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Undertakings

New Brunswick Board of Commissioners of Public Utilities

In the Matter of an application by NB Power dated January 8, 2002 in connection with a proposal for Refurbishment of its facility at Point Lepreau.

Delta Hotel, Saint John, N.B.
June 12th 2002, 2:00 p.m.

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CHAIRMAN: David C. Nicholson, Q.C.

COMMISSIONERS: Ken F. Sollows
Jacques Dumont
H. Brian Tingley

BOARD COUNSEL: Peter MacNutt, Q.C.

BOARD SECRETARY: Lorraine Légère

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CHAIRMAN: Good afternoon, ladies and gentlemen. Before beginning, any preliminary matters? Mr. Hashey? Mr. Morrison?

MR. MORRISON: Yes, Mr. Chairman. A number of undertakings. First Mr. Gillis asked for copies of the Fundy tidal studies. They are at the front of the room at the desk. As you can see, we have no intention of copying them, but if anybody wants to look at them they are here.

CHAIRMAN: I'm sure Mr. Albert will read them this afternoon during the break.

MR. MORRISON: Also, Mr. Chairman, I believe Ms. MacFarlane -- there was an undertaking dealing with electricity debt per worker, and I think part of that came from the Board and I believe part of it from Mr. Coon. Ms. MacFarlane, if you can answer that?

MS. MACFARLANE: We do not have all of the information yet, but in the transcript, Mr. Chairman, you asked if the $13,000 per worker was an up-to-date figure. This was in Mr. Adams' evidence. It is not clear from the evidence Mr. Adams submitted what he is using for data, but we have calculated that figure based on projected number of -- employed population of New Brunswick based on projections from the Conference Board of Canada, and on that calculation the debt per worker in 2007 would be 11,000.

You went on to ask if we could provide that information for all provinces across Canada, and we are collecting that now and again we will be using Conference Board of Canada data for that.

However, I did address in the record that I thought the data in Mr. Adams' report was coming from DBRS' 1996 report, and as it went to utility debt per worker he did not use that. It's not clear what he did use but he did not use the DBRS 1996 data.

So we will submit that on Monday for the other provinces.

CHAIRMAN: Good. Thank you.

MR. MORRISON: Mr. Chairman, there was another -- excuse me -- there were undertakings from JDI dealing -- the first dealt with the difference in variable costs with and without Lepreau. I believe Mr. Marshall is in a position to respond to that undertaking.

MR. MARSHALL: Yes. It was in reference to the DBRS report where the variable costs were 3.93 cents per kilowatt hour in 2001 and the request was how would these variable costs be affected under three different scenarios.

The first scenario where Point Lepreau would be refurbished and with Coleson Cove also refurbished on Orimulsion and the costs would reduce to about 3.4 cents a kilowatt hour.

And the case where if Point Lepreau was not refurbished and -- but Coleson Cove did proceed on Orimulsion, the cost would be about four cents a kilowatt hour.

And if Point Lepreau is not refurbished and Coleson Cove is not refurbished on Orimulsion but continues on oil, the cost would increase to four-and-a-half cents a kilowatt hour.

MR. MORRISON: Thank you, Mr. Marshall. Also, Mr. Chairman, there was another undertaking from JD Irving -- or to JD. Irving. It dealt with the document that was marked for identification 9. And there was an undertaking to provide the cost per kilowatt hour using the numbers that were on identification 9. I believe Mr. Marshall is in a position to respond to that undertaking as well.

MR. MARSHALL: Yes. We have taken identification 9 and prepared a response with all net present value numbers in it. I believe it's available to be handed out as a --

CHAIRMAN: What is your intention, Mr. Morrison?

MR. MORRISON: Well I guess we can do it one of two ways. You can either have that marked and entered as an exhibit, Mr. Chairman, or Mr. Marshall can read the numbers into the record, whichever is your preference.

CHAIRMAN: Well I mean the only reason I was asking the question, I have the paper, is whether or not you intend to have it marked as an exhibit or marked for identification.

MR. MORRISON: Well it would be my intention to enter it as an exhibit, Mr. Chairman, just for ease of reference if nothing else.

CHAIRMAN: Okay. Any objections to this being marked as an exhibit? Mr. Coon is not here today. So -- when is Mr. Coon coming back?

MR. THOMPSON: Mr. Coon will be back next week.

CHAIRMAN: All right.

MR. MORRISON: It really makes -- we are simply responding to an undertaking, Mr. Chairman. We can read the information into the record if the Board prefers.

CHAIRMAN: No, we will accept it as an exhibit. If Mr. Coon wants to comment on it he can do so next week. That's fine. And that would be -- that will be A-25.

MR. MORRISON: Mr. Chairman, going on with -- we are trying to clean up all of the undertakings --

CHAIRMAN: Good idea.

MR. MORRISON: This is from the Province of New Brunswick. There was a number of -- three questions I believe put by Mr. Hyslop yesterday concerning the NUCO proposal, one dealing with the costs in the NUCO proposal and the net present value and when the matter was discussed at the Board of Directors of NB Power. I believe Mr. Marshall can respond to the first two and Ms. MacFarlane to the last.

MR. MARSHALL: Yes. The arrangement with NUCO would be that they would operate the plant, do the refurbishment and sell all the power back to NB Power. The contract would start in 2001 or '2. The price was $50 a megawatt hour in 2001 escalating at CPI. There was also provision for upward adjustments in that price to accommodate capital cost increases because the price was based on the preliminary Hagler Bailly projections at that point in time. There was also provision that NB Power would continue to be responsible for decommissioning costs in all existing IFM up to this -- up to the start of the contract.

The -- NB Power evaluated that and the net present value difference of that proposal compared to doing the refurbishment and financing it as a Crown corporation at the interest rates that we have presented in the evidence was $170 million net present value difference.

And the third question as to when it was discussed --

CHAIRMAN: Can I just ask a question for my own clarification on that. I am probably wrong, but my recollection was that it was the NUCO was less advantageous than the dual -- than the natural gas combined cycle, which is 234 or thereabouts.

MR. MARSHALL: At the point in time -- again this was over two years ago, about two-and-a-half years ago, that the data was calculated and presented, the costing of the refurbishment was based on the Hagler Bailly information at the time prior to the detailed assessment of the plant. Natural gas at that point in time had a forecast price going forward of less than $2.50 compared to the current $4 price in the market place. So there were a lot of differences in the evaluation done at that point in time.

CHAIRMAN: Okay. Thanks, Mr. Marshall.

MR. MORRISON: I think the final aspect of that undertaking dealt with when it was discussed by the Board. Ms. MacFarlane.

MS. MACFARLANE: Yes. The Board minutes are in response to interrogatory CCNB-102 and they are in exhibit A-6. There is a reference in the February 23rd 2000, meeting to a presentation made about refurbishment by Mr. White, Mr. Groom, Mr. MacPherson and myself, and one of the slides on page 8 in those minutes makes reference to what was -- what information was delivered to the Board.

It was then discussed again at the April 27th, 2000, meeting. Again it's in appendix A-6 under CCNB-102 on page 12.

And it was finally discussed on June 8th, 2000, on page 4 of the minutes.

MR. MORRISON: Mr. Chairman, the final undertaking was in response to a question yesterday from Mr. Hyslop and it dealt with whether there was an independent engineering review of the refurbishment budget, and I believe Ms. MacFarlane can respond to that undertaking.

MS. MACFARLANE: In discussions with members of Panel A they believe that that was -- they received cross-examination on that from Mr. Hyslop in -- on page 920 of the June 5th, 2000, transcript Mr. White is asked about this. He has indicated that AECL opened their books to NB Power, that our review was on two fronts, one that we were getting fair value for the work, but secondly to ensure that the price was robust enough to be able to actually allow AECL to execute the work.

Further Mr. Hyslop asked if the analysis was our own or if there were independent experts and Mr. White commented that our staff did the review and the external advisory group that advises the president reviewed their work.

Mr. Eagles has also indicated to me that one of the baselines they had in doing the review on determining, A, whether we were getting value and, B, whether the price was robust enough, was the price that was received by -- pardon me -- from Ken Adam earlier on that gave a benchmark for determining the nature of the work, the amount of engineering and the prices attached to that work.

MR. MORRISON: Mr. Chairman, I believe subject to the further comments that Ms. MacFarlane will provide on

Monday on the debt per worker issue, that we have responded to all of the undertakings, by our records.

CHAIRMAN: If any of the -- either the Board staff or any of the other intervenors think there is another undertaking that hasn't been responded to, don't hold thy peace, let them know so they can work on that as well.

Otherwise, if there are no -- are there any further preliminary matters from any -- you have one, Mr. Hashey?

MR. HASHEY: Yes. Mr. Chairman, as requested by Commissioner Sollows, we have now had prepared the scheduling, which I think Mr. Sollows requested an update of current status, and we have that here available. It deals with the work that's currently underway. If you go to the other confidential document -- I forget the number, but we know the one that was scheduling -- that it does show other work that of course isn't in this phase and probably won't start I think the indication is until February, some time like that.

So the current stuff we have here, which has a green bar showing the progress bar and a purple bar -- sorry -- the purple bar showing the progress bar and the green bar is the early bar as to what is intended.

You know, I would offer this but I would request with respect to this exhibit that it does have the confidentiality attached to it because it is information that would be of interest to parties in which negotiations are currently going on, namely Quebec -- Hydro Quebec, I'm sorry, and the Bruce organization, where there is some serious negotiations currently underway with respect to the sharing of cost of product.

I don't know how you wish to deal otherwise with it as to how we should distribute it.

And this did come up in the in-camera hearing, so I guess I have got to be a little cautious.

CHAIRMAN: Just a minute, Mr. Hashey. Well I guess the -- all right, I will run this by you, Mr. Hashey.

First of all, we can't -- I am loathe to receive anything in confidence unless the parties are able if they wish to, to see it. Because otherwise -- and normally any recommendation or decision the Board made as a result of that and they depended on it or took it into consideration in the decision making process, the courts would strike it down.

However, I might suggest that we accept it in evidence as a confidential exhibit subject to the exact same provisions as were applicable to the previous three different things which were filed.

MR. HASHEY: I was suggesting nothing other than that, frankly. I apologize I didn't clarify. But we have got to remember I guess this question arose in the in-camera hearing. Now whether we need to go back in-camera at some point to enter that or just -- maybe that would be the better way that I would sit on it. I have it here and then at the termination of the hearing for five minutes some day we might just deal with the in-camera and distribute it in the same way it was done before?

CHAIRMAN: Either that or could I suggest that maybe that we accept it as a confidential exhibit with those parties who indicated for the last time that -- excuse me, in the last confidential in-camera hearing that we had, that they be given a single copy. And if anybody who returned the exhibits the last time around would like to receive this, then they can let NB Power know, it will be subject to the same terms and conditions as that order. And we will see after the parties have had an opportunity to review it, if in fact there is any necessity to go into an in-camera hearing at all.

MR. HASHEY: That is fair. Mr. Chairman, I have with me here I believe only 10 copies of this coloured reproduction. How many copies does the Board with to have of this at this point?

CHAIRMAN: I tell you what I am going to do is, I am going to suggest that you wait until the next break, Mr. Hashey. And then let's take a look at how many copies went out, the net number of copies that went out the last time around and that would be the number of copies for this one.

