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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 17th 2002, 9:30 a.m.

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 17th 2002, 9:30 a.m.

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 morning, ladies and gentlemen. Do we have any preliminary matters? Mr. Hashey?

MR. HASHEY: No, Mr. Chairman.

CHAIRMAN: Okay.

MR. HASHEY: Actually the undertakings that were requested, they are still being finalized and worked on. And I would hope that this afternoon or no later than tomorrow morning we would be able to have those completed.

CHAIRMAN: Yes. Good. And if my memory serves me correctly, Mr. Miller, there were some undertakings by this witness. And have you got those today?

MR. MILLER: Yes, Mr. Chairman. We have the undertakings.

And we are prepared to read them into the record --

CHAIRMAN: Good.

MR. MILLER: -- at this point. And I will just proceed with that. Dr. Kugler, Mr. Thompson asked you on Thursday, and I will paraphrase the question, if an accident were to occur where a tube was dropped into the reactor core, how long would it take to retrieve this from the reactor core?

Do you have a response to that undertaking?

DR. KUGLER: Yes, I do. The Calandria tube cannot drop into the Calandria because the Calandria tube is longer than the distance between the tubesheet and end shields to which it was originally attached.

By the time one end of a Calandria tube is exposed inside the Calandria, the other end is already well inside the opposite tubesheet that could on its own support it.

In addition, during removal the Calandria tube is secured at the leading end by the volume reduction system and at the trailing end by a Calandria tube guide tube that travels with and holds the trailing end of the Calandria tube as it is being removed.

MR. MILLER: Thank you, Dr. Kugler. Mr. Thompson on behalf of CCNB had a question that was tied into that latter question.

And it was "Please advise what you are now doing to build specialized tools to deal with this kind of a situation of an object being dropped into the reactor core and requiring removal?"

DR. KUGLER: Tools will be built to inspect, clean and retrieve any objects in the Calandria before rebuilding of the reactor begins. This is a planned activity and an area that AECL has expertise in.

MR. MILLER: The next undertaking was to Mr. Hyslop on behalf of the Province of New Brunswick. And I will again condense the question.

He said, one of my concerns in removing the Calandria tubes is that there may become some damage to the Calandria surfaces. Is that something in your analysis that has been considered? And has any analysis been done to determine the extent to which there may be needed re-machining of any of the surface areas around the Calandria tubes?

DR. KUGLER: The tool development programs at AECL have shown that during Calandria tube removal the Calandria tubesheet can sustain shallow scratches.

Considerable work has gone into developing and qualifying tools and procedures to minimize this damage and to correct it should it happen.

In the event of unexpected significant damage, contingency tools such as weld repair and re-machining of the tubesheet will be used. All these tools and processes will be qualified before work begins.

MR. MILLER: Okay. Mr. Chairman, the next set of undertakings arose in the in-camera session. However I spoke to the applicant this morning. And they have no objection to putting the undertakings and the responses on the public record. In response to Mr. Hyslop -- or a question, sorry, was raised by Mr. Hyslop regarding the critical path schedule.

He said, "As a result of the AECL undertakings related to the potential Calandria tube removal, is there any impact on the critical path schedule?"

DR. KUGLER: No. There is no change in the critical path schedule as a consequence of these considerations.

MR. MILLER: And the final set of questions relates to the Ernst & Young report that was discussed during the in-camera session.

Dr. Kugler, please advise the extent to which Mr. Bruce Ambeault or others at AECL had in reviewing the document prepared -- in preparing the letter which they included in the Ernst & Young report under tab 12?

DR. KUGLER: Mr. Ambeault was present at a meeting on

December 5th 2001 conducted by Ernst & Young representatives in which Ernst & Young presented a summary of their draft risk assessment.

He received a handout from them at the meeting. The meeting lasted a couple of hours. Mr. Rod Eagles of NB Power later gave Mr. Ambeault a one-page computer printout of various data on certain risk parameters.

Mr. Ambeault had one of his staff, Ms. Debra Lewis attempt to replicate the Ernst & Young quantitative risk analysis using the program at risk. She was unable to duplicate the results exactly, as not all of the information about the risk assumptions and parameters was disclosed to AECL. She did however, making certain assumptions to fill the gaps, achieve results quite close to the Ernst & Young results.

Mr. Ambeault, Mr. Joe Howieson and Ms. Lewis then reviewed the risk parameters assigned by NB Power to the various risk elements and made certain changes to reflect their views of the risks and re-ran the analysis.

Mr. Ambeault then prepared the letter which was referred to, which is self-explanatory.

MR. MILLER: Thank you. Mr. Hyslop also asked what additional price would AECL consider charging to absorb the contractual risks referred to in the Ernst & Young

report?

And if you can't advise on a price, he asked that you explain the reasons for not being able to do so.

DR. KUGLER: The summary answer to this question is that the risks in the document referred to, and I believe it was referred to as the list of 24 key risks, are not ones which could reasonably be assumed by AECL in the context of the refurbishing and retubing contracts.

The reasons are several. And without going into a detailed analysis of each risk item, which I believe was beyond the intent of the question, I will set out the broad reasons.

The risks on the project have been allocated along the principle that the party in the best position to assess and manage the particular risk should assume that risk. NB Power and AECL, beginning with the retubing agreement and continuing with the Refurbishment Agreement, set out their respective divisions of responsibility and in contractual terms indicated the risks that were the responsibility of the owner NB Power and the contractor AECL, or were to be classified as force majeure for which each party bears its own costs. Together with a scope statement this formed the basis of the respective cost and contingency estimate of the parties.

The 24 risks in question are ones which on balance the owner has a better capacity to manage and mitigate and to which one or more of the following statements applies.

(1) AECL already bears some measure of cost responsibility for its share of that particular risk or (2) constitutes an event of force majeure for which the agreed contractual principle is that each party shall bear its own costs arising from such events, or (3) relates to alternate technical solutions or possible imposed requirements by the CNSC for refurbishment.

For these the parties agreed that the probability is low and identified and adopted mitigation strategies, including the preparation of a licencing basis document and review of this with the CNSC to obtain their comments and planning inspections to be undertaken by NB Power during future outages at the earliest opportunity to confirm condition assessments.

To assign such risks to AECL and to relieve NB Power of any risk would require AECL to essentially include budget in its price to do the alternate work.

Since NB Power would have no responsibility and AECL, being neither the licence holder nor the plant operator nor owner, could not reasonably control the outcome of whether the alternate scope was required, the method

adopted by NB Power and AECL was the more common practical one of including in the price that scope which was agreed to be required, and for the owner to pay for such other scope only if, despite the owner's best efforts with the support of AECL, to avoid the need it was required. This would then be done by change order.

Fourth category relates to NB Power failing to meet its direct contractual obligations. It would obviously be inappropriate for AECL to relieve NB Power of its obligations to perform its responsibilities under the contracts.

We believe the risks which are within our reasonable ability to foresee, control and mitigate are allocated to AECL in the contracts. And we accept responsibility for these pursuant to the contracts.

To respond to the question on the business reasons for not being able to accept certain risks, we operate as a commercial company with a process of executive and board governance that approves our contracting mandates and pays particular attention to risk, ensuring we take on risks which are in our ability to manage and mitigate.

We do take very substantial risks for scope for which we have the technical ability to define and perform and which we believe are under our reasonable ability to

control and mitigate.

MR. MILLER: Thank you, Dr. Kugler. Those are the undertakings, Mr. Chairman. There is one other matter.

I believe, Dr. Kugler, you wanted to clarify your answer to Mr. Sollows regarding the costs associated with the next generation reactor?

DR. KUGLER: Yes. I believe Mr. Sollows asked about the cost, the capital cost specifically of the advanced Candu reactor. And I replied that the specific capital cost was a thousand US dollars per kilowatt installed.

I wanted to just clarify that that is an overnight cost. It excludes interest during construction and escalation, which if you added it in would raise it by another 25 to 30 percent.

MR. MILLER: Thank you, Mr. Chairman. Those are the preliminary matters from AECL.

CHAIRMAN: I just want to confirm on the record that the in-camera session of last week now forms part of the public record. Right, Mr. Hashey?

MR. HASHEY: That is correct.

CHAIRMAN: Good. Thank you. Any other preliminary matters?

Mr. Gillis, you have arranged for Saint John Energy or somebody to move around, I understand, and you take their place, is that correct?

MR. GILLIS: If Mr. Chairman agrees, I will proceed with my cross-examination.

CHAIRMAN: Yes. Go ahead.

CROSS-EXAMINATION BY MR. GILLIS:

Q. - Mr. Kugler, you are familiar with the contracts that we are dealing with here?

DR. KUGLER: Yes, in general.

Q. - And you understood what was written in each of the articles that are set forth in those contracts?

DR. KUGLER: In general, yes.

Q. - Well did you sign the contracts?

DR. KUGLER: I did.

Q. - Did you read them before you signed them?

DR. KUGLER: I did.

Q. - Did you understand them before you signed them?

DR. KUGLER: I did.

Q. - Thank you. Now, you have been pretty well involved with the negotiations of these contracts since inception.

Would that be a fair statement?

DR. KUGLER: In an oversight sense, yes.

Q. - And who led the negotiating team on behalf of NB Power to negotiate let's say the plant performance agreement?

DR. KUGLER: I believe there were various individuals involved.

Q. - Just their names are fine?

DR. KUGLER: Individuals that come to mind are Mr. David Reid, Mr. Gordon Murphy, Mr. Rod Eagles, Mr. Rod White from time to time, Mrs. DeGroot.

Q. - And of all of those individuals which would be the lead negotiator, as you understood it?

DR. KUGLER: On the refurbishment in the Performance Agreement I would say Mr. David Reid. On the retube I think there were several people involved. It depended on whether it was scope or commercial terms.

Q. - So who was the lead negotiator on behalf of AECL?

A. Mr. Bruce Ambeault on the commercial side and various people on the technical scope definition.

Q. - Has Mr. David Reid, who negotiated this contract, given evidence before you to the best of your understanding?

DR. KUGLER: At this hearing?

Q. - Yes. You would have thought so?

DR. KUGLER: I believe not.

Q. - You believe not. Do you know why not?

DR. KUGLER: I do not know.

Q. - I just want to get an overview of the sequence of the contracts. If I understand it correctly, originally there was a request for a retube. And then subsequently the scope expanded to include refurbishment and plant

performance. Is that correct?

DR. KUGLER: Yes. May I clarify however that NB Power's executives made it very clear at the very outset of these deliberations going back to probably 1998 that they wished AECL to take risks. And that they wanted us involved in more scope rather than less scope and to take commensurate risks. They saw NB Power as being a relatively small utility not able to sustain and maintain the resources, technical resources to be able to manage the plant for the remaining life and to consider that they wanted AECL literally joined at the hip throughout the refurbishment project as well as later in the subsequent operation.

Q. - Okay. Well you have expanded. And when you say NB Power said they were not able to maintain the technical resources, you are saying that they didn't have -- how shall we put it -- deep enough pockets to maintain that technical expertise on staff for the life of the remaining plant?

DR. KUGLER: No. What I meant is that to operate and maintain a project or a nuclear power plant for the longterm there is a broader infrastructure that goes beyond the operation and maintenance staff at the plant.

It is that broader infrastructure that they wanted to rely on AECL on.

Q. - Well, okay. Did NB Power have that broader infrastructure from 1983 up until the year 2000, to the best of your understanding?

DR. KUGLER: It was there through a variety of mechanisms. One is the CANDU Owners Group, the COG Organization of which AECL is a member. Joint projects are often undertaken through that mechanism.

AECL has been available. But we did jobs for NB Power on a case by case basis without specific risks and reward sharing programs. And NB Power wanted to have a longterm performance agreement onto which we guarantee certain performance.

Q. - Okay. No, I just was surprised. I thought they had the expertise. Well I will continue on.

You, I gather, stayed in touch with the evolution of these various agreements over the last couple of years?

DR. KUGLER: At the executive level, yes.

Q. - And with respect to the plant performance agreement, A-17, who requested that agreement?

DR. KUGLER: It was NB Power.

Q. - And who at NB Power requested that agreement of AECL?

DR. KUGLER: At the time the CEO.

