many years ago, took a look at the longer-term economic implications when they proceeded with rural electrification, because probably on a case-by-case basis, one could have argued that the economics weren't there, but I certainly think electrification of rural Manitoba has had a tremendously beneficial economic impact to the province.

At the same time, there are still areas that for economic reasons do not have electrification. I get calls from rural people saying they want electrification or they would like three-phase power and there are economic considerations to take into account, so I would caution the member to rein in his desires to see natural gas in every farm.

MR. H. ENNS: Mr. Chairman, it saddens me when I see the passion and the vigor of a socialist Minister sounding so reactionary with respect to providing services that I believe could be beneficial to all people of Manitoba, and I remind the Minister, as he himself said it, if we were waiting for an economic case, we still would not have electricity on my farm in rural Manitoba. That was done because there was the political will to provide that service to all the people of Manitoba.

Mr. Chairman, I detect a tendency to take this line of questioning less than serious on the part of the Minister or . . .

HON. W. PARASIUK: No.

MR. H. ENNS: . . . his officials. I specifically ask the question, though, that there is governmental case being presented before the Public Utilities Board that calls for substantial reduction in the natural gas prices within the area principally as Greater Winnipeg, who is served by Inner-City gas. Has, for instance, Manitoba Hydro taken into account a successful appeal on the part of the Manitoba Government and what the result of a significant, one-third, or a 40 percent reduction in gas prices would be in the Greater Winnipeg area? What would that lead to in terms of expansion of usage by homeowners to natural gas? Would, in fact, electric furnaces be turned off and switched over to gas supply if that were the case? I think that's a legitimate question.

MR. M. ELIESEN: Maybe Mr. Beatty can answer that.

MR. G. BEATTY: Mr. Chairman, as I indicated earlier, we are still working with a load forecast prepared last year, so obviously that forecast has not taken into account any precipitous change in the situation. But I think Chris Goodwin has pointed out the major factors that we will be taking into account, as we go through the revision of the load forecast, that possibility. If we have information at that point, we will certainly factor it in.

HON. W. PARASIUK: I wanted to just assure the Member for Lakeside that I was not treating his question or line of questioning facetiously. I think that he has a genuine position, which I certainly don't find fault with, and I think he has a genuine position when he looks at what type of utility services he would like to see

more people in Manitoba have greater access to. I think that's a legitimate, solid position and I think it makes a lot of sense.

But I also would like to indicate to him that I did try and deal with this question by saying that we don't know exactly what the future will hold. We'll know as that unfolds over the course of the next number of months, but at the same time there will be pluses and minuses in terms of any type of forecasting. Any type of reduction in gas prices has an economic stimulus to the province and that is a plus thing, and that'll probably lead to more electricity usage, because there is a correlation between economic performance and economic growth and electrical usage. At the same time, there may be some instances where you will have people switching from electricity to natural gas because of the price differential, so one would have to take those particular things into account.

MR. H. ENNS: Mr. Chairman, I believe there's a will to rise at 12:00.

MR. CHAIRMAN: Yes.

MR. H. ENNS: I would just, perhaps as a matter of courtesy to the Hydro officials, indicate that I have a number of my rural colleagues that would like to ask some more specific or detailed questions relating to their own constituencies, line difficulties, and so forth, for the next session and that that would be the principal purpose of a follow-up meeting of this committee.

HON. W. PARASIUK: . . . customer service type of question.

MR. CHAIRMAN: Mr. Manness, do you have . . .

MR. C. MANNES: Mr. Chairman, I also have some questions on Hydro borrowings, but I'd like to just ask one short question, because page 4 of this handout indicated that the assumptions that have gone into developing the load forecasts are currently being reviewed. I'm wondering if Hydro could undertake to present to members of the committee, their latest revisions of the forecasts before we sit again, as a committee a year from now?

MR. G. BEATTY: Mr. Chairman, the process takes corporately about four months, five months. So I guess that's fair to say that we wouldn't have it, and start using any revision of a forecast until October or November, thereabouts.

MR. C. MANNES: Mr. Chairman, then when the quote says "for use in the upcoming revision of the forecast," you're talking then about the fall '87 revision. Is that correct?

HON. W. PARASIUK: I just wanted, for housekeeping purposes, we'll try and confirm this by the end of this afternoon.

The intent was to have the next meeting of Public Utilities dealing with Hydro on Tuesday, but I gather that there is a Hydro board meeting and that could create difficulty in terms of trying to get ahold of people

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on Good Friday and Easter Monday, the board members especially.

So what we'll try and work out between House Leaders is that we meet next Thursday and it may turn out that we can work out something whereby we might have another committee meet, like Economic

Development, maybe discuss MMR or Manitoba Oil and Gas Corporation on Tuesday.

MR. CHAIRMAN: Committee rise.

COMMITTEE ROSE AT: 12:00 noon.