MR. HASHEY: Very good. We may need to make a few more, that is all.

CHAIRMAN: We will deal with it after that break.

MR. HASHEY: Okay. Thank you.

CHAIRMAN: Any other matters? If not, Mr. Craik you better move over here to mike number 13.

CROSS-EXAMINATION BY MR. CRAIK:

Q. - Yes. My first question is to Mr. Marshall. In the presentation you gave you mentioned that you had done some calculations under the heading of "Carbon Dioxide Mitigation Strategy". And you I think used some numbers for dollars per tonne penalty for natural gas and some estimates.

MR. MARSHALL: Yes. Could you refer me to the page of the --

Q. - Well it is page 40.

CHAIRMAN: That is in exhibit A-16. And that is the slide presentation. Is that correct?

Q. - Yes. Oh sorry, slide 10.

MR. MARSHALL: Good. Thank you. I have it.

Q. - When you look at CO_2 mitigation and this is being compared with natural gas option, you consider the natural gas burning and the CO_2 emitting from that particular power station. That is the way you do those calculations?

MR. MARSHALL: Yes. We look at the CO_2 in terms of tonnes per megawatt hour of release from a particular station.

Q. - So do you take into account the leakage of methane all the way from the gas well out at Sable Island in this case from the lines at the processing plant through the compressors and so forth until the gas is delivered to your power station, bearing in mind that methane is 22 times more potent a greenhouse gas than CO_2?

MR. MARSHALL: No, we do not. We account for the combustion of the natural gas. So the methane is combusted in the gas and released only as CO_2 as an exhaust from the plant. That is all that we have costed in this evaluation.

Q. - Pity. I will now move on to another question with regard to natural gas. There was some comment made somewhere about volatility and reliability of gas prices?

MR. MARSHALL: Yes.

Q. - But we don't have to get into detail. There was an incident recently here in Saint John, in February of this year, when the Bayside Power Station had to either shut down or be severely down-loaded for about a week due to the lack of natural gas. Do you have an information on that?

MR. MARSHALL: I believe it was in January, not February. As a matter of fact, I think it occurred the same week that we were here at the Coleson Cover hearings. There was a production difficulty with the offshore Sable platform on a Sunday that couldn't be repaired because of bad weather conditions. And my recollection is that there was a curtailment of gas supplies and the Bayside plant was curtailed from their normal 260 megawatts down to I believe about 100 megawatts of production. And I believe it occurred twice that week.

The first one I think lasted for about a day or a day and a half. And then it occurred again a day -- a few days later. That is my recollection.

Q. - So are you able in your calculations to give any credit for the fact that at the Point Lepreau station you have something like six months of fuel within walking distance of the reactor?

MR. MARSHALL: No. We do not give any penalty to the natural gas option based on that availability of gas. We have assumed in our modelling that gas is available as required to be -- to be burned and turned into power.

The only unavailability we account for would be the normal forced outage availability of the unit. So if -- the only modelling we have of gas unavailability has to be incorporated is the part of the forced outage of the generator.

Q. - Thank you. I will just change the subject somewhat. I would like to address the plant performance agreement and the fact that the capacity factor term has now been replaced in that agreement by availability and to explore what that might mean.

For the benefit of those who may not be familiar with the terms of these agreements, there was a memorandum agreement on plant performance agreement signed the 21st of December 2000 between AECL and NB Power in which AECL warrants the capacity factor and that if the plant produces more energy, NB Power will pay AECL a bonus.

Now I can give a reference to where you will find that document. But there was that agreement based on the capacity factor.

CHAIRMAN: Now Mr. Craik, you haven't been here, but that has been very thoroughly canvassed. I think everybody in the room is aware of that 80 percent capacity factor. And if Lepreau refurbished were to run over that, then NB Power would pay a bonus. And if it runs under, then AECL would compensate NB Power somewhat. The Board is quite well aware of that.

MR. CRAIK: All right. However, Mr. Chairman, in the current plant performance agreement signed May 24th 2002 the term capacity factor does not appear in that agreement.

CHAIRMAN: Okay. Go ahead. I just wanted you to know that there has been a good deal go on. So we are all familiar with the concept.

MR. HASHEY: Mr. Chairman, I am a little concerned that this probably is a Panel A issue. Because they were involved with the contract and the contract negotiations and the discussion of the term of the contract.

I don't have any problem if Mr. Marshall can answer or Ms. MacFarlane. But if it is -- if it is definitely a Panel A issue, as I expect, then that may be the answer. But carry on. I just wanted with that caveat --

CHAIRMAN: I think both -- the panel will say if it is a Panel A.

MR. HASHEY: Okay.

MR. CRAIK: May I respond to that Mr. Chairman?

CHAIRMAN: Just ask the question, Mr. Craik. I think that is the way to go.

Q. - Okay. Would you agree, Mr. Marshall, that the difference between the terms capacity factor and availability depend on the ability of the grid to receive the energy produced by Point Lepreau?

MR. MARSHALL: Yes.

Q. - And it is only when this energy is produced and delivered to the grid that revenue is generated?

MR. MARSHALL: Well that would be dependent on the terms of the contract.

Q. - No. I am talking about normally as we stand at the moment, when NB Power -- when Lepreau is part of NB Power and you are taking electricity from it and selling it to whoever, it is only when that electricity is being delivered from Lepreau to the grid that it has a value?

MR. MARSHALL: Yes. That is correct.

Q. - And in the spreadsheets which you prepared in appendix B you have used the term capacity factor over 25 years?

MR. MARSHALL: Yes.

Q. - Now, is it possible that the change from capacity factor to available generation could result in NB Power having to pay AECL millions of dollars unsupported by revenue?

MR. MARSHALL: Yes. It is possible that, as you point out, there is a difference between availability and capacity factor. If the plant is available to produce power then -- and the grid is not able to accept it, then there would be a payment made and not a value of the energy into the system.

If the plant is -- and again, I haven't seen the details of this. So depending upon how the availability is calculated, if it is simply availability to operate at 100 percent capacity factor, but the plant in actual fact is operating at a lower reason for some other factor, a system related factor, then there may be some -- some lost value.

Q. - Would you agree that availability is difficult to measure as compared with capacity factor, which I understand is measured by meter readings on the output connections from the main generated transformer to the grid, less the meter reading on the connection from the grid to the station transformer?

MR. MARSHALL: I guess it is -- it may be more difficult to measure availability. I wouldn't characterize it as difficult to measure. We measure availability on all of our power plants today.

There are clear defined statistical measures of power plant performance. We collect operating hours, outage hours, maintenance hours and all of those, that data. So that there are clear industry standards for measuring availability.

Q. - Are those industry standards referenced in the new plant performance agreement signed May 24th 2002?

MR. MARSHALL: I am not familiar with the detail of that but -- so I can't respond to that.

Q. - But is it not the grid that accepts the power from the power station and eventually sells it to customers?

MR. CRAIK: Yes, we do that.

Q. - There is some information -- and I don't know how to put this in a question. Are you aware that there is a publication called "Nuclear Engineering International" which publishes every year annual and lifetime capacity factors for over 360 nuclear generating stations in the world?

MR. MARSHALL: I'm aware there are publications of capacity factors of nuclear plants throughout the world.

Q. - Yes. Are you aware that about once every five years they include a column of availability as well as capacity factors for the individual stations?

MR. MARSHALL: I have not looked at that in detail.

MR. CRAIK: Well, again trying to put this in the form of a question -- I will come to the point, Mr. Chairman.

I have done an analysis of the results of 38 CANDU nuclear power stations in the world, excluding India and Pakistan, for the years of 1992 and 1997 which I'm willing to table. And this indicates an average difference --

CHAIRMAN: Mr. Craik, what is happening is you have gone from being an intervenor to being a witness. In other words, you are bringing your own evidence to bear.

I suggest what you do is that you wait until the AECL witness, who is scheduled to come on, if that witness can answer these questions that you are talking about, then you would be able to get it in through that witness, rather than forcing you to take the stand yourself to get it in. Okay.

MR. CRAIK: Well, again, Mr. Chairman, I don't mind taking the stand to be cross-examined. But that is an appropriate time.

CHAIRMAN: Well, you see, in our procedure, if you were going to do that, you should have given prefiled written evidence, et cetera, et cetera, et cetera. So I would rather not cross that bridge unless I have to.

MR. CRAIK: Can I do that now, give you the prefiled evidence?

CHAIRMAN: No. That is not the way it works. You have to give all the parties the opportunity to see this well in advance. There is a schedule that has been out there since the pre-hearing conference.

So my suggestion is why don't you go to another area.

And during the break the Board will perhaps consider it as a Board rather than just me as a Chairman reacting.

So if you have got another area of questioning you would like to go to?

MR. CRAIK: If I could just comment a little bit on what you said, it is true that the process of interrogatory direct evidence has been going on for some months.

But this particular plant performance agreement was not received until one day before the public hearings. And it was only then that it became evident that the terms of this agreement had changed from capacity factor as in a document signed in December of 2000 to availability.

So there hasn't really been adequate time to submit any other information under the general heading of interrogatory.

CHAIRMAN: Okay. That is a very good point. And I'm glad you have made it. However did you -- and I don't remember. That I think would be a Panel A question as to whether or not that change did in fact occur.

Did you put that question to them? I don't remember.

MR. CRAIK: No, I did not. Because I was viewing it as a matter of availability being determined by the ability of the grid to receive the power as opposed to the station delivering the power.

CHAIRMAN: Okay. Look, what I'm going to suggest is that once you have finished the rest of your questioning is that you allow the applicant and the intervenors here to review what it is you have there.

And if somebody has an objection to it being introduced by way of an exhibit, maybe even of the Board, then they can let us know.

But I think what we are dealing with now is between you and I. And it should really be with the parties to this proceeding.

So do you have another area of questioning which you would like to pursue?

MR. CRAIK: Well, I will avoid submitting any evidence.

Q. - But I would like to ask why in Mr. Marshall's spreadsheet he has used the term "capacity factor" when in fact the document describing all this uses the term "warranted available generation" and does not include the statement "capacity factor"? I think that is a valid --

CHAIRMAN: All right. I think you should refer us to which exhibit and attachment you are referring to, Mr. Craik?

Q MR. CRAIK: Well, Mr. Marshall's attachment is a spreadsheet in appendix B-2.

CHAIRMAN: And that is exhibit A-1 which is the prefiled evidence?

MR. CRAIK: Yes.

CHAIRMAN: Yes.

MR. MARSHALL: Yes. I have it.

Q. - You have a column there which refers to the performance agreement with AECL?

MR. MARSHALL: Yes.

Q. - And adjacent to it a column "capacity factor"?

MR. MARSHALL: Yes.

Q. - And at the bottom you have a note defining what capacity factor is?

MR. MARSHALL: Yes.

Q. - Well, are you surprised to learn that those terms do not appear in the plant performance agreement and that the terms in the current version of the plant performance agreement talk about warranted available generation? And would these not be possibly significantly different numbers?

MR. MARSHALL: The first time that I heard of this warranted available generation in the performance agreement is today. Our evaluation in appendix B-2 is done based on capacity factor.