Q. - And who was that?

DR. KUGLER: Mr. Jim Hankinson.

Q. - And when did he request the plant performance agreement?

DR. KUGLER: The principles or the articulation that there would be literally four elements to AECL's involvement were articulated very early on. I can't remember specifically, but perhaps as early as '98, '99.

Q. - So these four agreements were all contemplated in '98, '99. Beside the retubing, they said we are going to get into refurbishment. We want a cost agreement as well as a plant performance agreement. Is that what you are telling me?

DR. KUGLER: I would say the sequence was that they identified AECL as being the logical party to undertake retubing. But before it moved too far down the road, NB Power's executive made it very clear in a number of meetings -- we had an executive steering committee process set up, we met regularly -- that they wished us to take substantial risk not just in doing the refurbishment, the retubing, but also in the longer term operation. And that risk was to be embodied in various agreements.

Q. - In the plant performance agreement?

DR. KUGLER: The plant performance agreement as well as the individual retubing agreement, the refurbishment agreement and there is yet another agreement to come which is for ongoing operation and station support after refurbishment.

Q. - Now, you say early on they got into this assumption of risk by AECL and plant performance. Would that be within six months after starting negotiations for the retubing or six years?

DR. KUGLER: I would say more like six months probably in the first year.

Q. - And the request for the plant performance guarantee was made by Mr. Hankinson to somebody at AECL?

DR. KUGLER: To myself and to our CEO.

Q. - And he -- did he call you up on the telephone and say hey I would like to have a plant performance agreement or did he write you a letter articulating their concerns and what they would expect?

DR. KUGLER: No. It was made in meetings. We kept minutes of these meetings. And specifically prior to signing the first major agreement, the retube agreement, we were also asked to enter into an MOA, memorandum of agreement on the principles of the performance agreement.

We didn't want to leave that until sometime in the future after the contract for the retubing was signed.

Q. - May I see copies of all of these minutes and all or the correspondence that AECL received from NB Power including Mr. Hankinson, concerning the performance guarantee?

DR. KUGLER: That is not my decision to make. I think that

would be largely NB Power's decision.

Q. - I see. These documents are in the possession of AECL?

DR. KUGLER: Yes. We would have minutes of those meetings.

Q. - And you knew coming to the hearing that the opposition here today, for myself and others concerns the guarantees and the lack of substance to the guarantees, you knew that didn't you, Doctor?

DR. KUGLER: So what is the specific question?

Q. - Did you know that there was concern being expressed by the intervenors here about the guarantees and the lack of substance to the guarantees?

DR. KUGLER: I knew that there were concerns expressed about the terms of the contracts.

Q. - And you have known that for some considerable time. If you go back to the interrogatories that were received, which I believe AECL would have seen, there were questions about the guarantees?

DR. KUGLER: Indeed.

Q. - So you have come here today, AECL, and you saw fit, well
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DR. KUGLER: The guarantees are clearly laid out in the
contracts.

MR. MILLER: Mr. Chairman, if I can just interject at this point. AECL pre-filed evidence on this. And there was the opportunity for interrogatories to be issued to AECL. And if Mr. Gillis had specific interest in specific documents we would suggest that the interrogatory stage would have been the appropriate time for him to request those. Thank you.

Q. - So Doctor, you knew that I was concerned about the guarantees for some considerable time?

DR. KUGLER: Indeed.

Q. - And you don't have the particulars at hand of your conversations with NB Power about the guarantees, the extent of the guarantees that they wanted, the extent that you are prepared to provide, other than what is in the written agreement. Is that right?

DR. KUGLER: It ultimately is embodied in the written agreements.

Q. - I am more interested in the negotiations that led up to the agreement, what the request was, whether NB Power asked for a guarantee for consequential loss? Did they?

DR. KUGLER: There were literally thousands of questions and answers provided --

Q. - I am only interested in guarantee documents.

DR. KUGLER: -- in the course of the negotiations.

Q. - I am not interested in the technical aspect. I am only interested in guarantees. And you are saying there were thousands of questions by NB Power to AECL about guarantees. Is that right?

DR. KUGLER: That is not what I said.

Q. - How many questions were there, Doctor?

DR. KUGLER: I am assuming that you are aware how negotiations are conducted. There are many interventions on both sides. Questions are asked, answers are provided. I think it is rather pointless to get into the details of that.

The final result is the contracts as they stand.

Q. - I see. Okay. Well, what is your undertaking of the guarantee and warranty under the retube agreement?

DR. KUGLER: We have --

Q. - You said you signed it.

DR. KUGLER: We have a schedule agreement that we would do the retubing within a certain number of weeks. If my memory serves me correctly, I think it's 224 weeks from the start of Phase 2 work.

Q. - Why don't we turn up the retubing agreement? A-13? Yes, it's the retubing agreement. I may have the wrong number. I think it's A-13. It's A-4? A-4, I'm sorry, Doctor. Do you have that?

DR. KUGLER: I have it, yes.

Q. - All right. And I'm asking here about the guarantee and the warranty. And if I take a look at it --

DR. KUGLER: Which page are you looking at?

Q. - Well, look, I don't know what page. Maybe Part 2, page 24, right at the bottom. Do you have that? Payment and performance guarantee?

DR. KUGLER: Yes. Yes.

Q. - Okay. Oh, it's not here in my copy. I'm sorry. Do you have it?

DR. KUGLER: I have page 24 and on the bottom of it, article 234 says payment and performance guarantee.

Q. - And then you go to the top of page 25?

DR. KUGLER: And it says text excluded, confidential.

Q. - Wait a minute.

MR. MILLER: Mr. Chairman, the exhibit that we have was the redacted version that was filed at the outset. Since then the full version of the agreement has been filed. I can't recall the exhibit number. I thought it was A-13. But if we could just be given a moment to verify that?

MR. MORRISON: PNB --

MR. MACNUTT: Mr. Chairman, it's in exhibit A-13 in PNB-9. It's towards the end of the volume.

CHAIRMAN: That's retube, isn't it, Mr. MacNutt? And we are

looking for performance, are we not?

MR. MORRISON: Retube.

CHAIRMAN: Retube. Mr. Gillis, it's retube we are looking.

Okay. Thank you.

MR. MACNUTT: That's the -- that's the unredacted version.

Q. - Part 2, page 25.

MR. MACNUTT: Could we have the reference to the page in the agreement, where it's Mr. Gillis' question, right?

Q. - It will be part 2, page 25, I guess, and the unredacted version. It's expanded and it goes over another page. You took something else out earlier on, I gather, but -- now this was the performance guarantee for the retubing. What is your understanding as to how much the guarantee was for when you signed this contract?

DR. KUGLER: On price, the performance the price is guaranteed. On schedule, we guaranteed the schedule, I believe it was based on 224 weeks from the start. And we accept a \$250,000 per day liquidated damage capped at 10 million.

And we asked for a bonus. I can't recall what the specific bonus was, \$100,000 a day if we came in early.

Q. - Okay. I was reading this performance guarantee in the contract. And it really is set out in the schedule which is schedule E, I thought, but I could be wrong. Obviously

I'm wrong.

DR. KUGLER: I think when you refer to performance guarantee in this context on page 25, it is like a performance bond.

Q. - Right.

DR. KUGLER: I just thought you were referring to the performance of doing the work.

Q. - Oh, I'm sorry. I'm sorry. The performance bond that you put up here, and we have covered it earlier, I gather normally the performance bond is 50 percent. But the bond you are putting up is much less than 50 percent?

DR. KUGLER: Well, we wondered why we were asked for a performance bond, because we -- performance bonds cost money. There is little question, I think, that AECL will perform.

Q. - Well, that's why you put up a performance bond. If you thought AECL was going to perform, and it was not needed, why did you put any performance bond in at all?

DR. KUGLER: Because NB Power requested it.

Q. - So NB Power in their great wisdom, this Mr. Reid comes up with a performance bond which is a fraction of what it would be in the regular world, the commercial world?

DR. KUGLER: I think in the -- in other contexts with AECL being a different supplier. Some suppliers have been known to walk away from the job if they see that they are

going to lose money. You want to hold the pig to the fire then you ask them for a substantial performance bond. I don't think AECL is in that category.

Q. - It isn't, okay. Well, can I summarize this bond, and you can confirm that I'm right. That you agreed to put up a bond for only 10 percent of the contract price rather than 50 percent, 30 days after you start work. Is that right?

DR. KUGLER: Mmmm.

Q. - Now most of the public purchasings acts that I am familiar with require the bond to be put up before you start work. How come there was another exception made for you folks, because you are good fellows?

DR. KUGLER: I am not aware of the details of why 30 days after start was agreed.

Q. - And 10 percent on this contract amounts to about \$13 million. Is that right?

DR. KUGLER: The contract I believe at the time it was signed was about 289 million.

Q. - Okay. I can dig up the contract price. We have a schedule of payments. How much are you to be paid before you even have to put up this letter of -- well, really, it's just a letter from a bank, isn't it?

DR. KUGLER: My understanding of performance bonds are that they are cashable at sight simply by presenting it to the

bank that it's drawn on.

Q. - Your understanding might be a little different from mine, but that's for another day.

How much do you get paid before you even have to put up a bond? And we worked it out earlier. And I think looking at your agreements it about 8 million bucks. Does that sound about right?

DR. KUGLER: This bond would be provided after the start of Phase 2.

Q. - Right.

DR. KUGLER: We would not have been paid anything on work to be done under Phase 2 specifically.

Q. - Oh, so if Mr. White said something to the contrary, he would be mistaken?

DR. KUGLER: There is other work that is authorized prior to the formal start of Phase 2 for which we do get paid.

Q. - No, I think you are wrong. If you look at the terms of payment, part 4 of page 3, article 4.2.2.2 under Phase 2 work 2.1 and 2.2, you folks pick up 7 percent of the contract before you even put up the bond?

DR. KUGLER: You went a little too fast for me.

Q. - Oh, I'm sorry. Part 4, page 3

DR. KUGLER: Part 4, page 3.

Q. - Page 3. And if you go down under Phase 2 work, the first

item date of Phase 2 work commencement, you have got five percent?

DR. KUGLER: Yes. And we would normally invoice and then be paid within approximately 30 days.

Q. - And I think -- and if I can -- if you want I can go through the rest of the terms of payment. You bill again at 28 days for the second instalment. So before you put a bond up you have sent two bills for about 8 million bucks?

DR. KUGLER: Whether or not we would actually have been paid that is the issue.

Q. - I see.

DR. KUGLER: We may have invoiced, but whether or not we have been paid is the issue.

Q. - So really although you put up a performance bond of 10 percent, by the time you have to put it up you have already billed for seven percent?

DR. KUGLER: We bill as soon as we are entitled to bill because the process of payment usually takes some time.

Q. - Again that is part of a negotiating process, to set out the sequence of payment. I usually get paid when the work is done. Well let's go on.

Now this is the retube agreement. On the refurbishment agreement the total of the guarantees is

what?

DR. KUGLER: On the refurbishment agreement?

Q. - Yes.

DR. KUGLER: I would have to turn to it.

Q. - Okay.

DR. KUGLER: I can't remember.

MR. MILLER: This is exhibit A-17. I will bring it up to the witness.

Q. - I think it's article 6.1. Article 6 is a performance guarantee, is that right, Doctor?

DR. KUGLER: Yes, that's right.

Q. - And on this agreement you are to provide a performance guarantee again 30 days after Phase 2 work starts?

DR. KUGLER: Right.

Q. - And the extent of the performance guarantee?

DR. KUGLER: It reads, the performance guarantee shall be in the amount of ten percent of the fixed contract price.

Q. - And in this case the fixed contract price was how much?

DR. KUGLER: I believe it was of the order 139 million for the firm price and then there was an additional -- I can't remember the word for it -- but there was to be additional scope of work which was essentially reimbursable.

Q. - And with respect to the fixed scope, again you folks get to bill seven percent before you have to put up your ten

percent guarantee?

DR. KUGLER: Yes, we would invoice on the start of Phase 2.

Q. - Okay. Now in addition here you had a warranty. It's article 15, page 60.

DR. KUGLER: Yes.

Q. - Again that was negotiated by this fellow, Mr. Reid, at NB Power, and your people?

DR. KUGLER: Yes.

Q. - Do you have a car, Doctor?

DR. KUGLER: Do I have a car?

Q. - Yes.

DR. KUGLER: Yes.

Q. - What type of car?

DR. KUGLER: A Buick.

Q. - Buick. What guarantee did you get on that when you bought it?

DR. KUGLER: I think it would have been the traditional labour and materials for a year and materials for three years.

Q. - I see. You have never seen any of these ads for toasters or cars where you get a five year or a ten year guarantee.

DR. KUGLER: Usually for an additional price, yes.

Q. - So you are quite familiar with the fact that for additional monies you can get a further guarantee?

DR. KUGLER: Yes.

Q. - And in this contract here, the refurbishment contract, you warrant defects in design, material and workmanship for two years.

DR. KUGLER: That's correct.

Q. - You realize that's much less than the warranty you get on a Korean car?

DR. KUGLER: Depends on the contract of sale for the car.

Q. - I see. The Koreans are just able negotiators maybe.

That's for another day. Now the other agreement that we have is the performance agreement, A-17, which you have in front of you. I think it's article 7.

DR. KUGLER: Page 17. Yes, I have it in front of me.

Q. - And if you go to article 7, it's warranty.

DR. KUGLER: Yes, I have it.

Q. - And again you signed this agreement and you are familiar with the terms of the warranty?

DR. KUGLER: Yes.

Q. - In a nutshell the way I read this, and you can correct me if I'm wrong, that the maximum that gets paid for warranted available generation is 24,940,000 a year to a total maximum over the life of 225 million, is that right?

DR. KUGLER: That's correct.

Q. - Now what happens in a year -- we are talking here,

warranted available generation, and you negotiated these agreements and signed it. Let's say the grid is not capable of taking the full available generation from Point Lepreau. Does that mean you fellows still get paid a bonus if it can generate more than 80 percent?

DR. KUGLER: If the plant is available to produce electricity, yes, then we would get a bonus.

Q. - So the plant, although being available to produce electricity, and if the grid can't take it, you could get a bonus year after year?

DR. KUGLER: That's correct.

Q. - And -- I'm going to change my questioning and then come back to that. I'm going to talk about risk. You used the word, take a risk, and you responded to some of the undertakings this morning by saying NB Power is in a better position to assess the risk and to assume the risk. Do you remember using those words?

DR. KUGLER: In some cases, yes.

Q. - And these were for the show stoppers, as I described them in earlier testimony, those events that in effect would make the refurbishment and retubing not the cheapest alternative.

DR. KUGLER: I was speaking about a specific list of 24 items.

Q. - 24 items. Okay. Now those risk items of 24 that you are talking about, I think we have got a list of them somewhere here, you have seen the list?

DR. KUGLER: Yes.

Q. - Now they were compiled basically by Mr. Eagles, was it, of NB Power, and he assumed a figure to it and then I gather you folks got a draft report from Ernst & Young in December 5th of 2001?

DR. KUGLER: No. To be precise we attended a meeting where Ernst & Young presented a summary.

Q. - All right. So up until the time you went to this meeting on the 5th of December, 2001, you had never received this risk assessment prepared by Mr. Eagles and his staff, is that right?

DR. KUGLER: Correct.

Q. - And Mr. Eagles and his staff, in preparing this risk assessment, assigned the probability of certain events taking place, as you understood it?

DR. KUGLER: I should say that in the course of negotiations and deciding on what refurbishment to do and what not to do there was extensive discussion on which items were considered to be very low probability and therefore should not be included, and others which we judged should be included. And so Mr. Eagles I would presume had had some

input from us in the course of the negotiations. But the specific list, the compilation and the consequences or impact in dollar values, I believe that would have been NB Power's. Whether it was Mr. Eagles specifically I don't know.

Q. - I am more concerned with the percent assigned to it, high probability, low probability, five percent, 20 percent. Initially when that document was prepared was it prepared by AECL, by AECL and NB Power working together, or was it prepared by NB Power, perhaps given to Ernst & Young, and then you were introduced to it?

DR. KUGLER: As I said, in the course of the negotiations we would have jointly judged whether it was low probability or not. Whether or not we actually suggested and agreed on a specific probability, whether it was a one percent or a three percent or five percent probability, that I can't tell you.

Q. - I don't mean to continue to come back to the question, but did you actively participate with NB Power, you being AECL, in coming up with not only this list but the probability of various items happening up until the 5th of December, 2001, when you met with Ernst & Young?

DR. KUGLER: Not being personally present I can't speak very specifically, but what I envision the process to have been

is in the context of this two year condition assessment during which we had a lot of interaction -- it was a total joint integrated project -- there would have been extensive discussions on what specific items should be refurbished and which ones were deemed to be of such low probability as not to be included. Whether or not we participated in establishing the precise list of 24 items and the assignment of specific probabilities and maximum consequences, I can't tell you that.

Q. - Would you be able to undertake to find out and tell me whether or not your staff met with Mr. Eagles in order to come up with not only the list, but the probabilities of each of those events occurring?

DR. KUGLER: I can undertake that, yes.

Q. - I had a bit of difficulty. I looked at the memorandum of agreement, December 21, 2000, concerning plant performance. And in that memorandum of understanding AECL represented a capacity factor. Words to that effect were used. You recollect that?

DR. KUGLER: The MOA used term capacity factor during some sections and then clarified at the end of the section that for purposes of the performance agreement capacity factor was to be equal -- was to be available generation. And I believe you will find it in the MOA in section 4.

Q. - Section 4?

DR. KUGLER: Yes. It was always clear between the parties that we were talking about availability, and that was specifically clarified in the final agreement so as to leave absolutely no doubt. And it was simply for that reason for sake of clarity that we chose to use the word availability. The intent was never any different.

Q. - So I gather what AECL was saying was that, look, the performance will be the availability. If you fellows aren't able to receive the power and sell it that's your problem, you are going to pay us.

DR. KUGLER: It wasn't just aren't able to receive it. Suppose in ten years from now NB Power has lots of hydro and would prefer to sell hydro power --

Q. - Tidal power?

DR. KUGLER: Hydro.

Q. - I was saying tidal as a --

DR. KUGLER: No. I don't want to be facetious here but we have had instances where some of our other customers did have an excess of hydro power and chose to sell that rather than nuclear, and the nuclear plant was therefore operated deliberately at less than its availability.

Q. - I see. Now I want to change my questioning just for a bit. What is the scope, mandate and authority of AECL?

DR. KUGLER: AECL's mandate is -- AECL has a dual mandate.

One is a public policy mandate, the other is a commercial mandate.

Under the public policy mandate we manage the nuclear platform on behalf of the Canadian government. By nuclear platform I mean doing nuclear research and development and managing our legacy obligations which are largely wastes that go back to the very beginnings during the Second World War, as well as the decommissioning of aging facilities. And I should point out that about 80 percent of those wastes were generated before AECL even became a crown corporation. And that's largely our public policy mandate for which the government funds us.

Under the commercial mandate we provide services to customers and we design and build new plants as well as providing technical support in the operation and maintenance of the operating reactors.

Q. - I asked three words, what is the scope, mandate and authority of AECL, and you have given me an answer with respect to mandate. Does the same answer apply to both the scope and the authority of AECL, or is it something different?

DR. KUGLER: No. The scope is simply delivering on the mandate, that is, doing R and D, managing the waste,

decommissioning old facilities, designing and building and providing technical support to CANDU reactors. That's our scope.

We -- in terms of the -- there was a third part of your question?

Q. - The other word I used was authority?

DR. KUGLER: Authority. Yes, we are an agent crown corporation and all work we perform which is within our mandate is done as an agent to the crown.

Q. - I was looking at this document, AECL number 4, this letter you fellows got from Justice. You are familiar with that?

DR. KUGLER: Yes, I am.

Q. - I was sort of surprised with the particular terminology used on the second page. This lawyer was writing to your lawyer, not to NB Power, is that correct?

DR. KUGLER: The letter was from a Mr. Trotman to our general counsel, Mr. Hawryhuk.

Q. - And there is no carbon copy of this letter being sent on to NB Power by Mr. Trotman. If he intended to do that he would have said, cc NB Power.

DR. KUGLER: We requested this letter because we anticipated the question, we often get asked this question by our clients overseas as well, and on any major contract we are

required to have our contracts reviewed by the Department of Justice, and it's in that context we asked for this letter and we shared it with NB Power. We also anticipated that this issue may be discussed here at these hearings and it's in anticipation of that that we obtained the letter.

I should say that you may perhaps be looking at a letter dated May 24th. I have an updated letter of June 13 which further clarifies that the opinion also includes the performance agreement which was not yet available at the time the initial request was made.

Q. - My letter is dated the 28th of May, not the 24th.

DR. KUGLER: 28th. I'm sorry.

Q. - And the performance agreement is dated the 24th of may, that's where your mistake is, Doctor?

DR. KUGLER: Yes. When we ask for the opinion Mr. Trotman did not have the performance agreement because it had not yet been signed. And if you like I can read from his most recent letter the pertinent comments and opinion.

Q. - I'm sure if it was important it would have been brought up by your solicitor, Doctor. My questions are rather focused. I'm looking at this exhibit that you fellows put before this Board, the letter of the 28th of May, and it refers to obligations -- on the second page is the key

part, top part of the paragraph.

DR. KUGLER: Yes. I don't have the 24th. I have the subsequent letter.

Q. - Have you got a copy now?

DR. KUGLER: Yes. I now have the 28th.

Q. - Flip to the second page, look at the top paragraph, and it's the last three lines in the top paragraph. That's where I started my questioning.

As long as those obligations or responsibilities are within the scope, mandate and authority of AECL. Do you see that?

DR. KUGLER: Yes.

Q. - And you have defined already what the scope, mandate and authority of AECL would be. And it's to design, build and provide technical facilities as well as do research. Now we are talking here about operating a plant for a period of some 25 years. Do you want to now change your answer and expand on mandate to say that will include the commercial operation of a plant with a partner, NB Power?

DR. KUGLER: I believe I said amongst our scope it includes the provision of technical support to the operating CANDUs.

Q. - Yes, you did. We are talking something more than technical support in this plant performance guarantee.

You are joined at the hip, were your words. You are a partner is my word. Now do you want to change -- and I will give you the opportunity -- your answer with respect to mandate that allows you to enter into a partnership with the utilities concerning the commercial operation of those facilities.

DR. KUGLER: No, I don't need to change my answer because any contracts that relate to the scope that I articulated would be contained within our mandate.

Q. - All right. And then if you go to the next paragraph, and you are trying to take my thunder away, the author here said the contracts are only the retubing and refurbishment services, isn't that right?

DR. KUGLER: That's what the letter said. And as I explained at the time he did not yet have a copy of the performance agreement.

Q. - But now, Doctor, you don't mean to tell me that you misled somebody in Justice saying that, look, there is only two contracts here, and then you pull out another one. You knew for some time, back two years you told me, that there was a performance agreement to be entered into, you had an MOA?

DR. KUGLER: Yes. And he I believe had not yet seen it and therefore he did a revised letter.

Q. - I see. So you fellows when you sent him a couple of the agreements you omitted to forward the MOA and advise of the current status of your negotiations concerning the performance agreement, is that right, Doctor?

DR. KUGLER: I don't want to mince words, but if you read the letter specifically it talks about Point Lepreau retubing and refurbishment services. It does not talk about the agreements. And in speaking about the services, they are within the scope, mandate and authority, et cetera, and any contracts that we would enter into to provide those services and any guarantees that go along with that would obviously be included under our scope and mandate.

Q. - I see. Now, Doctor, if NB Power had told you, Mr. Hankinson or Mr. Reid, that, look, we do not require a plant performance agreement. We just want a refurbishment and a retubing agreement with no plant performance, how much would the price have decreased for both of those retubing and refurbishment contracts, if any?

DR. KUGLER: I can't answer that question off the top of my head.

Q. - Would you undertake to get me the answer then, Doctor?

DR. KUGLER: I don't think that's practical for me to do so because ultimately any such numbers or price impact would

have had to be reviewed by a risk assessment panel and ultimately approved by our Board of Directors. It's very hypothetical.