It is under the assumption that we have a highly reliable transmission system and that the transmission system is capable of accepting the output from the station as it is produced. So in this evaluation we have modeled it all on capacity factor.

I guess the performance agreement was modeled on capacity factor. So inherently that would assume that the plant availability, guaranteed availability number and the capacity factor would be equal in this evaluation.

Q. - Can you envisage any grid operating situation where the grid may not be able to receive 100 percent of the output of Lepreau?

MR. MARSHALL: There are -- there is a very small probability that the transmission system may not be available.

I think there was an instance last year with lightning strikes actually took a line out and caused Lepreau to be forced off-line for a small period of time.

In the overall evaluation of this analysis, I think it would have a very small impact.

Q. - Was there not an occurrence in Quebec and parts of Ontario where power stations were unable to deliver power to their grid system for several weeks?

MR. MARSHALL: There was an occurrence in an ice storm of about three years ago where a catastrophic ice storm across Ontario and Quebec and Maine did take out transmission lines for an extended period, yes.

Q. - Well, what happens if there is a reduced amount of the energy available from Lepreau because of cheaper generation available from other sources either inside or outside the province such as Hydro Quebec hydro generation?

And we are talking here of a period of 25 years. I'm not talking of something that will happen in the next five years.

But over that 25-year period is it not possible to imagine a situation where the power output required from the grid or requested from the grid from Lepreau could be less than 100 percent because of gas fired generation or wind power?

I have heard people advocating recently some wind power generation or a reduction in system demand. I mean, how can you maintain that the capacity factor will equal availability factor for the next 25 years?

MR. MARSHALL: The dispatch of Lepreau on the dispatch of all the resources on our system is done on an incremental cost basis which essentially is the fuel cost plus the incremental O&M associated with the fuel.

For example, for a Belledune plant with a scrubber the cost of limestone would be directly accorded with the fuel as an incremental cost with the fuel and the dispatch of the plant.

The dispatch cost of Point Lepreau is only the fuel cost and the irradiated fuel management cost of Point Lepreau. It is down in about $3 a megawatt hour.

We would need -- there is no gas plant, no fossil fuel plant that I'm aware of that can generate any energy at lower than $3 a megawatt hour.

So the only issue that you have raised that might cause it would be wind generation, which would have a zero cost energy dispatch.

And if there was enough wind generation we would need at least a thousand megawatts or more added with our hydro system in order to alter the dispatch of Lepreau.

But I think it is an extremely low probability over the life of the station.

Q. - So why would a person change the terms from capacity factor to availability in the plant performance agreement?

MR. MARSHALL: I don't know.

Q. - Does -- with regard to the grid setup at Lepreau, at what point does the Lepreau Nuclear Power Station stop and the grid start in terms of the switching station?

Is the switching station regarded as part of the grid totally? Or are parts of it regarded as Lepreau?

MR. MARSHALL: We are getting into the division line now between transmission and generation that will be subject of the next hearing that we are in in the fall on transmission tariff.

Our projection at this point in time under the most ferc definition of rules would be the high side of the unit transformer. In Ontario it is at the synchronizing breaker of the generator. But it does not include all of the terminal station at Lepreau.

Q. - So for the purposes of this plant performance agreement, would you think that there could be a failure in the grid which would be regarded as a failure of the Lepreau station or a failure of the ability of Lepreau to deliver power to the grid, which would trigger either a penalty on AECL or a bonus on AECL, depending on how you resolve that definition?

MR. MARSHALL: If it is a failure in the grid, then it would not affect the availability of the station.

Q. - These questions may seem a bit technical. But they do underline the difficulty of administering a performance agreement based on available generation.

You can get into debates as to whether the generation was truly available but the grid could not receive it or vice-versa.

And my concern here is simply whether this change in this agreement is going to penalize NB Power?

MR. MARSHALL: I wasn't party to the negotiations to change the wording. But I can say that we have a reliable transmission system. We have two 345 KV lines going into the Lepreau station.

We have an application before the National Energy Board for another 345 KV line running from Lepreau into the United States in the Bangor area, that there will be sufficient takeaway capacity and alternative sourcing on those lines so that should any one trip, there still is a full capability to take all of the power away from Lepreau.

As a matter of fact, we will have triple contingency capability when the international line is built. So I think again, as I say, the probability of the grid not being able to accept Point Lepreau power is very small.

Q. - So would you agree it is puzzling if not suspicious that these words were changed in this agreement?

MR. HASHEY: Mr. Chairman, I think we are getting a little bit unfair here with this panel. These are not the people that were involved in that contract negotiation.

The people that were have been here and they have testified. And I think we are getting a little bit into argument too. I think if necessary we can bring somebody to explain this.

But the people that were not involved in the negotiation of this contract in that regard, really I have let this go, but this is not the appropriate witness.

Now if you want me to recall a witness for this purpose I can do it.

CHAIRMAN: Mr. Hashey, again I say the witnesses should -- if it is Panel A they should say so. You shouldn't have to do it.

Do you feel competent in responding to that question? Or is it Panel A? That is the question.

MR. MARSHALL: Well, the question of availability of the transmission system, I feel capable to respond on. And I believe I have done so.

The details of why the contract was changed from one point to another, I'm not capable of responding. I was not party to the discussions.

CHAIRMAN: The wrong panel, Mr. Craik. I'm sorry.

MR. CRAIK: Well, at least I have had an opportunity to make this particular point, if not completely.

CHAIRMAN: I'm sorry you didn't bring it up in your cross with panel A.

MR. CRAIK: Well, I can explain the reason for that.

CHAIRMAN: Frankly, it is too late now. But do you still wish to see if the parties will allow your calculations in reference to availability to go in?

Q. - Well, I had some requests for information which --

CHAIRMAN: Yes.

Q. - -- were does NB Power or has NB Power kept a list of -- a table of -- historical list of plant availability compared with a capacity factor for Lepreau from its inception? Could that information be provided?

MR. MARSHALL: Yes. My understanding we have detailed statistical data on all of our power plants.

Q. - In terms of capacity factor and availability?

MR. MARSHALL: I know that we have participated in CEA databases and have provided information to the CEA on performance of generators through that database. And data is collected and filed.

I'm not familiar with the most recent data. But I'm aware that there is data collected and has been filed through the CEA database. And I know that that data at least exists back to '85 or '86.

Whether it goes all the way back I'm not certain. That is subject to check.

Q. - Well, could NB Power provide information on availability versus capacity factor for other CANDU units?

MR. HASHEY: That is an unfair question.

MR. MARSHALL: I don't have that data. That would be a Panel A, Lepreau people to deal with that or AECL to deal with that.

CHAIRMAN: Now Mr. Craik, I think just to follow up and assist you a little bit here, Mr. Marshall has indicated that NB Power may well have statistics in reference to what you are looking for as to availability and capacity factor with Lepreau back perhaps into the mid '80s.

And I think the question that you could ask is whether or not they would undertake to provide the hearing with that information.

MR. CRAIK: Yes. I will terminate there, Mr. Chairman.

CHAIRMAN: No, I am not trying to cut you off on your line of questioning. I am just simply saying that is the way to handle that is to ask them then to file it if they have it.

MR. CRAIK: Yes.

CHAIRMAN: They -- Mr. Hashey is objecting to you asking for the same data in reference to other plants. The witness has not indicated whether he believes NB Power has those stats in reference to other CANDU reactors or not. But again, I say there is somebody coming on from AECL who could well have those.

MR. HASHEY: Mr. Chairman, we will make an effort to locate that information. I can't obviously through this Panel or the people present today give you an indication as to what we have, but we certainly will find out and let you know, if not late this afternoon by Monday.

MR. CRAIK: Well to conclude, may I offer this table to Mr. Hashey for his consideration as to whether it can be introduced in evidence or whatever?

CHAIRMAN: All right. Mr. Craik, what I'm going to suggest is the Board will take a 10 minute recess. You can show it to Mr. Hashey and to the other intervenors, because it's not just the applicant but if anybody else has difficulty with it being introduced. If nobody does, then the Board is prepared to accept it. So we will take a ten minute recess.

(Recess)

CHAIRMAN: We are in trouble. Mr. Hyslop has moved down to the front table. I'm kidding.

MR. HYSLOP: My purpose is only --

CHAIRMAN: Admirable.

MR. HYSLOP: -- to assist Mr. Craik as we proceed, Mr. Chairman.

CHAIRMAN: Yes, I'm sure of that. Okay, Mr. Craik, we have had a break. I take it you are not going to attempt to -- sorry -- Mr. Morrison, you had something you want to say?

MR. MORRISON: I was going to let you finish, Mr. Chairman, but we have taken a look at the document that Mr. Craik has tendered. We do have a problem with it -- several problems really. And I guess -- well we are objecting to it going in.

It may very well go to weight, Mr. Chairman, but it does contain selected data. The comparisons are to plants which may very well have a different configuration with respect to the grid than Lepreau does.

It also deals with plants or systems that would have different dispatch parameters. For example, utilities that have high hydro, which is unlike New Brunswick, which would have a different dispatch parameter than Lepreau would have.

So it's our submission that the document itself is -- I don't want to say misleading, but has very little probative value.

CHAIRMAN: Any other parties have any points to make in reference to it?

MR. HYSLOP: Yes, Mr. Chairman. In my capacity as solicitor for the Province, we take the view that the point being raised by Mr. Craik would appear to possibly have some significance in that the change of the words capacity factor to availability in the contract may have some materiality in terms of payments, calculation of payments both ways.

We would ask that the Board consider admitting the document as an exhibit, giving it its weight, and then allowing cross-examination on the document and proceeding on that basis, taking into account the low probative value of some issues that may be pointed to in the cross-examination, or I might add in any re-direct that Mr. Morrison or Mr. Hashey may have with regard to the document itself.

CHAIRMAN: Thank you, Mr. Hyslop. Well the Board will accept it as an exhibit and will give it the weight that it deserves, and of course as Mr. Hyslop has just indicated, it will be subject to what the panel has to say about it and as well what comes out in argument.

So that will --

MR. HASHEY: Mr. Chairman, obviously this is the wrong panel on the contract issues, that has become apparent, and we would ask for the right -- if this is going in, the right to consider the possibility of calling rebuttal evidence from the appropriate panel, if necessary.

CHAIRMAN: Yes. Absolutely, Mr. Hashey.

MR. HASHEY: Thank you, Mr. Chairman.

CHAIRMAN: As a matter of fact, if it turns out that the parties believe it to be a worthwhile thing to pursue, the applicant might even consider bringing that panel that is familiar back. However, we will cross that bridge if we come to it.

So it will be -- this will be Craik number 1, and that's a single page exhibit headed "Nuclear Power Plant Capacity Factor and Availability".

Okay. Go ahead, Mr. Craik.

MR. CRAIK: Well I understand, Mr. Chairman, that I have the privilege of being able to ask Panel B a few questions on this particular document?

CHAIRMAN: Yes, you do. It's now in the evidence and will be given the weight that the Board believes is appropriate to attach to it after the hearing closes.

Q. - Will you agree that assuming the data is reliable, and it's certainly not my data --

CHAIRMAN: Mr. Craik, could you pull the mike in just a bit. Over the break some of the people in the back of the room were having a little difficulty hearing some of your questioning. Good.