Q. - Well that leads to the other question, I went in reverse order, how much would you drop the price if we didn't have the plant performance. How much would you increase to give us a plant performance agreement which covered the plant for the full 25 years, including consequential loss, which would mean the provision of replacement power or the dollar equivalent?

DR. KUGLER: We would not take consequential damages.

Q. - Why not? It's not within your mandate?

DR. KUGLER: No. Because we are not in a position to undertake that.

Q. - Now has the Government of Canada at any time in the past provided guarantees with respect to the sale of CANDU reactors?

DR. KUGLER: I don't know what you want to limit guarantees for, but --

Q. - Anything. Any guarantee? Has the Government of Canada provided any guarantee concerning the sale of any CANDU reactor? How is that for a broad question.

DR. KUGLER: Such guarantees as might be construed to come within the realm of performance or technical work, they

would not. We would do so on their behalf implicitly. And beyond that I don't know what other guarantees they may have.

Q. - Doctor, stop playing a game with me. You know bloody right well what I'm after. The Government of Canada has provided guarantees concerning sale of CANDU reactors, and if you want I can quote from the Supreme Court of Canada.

DR. KUGLER: I frankly do not know what --

Q. - Are you familiar with the case of --

DR. KUGLER: -- specific guarantees you are referring to.

Q. - Are you familiar with the case of AECL versus the Sierra Club of Canada in the Supreme Court?

DR. KUGLER: I'm generally familiar, yes.

Q. - Are you familiar with what that related to, a guarantee provided by the Government of Canada concerning the sale of a CANDU reactor or two to China which you so nicely described in your show and tell presentation?

DR. KUGLER: What it related to was the provision of financing for the project.

Q. - Right. I'm getting at the Government of Canada provided a guarantee to support the commercial undertakings concerning the sale of a CANDU reactor, isn't that right?

DR. KUGLER: They provided financing and they agreed to do that.

Q. - And they provided it. And I'm coming at consequential damage. You realize that the provisions that they provided that financing they do allow for consequential damage up to \$13 billion?

DR. KUGLER: I don't know what you are referring to.

Q. - I'm referring to the Export Development Act. Are you familiar with that act?

DR. KUGLER: No, I'm not.

Q. - Maybe I will help you a little bit. Your counsel can look it up and confirm that I am right. I am really looking at the provisions of the Act, which would be section 10, where the corporation is established, and section 24 where the limits of liability, contingent liabilities, are capped not to exceed \$13 billion.

Maybe you fellows, because you have used that act to sell two of your reactors to China, would be able to undertake to confirm that the provisions for contingent liabilities exist in the legislation in Canada, in legislation that you yourself have used?

DR. KUGLER: I have no comment.

Q. - No comment. Well, have you or anybody at AECL approached the Government of Canada and say, look, fellows, can the Minister of Finance, or the Minister under this act, the Export Development Act, direct us to provide a guarantee

and support it. And give a copy of that guarantee to NB Power?

DR. KUGLER: No, we did not.

Q. - You didn't. Who would I have to ask the question of? Because I have been asking at these hearing of NB Power. I'm asking it now of you, AECL.

Who would I ask the question of, what would it cost for a plant performance guarantee by AECL, supported by the Government of Canada, which would guarantee contingent losses for consequential damage, which would include replacement power at \$200 million today per year?

DR. KUGLER: You can ask me. And I can give you my opinion that our Board of Director would not allow us to take on those kinds of risks.

Q. - Because it's too big a risk?

DR. KUGLER: It is not in the nature of the kinds of risks that we, as a corporation with the mandate that we have, would undertake. We do not undertake consequential damages as a general practice.

Q. - You have in this plant performance only to the figure of 24 million a year. I'm just saying take it up to 200 million a year. What would it cost?

DR. KUGLER: We don't consider those consequential damages.

Q. - I see. So replacement power is not a consequential

damage?

DR. KUGLER: Replacement power I would say is a consequential damage.

Q. - I see. And surely it wouldn't cost -- I can give you the outside parameters how I would approach it. If it's 200 million a year for 25 years, it would amount to what, \$5 billion?

DR. KUGLER: Roughly.

Q. - And the present value would be about 2 and a half billion dollars, 2, 2 and a half. But you would agree you would have to bring it back to present value in today's dollars if you are trying to quantify what the premium would be for such coverage?

DR. KUGLER: There are many different ways of approaching that. If that's the line that you are going down, mental arithmetic can be done, yes.

Q. - Yes. Now so the cost of it would be between zero and 2 and a half billion dollars. And it would be up to your Board to decide to accept it or not?

DR. KUGLER: Well, I told you my -- in my opinion, they would not provide such a guarantee.

Q. - Why? A simply question, why?

DR. KUGLER: We generally take risk on the things that we have reasonable control over, and we are able to manage

and mitigate.

Q. - And you are suggesting that NB Power is in a better position to take the risk, the worst case scenario, as I have painted it, than AECL?

DR. KUGLER: NB Power as the utility has a certain mandate.

And by definition, by providing electricity to the province it is undertaking those risks.

Q. - And how deep is NB Power's pocket to afford those risks?

DR. KUGLER: How would you like to characterize the depth of a pocket?

Q. - Well, when people gamble in a casino or in a slot machine, it's usually done, I gather, with monies that are surplus, that you don't need for your day to day living. That you can throw away or spend in a gambling undertaking. Do you understand that generally?

And then there are those gamblers that are addicted to gambling, and will bet everything. Do you understand that?

DR. KUGLER: I have no comment.

Q. - I see. Do you -- have you ever gambled, Doctor?

DR. KUGLER: In slot machines.

Q. - Yes. And the money that you put in the slot machines, is it disposable income that wouldn't affect your lifestyle?

DR. KUGLER: Yes.

Q. - And if it came to the point that your gambling reached the level that you took and you mortgaged your house, and you put all that money in the slot machine, that would be a mistake, wouldn't it?

DR. KUGLER: In my case, yes.

Q. - Yes. Now the depth of NB Power's pocket, what is their net income that could be applied towards the cost of replacement power just for one year? Do you know that, Doctor?

DR. KUGLER: I would assume that NB Power, being a publicly owned not for profit utility, would have relatively little, let's say disposable income, in the context that you mentioned it for gambling.

Q. - But ultimately who then picks up the tab for the gamble?

DR. KUGLER: I don't -- I wouldn't characterize that as gambling.

Q. - I see. But AECL certainly wouldn't take the risk?

DR. KUGLER: Not for consequential damages of the type that you suggested.

CHAIRMAN: Mr. Gillis --

MR. GILLIS: No further questions, Mr. Chairman.

CHAIRMAN: You are all through your cross?

MR. GILLIS: I'm finished.

CHAIRMAN: Okay. All right. We are going to take a 15

minute break. And the Board has to rise at 12:00 noon and reconvene at 2:00 today because Commissioner Sollows is a witness in that inquest which is going on, so he will do his testimony there over lunch.

And let me see, when we come back after the break, it would be Saint John Energy's turn.

(Recess)

CHAIRMAN: Just before we commence I wanted to give the informal intervenors a heads-up. Doctor, when do you have to physically leave the premises?

DR. KUGLER: I would like to leave at 4:00 o'clock, no later.

CHAIRMAN: So this witness will be on the stand until he is finished or 4:00, whichever arrives first. And after that time is when the informal intervenors will make their presentation to the Board.

I just wanted to clear that up. So informal intervenors are not going to be making presentations at 2:00 this afternoon, okay.

And Saint John Energy, go ahead.

CROSS-EXAMINATION BY MR. YOUNG:

MR. YOUNG: Good morning, Dr. Kugler.

DR. KUGLER: Good morning.

Q. - Your position at AECL, you are the senior Vice-President?

DR. KUGLER: Yes.

Q. - In that capacity you would attend and participate in Board meetings at AECL?

DR. KUGLER: Yes. But I'm not a Board member.

Q. - Okay. This morning and last Thursday you have had formal intervenors come with questions from a technical perspective, financial, environmental. I just want to make sure the bases are covered and try the safety perspective.

Would you agree with the statement that health and safety is of paramount concern, especially with the nuclear industry?

DR. KUGLER: Yes.

Q. - In your AECL experience managing major projects, AECL-2, could you turn to slide 3 in that --

DR. KUGLER: I don't --

Q. - -- on page 3?

DR. KUGLER: I don't have a copy with me today. Slide number 2?

Q. - Page number 3?

DR. KUGLER: Page number 3, yes. Yes.

Q. - You have it? The top of that page is "AECL Resources and Facilities." And the picture on the left-hand side close to the top is Chalk River?

DR. KUGLER: That is correct.

Q. - Is that one of your facilities?

DR. KUGLER: It is one of our facilities, yes, the entire site.

Q. - Okay. How far away is that from the Chalk River laboratories?

DR. KUGLER: That is the Chalk River laboratories.

Q. - Okay. Are you familiar with a 1999 incident that took place at Ontario's Chalk River laboratories involving 22 charges laid by the Canadian Nuclear Safety Commission, and of those eight charges AECL pled guilty to?

CHAIRMAN: Mr. Young, we are not the nuclear regulator. And I think that is a matter -- if you can tie it into economics, then fine. But otherwise, to talk about safety records, et cetera, that is beyond our --

MR. YOUNG: No, Mr. Chairman. I was just looking to see that -- this is a safety concern when there is 22 charges laid. And in fact if this was -- led to a stop work order and led to slowing down their operation where they had very tight time lines and floats and what not. If you have 100 hours to perform a job and you have a stop work order for 90 of those hours it may affect your performance.

CHAIRMAN: That is a good way of tying it in. Go ahead.

MR. YOUNG: Thank you, Mr. Chairman.

DR. KUGLER: There were no stop work orders issued. The nature of the work that was called into question was of an entirely different kind.

Q. - Thank you, Dr. Kugler. After those eight charges were pled guilty to, have you made any changes to your operation to make sure those events don't occur again?

MR. MILLER: Mr. Chairman, if I may, although the initial question may have been brought around so that it had some relevance, the operations of the Chalk River facility I don't think have any relevance to this proceeding.

And Dr. Kugler responded there was no stop order issued in that case.

MR. YOUNG: My only concern was if some of these procedures would be carried over again at this project that you are going to be doing for Point Lepreau.

And if some of these failures were failure to provide protective clothing, failure to use radiation detection equipment, instances like that or procedures like that, would they affect what you are going to be doing at --

CHAIRMAN: Go ahead, witness. Answer the question.

DR. KUGLER: The nature of the work that was called into question by the CNSC is entirely different from the nature of work that we would be doing at Point Lepreau. And it

is really very difficult to make a comparison.

Q. - Okay. Has NB Power asked you, AECL, about any health and safety violations of any nature during their due diligence in selecting you as the general contractor for this project?

DR. KUGLER: They have not asked the specific question as you have articulated it. I think New Brunswick Power is comfortable with our practices.

We perform work in support of the operation and maintenance, during maintenance outages in particular when our people do have to go right into the plant inside the reactor building in radioactive areas, being monitored by NB Power's radiation protection staff.

And they are aware of the conduct of our staff. And I believe they are reasonably assured that our people conduct themselves with health and safety in mind. And it is on that basis they selected us as a contractor in part.

MR. YOUNG: That is all my questions. Thank you,
Dr. Kugler.

DR. KUGLER: Thank you, Mr. Young.

CHAIRMAN: Thank you. Am I missing something? Or is the only intervenor who has not had an opportunity to cross would be Mr. Craik?

Okay. Mr. Craik, would you like to come forth to

microphone number 8?

CROSS-EXAMINATION BY MR. CRAIK:

Q. - Good morning, Dr. Kugler. Yes. I guess one of my first questions is why are there two separate agreements with AECL, one for retubing and one for refurbishment with separate and different warranties for scheduled performance?

DR. KUGLER: I don't know that it was initially intended that way. The preparation and the negotiations for -- that led to the retubing agreement started much earlier and were more complex. That was the initial focus.

The precise -- the nature of the remaining refurbishment work and how it might be contracted was decided on sometime after we had actually started the retubing agreement. And it just seemed natural to conclude the retubing agreement and then get on to the refurbishment agreement.

Q. - Well would it be correct to say that dividing the work into two agreements somehow reduces the risks to AECL?

DR. KUGLER: I don't think that that is the essence of it. Each scope was judged and contracted on its own merits. Had the two been put into one agreement, whether or not specific risks might have been delineated separately to apply to this piece of work versus that piece of work, or

whether we would have agreed on terms and conditions that covered the entire work as one package, I really can't say. That is obviously a matter of negotiation.

Q. - You understand that the scheduled warranty for retubing is \$250,000 a day. And that is about half of the cost to NB Power. So that is in the spirit of cost sharing or risk sharing?

DR. KUGLER: I think the spirit of risk sharing is a matter of identifying each party's scope of responsibilities. Each party then taking the risk on its scope and through negotiation we arrive at specific liquidated damages that we think are equitable.

Q. - And yet the schedule warranty for refurbishment is only \$75,000 a day. And yet a delay in any one of the refurbishment items could be just as costly for NB Power and its customers?

DR. KUGLER: I think the judgment there by both of us was that there was less technical risks perceived in the refurbishment tasks as compared to the retubing tasks. And it is in the nature of assessing risk that if the risk is lower, liquidated damages and bonuses would be correspondingly lower as well. And I think it was simply recognition that the potential impact on ultimate schedule and price of the retubing agreement was somewhat larger

than the refurbishment tasks.

Q. - Well could AECL not make the schedule warranties for refurbishment the same as for retubing, so as to present the better image to New Brunswickers of protection against schedule risk?

DR. KUGLER: I think that was implicitly discussed and recognized at the time that these agreements were negotiated. And those were the numbers that we ultimately settled on.

Q. - So you weren't really concerned about the image of this as presented to New Brunswickers?

DR. KUGLER: It is not a question of image, I believe. It is a question of ultimately negotiating the specific terms and agreeing on the price that goes with those terms.

Q. - Are you familiar with the Hagler Bailly Report?

DR. KUGLER: I have heard it mentioned. I have heard verbal summaries of it. I have never read it.

Q. - Now, would it surprise you that in the Hagler Bailly Report there is an estimate of the maximum schedule for retubing which is 50 days longer than the schedule warranty offered by AECL?

DR. KUGLER: I am not aware of what schedule they had estimated and on what basis they would have done so. I believe this Hagler Bailly report or study was done some

time perhaps before we got into the retubing agreement. And they would not have had knowledge of the techniques and the technology that we would have developed on the basis of which we agreed on a schedule.

Q. - Well could not AECL now extend the schedule warranty to three months to make it more acceptable to New Brunswickers?

DR. KUGLER: The agreements have been signed and have been entered into. We -- as I said before, we agreed that these would be reasonable terms. And I don't see a basis for re-opening them.

Q. - Well apart from the acceptability to New Brunswickers?

DR. KUGLER: I can't comment on that. The contract is between NB Power and AECL.

Q. - Just to comment that New Brunswickers own NB Power?

DR. KUGLER: Yes, indeed.

Q. - Well assuming for the purposes of argument that if there is a three month delay costing NB Power about \$29 million and then the plant goes into service and starts performing while achieving a 90 percent capacity factor, do you think that in those circumstances a bonus of more than \$10 million immediately being paid to AECL, after NB Power has swallowed \$29 million, that this would affect the popularity of AECL in New Brunswick?

DR. KUGLER: I don't understand the 10 million. What is the basis of that number, the \$10 million?

Q. - The 10 million is about the bonus that AECL receives when the plant operates at a 90 percent capacity factor?

DR. KUGLER: You have done the calculation?

Q. - Oh yes.

DR. KUGLER: I will accept your numbers. Well in that case I can only say if the plant operates at 89 percent, NB Power would be very happy.

Q. - Yes. I am not talking about NB Power. They seem to be overly happy with an awful lot of these contracts. I am talking about the perception of AECL in New Brunswick and to New Brunswickers?

DR. KUGLER: I can't comment on the perception.

Q. - Well perhaps I should clarify that one. Whatever you were talking about --

CHAIRMAN: Mr. Craik, really what you are doing here is you are presenting argument.

MR. CRAIK: Yes. I have got a bad habit of doing that.

CHAIRMAN: I am not saying it is a bad habit, having a legal background myself. But I think we save that for argument or just a comment of the witness maybe. But most of that is argument.

Q. - Well in the plant performance agreement, AECL have

indicated their support to Lepreau by setting aside a \$225 million penalty of possible for performance over 25 years.

Now this is about worth \$100 million in present value, approximately.

So would it not be possible for AECL to offer to draw down on this penalty contingency to cover delays in getting the plant back into service, thus enhancing the present confidence in AECL's partnership in the project?

DR. KUGLER: That was not the nature of the agreement. Had different people been at the table we might have come up with different terms and conditions. But the terms and conditions that we did agree on are written in the contract.

Q. - Yes. I understand that. But I welcome your comments that if other people had been present at the table the contracts might have been written differently.

DR. KUGLER: Might have been written differently.

Q. - Just one fairly technical question with regard to the difference between availability and capacity factor. When a more efficient advanced CANDU reactor becomes available, would the possibility that this could reduce the capacity factor of Lepreau while AECL continue to receive bonus payments based on high availability, not make the advanced CANDU reactor unattractive at the Lepreau site?

DR. KUGLER: I am sorry, I don't follow your argument.

Q. - The AECL get paid, as we now understand it, on plant availability whether the plant is producing power up to that amount or not?

DR. KUGLER: It would have to be available to do so.

Q. - Yes. It is available. But because the grid is not demanding the power it is not producing the power. It is not making revenue. But nevertheless AECL gets paid a bonus.

Now over the next 25 years, and we are talking a long period of time, there is the more efficient advanced CANDU reactor coming on the market. And in assessing where to build that advanced CANDU reactor, the Lepreau site looks fairly attractive. But it being more efficient, could you not get a situation where it starts to produce high capacity factor and high availability and that the existing unit is there by run back and its availability is still high, but its capacity factor is fairly modest. And in that case would not that loss of money to New Brunswick power mitigate against a decision to build an advanced CANDU reactor at the Lepreau site?

DR. KUGLER: Well, you are postulating a very hypothetical question. I would think that in the deliberations that would lead New Brunswick Power to build advanced CANDU

reactors due consideration would have to be given to other sources of power that exist within the grid. And if that were the case I would presume that the reason it would be done is because the demand would be foreseen to be such that both the advanced CANDU reactor as well as Point Lepreau would be operating at base load and selling every kilowatt of electricity that they would generate.

Otherwise it wouldn't make sense.

Q. - One final question, and again this is a little technical. The lifetime of the pressure tubes, and I am now talking about the new pressure tubes, is based on not so many years, so many years, but on the number of megawatt hours that are generated for those pressure tubes. We have had this explained to us several times.

Now if towards the end of the 25 years, maybe year 15, 20, NB Power decide that they would like to reduce the power from Lepreau in order to prolong the life of the pressure tubes so that they may stretch out beyond the year 25 to year 30, would the warranted available generation be reduced accordingly?

DR. KUGLER: Again, it is a hypothetical situation. The contract exists and until the parties agree to change it for whatever reasons these are the governing terms.

Q. - So what you are saying is that it is possible to change

the terms of this agreement?

DR. KUGLER: Two parties can always agree to change an agreement that they have entered into.

Q. - And this could be done in year 10?

DR. KUGLER: It could be whenever the parties agreed to.

Q. - So they could do it tomorrow?

DR. KUGLER: It could be.

MR. CRAIK: Thank you. End of my question.

CHAIRMAN: Good. Thanks Mr. Craik.

CHAIRMAN: I believe that leaves Board counsel.

CROSS-EXAMINATION BY MR. MACNUTT:

Q. - Dr. Kugler, this morning you referred to NB Power as a not for profit corporation, do you recall that?

DR. KUGLER: I believe I did use that term.

Q. - Are you aware of the fact that NB Power is allowed by NB Power legislation, the Electric Power Act, to earn income in excess of its costs?

DR. KUGLER: I am not aware of the details of the act, no.

Q. - So you are not exactly sure of the statement you made about it being non-profit?

DR. KUGLER: I used the term in a qualitative sense as not having to pay dividends to private sector shareholders.

Q. - Are you aware of the contribution that NB Power must make to the province to assist -- as a contribution against

providing borrowing services and guarantee services?

DR. KUGLER: I'm not aware of those terms, no.

Q. - Now I want you to turn to exhibit A-6, CCNB-6(b), tab 1 at the front of the binder, and what it is in fact is the AECL annual report for 2001.

CHAIRMAN: What page, Mr. MacNutt.

MR. MACNUTT: It's exhibit A-6, CCNB-6(b), which is tab 1 at the front of the binder, and it's page 36, the AECL annual report for 2001.

Q. - And, Dr. Kugler, what you find there on page 36 is the balance sheet for AECL, and under the heading shareholders equity, towards the bottom of the page you see a line, contributed capital, note 7 --

DR. KUGLER: Yes.

Q. - -- is that correct? And the amount of contributed capital is shown to be \$535 million, using slightly rounded terms?

DR. KUGLER: Yes.

Q. - Now I want you to turn to note 7 of the annual report which is on page 43.

DR. KUGLER: Yes.

Q. - I'm just going to read a couple of phrases here. Under contributed capital and deferred decommissioning funding there is a statement, included in contributed capital is

approximately \$342 million (2000 - \$342 million) related to parliamentary appropriations received for the production of heavy water inventory. And then later in the same paragraph, quote, A 1997 decision of the Treasury Board directs the corporation to hold the proceeds from the sale or lease of government funded heavy water in a segregated fund for use in decommissioning activities for the ten year period following the decision commencing in 1996-1997, its government funded heavy water sold or released, the net proceeds are transferred from contributed capital to deferred decommissioning funding which is used to fund ongoing decommissioning activities.

You see that?

DR. KUGLER: Yes.

Q. - Now would you agree that these funds appear to be segregated and they are not available to fund AECL activities?

DR. KUGLER: They are not available to fund AECL's commercial activities. There is a distinction.

Q. - Well do you believe -- you have answered the question almost with an implication there is a further explanation. Could you go on?

DR. KUGLER: Well as I explained earlier, we have a dual mandate, a public policy mandate and a commercial mandate.

One of our public policy mandates is to look after the decommissioning of our aging facilities. And these monies would therefore be allocated to pay for decommissioning of facilities.

Q. - But not available for your commercial activities such as that which you are engaged with NB Power?

DR. KUGLER: That's correct.

Q. - Now would you also agree with me that the funds are more in the nature of a deferred liability due to the federal government?

DR. KUGLER: I'm not qualified to speak on the precise accounting term of the implication of a deferred liability.

Q. - Okay. Now I would like you to go back to the balance sheet on page 36. Now you would agree with me that the item called contributed capital of \$553 million includes 342 million that should properly be included in the balance sheet as a liability, or can you answer that?

DR. KUGLER: I can only go by what note 7 says in reference to that amount. It includes what we have discussed earlier.

Q. - So would you agree with me or are you able to answer that the net effect of this is that the shareholders equity really should be reduced by \$342 million to properly

reflect the monies available to AECL for commercial operations?

DR. KUGLER: I really don't feel qualified to address that particular one. I have confidence in our CFO and our auditors and they would have deliberated on that and decided that this is an appropriate way of stating the contributed capital.

Q. - Thank you. Now I want you to turn to exhibit AECL-4 which is the May 28th letter from Mr. Trotman to Mr. Hawryhuk.

DR. KUGLER: Yes, I have it in front of me.

Q. - Thank you. Now that letter is dated May 28th 2002, and on page 1 in the third paragraph of the letter, reference is made to Atomic Energy Control Act. A second reference to that act appears in the last paragraph on that page. I was unable to locate that act. Can you tell me if the reference should be to subsection 11(1) of the Nuclear Energy Act, Chapter A-16, RSC 1985? I was able to find a reference to 11(1) in that act.

DR. KUGLER: I don't know the precise reference that Mr. Trotman is making here.

Q. - Perhaps Mr. Miller, your counsel, could --

DR. KUGLER: I could undertake, yes.