Q. - Thank you. Would you agree that this data, assuming the inputs are correct, indicates the possibility of a difference between annual availability and annual capacity factor, which could have a financial implication on the plant performance agreement in terms of payments from NB Power to AECL?

MR. MARSHALL: I look at the data -- the -- assuming that the data is calculated based on industry standards -- I take it this data you have selected from reported data?

Q. - Yes. It's straight out of these magazines, Nuclear Engineering International.

MR. MARSHALL: Then the issue of the question is would it have a financial impact relates back to whether the annual availability as calculated in this data is consistent with the terminology of availability as written in the performance agreement. And I cannot respond to that without reviewing all of that and being able to determine that factor.

Q. - Well can you advise me as to why the plant performance agreement was changed from the more easily understood capacity factor term to annual availability?

MR. MARSHALL: I'm not certain that it was changed to annual availability, and again I already responded that I wasn't party to the negotiation of that agreement, so I don't know why it was changed.

Q. - Well the certainty is in evidence in the documents before us, if you look at the plant performance agreement as submitted.

MR. MARSHALL: Could you refer me to that place, please.

Q. - In this book here which is -- I am advised it's A-17.

MR. HASHEY: In fairness, Mr. Chairman, we are asking for legal interpretation of a document. And an interpretation may be semi or not legal from someone who had no involvement with this document and its drafting. And I really think the question is unfair and improper of this panel.

I think Mr. Marshall answered. Then Mr. Craik goes right back to the question he asked earlier before the break when it was responded to again by Mr. Marshall, that he wasn't party to this agreement. And then we just don't cease. And I don't think that's fair. I realize he is being coached now.

CHAIRMAN: Well, it is rather obvious that it is the -- it is a Panel A matter. And, Mr. Craik, I don't understand, you are saying that it changed. We have in front of us here exhibit A-17, the agreement. And that is dated May 24, 2002. What did it change from?

MR. CRAIK: It changed from the memorandum of agreement on plant performance, agreement signed 21st of October 2000.

CHAIRMAN: Is that in the evidence?

MR. CRAIK: Yes. Yes, sir.

CHAIRMAN: Where would that be? Can you help us out there?

MR. MACNUTT: A-5 of PUB-8.

CHAIRMAN: A-5, Mr. MacNutt?

MR. MACNUTT: A-5, PUB-8.

CHAIRMAN: PUB-8.

MR. MACNUTT: Our advice is, Mr. Chairman, you will just have to keep piecing through the document until you come to it. Because there is about seven different documents in there altogether.

CHAIRMAN: Do you know, Mr. Craik, where in that?

MR. CRAIK: Yes. It's under PUB-7 and it's after the third green sheet.

CHAIRMAN: The third green sheet, here we go again. There is one. So that's the memorandum of agreement. And where in the memorandum of agreement would it have said capacity factor that has now been substituted with availability?

MR. CRAIK: Well, you have to look at the latest version of the plant performance agreement, which was dated 24th of May 2002.

And if you look through that document, Mr. Chairman, you will not find the words, plant capacity factor, anywhere in the documents.

CHAIRMAN: No. And availability is defined in the definition section. That's no problem.

MR. CRAIK: It's not the definition. It's the cost of the definition that bothers me.

MR. HASHEY: Maybe Mr. Morrison can help.

MR. MORRISON: Mr. Chairman, and I am not -- definitely not going to be a witness. But to put it in perspective, I think what Mr. Craik is asking the panel to do is, in fact, an interpretation of the contract.

Now I'm not going to give evidence. But if I can direct the Board, if you look at what the term capacity factor is in that paragraph 5 of the memorandum of agreement that deals with the number of megawatt hours. The denominator is the number --

CHAIRMAN: What page is that on?

MR. MORRISON: That would be on page 2 of the memorandum of agreement on plant performance agreement.

MR. SOLLOWS: Memorandum of agreement, A-5, PUB-8, the third green sheet in. Do we have the same page as him?

MR. MACNUTT: The heading at the top of the agreement actually states "Memorandum of Agreement on Plant Performance Agreement."

CHAIRMAN: So it's not after the fourth green page.

MR. MACNUTT: You just keep going down through it until you find it. Because it's about the fifth. There are no numbers.

CHAIRMAN: We are looking at the wrong document, Mr. MacNutt. We have got to go one more green page or two.

MR. SOLLOWS: We have got memorandum of agreement on plant performance next.

MR. MACNUTT: The next one is the one you are looking for.

MR. MORRISON: Yes. And if you turn to the second page, page 2.

CHAIRMAN: Ah, there is a numbered paragraph 5.

MR. MORRISON: And without going through, what I am suggesting is if you look at the definition or how capacity factor is defined in the memorandum of agreement, and then you look at the definition of warranted available generation which appears in the plant performance agreement, I think you will see that generally the same numbers are carried through in both documents.

Now as with any legal agreement, you have to work through the agreement in some detail. And I don't think that this panel is the appropriate panel to do that.

The appropriate panel to do that would be the Panel A people who were involved -- involved in the negotiation of the agreement and who are familiar with the agreement.

CHAIRMAN: Basically what you are saying is that that's Panel A, and it's also open to argument.

MR. MORRISON: Well it is certainly a legal interpretation, Mr. Chairman. Because, really, to understand any complex agreement, but particularly this one where it utilizes several definitions. And warranted available generation is a defined term which relates to other defined terms in the agreement. And it really deals with the number of kilowatt hours divided by the number of available days in the year.

And I haven't worked through it in quite some time myself. So I don't want to overemphasize the point. But I believe if you read the two documents you will see that there is a connection between the two definitions.

However others could explain that. But really it is a legal interpretation of the document.

MR. CRAIK: Well, I'm not very good at legal interpretations. But the original document talks about -- it says "if the plant produces more." And the new document says "if it is generated or can be generated." There is a big difference in those meanings.

CHAIRMAN: Right. Mr. Craik, what we are getting into here now is argument. In evidence we have the various agreements. And you have your exhibit.

I'm just wondering. The only question would be is if we could have comment from Panel A or not. That is one thing.

But the second thing is are there any other questions that you know to be appropriate of this panel?

MR. CRAIK: Well, Mr. Chairman, I raise this because in Mr. Marshall's spreadsheet and calculations he was using capacity factor.

And it seems to be an incorrect term with financial applications. That is why I raised it with this panel.

CHAIRMAN: I understand that. Yes.

MR. CRAIK: I really don't feel I can pursue this much further except to wonder why these changes were made which have or could have a serious financial implication on the payment of bonuses to AECL.

CHAIRMAN: Well, again I think that you are finding that the applicant maintains that there hasn't been a quote "change" made.

MR. MARSHALL: Well, Mr. Chairman, I guess what I'm saying is that it really is -- the two documents are there. They are subject to interpretation. Quite frankly, I don't even know if you had Panel A here it would shed much light on the matter.

It is really a question of argument. And Mr. Craik can make his argument based on the two documents. And I guess we could see where it goes from there.

But the documents are what they are. And I don't want to put my interpretation on the documents in evidence before this Board. It is a legal interpretation. And I think it should be left for final argument.

CHAIRMAN: My understanding is that this panel has undertaken, if you do have the statistics in reference to Point Lepreau concerning capacity factor as versus availability you would provide it, is that correct?

MR. MARSHALL: We could do that. And I might add I could -- relative to the last question asked by Mr. Craik concerning the comparison of this annual capacity factor versus annual availability --

CHAIRMAN: Yes.

MR. MARSHALL: -- again it comes into what is the definition of availability. Generally availability is if the unit is available and capable of running you would look at it as 100 percent. The difference between those two numbers may not take into account, depending upon how the availability is calculated, may not take into account derations at the plant or slight reductions in output. The plant was available and running. But it may not have been capable of operating at full capability. So the differences in the numbers of Mr. Craik's exhibit may actually reflect derations and unavailability of portions of the plant, not the whole plant. That type of an adjustment is accommodated in the definitions in the agreement. So his original question, to say that the difference in these two columns, do they have a financial impact on the result, without having his clear definition of how he calculated availability, I can't answer that.

Q. - Well, could I ask the question do NB Power have a clear definition of availability as distinct from capacity factor?

MR. MARSHALL: The only definition that is relevant here is available capacity that can be delivered from the plant.

In the agreement on page 4, in available capacity, I read item -- article 1, 1.1, bullet 3 on page 4 of that agreement, that available capacity means the maximum capacity modified for ambient cooling water temperature for a specified period of time, such as a month or a season, and Point Lepreau -- PLGS, being Point Lepreau Generating Station equipment limitation at anytime.

So any limitation of equipment inside the plant that would cause derations is accommodated in this agreement and not part of the availability and not lost.

So I just say that comparing this annual capacity factor and the annual availability numbers may not be relevant at all to this agreement.

Q. - Well, does this agreement clearly state that only if -- I quote from Mr. White's words from the proceedings.

He said, referring to the plant running at high capacity factors, "We pay them essentially", that is AECL, "one-third of our gain on the upside." So we have already made two-thirds gain on that upside.

Now if you are talking of availability rather than capacity factor, could you not have a situation where NB Power is not generating revenue but in fact still is contracted to pay AECL?

MR. MARSHALL: If the question there of availability of the grid is beyond the control of AECL and only within the control of NB Power transmission, that is likely the reason why it is there.

Q. - But the idea conveyed in the evidence previously presented was that when we make the money, we pay AECL a share of it?

CHAIRMAN: All right. Mr. Craik, that is the precise reason why you should have put these questions to the previous panel, sir, is that -- I mean, you are going back and you are quoting from their testimony in front of the Board and saying that what you are bringing up now brings a different picture.

And I only wish that you had brought that to them. Because they were the panel that should be able to testify in reference to it.

The other things that I see happening here are really a matter of argument. And Mr. Hashey has made the point a number of times that this panel is not the panel the question should have been put to, to begin with. But secondly, if it is argument then it is saved for the argument at the end.

Mr. Hyslop was moving over there. Did that mean he wanted to mention something to Mr. Craik or not, sir?

MR. CRAIK: Well, I can only apologize that --

CHAIRMAN: No. I'm sorry. I'm just simply sorry that you didn't realize it and do it then. Because that is when it would have been of value --

MR. CRAIK: Well --

CHAIRMAN: -- or much more value.

MR. CRAIK: -- part of the problem was that I did not receive this document until one day before the public hearing. And it is a very complex document. And the subtleties, the financial subtleties inherent in this change of wording, I was familiar and had studied the document that we referred to earlier under the memorandum of agrement on plant performance agreement and naively assumed that those principles would be carried forward into the final agreement.

And so I can only plead that I didn't have sufficient time to explore this particular financial point in some detail.

MR. CRAIK: Well as a final point, I understand that Mr. Hashey before the break had indicated willingness to recall a member of Panel A to address this issue.

MR. HASHEY: I didn't say that. I said we would take that under consideration whether we should or whether it was necessary.

CHAIRMAN: You are requesting that the applicant does?

MR. CRAIK: Yes.

CHAIRMAN: Okay. Any further questions then of this particular Panel?

MR. CRAIK: No, Mr. Chairman.

CHAIRMAN: Okay. Thank you. We will give a 10-minute recess so that Mr. MacNutt and Board Staff can move down to mike number 13.