Q. - -- clarify this for us.

MR. MILLER: Yes, we will undertake to clarify that.

Q. - Thank you. Now section 11 of my copy of the Nuclear Energy Act reads as follow, 11(1), the shares of the capital stock of the company, except the shares that are necessary to qualify persons other than the minister as directors, shall be owned or held by the minister or by another company, interest for Her Majesty in right of Canada. 11(2) a company is for all purposes an agent of Her Majesty in right of Canada. However, I'm not able to find a definition of "company" is used in that subsection in the Nuclear Energy Act. Are you able to explain to the Board if the term "company" is used in that section I just quoted can be taken to be a reference of AECL, and, if so, why should we consider it to be a reference to AECL?

DR. KUGLER: I would have to take an undertaking to get clarification on that point.

MR. MILLER: Mr. Chairman, at the time that I'm clarifying the statute I can also provide the answer on that as well.

CHAIRMAN: Thank you, Mr. Miller.

Q. - And with respect to AECL-4, I go to the last paragraph on page 2, the first two lines the following appears, quote, for the foregoing reasons, it is my considered opinion that the contractual I commitments made by AECL, et cetera. Can you tell us what a "contractual I" commitment

is, because it's important in the sense that it modifies the whole of that paragraph where the opinion is given.

DR. KUGLER: When I read that I thought it was a typo. I thought it should have just read that the contractual commitments made by AECL. That's the way I took it.

Q. - Would AECL clarify that Dr. Kugler's interpretation is correct?

MR. MILLER: Yes. I can clarify now, Mr. Chairman, that that is a typo and in the June 13th letter to which Dr. Kugler referred to in responding to Mr. Gillis' questions, that typo has been corrected and we will come back to that on redirect.

MR. MacNUTT: No further questions, Mr. Chairman.

CHAIRMAN: Good. Thank you, Mr. MacNutt. Okay. The Board has no questions. So Mr. Miller, redirect.

MR. MILLER: Okay, Mr. Chairman.

REDIRECT EXAMINATION BY MR. MILLER:

Q. - I will go right to the question that Mr. Gillis had raised about AECL-4, Dr. Kugler. And at one point in your answer you commenced to read from the opinion of June 13, 2002. And it provided the explanation on the basis -- an explanation of the basis upon which the June 13, 2002 opinion was given.

I wondered if you wanted to complete your answer.

Because it appeared that you were cut off before you had finished reading from the letter.

DR. KUGLER: Yes. The remainder of the letter being the same as the May 28th letter. The final paragraph reads as follows.

For the foregoing reasons it is my considered opinion that the contractual commitments made by AECL with respect to the Point Lepreau retubing, refurbishment and plant performance are valid and enforceable as against AECL and will be valid and enforceable against its principal Her Majesty The Queen in Right of Canada in the event of default by AECL in the fulfilment of those commitments.

MR. MILLER: Mr. Chairman, for completeness I have circulated the June 13, 2002 updated opinion which corrected one of the typos and dealt with the plant performance agreement to the intervenors.

And if there is no objections from the Intervenors I would be prepared to file it as an exhibit if the Board considered it appropriate.

CHAIRMAN: Any objection to receiving that? No. Go ahead.

That will be AECL-4.

MR. MORRISON: 5.

MR. MACNUTT: 5.

CHAIRMAN: I'm sorry. You are absolutely right, everybody.

AECL-5.

Go ahead, Mr. Miller.

MR. MILLER: Thank you.

Q. - In response to the questions from Mr. Gillis, you were asked about the Export Development Act. And I realize you testified you had a very limited understanding of that.

But based on your limited understanding would you be able to comment on whether you consider it has any application at all to the provision of services by AECL to NB Power as contemplated in the agreements that are before the Board?

DR. KUGLER: Has it required guarantee or the use of the Export Development, the corporation?

MR. MILLER: If you don't know you can say so. But if the -
- I just wondered, based on your understanding of the legislation, whether you consider that the Export Development Act had any application to the provision of services by AECL to NB Power?

DR. KUGLER: No, not at all.

Q. - The final question relates to a matter that Mr. Adams and -- both Mr. Adams and the Chair inquired about. The Chairman asked you about -- to explain the Maple reactor and what it was. And I believe you responded it was a non-power reactor to produce medical isotopes.

Would you care to elaborate on the differences between the Maple reactor and the CANDU-6 including commenting on whether it has any Calandria or Calandria tubes?

DR. KUGLER: No. The Maple reactors are relatively small reactors, 10 megawatts of power compared to about 2,000 megawatts thermal power for the CANDU-6 at Point Lepreau.

So its size in power terms is less than 1 percent, approximately half a percent. It does not have any Calandria. It has no pressure tubes or Calandria tubes.

It is what we refer to as a swimming pool type of reactor with a concrete pool filled with -- filled with light water with a reactor which is relatively small, about one meter in diameter, sitting at the bottom of this pool. So it is entirely different from a CANDU power reactor.

Q. - And my final question on redirect relates to a matter that was raised by a couple of intervenors. And it has to do with the calculation of availability and the availability factor.

What is contemplated between the parties for determining that?

DR. KUGLER: Yes. When we negotiated the plant performance agreement on the basis of availability, we were in general aware of how NB Power has tracked availability as distinct

from the measured capacity factor. We were comfortable with that and the general assumptions made within that.

When we ultimately implement the plant performance agreement it provides for the establishment of an executive governance committee.

And we intend to deal with the details of the tracking and the monitoring and the application of availability under the auspices of that executive governance committee.

And at this stage we have no difference of opinion with NB Power as to what would constitute availability versus capacity.

MR. MILLER: Thank you, Mr. Chairman. Those are all my questions.

CHAIRMAN: Thank you, Mr. Miller.

MR. SOLLOWS: Mr. Miller, I was just glancing at this exhibit 5, AECL-5. The second to the last paragraph on page 2 says, The entry by AECL into contracts for the Point Lepreau retubing and refurbishment services are within the scope, mandate and authority of AECL, and so has the intended obligation to negotiate the terms and conditions with respect to the contracts concerning therewith.

Is it intended that the plant performance agreement not be referred to in that paragraph? Or can you check

and just see if that is an omission?

MR. MILLER: I can check with Mr. Trotman. My understanding is that he intended to deal with all three agreements. And he indeed did deal with all three in the next paragraph.

And it may be -- and this is admittedly speculation on my part. It may be that the plant performance, the retubing and the refurbishment agreements are considered to be a package. And when he refers to "the contractual commitments" he is referring to all contractual commitments.

That paragraph to which you referred, Mr. Sollows -- and Dr. Kugler made reference to that. He refers to retubing and refurbishment services and not the agreements themselves.

MR. SOLLOWS: Yes.

MR. MILLER: But I can undertake, together with my undertakings, to try to clarify that as well.

MR. SOLLOWS: Thank you.

CHAIRMAN: Okay. On behalf of the Board, I want to thank you for your testimony, Doctor. And have a good trip this evening to Britain. And you are now excused.

DR. KUGLER: Thank you very much.

CHAIRMAN: And we will rise now and come back at 2:00

o'clock for the informal intervenors' presentations.

Mr. MacNutt?

MR. MACNUTT: I just wish clarification as to the time at which the informal intervenors should appear in this room to do their submissions.

CHAIRMAN: 2:00 o'clock --

MR. MACNUTT: Thank you.

CHAIRMAN: -- Mr. MacNutt.

(Recess - 12:00 p.m. - 2:00 p.m.)

CHAIRMAN: Mr. Miller, you mentioned during the break that you had a response to an undertaking. I think it would be appropriate if you read that into the record now, sir.

MR. MILLER: Thank you, Mr. Chairman. The undertaking given to Mr. Gillis. His question was please identify AECL's staff involvement in preparing the 24 risks and related probabilities and consequences. These are the risks referred to in A-23 and the Ernst & Young Report. And the response is as follows.

AECL staff participated in an initial workshop related to risk identification and prioritization. AECL provided input to NB Power staff on request. AECL staff provided input to NB Power staff related to two of the 24 items, specifically, moderator recovery system is required because seamless Calandria tube cannot be qualified or

licenced and reactor assembly component inspection. Those are two items that are listed on that exhibit A-23.

The second undertaking was an undertaking to respond to queries of Mr. MacNutt regarding the exhibits AECL 4, which is the opinion of the Department of Justice dated May 28, 2002. And certainly these comments also apply to AECL 5, the updated June 13th 2002 opinion.

Both of these opinions were provided by the Department of Justice to be used before the Board and in the end to be used for NB Power's purposes. And in the document there is reference to the Atomic Energy of Control Act. And we have determined that the appropriate statutory reference today is the Nuclear Energy Act, Chapter A-16 revised statutes of Canada 1985.

So everywhere where Atomic Energy of Control Act appears it should be the updated reference, the Nuclear Energy Act. Just by way of additional background, the word "of" was a typo. And in 1997 certain provisions of the Atomic Energy Control Act were carried over into the Nuclear Energy Act.

And accordingly the accurate section references that Mr. MacNutt was inquiring about are sections 11 (1) and 11 (2) of the Nuclear Energy Act.

Finally, Mr. MacNutt inquired regarding a definition

of the word company as it appears in Section 11. And indeed in Section 2 of the Nuclear Energy Act there is a definition of company. It is defined to mean a company incorporated or acquired pursuant to subsection 10 (2) of the -- that is 10 (2) of the Atomic Energy Control Act, Chapter A-19 of the revised statutes of Canada 1970. And AECL was the company incorporated or acquired pursuant to subsection 10 (2) of the Atomic Energy Control Act, Chapter A-19 of the revised statutes of Canada.

The final item related to the second to last paragraph of the AECL 5, the June 13th opinion -- and I have spoken with the general counsel of AECL who was present this morning, is present now -- and he confirmed that he spoke with Mr. Trotman and confirmed that where there is reference to Point Lepreau retubing and refurbishment services, it was intended to include commitments under the Plant Performance Agreement. And that was reflected in his expressed opinion in the last paragraph where he said, It is my considered opinion that the contractual commitments made by AECL with respect to Point Lepreau retubing, refurbishment and plant performance are valid and enforceable as against AECL and will be valid and enforceful against its principal, Her Majesty the Queen in Right of Canada, in the event of default by AECL in the

fulfilment of those commitments.

So with that, those were the undertakings. And unless there is anything else I will take my rightful place in the back of the room.

CHAIRMAN: Thank you, Mr. Miller. Mr. MacNutt?

MR. MACNUTT: I thought also there was an undertaking with respect to the status of the retained earnings. Let me just get the right phraseology here. Yes, contributed surplus.

CHAIRMAN: What you are saying, Mr. MacNutt, is that AECL has not yet complied with all its undertakings?

MR. MACNUTT: Yes. There was one with respect to advising the status of the contributed surplus and the segregated portion of it that was maintained in a trust fund and whether that went to -- was available for commercial operations.

MR. MILLER: Mr. Chairman, thank you, Mr. MacNutt. We will review the record on that and respond as appropriate.

CHAIRMAN: Good. Thank you, Mr. Miller. Any other preliminary matters?

All right. This is the time that the Board has indicated that the informal-intervenors would be able to address the Board. And the Board's secretary was in communication with all of the various informal-intervenors

on last Friday indicating that this afternoon sometime we would hear from them.

My understanding is that there is no representative here from the Union of New Brunswick Indians. And what I in Board counsel's presence indicated to the Union was obviously misunderstood. However, the Board will allow the so called prefiled evidence of the Union of New Brunswick Indians to remain on the record and that will suffice for the Union. I'm quite familiar with their position in reference to it.

In the future they won't -- the Board will not accept that way of proceeding. But they simply want what they have stated in their evidence to be on the record, so they won't be stopped from pleading that in the future.

Now is there anyone here from the Canadian Manufactures and Exporters Association? And then we have the Canadian Nuclear Workers Council?

MR. DOWNEY: Yes, Mr. Chairman.

CHAIRMAN: Okay. And then IBEW Local 37 and District 1?

MR. GALBRAITH: Yes, Mr. Chairman.

CHAIRMAN: Okay. Who would like to come to the front table and address the Board?