It's my understanding that Mr. Hyslop has two short -- well I shouldn't say that. Has a couple of questions of clarification in reference to an undertaking. Is that correct, Mr. Hyslop?

MR. HYSLOP: Yes, sir.

CHAIRMAN: That's 16.

MR. HYSLOP: Yes, Mr. Chairman. It's in reference to exhibit 25, the handwritten numbers relating to the NPV dollars in chart form comparing the gas cycle in Point Lepreau.

MR. MARSHALL: Yes.

MR. HYSLOP: Yes. Under the new combined cycle gas, there is a figure of $820 million for replacement power?

MR. MARSHALL: Yes.

MR. HYSLOP: And my understanding would be that that's the net present value of replacing the difference in power between a 400 megawatt combined cycle gas unit and the 605 that would be from the refurbished Point Lepreau. Is that a correct understanding, Mr. Marshall?

MR. MARSHALL: That's correct.

MR. HYSLOP: And with respect to the used fuel management, there is a figure of $170 million net present value for the new combined cycle gas unit?

MR. MARSHALL: Yes.

MR. HYSLOP: And is my understanding correct on that, that that reflects the same cost of disposing of the waste fuel from Point Lepreau and its decommissioning. But because it's at a later date it costs more. Am I correct in that?

MR. MARSHALL: No, because it's at an earlier date --

MR. HYSLOP: Or earlier --

MR. MARSHALL: -- it costs more. Yes.

MR. HYSLOP: Okay. Thank you very much. That was just clarification.

CHAIRMAN: Thank you, Mr. Hyslop. Mr. MacNutt.

MR. HASHEY: Mr. Chairman, before -- I apologize for interrupting.

CHAIRMAN: Oh, sorry. Not a bit.

MR. HASHEY: During the brief break, I'm sorry, again. During the break as instructed, we have identified the parties who received a copy of the document before that I have reference that Commissioner Sollows had requested the update on.

We have supplied them with a copy of that. I have asked for additional copies. I have four copies here that I will leave with the secretary. And, I believe we gave you seven last time.

CHAIRMAN: I think four -- four will be sufficient.

MR. HASHEY: Okay. Well I have the four then we can provide right now.

CHAIRMAN: Okay. And that document is subject to the same conditions as the previously and the same order. An order exactly the same as the previous one. And we will -- we will deal with it later.

We will mark that in the morning, Mr. Hashey. I don't know quite how to attack it. I will check it out.

Go ahead, Mr. MacNutt.

CROSS-EXAMINATION BY MR. MACNUTT:

Q. - Ms. MacFarlane, I am sure you are familiar with the corporate document entitled, Business Plan and Financial Projection 2001/02, 2008 --

CHAIRMAN: Would you draw that mike in a bit, Mr. MacNutt.

MR. MACNUTT: Even moreso, thank you, Mr. Chairman.

CHAIRMAN: Thank you, Mr. MacNutt.

Q. - Business Plan and Financial Projection 2001/02, 2008/09, March 2001?

MS. MACFARLANE: Yes.

Q. - Has this document been approved by the Board of Directors of NB Power?

MS. MACFARLANE: Yes, it was. Pardon me, it was presented to the Board of Directors. I am not sure there was a motion around that. I would have to check that.

CHAIRMAN: Mr. MacNutt, sorry, you are normally the one reminding me that people haven't been told which exhibit we are looking at. We don't understand up here which one we are looking at.

MR. MACNUTT: It's from the Coleson Cove. That is the only necessary reference that she is familiar with. It was introduced in the Coleson Cove hearing, Mr. Chairman. A truncated version has been supplied in exhibit A-1 to the last exhibit A-3 and appendix B-3. And the line of questioning does not require you to actually refer to the document, I don't think, Mr. Chairman, unless you like to do so.

CHAIRMAN: Thank you, Mr. MacNutt.

Q. - Does the document, as put in as an exhibit in the Coleson Cove hearing, include a financial forecast as defined by the CICA?

MS. MACFARLANE: Could you remind me which document you are referring to? Is it the business plan or the addendum?

Q. - Yes, Coleson Cove --

MS. MACFARLANE: Does it meet the definition of?

Q. - Does that document include a financial forecast as defined by CICA?

MS. MACFARLANE: Yes, it did based on the date that was there.

Q. - Now I'm using the word, financial forecast, very carefully here --

MS. MACFARLANE: Yes.

Q. - -- as opposed to projection?

MS. MACFARLANE: Yes.

Q. - Now so the business plan which is the label on the document includes the forecast not a projection?

MS. MACFARLANE: Mr. MacNutt, I don't have in front of me the excerpt from the CICA guidelines defining projection and forecast. I do not recall off the top of my head the difference. One is based on management's best estimate. The other is based on management's best estimate as well as a series of hypotheses. But, I'm sorry, I cannot recall the distinction between the two.

Q. - I refer you to exhibit A-20 where the CICA handbook reference to paragraph 4250.33 is stated on the first page. And I will just read it for the purpose of the record.

"When a forecast is presented, the entity should disclose that the forecast has been prepared using assumptions all of which reflect the entities planned course of action for the period covered, given managements judgment as to the most probable set of economic conditions."

Is that not a correct statement?

MS. MACFARLANE: That's correct.

Q. - Now on page 1 of the business plan. Mr. Hashey, could you provide the panel with a copy of the business plan and financial projection as used in the Coleson Cove Hearing? I believe the Chairman asked NB Power to have -- that was one of the documents the Chairman asked NB Power to have available if reference need be made to it.

MR. MORRISON: It will be a moment, Mr. Chairman.

CHAIRMAN: Okay. We will wait a moment.

MR. MACNUTT: For purpose of reference while that document is being obtained, Mr. Chairman, it was introduced in the Coleson Cove Hearing as exhibit A-6, as appendix C in the original pre-filed evidence of Ms. MacFarlane.

CHAIRMAN: What was it called, Mr. MacNutt?

MR. MACNUTT: The exact title is "Business Plan and Financial Projection 2001/02, 2008/09, March 2001". And what you will find if you go to exhibit A-1 in addendum B -- it's B-3. In appendix B-3, you will find that appendix B-3 to exhibit A-1 is an addendum to the Business Plan and Financial Projection (March 2001) February 2002. So my questions will start with the original document, namely the Coleson Cove document, if you like, and may incorporate some questions relating to the addendum.

MR. HASHEY: I apologize, Mr. Chairman. I didn't realize that was coming up this afternoon.

CHAIRMAN: No, that's fair.

MR. HASHEY: Mr. Morrison is assisting with that.

CHAIRMAN: Yes. It's been shipped back to Fredericton. You haven't got another line of questioning that you could pursue right now, Mr. MacNutt, and then we could come back to that? I guess not.

MR. HASHEY: The witness has it but we don't have copies for the Board.

CHAIRMAN: I would like to have a copy just to be able to follow along. Let's give it a minute. We will see if the gentleman can find it. I am just going to ask you, Mr. MacNutt, when you go back down there, do you think it needs to be an exhibit or if it's just available for everyone to refer to, is that sufficient?

MR. MACNUTT: I think by the time I have read from various portions and the witness has answered, it won't need to be an exhibit.

CHAIRMAN: Okay. All right, Mr. MacNutt. We now all have and all the intervenors have a copy of the document. Where do we look in that document?

Q. - Page 1, under the heading "Background". And if you go to the first full paragraph, there is a statement that this business plan and financial projection was approved by the Board of Directors of the New Brunswick Power Corporation in March of 2001. Is that a fair statement?

MS. MACFARLANE: As I say, I remember presenting it to the Board. I was not -- I could not recall off the top of my head whether or not there was a motion, but it says here it was approved, so I suggest it was probably approved.

Q. - That would clarify the situation on that point. The statement would clarify your comment earlier?

MS. MACFARLANE: Yes, that's right.

Q. - Thank you. Now in the following paragraph there is a statement, While these assumptions and estimates are believed by management to be reasonable, a number of factors could render them inaccurate and result in material differences from historic results or between the actual and anticipated performance. You are aware of -- see that provision?

MS. MACFARLANE: Yes.

Q. - Now do you believe this statement is consistent with the standards required by CICA Handbook, paragraph 4250.33, we just read earlier?

MS. MACFARLANE: It is part of -- based on my understanding it is part of the requirements of section 4250. I don't have a paragraph reference, but certainly one needs to warn the reader that these are only projections and cannot be relied upon for circumstances beyond the control of management, and they need to be listed. And we have done so here.

Q. - So your short answer is yes, so I would ask you to turn to page 3. And I want you to look under the heading "Financial Projections 2001/02-2008/09" in the last paragraph. And italics that would just be below the midpoint line on the page. And I will just cite part of it.

The financial projection does not incorporate rate increases for any consumer classification. Do you see that?

MS. MACFARLANE: Yes.

Q. - And that is a correct statement with respect to the document?

MS. MACFARLANE: That's correct.

Q. - Now does this statement reflect the entity's planned course of action?

MS. MACFARLANE: There were -- at the time this document was prepared, there were no longterm rate plans. I believe I indicated yesterday that for a number of years we have been dealing with rates through an annual budget process. In the -- in a recent Board meeting, the Board asked NB Power to prepare a longterm rate plan and that work was scheduled to be done this summer. But certainly at the time of the preparation of this document and at the time of filing of the evidence, NB Power does not have longterm rate plans. So they could not -- there was no plan. There was no entity's planned course of action as it goes to rates.

Q. - So from what you are saying -- what is the situation today? Are you intending to make -- apply for a rate increase?

MS. MACFARLANE: There is no plan today to apply for a rate increase.

Q. - Between the time of preparation and approval of the document we have just been referring to, the financial projections, and today, has there not been a rate increase?

MS. MACFARLANE: There was a rate increase April 1 of 2002.

Q. - And was there not another one in April of 2001?

MS. MACFARLANE: I would have to check. But I would suggest that if there was it would be incorporated in this document.

Q. - So you would confirm for me that this document we have been referring to is a projection and not a forecast?

MS. MACFARLANE: I believe this document meets the definition of a forecast. I do not believe it meets the definition of a projection as labelled by CICA because that calls for a forecast as well as a number of scenarios. And we have not presented scenarios here. So I am sorry I am missing your point, Mr. MacNutt.

To the extent that we have presented scenarios they are in my testimony, as opposed to in the business plan or in the addendum.

Q. - I am just going to read you a paragraph from the page 3405 of the accounting recommendations, September of '89. And it is with respect to paragraph 4250. And I am just going to see if you agree with me.

I am going to read -- this is a statement in the CICA handbook. "When a projection is presented, the entity should disclose that the projection has been prepared using assumptions that reflect the entities planned course of action for the period covered given management's judgement as to the most probable set of economic conditions, together with one or more hypotheses that are assumptions which are consistent with the purpose of the information, but are not necessarily the most probable in management's judgment as of October 1989."

MS. MACFARLANE: I am familiar with that. And for that reason I said earlier this does not meet the definition, CICA's definition of a projection that meets CICA's definition of a forecast, because we have not presented a series of hypotheses based on other probable events. What we have presented is what the entities planned course of action is subject to the things indicated on the front, such as planned restructuring of the electricity sector, possible changes in NB Power's ownership or corporate structure currently under study by the government, completion of detailed engineering design and costing on capital projects, et cetera.