MR. GALBRAITH: Mr. Chairman, Members of the Board, my name is Ross Galbraith. I'm the Assistant Business Manager of

Local 37 of the International Brotherhood of Electrical Workers. And I would like to thank you for affording me this opportunity to speak before you today.

As I said, I'm appearing as a representative of the approximately 2,100 unionized employees at NB Power, including 600 employees at Point Lepreau. But I'm also here as a citizen of New Brunswick. I'm a taxpayer. I'm a ratepayer. And I'm also a person that is concerned with the quality of life in our province and what these deliberations will mean for all of us.

Much of the evidence brought before you to date in these hearings has come from experts on engineering and financial aspects of the proposed project. And I don't pretend to have this expertise.

But we have made a point of doing considerable research and educating ourselves on energy supply issues.

We started doing this in earnest several years ago. And we have since made several formal presentations on the issues of deregulation and privatization.

And in fact we presented our first brief on deregulation in 1997 to the Legislature Standing Committee on Crown Corporations.

CHAIRMAN: Mr. Galbraith, I will interrupt simply to say you shouldn't call it deregulation because it is simply

reregulation.

MR. GALBRAITH: Reregulation.

CHAIRMAN: However, that is my personal torch. Sorry to interrupt.

MR. GALBRAITH: There you go. There is many names for that I guess.

Our research at that time had brought us to the conclusion that the government of the day was perhaps on the verge of making a mistake by embracing radical reregulation and privatization, which had been suggested by others as the right course of action.

Now at the time, we found ourselves as the lone voice on the other side, arguing the need to be careful, based on what our research showed as trends in other jurisdictions that had headed down that road.

And I would like the people in this room to realize that was before we had the examples of California and Alberta as warning signs of what could go wrong.

Now my purpose in bringing that up isn't to be smug. It is just to illustrate that our union takes its responsibility in these types of issues and these hearings very seriously. And we appreciate that whatever we present should not only be solid, but we like it to be verifiable as well.

And we are here -- we are not here to challenge any of the technical arguments. We do feel that what we have to say may add some context and perhaps an added dimension to some of what has been placed before you to this point.

Now while our presentation is not meant to be expert testimony, I am going to include some comments from someone who certainly is.

Professor Myron Gordon of the University of Toronto has a Ph. D. in Economics from Harvard and is regarded as one of the foremost experts in North America on the economics of energy.

Now he first studied New Brunswick's situation in 1998, as a research for a presentation he made to the Legislature's Select Committee on Energy in January of 1999.

And I do appreciate that Professor Gordon is not available for cross-examination. But I would like to submit a statement from him for appropriate consideration by your Board and have it placed on the record.

CHAIRMAN: Have you shown that to the parties to the proceeding?

MR. GALBRAITH: The various intervenors and --

CHAIRMAN: Yes. And the applicant?

MR. GALBRAITH: I would believe not at this time, sir, but

certainly we would make it available to them.

CHAIRMAN: Well, that certainly -- before we will accept it on the record of this proceeding, why that is an appropriate way so that they can have an opportunity to look at it.

So have you got some copies of it?

MR. GALBRAITH: Yes, I do, sir.

CHAIRMAN: Why don't you just pass it around. The Board Secretary will assist you in that. And they can have an opportunity to look at it.

MR. GALBRAITH: Okay.

CHAIRMAN: Okay.

MR. GALBRAITH: Would you like that done at this time, sir?

CHAIRMAN: Might as well pass it around now. And then you can go on if you want to -- if it fits in your scheme of doing things, you can go on and deliver it. And then we will see whether or not it can be submitted in evidence.

MR. GALBRAITH: Certainly. I will only refer to it in general terms in this presentation.

I appreciate the significance and our union certainly appreciates the significance of the responsibility that you face. The numbers being tossed around are large. And the recommendations you make at the end of the day could carry consequences which will affect this province for

generations.

In many ways it is a complex issue. But I submit in its essence it is really quite simple. In a very few years we will have to replace 600 megawatts of electricity at Point Lepreau because unless refurbishment is done that will be the end of Lepreau power.

Now we see three choices. We can replace that energy by buying it on the open market. We can build an alternative energy source to replace the shortfall. Or we can refurbish Point Lepreau.

Of those three I don't think anyone is suggesting the former. I think we all agree that buying power on the open market is very risky and would leave this province very vulnerable, which leads to the conclusion there is really only two options.

One is to build an alternative energy plant. And natural gas seems to be the alternative which is being suggested for refurbishment.

Now I respect that not everyone agrees with us. But we find that when these two alternatives are compared and all the key criteria, the costs, jobs, risk and the environment, we believe that Lepreau is the obvious choice each time.

And I will elaborate in a moment. But simply put, the

costs of building a natural gas plant or refurbishment of Point Lepreau are roughly the same. The difference comes after construction. The costs then are comparable to.

But in the case of natural gas plant, most of that money goes to fuel with no residual benefit to the province, while most of the cost of operating Lepreau would go to salaries. Because the workforce at Lepreau, which would be about 700 when compared with best industry practice for stations of that size, is quite a bit larger than the numbers you would require to operate a two-unit natural gas plant, which would be around 40 employees.

So rather than the money going out of province it stays here, fuelling our economy. And we believe this is the choice. And it is an important matter that should be considered.

And throw in the fact that there is a big question mark on the future supply and cost of natural gas, and the fact that Lepreau would be emission-free compared to a gas plant which would add to the greenhouse gases that are becoming more and more of a concern, it seems to us the choice should be obvious. We appreciate that not everyone sees this as we do, so we would like to look at the factors individually.

On the issue of costs, I noted a story from these

hearings that received widespread media attention a few weeks ago, and this was one of the presenters put forth the opinion that the cost of extending Point Lepreau's life is really around \$4 billion.

Now I feel that as a comparison to suggest alternative natural gas, this is your proverbial apples to oranges. To get to the 4.1 billion, as I understand it, every possible expense over the next 25 years was thrown in. But for this to be a legitimate comparison it would have to be balanced against all the accumulated costs of running a natural gas facility for 25 years.

Now we submit this cannot be done with any appreciation of accuracy, because nobody can predict with any certainty what the fuel cost could climb to, anymore than we could predict 25 years ago what the price of gasoline would be today.

One point I would like to make is of this 4.1 billion which was thrown around, about 1.3 billion would have been towards wages of the employees working in that station for the next 25 years, which directly supports the economy of southern New Brunswick.

Now the critics have said that this cost of refurbishing Lepreau is a burden on the province. I take issue with the fact that these jobs and the salaries and

the money that it pumps into our economy is a burden on the province.

And I would also like to point out that of that money, a significant portion of it goes back to all levels of government through the taxes that those people would pay.

Back to the specific issue of refurbishment, I would like to quote Professor Gordon at this time. And he says that "I'm persuaded by the evidence that it is in the best interests of the people of New Brunswick and of New Brunswick Power as well to carry out the refurbishment on the Point Lepreau nuclear station."

Now his rationale is long and detailed. But to touch on the salient points, he says that the odds are extremely strong of a refurbished Point Lepreau reactor being profitable.

And he is not just talking about the best case scenario. He says that if refurbishment is carried out within budget, and if the performance of the refurbished reactor meets expectations over the next 25 years, it will be exceptionally profitable.

He then goes on to say that it will be profitable even if its life and utilization are no greater than the original installation.

In fact he says a refurbished Point Lepreau would

prove to be unprofitable only if its performance proves to be exceptionally poor. And he says this would be very unlikely. He says that there is every reason to expect superior service.

And to quote, "The likelihood that the life and capacity utilization over the life of the refurbished Point Lepreau reactor would be materially worse than the original installation is very small, practically zero."

Now Professor Gordon found that it was extremely unlikely that the costs of refurbishment would go over budget. And he notes that the conditions for the refurbishment are very different than the conditions when the reactor was originally built.

Unlike the first time, interest and inflation rates can be expected to remain low. And labour stability is assured. And also that AECL has agreed to a fixed price contract, as I understand it, for most of the work.

What is more, he says that the future of AECL depends heavily on the success of the refurbishment. And we believe that as a result AECL certainly has an interest in making sure that everything possible will go right to guarantee the success of this unit.

Regarding the comparison with a gas-fired generator, Professor Gordon says that when the refurbished nuclear

plant represents a cost advantage of \$342 million which is 40 percent -- 44 percent of the investment in the refurbishment, or as he puts it, a very substantial cost advantage.

And this is without adding in the financial benefits relative to emissions. He says that if the refurbishment results in the plant producing energy for 30 years or more, which he says is very possible, then it would be even more profitable.

Now on the flip side of this, consider the gas plant option, Professor Gordon sees the alternative as very risky. And he quotes -- or to quote him, "I am convinced that the much higher electricity costs and the much greater uncertainty about the costs under the best alternative sources of electricity would be a severe economic blow to the Province of New Brunswick."

Now in fact we also see substantial risks associated with a suggested alternative of a natural gas plant. Depending on the price of the fuel source, this could be cost-effective in the short term but certainly harder to predict over the long term.

We all remember that it wasn't that long ago when many of us thought that natural gas would be the key to cheap electricity, and the combined cycle gas turbines designed

to burn natural gas were very efficient and could produce electricity at a competitive price.

When we look at what happened we see the demand for natural gas quickly outstripped the supply, with the result that the cost of natural gas has risen sharply. And as a result many of the planned generation stations that were to be utilizing natural gas are now on hold, in fact may never get built.

The US Department of Energy lists the planned stations that are supposed to be built in the United States. And right now if you look at their material, 40 percent of the stations which were supposed to be in operation this year are now on hold and may in fact not be built.

And the reason for this is simple. Several hundred million dollars to construct a single 250 to 300-megawatt unit. These stations aren't cheap. And unless the price of gas is low or the price the operators can charge for electricity is high, the stations may not be profitable.

And there lies the problem. The price of gas is volatile. And no one can guarantee that the long-range price will drop or stay low enough to ensure that these generators can produce electricity at a competitive rate. Now it's not even that no one can guarantee a price. The fact is we are not even sure of the supply.

There was a conference here in Saint John a few weeks back, the E21 Conference. And much of the future energy planning for natural gas, it came out at that conference, is based on the assumption that gas will be discovered in large enough quantities to supply their growing thirst. Not only discovered, but it has to be found to be recoverable at a cost the exploration companies see as reasonable. And there is no guarantees that sufficient gas reserves will be available.

I know the day after that conference ended there was a report in the National Post. And there is planning of a natural gas pipeline to bring gas to North America from the Arctic.

And it's absolutely essential to the predicted demand in the year 2011 that this gas arrives in the main continental area. The nature of this report was a pipeline. And the US government had agreed to subsidize this pipeline.

But even with the subsidies they were willing to put forth, the gas companies were saying the pipeline was not profitable. And they weren't going to entertain building it at this time until either the price of gas goes up or further subsidies come in.

So I think this just highlights the problem that if we

rely too heavily on natural gas we are putting all our eggs in one basket.

MR. GALBRAITH: Another issue, of course, we are concerned with are jobs. I mentioned that earlier, that Point Lepreau does support the economy of Southern New Brunswick. But jobs alone aren't a reason to build any energy generation facility.

And we submit in deciding the recommendation your Board is now weighing, that the decision should not be made in isolation, but based globally on what serves the best interests of the people of this province.

In the choice between a new gas fired plant or refurbishing Point Lepreau, the former results in most of the money paying for the fuel of the plant that would employ about 20 to 30 people.

With the refurbishment, the fuel is very inexpensive with most of the money going towards the salaries of the 700 people needed to operate and maintain the plant, and all of the spin offs that represents to the Southern New Brunswick economy.

This represents approximately \$50 million every year in the economy. And, in addition, there is approximately another 1,100 indirect jobs tied to Point Lepreau which pumps another \$20 million into the economy.

Now we believe that's the choice. 10's of millions of dollars each year spent on fuel, of which there is minimum economic spin off. Or roughly the same amount on the people who live in New Brunswick and pay taxes here, spend their money here and support their local communities.

The related point I would like to make on jobs, and it's an issue that I don't believe has been brought before you before. But the Point Lepreau work force is a highly trained very skilled group of professionals. And they have got many specialized talents and abilities. I have had the pleasure in a former career of working with them.

And I can tell you that the workforce down there is second to none.