I am sorry if I have confused the Board in labelling this document as a projection when in fact it meets the definition of a forecast.

Projection is a term that we use internally at NB Power to talk about forward looking financial statements. But this is a forecast not a projection.

Q. - Now I am going to another topic and deal with cash flow projections, Ms. MacFarlane.

MS. MACFARLANE: Yes.

Q. - NB Power has an arrangement with the Province where by it borrows money on a short term basis. Is that not correct?

MS. MACFARLANE: We do our short term borrowing through the Province. That is correct.

Q. - Yes. Now is this a formal arrangement?

MS. MACFARLANE: It is an arrangement that requires exchange of documents.

Q. - What are the terms of the arrangement or the contents of those agreements or documents at the time of each borrowing? In other words, is there a governing agreement which covers individual borrowings that you don't have to sign each time or is there a separate set of documents exchanged each time?

MS. MACFARLANE: Can I just clarify. You are referring to short term borrowings, not long term borrowings?

Q. - Correct. Short term basis borrowing?

MS. MACFARLANE: Yes. I sign documents for each one. And the terms -- even the number of days in the interest rates are stated in the document each time.

Q. - Thank you. Now what is the upper limit of the amount that can be borrowed?

MS. MACFARLANE: It is 50 percent of our revenues. And that is not a limit imposed by the government. That is a Board imposed limit, an NB Power Board imposed limit.

Q. - Okay. And the revenue is determined as of what point in time?

MS. MACFARLANE: I believe -- I would have to check. But I believe it is for the previous fiscal year.

Q. - And domestic revenues or is it included in export sales?

MS. MACFARLANE: I believe that it is all revenues. But again I would have to check. The limit is far in excess of what NB Power's practice for short term borrowing has been in the last number of years because the differential between short term and long term rates, the curve has been so flat that we have not gone anywhere near the limit of the borrowings.

Q. - Thank you. Now I want you to turn to exhibit A-1, appendix -- your evidence, appendix A-1, table 9. I was in error in the reference. Exhibit A-1, appendix A-3, table 9 -- B-3, excuse me. B-3. We will get it straight.

MS. MACFARLANE: Could you give a page number for that table, please?

Q. - 11, last page. I think it is the last page in the whole exhibit.

MS. MACFARLANE: Yes, I have it.

Q. - Now the projected -- balance of cash at the end of each year from 2002/03 onwards is $2 million. Is that not correct?

MS. MACFARLANE: That is correct.

Q. - Now is this because you assume that any cash shortfall will be borrowed from the Province?

MS. MACFARLANE: That is correct. And that is not -- that level of cash by the way is not unusual for the utility industry. We typically as an industry do not keep much cash on hand. Cash surpluses are in short term investments and cash deficits are managed through short term borrowings.

Q. - Now I want you to turn to exhibit A-20.

MR. DUMONT: A-20.

CHAIRMAN: Yes. A-20.

Q. - A-20. It is a balance sheet. Yes, I am sorry, exhibit

A-20 which is a balance sheet which was provided in response to to a request from the Board.

MS. MACFARLANE: Yes.

Q. - And now the budgeted 2002/03 short-term indebtedness --

CHAIRMAN: Sorry, Mr. MacNutt. Which page in exhibit in A-20.

MR. MacNUTT: Please go to page -- I think it's the third page and it's headed -- second line says, Consolidated Balance Sheet.

CHAIRMAN: Thank you.

Q. - And you will find a column there that they budgeted 2002/03 short-term indebtedness is 273 million. If you go down that 273 million is found under current liabilities just below the half way point on the page. And -- is that correct?

MS. MACFARLANE: That's correct.

Q. - And if you go over to the next page there is a statement of cash flow.

MS. MACFARLANE: I believe this is the statement of cash flow.

Q. - Okay. And if you -- the budgeted cash at the end of 2002/03 --

MS. MACFARLANE: I'm sorry, Mr. MacNutt. I'm having trouble following you. I thought you had earlier referred me to the statement of cash flow and shown me the number 273.

Q. - No. I wanted you to go to the balance sheet --

MS. MACFARLANE: All right.

Q. - -- and in the column budget, second from the left, 2002/03 --

MS. MACFARLANE: Yes.

Q. - -- if you go down under current liabilities you will find the $273 million, is that not correct --

MS. MACFARLANE: All right. Thank you.

Q. - -- under the heading Short-term Indebtedness?

MS. MACFARLANE: Yes.

Q. - Yes. Now I want you to go over to the next page which is the statement of cash flow. Are we there?

MS. MACFARLANE: Yes.

Q. - Thank you. The budgeted cash at the end of 2002/03 is still $2 million, is it not, in the second column from the left --

MS. MACFARLANE: That's correct.

Q. - -- at the bottom? Now is this because NB Power anticipates borrowing its cash short fall from the province?

MS. MACFARLANE: That's correct.

Q. - Now I want you to go back to exhibit A-1, appendix B-3, table 9, which was the previous document we just had out a moment ago.

MS. MACFARLANE: Yes.

Q. - Now the projected increase in cash borrowings from the province for 2003/04 is $17 million, is it not? And -- well we may as well put this in too. And for 2004/05 is $38 million?

MS. MACFARLANE: That's what the document says, yes.

Q. - Okay. Now if we add these amounts to this $273 million budgeted for 2002/03, the short-term debt due the province would be $328 million, is that not correct?

MS. MACFARLANE: All right.

Q. - So would you agree that in order for NB Power to meet its obligations, including debt retirement and capital expenditures, through March 31, 2005, it would have to borrow $328 million from the province?

MS. MACFARLANE: Mr. MacNutt, we do our financing of capital expenditures and debts being reissued through a combination of short-term and long-term. Typically the short-term is only that. It is short-term to take us through to the time of an advantageous borrowing by the province. It is not something that we use as part of our long-term financing except in circumstances where the interest rates are favourable.

Right now as an example there is a bit of a spread between long-term and short-term and we have increased our short-term borrowings.

But it is not fair to say that NB Power would have to borrow 328 million to finance itself next year because the financing is not just short-term borrowing. It would also included long-term borrowing.

In fact I believe that in the current fiscal year, as an example, we have some 830 million of issues coming due for maturity and re-borrowing.

So my only point is you cannot look at the short-term debt alone. We need to look at the whole -- the whole of our debt and then our relationship between short-term and long-term is simply a matter of when are the borrowings scheduled to happen, when are they advantageous to happen and what is the interest rate spread in the near term.

Q. - Yes. Thank you for the explanation. But you will confirm that the $328 million would represent debt?

MS. MACFARLANE: It would represent debt, yes.

Q. - Now staying with exhibit -- go to A-20, cash flow.

MS. MACFARLANE: Yes.

Q. - Under the heading Investing is an item described as waste management organization payment --

MS. MACFARLANE: Yes.

Q. - -- in the amount of $20 million?

MS. MACFARLANE: Yes.

Q. - Would you please explain this item?

MS. MACFARLANE: Yes. I believe there was testimony given by Mr. Groom to the effect that the federal government is introducing legislation requiring the formation of a waste management organization to develop an appropriate long-term strategy for waste management and then to manage it. And the owners of the waste, including the utilities and AECL, will be part of that waste management organization. The legislation is moving through the system, has not yet been proclaimed, but it is -- has been communicated to NB Power that when it is proclaimed NB Power will have to begin funding their irradiated fuel management and the first payment to be made will be $20 million, and thereafter it will be $4 million, until such time as the waste management organization determines the solution and provides an appropriate costing model.

Q. - Now as we speak today no payment has been made?

MS. MACFARLANE: No payment has been made. Included in the business plan and financial projection that was filed with the Coleson hearing, what was included in those projections was $4 million a year because that was our understanding at the time. But since that time the federal Department of Energy has -- NRCan, I believe they are called -- has decided to move the schedule forward somewhat and collect what we understood to be the first five years of the amount due as soon as the legislation is proclaimed. Our latest information would suggest that's going to be in October of this year.

Q. - And what form will this "investment" take?

MS. MACFARLANE: As we currently understand it, New Brunswick Power and the other utilities will be required to set aside these funds in a trust. The trust will be owned by the utility but --

Q. - Which?

MS. MACFARLANE: By NB Power. This amount will be set aside in a trust. The trust will be owned by NB Power, but as I understand it the only withdrawals from the trust -- withdrawals from the trust can only be made at the authorization of the Minister. This is the federal --

Q. - The federal Minister?

MS. MACFARLANE: The federal Minister, yes.

Q. - And will it draw interest and, if so, to whom is the interest payable?

MS. MACFARLANE: It will draw interest within the fund and just as -- just as today we are accounting for what we collect and as if we were setting it aside in an investment in NB Power. Beginning with this Act being proclaimed we will be setting it aside in a trust outside of NB Power though owned by NB Power and it will be earning interest.

Q. - Has the trust been established but not funded, or is it yet to be created?

MS. MACFARLANE: It has not yet been established. There are issues between the utilities, the provincial governments and the federal governments right now related to the tax status of those trusts, and until that is resolved the trust will not be fully established and as I understand it funds will not be placed in the fund.

Q. - Now you have described the initial obligation and then the ongoing obligation, which I believe is $4 million a year for a number of years. Will this be expensed at any time?

MS. MACFARLANE: This is simply a cash issue. We are each year through our accounting for irradiated fuel management we are charging our operations with the current years production share of the long-term liability. So that has been going on for a number of years. We are recording the charge against operations and setting aside the liability. All of this will represent as a balance sheet movement of cash into a trust fund.

I think in the evidence and in the responses to interrogatories we had indicated that -- I think there was a question asking what will the change in the financial statements be if and when NB Power begins funding it's long-term liabilities for used fuel management and decommissioning, and we had indicated that our -- as it goes to affecting rates and customers those charges are already being made as if the funds were set aside separately, but they instead of being set aside are invested internally and operational borrowings are avoided. Once we begin funding we will physically setting the funds aside and our operational borrowing will go back to what it would have been otherwise, but there will be no impact on net income.

Q. - Now I want you to go back to exhibit A-20 and the statement of cash flow.

MS. MACFARLANE: Yes.

Q. - Note 3, that's note 3 right at the bottom of the page --

MS. MACFARLANE: Yes.

Q. - -- states that NB Power has fewer capital expenditures "in both years" 2001/02, 2002/03, including a change in the timing of Coleson Cove in 2002/03, is that not correct?

MS. MACFARLANE: Yes.

Q. - Does this mean that there is a delay in the refurbishment of Coleson Cove?

MS. MACFARLANE: If you recall in the Coleson hearings NB Power had originally planned for this to be a three year project, and once the engineering estimating began it was clear that it was feasible to do it in two years, and in doing it thereby -- pardon me -- creating an extra hundred million dollars in value in the third year through export sales and production of power for in-province use at an economical rate.

In changing the timing of the project from three years to two years that also changed the timing of the cash flow because the nature of the construction work was going to change, and it became funds moved from year -- what was year 1 into year 2. Spending in year 1 was lower, spending in year 2 was higher.

I believe that was all discussed in the Coleson Cove hearings.

Q. - And how much was the delay?

MS. MACFARLANE: It is in the Coleson Cove evidence. If you give me a moment I may be able to find it.

Q. - Yes, please. And the amount of expenditure. We might as well identify both at the same time.

MS. MACFARLANE: That detail is not in my evidence, so I am quite certain it is in the evidence. I'm not sure it is the best use of time here for me to find it. Can I take an undertaking to find it at the next break?

Q. - Yes. Because where my question is going is will this impact the savings anticipated from the advancement of the date of the Coleson Cove conversion?

MS. MACFARLANE: No. It all would have been considered in the evidence that was filed. The -- in my evidence --

Q. - So all we need is the amount then?

MS. MACFARLANE: Yes. In my evidence I did file that financial forecast and then did speak to what the changes were. And one of the changes was a different project schedule, and the other was an increased capital cost.

So all of the cash flow changes were reflected in the evidence for Coleson and are also incorporated in the evidence for Point Lepreau.

Q. - Thank you. So you will get us the number, the actual amount?

MS. MACFARLANE: Okay.

Q. - Thank you.

MS. MACFARLANE: You are speaking about the change in capital spending related to Coleson for '01, '02 and '02, '03, compared to the financial forecast?

Q. - Yes.

MS. MACFARLANE: Thank you.

Q. - Now in your evidence yesterday you referred to the funding of deferred liabilities and stated that the liabilities recorded by the company, NB Power, together with interest would accumulate to the amount required to pay these liabilities when they are due, is that not correct?

MS. MACFARLANE: Yes.

Q. - Now I want you to turn to exhibit A-22, page 1, which is a statement of income for the year ended March 31, 2002. That is A-22, page 1.

MS. MACFARLANE: Yes.

Q. - Now finance charges for the year 2002 amounted to $266 million, is that not correct? It is right in the middle of the page.

MS. MACFARLANE: That's correct.

Q. - And if we turn to note 5 on page 11 of that exhibit, the detail of that amount is provided --

MS. MACFARLANE: Yes.

Q. - -- under the heading finance charges?

MS. MACFARLANE: Yes.

Q. - Now the second item under finance charges is interest expense and deferred liabilities in the amount of $18 million?

MS. MACFARLANE: That's correct.

Q. - Right. Now -- so the $18 million amount is included in the expenses for 2001, 2002, is that not correct?

MS. MACFARLANE: Yes.

Q. - So this means that the ratepayers of New Brunswick pay the interest on the deferred liabilities?

MS. MACFARLANE: That's not correct. As is described in response to one of the interrogatories, and I can find it if you like, this money is collected from ratepayers through, in the case of irradiated fuel management, a charge on the fuel line, one page 1 --, if you turn to page 1. The irradiated fuel management customers pay through the charge for fuel. And for decommissioning they pay through this -- two lines down, amortization and decommissioning. That is where we collect the funds.

We then set that money aside in a liability account. But we are treating it as if we are investing it in NB Power. And then NB Power has avoided external borrowings on the market but still has to pay interest as if it had borrowed externally on the market for its operations.

It is just rather than pay that borrowing to a banker out there that we have borrowed the money from for operations, we pay it into this fund.

Q. - But the upshot of it is it is still being recovered from the ratepayers in the province?

MS. MACFARLANE: What is being recovered --

\Q. - The initial source of funds is still from a ratepayer?

MS. MACFARLANE: That is not a correct interpretation. What is being recovered from the ratepayers is a charge for irradiated fuel management in fuel, a charge for decommissioning in the amortization and decommissioning, and the cost of NB Power's borrowing for operational purposes.

We get that borrowing for operational purposes from three sources. One is from long-term debt which we finance through the Province of New Brunswick. One is from short-term debt which we finance through the Province of New Brunswick. And the third is by borrowing money from these funds for irradiated fuel management and decommissioning.

If we did not borrow them internally we would be borrowing on the market and paying that same price, because what we attribute here is the Government of Canada plus the provincial spread as an interest expense on this avoided borrowing.

Then we credit that money to the fund being built up for eventual dispensation of the liabilities for irradiated fuel management and decommissioning.

What could happen is that we could set the money collected through fuel, ISM charges and amortization and decommissioning for decommissioning charges. We could be setting that aside in a bank account and earning interest income and putting that interest income into this trust fund.

And then on our regular operations, to the extent that we had borrowings, we would be paying some banker for those borrowings and charging finance charges for that. Rather than have two separate transactions in order to avoid management fees on the one hand and underwriter fees on the other hand, we borrow from ourselves. But we still charge the customers through fuel and decommissioning and amortization. We still credit the customers for interest earned by adding it to the fund. And then we charge operations for the cost of borrowing for operational purposes.

Q. - Now I want you to go to exhibit A-22 which is the budgeted income statement for 2002, 2003. And I want you to look at the first page after the draft financial statement. And it is tabled -- labelled income statement.

And I will just go through that again. Exhibit A-22, the budgeted income statement for 2002, '03. And it is the first page after the draft financial statement which is a table labelled "income statement"?

MS. MACFARLANE: Yes. I have it.

Q. - Now under the heading which is the fifth line down beginning out-of-province -- under summary, sorry. Let's go to summary.

Go to about fifth line down and there is a bullet that starts with out-of-province margin --

MS. MACFARLANE: Yes.

Q. - -- which reads actually in fact, "Out-of-province margin down by 65 million because of challenges in export sales"?

MS. MACFARLANE: That's correct.

Q. - Please -- yes, because of challenges in export sales. I may have misspoke myself in quoting there. Please describe the nature of the challenges?

MS. MACFARLANE: Beginning sometime in August or September of 2001, largely driven by weather and by demand, natural gas prices in the US fell dramatically. In fact they fell to levels below the full cost of production.

Electricity prices in the New England market are very closely tied to natural gas prices. And because there had developed a buildup of inventory in natural gas with low demand, therefore driving prices down, the price of electricity fell as well.

And one of the reasons why NB Power did not meet its financial projections in its budget in 2001, 2002 was because of this downturn in the export market.

We did not know how long this situation would continue, although we did advise our Board that based on analysis we had done, those natural gas prices were not sustainable in the long term. And as it turns out they have come back up to what forecasters would indicate would be a more normal level.

At the time that we prepared the budget we based it on market price forecasts available at the time. That is how we prepare all of our budgets. We take forecasts from the market into the future and we base our commodity prices, we base our energy prices and we base our foreign exchange prices on those readily-available market forecasts. And at the time, the market was predicting that this downturn would continue into fiscal 2002, 2003.

Now the prices have come back up since then. They have not come to previous levels. But they have come back up since then.

Q. - And you have just described the natural gas scenario. What other challenges can you detail for us?

MS. MACFARLANE: This was largely a price related issue. It certainly is the case that there have been -- there has been generation being built for natural gas plants in the New England area. But the largest challenge that was driving this issue was a very soft market from the perspective of price.

Q. - Now if these challenges were to continue in the future, what would the impact on the NPV calculations relative to Point Lepreau and the natural gas option be?

MR. MARSHALL: I believe that's responded to in -- in the -- my evidence, appendix B-1 of exhibit A-1. The sensitivity for low export volumes and margin. That would be given on table 4-3 on page 31, and table 4-4 on page 32.

There is a sensitivity there. It's the third line from the bottom of the table. A low export sensitivity. That low export sensitivity has lower volumes of export energy and a lower price.

And as a result, the net present value reduces from 234 million down to $105 million advantage for Point Lepreau. And that's without consideration of CO2 costs.

And if you turn over to table 4-4, when you still consider the $15 a tonne of CO2 costs in the calculations for the differential emissions of CO2 from the gas case to the refurbishment case, the net present value advantage reduces from 514 million down to 424 million. Still advantage of the Point Lepreau project.

MR. MACNUTT: Thank you. Back to you.

CHAIRMAN: Thank you, Mr. MacNutt. We have got a follow up here. Might as well do it now.

MR. SOLLOWS: Yes, just -- mike 10. Just for clarification, I think his question was the impact of lower export demand driven by lower natural gas prices.

And therefore I'm wondering how you would combine the 48 million disadvantage of the Lepreau project due to low gas price, with the 105 million -- 105 million advantage due to low exports. Really it would be both factors together.

And can you clarify whether these numbers can just be summed, or is there a combined effect that would have to be taken into account?

MR. MARSHALL: I think the -- I didn't understand his question as specifically related to low gas prices.

Ms. MacFarlane said their reason last year for the reduction in the market prices was related to low gas prices last year.

MR. SOLLOWS: I heard it as that. So whatever, could you just clarify that if it was because of low gas prices that we would -- that it would not be 105, it would be something -- I suppose, something less than minus 48 or --

MR. MARSHALL: These sensitivities are all done individually.

MR. SOLLOWS: Right.

MR. MARSHALL: And then we did a series of stress cases where you combine sensitivities to that effect. If you combine a sensitivity of low gas prices and that affecting the market as well to have very low volumes as well as a -- as a lower price, then you would have to do a run to do that. It wouldn't necessarily be adding the two effects. Because they may interrelate, okay, with them.

MR. SOLLOWS: I guess the reason why I think this might be important is because we have just heard that one does imply the other in terms of your exports. That low gas prices lead to low exports. And so it might be a run worth doing, that's all.

MS. MACFARLANE: I might just mention that the analysis that NB Power had done and presented to our Board was that the gas price last year was unsustainable from an industry perspective. It was so low that, in fact, new development was not taking place. Drilling was shutting down. And we believed it was not sustainable. And in fact that has proven to be the case.

These sensitivities assumed this out over 25 years. So to that end it's difficult to envisage that prices could stay below the cost of production out over 25 years.

MR. SOLLOWS: I think I understand that. It's just that there seems to be a link between these two stressors that might not be fully reflected in the table. I just want to make sure that link is understood and acknowledged.

MR. MARSHALL: That's correct. If there are low gas prices, the -- there likely is an effect in the marketplace of those low gas prices of a lower electricity price in the marketplace. Those combinations were taken account, in the stress case where on page 33 the stress case accommodated low gas prices, low market conditions, increased capital and lower nuclear performance. So we combined four, not just two. But the results in table 4-3 and 4-4, our sensitivity analysis, isolate only one variable at a time.

CHAIRMAN: Just let me follow up. What you indicate that there was a below cost of production gas price last year that you went to your Board at that time, and that's what had caused the difficulty.

In your sensitivity in table 4-3 you have got the low gas price as being $3 US. How does that compare with what it was last year?

MR. MARSHALL: I think it was actually down to about $2 US and it may have dipped even below that for a few days.

CHAIRMAN: So low gas price $3 US is --

MR. MARSHALL: This is --

CHAIRMAN: -- is above the cost of production?

MR. MARSHALL: So that depends on the cost of new wells that are going to come on in order to make the supply available.

CHAIRMAN: Sure. What is it -- what is it approximately right now?

MR. MARSHALL: The price of gas today, the NYMEX price, I believe, is up about 3.50 to $4.

CHAIRMAN: Okay. Thank you. Sorry, Mr. MacNutt.

Q. - Return to Ms. MacFarlane. What portion of the NB Power debt is attributable to Point Lepreau?

MS. MACFARLANE: NB Power does not attribute its debt to specific assets. Our assets operate as an integrated system. And our -- add value because of that integration, so we do not attribute debt at the current point -- at the current time we do not attribute debt to any particular asset.

Q. - Well coming at it from another direction, what is the net book value of Point Lepreau on the books of NB Power as of March 31, 2002?

MS. MACFARLANE: I think it's somewhere just under 400 million.

Q. - Now you will remember in the Coleson Cove evidence presented by NB Power, and I believe you presented it, that NB Power provided a calculation of the estimated pay back period for the investment in the Coleson Cove refurbishment project. Is that not correct?

MS. MACFARLANE: Yes.

Q. - Now as a business planner, do you consider the termination of an estimated pay back period a useful tool for management in making investment decisions?

MS. MACFARLANE: It's a useful tool particularly for shortterm investments. Its usefulness for longterm investments is hindered by the issue of the time value of money. Where the longer the project gets therefore the less useful the pay back calculation is, which is why it's called simple pay back.

It's especially difficult to do pay backs when in fact there are heavily back end loaded cash flows. In the case of Coleson, this was a project that, yes, was longterm, but had relatively even cash flows over its life. And it gave us some indication that in fact it was a very lucrative project.

In the case of Lepreau because of the irradiated fuel management and decommissioning cash flows coming well out, in fact, beyond the end of life, pay back becomes a much more difficult and less relevant calculation.

Q. - Have you prepared a calculation of the estimated pay back period for Point Lepreau?

MS. MACFARLANE: We have prepared a form of a pay back calculation. In the sense that we did the simply pay back for cash flows other than irradiated fuel management and decommissioning. And we tried to accommodate irradiated fuel management and decommissioning by levelizing the costs and looking at -- at any point in time along the yearly cash flows, what cash would have to be set aside to fund those liabilities. So it's a -- it's a form of a pay back, but a distorted form of a payback, shall we say.

And we did it, by the way, in relationship to the alternatives. That is the other issue we did. We looked at compared to the alternative how --

Q. - The alternative?

MS. MACFARLANE: The alternative being natural gas, the next least cost alternative that meets the environmental criteria.

Q. - Right.

MS. MACFARLANE: What -- which of the alternatives reaches the pay back earlier based on the relative cash flows of the two.

Q. - Now you say you actually prepared this and it was done roughly. Is it in a form that you could provide us with a copy of it?

MS. MACFARLANE: We could. In fact we prepared it because you asked that question of Panel A, so I expected I would get that question.

Q. - Would you provide it for us, please?

MS. MACFARLANE: Yes. It's -- I will have to do that at the break. It's in the other room. Or we could -- I could go get it, if you would like.

CHAIRMAN: The next break, Ms. MacFarlane, is going to be an overnight one.

MS. MACFARLANE: Okay.

CHAIRMAN: Well it's a quarter to 5:00. How much longer do you anticipate you have, Mr. MacNutt? Overnight.

MR. MACNUTT: Overnight. Half an hour plus, probably an hour for the --

CHAIRMAN: Pardon me, plus?

MR. MACNUTT: Yes, half an hour to an hour, I would say it would take in total, including answers.

CHAIRMAN: Well is -- do you have something short that you can tackle now until say about 5:00 o'clock?

MR. MACNUTT: I'm finding out that you can't predict that. Short questions get long answers. Yes, I can go on. There should be some that we can fill in between now and the time you wish to rise, Mr. Chairman.

CHAIRMAN: Just so the Hearing understands, the Board also has probably half an hour of questions for the Panel.

MR. MACNUTT: Mr. Hashey has a comment with respect to the request of the last document.

MR. HASHEY: My suggestion is we get that document and deal -- get it right out of the way and not interrupt Mr. MacNutt's train, if that's okay.

CHAIRMAN: Fine.

MR. MACNUTT: So while the document is being obtained I can go on with another question because it doesn't --

MR. HASHEY: I'm sorry, Ms. MacFarlane would have to get it.

MR. MACNUTT: Oh I see. She has to find it.

MR. HASHEY: I'm sorry.

CHAIRMAN: Keep on, Mr. MacNutt.

MR. MACNUTT: Mr. Marshall -- yes, this would be one for Mr. Marshall perhaps.

CHAIRMAN: Go ahead, Mr. MacNutt.

Q. - Mr. Marshall, the witnesses in Panel A were asked if they had ever benchmarked the Point Lepreau refurbishment project against other comparably sized nuclear generation projects. That appears in the transcript for June 5, 2002 at page 910. We were advised yes, but only with respect to certain engineering parameters. And we would have to look to Panel B to determine if any of the costs and financial parameters of the Point Lepreau project have been benchmarked.

Now I want you to turn to exhibit A-1, appendix B-1, which is the integrated resource plan, at page 19, table 3-5, power cost comparisons.

CHAIRMAN: Try that again, Mr. MacNutt.

Q. - A-1, appendix B-1, integrated resource plan, page 19, table 3-5, power cost comparisons.

MR. MARSHALL: Yes.

Q. - And if we go to the line Point Lepreau refurbishment and look across to the second last column marked total cents per kilowatt hours, 2006 dollars, we find that it will cost 5.686 cents per kilowatt hour to produce power from the refurbished Point Lepreau project. Correct?

MR. MARSHALL: That includes end effects. That's not the 25 year levelized cost. That's the cost for constructing and replacing the plant out over time as well. The 25 year costs would be the 5.01 in the middle column.

Q. - Okay.

MR. DUMONT: Could you repeat that please? Could you repeat that?

MR. MARSHALL: The -- this table provides levelized life cycle costs for the life of the project. So the three middle columns, levelized life cycle annual costs only consider the costs for the 25 years life from 2006 to 2031, '32. The levelized annual costs within brackets, including end effects on the right-hand side of the table, include costs beyond 2032 to replace things out in time to -- it's a methodology to account for projects of differing lives, so that you accommodate them on an equivalent basis.

MR. SOLLOWS: Just take number 10. Just to clarify, then how did you handle the end effects in the Point lepreau refurbishment?

MR. MARSHALL: The way you do it is you take the costs -- you assume that the project repeats itself on in time out to about 100 years of flow so that you capture everything out that the end effects beyond that period are negligible, so you are comparing projects by repeating them.

MR. SOLLOWS: So implicitly you would assume that the steam generators would last for 100 years?

MR. MARSHALL: Yes. What you -- yes. The issue here is -- so the relevant calculation is -- the relevant calculation I tried to point Mr. MacNutt to is the 5.01, not the 5.68.

MR. DUMONT: So does that mean that -- what you are saying actually is during the time that Lepreau -- after refurbishment and during the lifetime of Lepreau after refurbishment, the cost of a kilowatt hour would be 5.68 or 5.01?

MR. MARSHALL: 5.01.

MR. DUMONT: That would be cost of a kilowatt hour?

MR. MARSHALL: Yes.

MR. DUMONT: Thank you.

MR. MACNUTT: Yes. Do you wish me to proceed, Mr. Chairman?

CHAIRMAN: Yes. Please.

Q. - Thank you. Can you sell surplus power into the export market from the refurbished Point Lepreau plant at that price and make money, first with respect to the $5.01, second with respect to the $5.68 -- excuse me, 5.01.

CHAIRMAN: Mr. MacNutt, can you bring that mike up? Really I think people in the back of the room are going to have trouble hearing you.

Q. - Answer the question please with respect to the 5.01 cents and secondly with respect to the 5.68 cents? Thank you.

MR. MARSHALL: The -- we don't have an export market projection beyond 2032, so I don't think the 5.68 cents is relevant to the question. The 5.01 cents again is a levelized cost over the 25 years. Our projections of the market place are 55 -- that's 5.5 cents a kilowatt hour in 2006 escalating at CPI. So it's 5.5 escalating at 1.8 cents assuming that every kilowatt hour available was at the average -- could be sold at the average market place, assuming there is no transmission limitations and we can it to that price. The answer would be yes. All of the output energy from Lepreau if it wouldn't -- wasn't used in-province for dispatch purposes in-province, it could be sold in the market.

Q. - At the prices we have just been -- you have just explained?

MR. MARSHALL: Yes.

Q. - Now I would -- you mentioned end of life assumptions, let's just stay with that for a moment and please turn to exhibit A-5, JDI-17, which would be page 253 in exhibit A-5. And what I would really like you to do is expand a bit on your description you have just given of end of life assumptions made in the PROVIEW model for both the Point Lepreau refurbishment project and the NGCC option?

MR. MARSHALL: What is the reference again, please?

Q. - Exhibit A-5, JDI 7.

MR. MARSHALL: 7, sorry.

Q. - Yes. Page 253 of that exhibit. You don't really need the reference. I see. But just to refresh your memory.

MR. MARSHALL: Yes, I have it. And the question again?

Q. - Yes. And would you -- you described a bit about the end of life cost assumptions. I would like you to expand a bit on your description of the end of life assumptions made in the PROVIEW model for both the Point Lepreau refurbishment project and the NGCC option.

MR. MARSHALL: In the PROVIEW model the modelling only goes out to 2030. There are no end effects beyond that point. The end -- the PROVIEW model models the system in detail month by month to dispatch fuel costs and determine the costs of supplying the in-province load and the projected exports month by month out to the year 2020. The end effects calculation in PROVIEW takes the year 2020 results and escalates those at 1.8 percent for 10 years out to 2030 for the net present value calculations. There are no additional considerations of costs beyond the 2030.

In comparison to the table that we just referred to the -- with end effects calculations in the table, that's -- those are power costs from a screening point of view only. They are the isolated power costs of one option versus another and you use that to try to accommodate the differential effects of their -- of the lives of those projects.

In the PROVIEW modelling since the focus is on the replacement of Lepreau capacity in 2006, we model the whole system in detail out to 2030. We are using the same period of time. The projects have the same basic life, so we don't need to consider the cost effect past that.

Q. - How did you deal with the end of life in your screening?

MR. MARSHALL: Oh, the end of life -- the -- in the analysis there would have been no consideration of decommissioning costs for the combined cycle gas plant, but the decommissioning costs, the full effect of decommissioning costs and irradiated fuel management of the refurbishment project, have been included in the project -- in the analysis.

Q. - Now on to a different topic. You would agree that --

CHAIRMAN: Mr. MacNutt, Ms. MacFarlane has returned.

MR. MACNUTT: Oh, sorry. Yes.

CHAIRMAN: Maybe it's time to return to --

MS. MACFARLANE: The copy is out being made.

CHAIRMAN: The copies are being made. Maybe I'm premature. Do you propose we mark it as an exhibit, Mr. Hashey, Mr. Morrison?

MR. HASHEY: That would be fine.

CHAIRMAN: It will be A-26. How would you describe it, Ms. MacFarlane?

MS. MACFARLANE: This is a payback calculation of the Lepreau refurbishment option.

CHAIRMAN: Thank you. Go ahead, Mr. MacNutt.

Q. - Mr. Marshall, you would agree that there has been considerable discussion during the Hearing about what may cause --

CHAIRMAN: We thought you were going to look at A-26.

MR. MACNUTT: No. We would like a little time to look at it and we will ask the questions in the morning.

CHAIRMAN: All right. That's fine. Then my suggestion is it's 5:00 o'clock, we will break until 9:30 tomorrow morning.

MR. MACNUTT: Thank you very much, Mr. Chairman.

CHAIRMAN: Thank you.

(Adjourned)

Certified to be a true transcript of the proceedings of this hearing as recorded by me, to the best of my ability.

Reporter