Now I understand that it's being said that if refurbishment doesn't go ahead the plant will cease operations in about six years, around 2008. And I believe that the economics of continuing to produce electricity from Lepreau for the next five or six years are really important in the considerations you are making.

However, I do think there is a problem with the projection. I think that what hasn't been taken into account is that there are many people down there with these unique role class skills. And I'm not sure that in the case of a plant that is not going to be refurbished,

some of the younger individuals down there will actually stay around until it's time to shut the plant down.

Certainly a younger person considering their options would have to think very carefully whether or not they would stick it out if it meant that they may not be able to get an attractive job at the end of it.

Because their jobs are in high demand. Nuclear plants around the world are enjoying resurgence. And the jobs for people with the expertise and experience are available throughout the United States and throughout Europe.

And, in fact, many former NB Power nuclear workers have taken jobs in nuclear plants in Europe and also in China and throughout the United States.

And I guess my point is that these people have lots of options. And it's a safe assumption that many of the specialists at Lepreau would opt to leave for a nuclear plant with a longterm future. Possibly leaving Lepreau without an adequate number of people to keep it running.

Our best guess is that without expensive incentive bonuses to keep them here, Lepreau would only be able to operate for a year or so due to an inability to keep or find adequate specialized work force. And I think that's a very important consideration.

I would like to speak for a moment on the emissions

and decommissionings of the unit. Last month on May 22nd in Charlottetown, Canadian Energy and Environment Ministers met and they reiterated their commitment to act on climate change. They reviewed a federal discussion paper on Canada's contribution to addressing climate change and reviewed a number of options for research in Canada's Kyoto target for emission reductions.

It was decided that a number of stakeholder workshops would be held this month. And that a plan would be drafted for achieving Canada's Kyoto target. And that the plan would be represented for a meeting in -- would be presented at a meeting in October.

Now there is no doubt that Canada as a country is getting serious about tackling climate change. Now it is to this backdrop that a choice between natural gas plant and refurbishment is being considered. Now in these criteria it really does appear to be a no brainer. Natural gas plants add to emissions problem and nuclear plants do not. It's as simple as that.

It's quite possible, even probable, that financial penalties will be put in place to discourage emissions. This is something that also adds to the risk of investing in a gas-fired facility. And something that has the potential to throw the current cost comparisons out the

window.

And I would like to quote Professor Gordon one more time. He says the spreadsheet -- and he is talking about the one submitted by NB Power in their evidence, established that the cost advantage of refurbishment is 234 million in 2001 dollars. 342 million in 2006-07 dollars. With the investment 785 million in 2006-07 dollars. The cost advantage is a substantial 44 percent of the investment with a reasonable value assigned to the environmental advantages of the refurbishment due to CO2 emissions from a gas fired plant, the cost advantage of the refurbishment is \$700 million or 92 percent of the costs.

So to put it another way, a refurbished Point Lepreau would help New Brunswick Power meet its Kyoto Accord determined targets while a natural gas plant would contribute to the problem. This alone translates to a \$400 million advantage for nuclear over fossil fuel generation, an amount that certainly can't be ignored in balancing the two options.

Now we all share a responsibility to participate in the global -- the global work of reducing emissions. But a more direct responsibility is to our immediate environment, in this case the air quality of Greater Saint

John.

Considering that Point Lepreau accounts for 30 percent of our generating needs, if the power it had produced since it came on line had been produced by a conventional plant, that plant would have consumed something in the order of 130 million barrels of oil. Now it's hard to envision \$130 million -- or, pardon me, 130 million barrels of oil. Certainly I can't.

And to try to put it in perspective, consider the water that flows over Niagara Falls which it does at a rate of 35 million gallons a minute. We have all seen the falls and we understand that that's a massive volume of water.

But at that rate it would take more than two hours for 130 million barrels of oil to flow over the falls. But the oil wouldn't have flowed anywhere except into an oil fired electrical generation plants where it would have been burned. And that would have resulted in emissions of 62 million tonnes of CO₂ in the greater Saint John atmosphere. Or it put it another way, if it weren't for Point Lepreau, our CO₂ emissions would be 20 percent higher than they are today.

Now a word on decommissioning. Those opposed to Lepreau refurbishment argue that decommissioning costs are

a reason not to proceed. Now, we submit that decommissioning is not an issue. Here is why. Whenever decommissioning takes place, it's only going to happen once. It won't happen twice. And we say that why then shouldn't we get many more years of generation prior to reaching that point. The bulk of the cost to be shared by the nuclear industry and government will be the initial construction of a disposal facility. And whether we have to dispose of 20 years of spent fuel or 40 years, won't significantly increase that cost.

I do notice though, that one of the things the critics don't point out is that no one has yet figured out a way to dispose of the millions of tonnes of greenhouse gases that are pumped into the atmosphere by non nuclear generating stations. Nobody is disposing of that. It's just in the atmosphere. We have to deal with it.

And, as noted, there is going to be an increasing advantage to Point Lepreau as we try to curb greenhouse gas emissions in the future.

Another point I would like to make briefly is on some of the critics of Point Lepreau. And I do respect that there is different points of view on the issue of Lepreau refurbishment.

You know, we don't understand why on the basis of

sober comparisons with alternatives, anyone could come to the conclusions that it shouldn't go ahead. But I do appreciate that many of those who have come before you and are at odds with our opinion, are presenting them with the best interests of this province at heart. And I do respect that and our union respects that. They are a very important part of this process, and they certainly deserve to be heard.

I do feel, however, that there is a need to take issue with one particular individual. And those are comments made by Energy Probe and their spokesperson, Tom Adams. Because unlike those who are presenting responsible views based on verifiable research, we found his pattern is to deal in distortions and half-truths. And we find this irresponsible and detrimental to the process. And, quite frankly, we debated whether to just ignore Adams' comments. But we felt that it would be almost as irresponsible as he is presenting his distortions as facts.

So we have asked Professor Gordon to take a look at Adams' comments and offer his views. And Mr. Gordon found that Adams' comments, presented as facts, were quite often false. The specifics are too numerous in detail to go into here. But they are included in Professor Gordon's

statement. And I do hope that you will give them some consideration.

In short though, Professor Gordon found that Adams failed to consider important facts in coming to his conclusions. One, which you are well aware of, is that as a Crown Corporation NB Power has a mandate to operate at cost.

He also found in other parts of his brief that Mr. Adams' comments were just plain wrong, for example when he concluded that "the failed Pickering A refit was one of the main causes for Ontario Hydro's collapse." Professor Gordon explains in his statement how both statements are wrong. The refit has not failed and, in fact, is expected to start producing by the end of this year, and is expected to be very profitable.

Professor Gordon also takes issue with Mr. Adams comparing Nova Scotia Power favourably with NB Power. "In fact", Professor Gordon notes, "rates charged by NB Power are much lower for all provincial classes of customers."

Now Adams, as we are well aware, is very critical, as are some others, of NB Power's debt. Professor Gordon says that debt needs to be kept in perspective.

He says, and I agree with him wholeheartedly, "Along with the large debt per capita, et cetera, NB Power has

large earning assets per capita. These assets are generating the revenue and operating cash flow needed to service the interest and the principle on that debt. And more than that, it generates profits on energy exports and transmissions that reduces the rates charged to New Brunswick customers."

To summarize some of our points. We are presenting this brief and you are conducting these hearings at a time of fundamental changes to NB Power and also to New Brunswick. And we agree with and support the division -- the decision the Crown Corporation has recently made to separate into separate entities. In fact we suggested this in some of the briefs that we made to government several years ago, in order to facilitate competition to wholesale markets in the United States.

And while we understand the thinking that has led the government to search out private partners to help share the risk of refurbishment, it concerns us greatly that the government is starting NB Power down the road to privatization. And they say they are not, but we notice that even in their denials they coached them in words that leaves little doubt that it's only a matter of time.

I feel strongly, and I believe most New Brunswickers do, that Point Lepreau is an extremely valuable asset for

the province. And if it were not to produce one more watt of electricity, if it were to shut down today and never run again, it would still have been a wise and profitable investment. The proposed refurbishment promises to be even more profitable.

Nuclear plants all over the world are being refurbished and they are flourishing. In fact, right now in the United States there are 23 nuclear plants that have either received permission for 20 year licence extensions, or will receive that permission very soon. And it's expected that the entire US nuclear fleet, or the vast majority of it will, in fact, be granted licence extensions to bring their lives up to 60 years of operation.

Now it will be unfortunate if we do decide to turn Point Lepreau over to private industry that it turns -- it will be unfortunate that the considerable profits from the extended life of Lepreau will go to private industry, rather than benefit to people of this province, but at the very least a refurbished Point Lepreau will offer us dependable electricity supply at a cost that isn't dependent on the going price of natural gas.

I would like to thank you for affording us the opportunity, and me the opportunity to speak on behalf of

my members. And I would be pleased to field any questions, and as we said at the outset, as well as our brief, we would like to file with you Professor Gordon's statement and supporting documents. And I do hope that that will be acceptable to you, and you will give them some consideration.

Thanks very much, Mr. Chairman.

CHAIRMAN: Thank you, Mr. Galbraith. Have the parties had an opportunity to look at this paper that has been handed around? Anybody have any comments?

MR. THOMPSON: Conservation Council, David Thompson, and we have some comments and we would be concerned if this statement from Myron J. Gordon was entered as evidence. There is no opportunity to rebut this or to cross-examine Myron Gordon. And, you know, it should only be, you know, used for identification purposes such as the other documents which were submitted for identification.

As well, we are somewhat concerned about, you know, comments that were made in it about Mr. Adams, without the opportunity of Mr. Adams to respond to the Board on that directly.

Disturbing to say the least.

Anyhow, we would object to it being entered as evidence. Thank you.

CHAIRMAN: Thank you, Mr. Thompson. Anybody else?

MR. MILLER: Mr. Chairman, we have no objection to it being entered in the appropriate manner. The comments in it we think would be very helpful to the Board in considering its deliberations, and it may be a situation where you afford it the weight it deserves using the flexibility that the Board has in allowing perhaps a broader range of evidence than would be permitted in a court of law.

CHAIRMAN: Thank you, Mr. Miller. Mr. Hashey?

MR. HASHEY: Yes, Mr. Chairman. I have not seen this before nor was I aware of it. But it would seem to me that it could be entered as part of Mr. Galbraith's very eloquent presentation that he has made here, very useful presentation I would think, very helpful to us obviously.

And I would expect that it could be attached as part of a submission and not necessarily be marked as evidence. I quite agree that that might not be the appropriate thing to do without the cross-examination area. But it certainly just is part of a presentation I think of Mr. Galbraith and could be considered as such.

CHAIRMAN: Anybody else, any comments? Mr. Hyslop?

MR. HYSLOP: Thank you, Mr. Chairman. Our position on Mr. Gordon's statement on the refurbishment of the Point Lepreau nuclear station, I have only had a chance to very

briefly review it, it appears to be in the nature of an expert opinion, which I haven't had a full opportunity to review the facts on which he is basing his opinion. But it's intended to be strong evidence. And if it's intended to be strong evidence, I don't think the process is being followed.

Having said that, I appreciate the Board has a fair amount of flexibility dealing with weight and consideration. I would not prefer it be marked as an exhibit. I don't think it's proof of the statements that are made in it. But if it sheds a little light on the fair comments that are made by the International Brotherhood of Electrical Workers in stating what their position would be, it might be annexed as a document. But it certainly shouldn't be considered proof of any of the statements made in it.

CHAIRMAN: Thank you, Mr. Hyslop. Any other comments? Mr. Craik?

MR. CRAIK: Thank you, Mr. Chairman. I must be one of the few people that were present when Professor Myron Gordon gave his presentation to the Legislature in January of 1999. And subsequently I had various discussions with him, both verbally and also in e-mail correspondence, with regard to certain technical points, and economic points he

made in his document he presented at that time. I don't have the privilege of having received his new document, but he certainly convinced me as being somebody who really knows his subject and I strongly endorse the comments made about Mr. Gordon's report on this particular subject.

CHAIRMAN: Thank you, Mr. Craik. Those are all the comments. The Board is going to take a two minute recess.
(Recess)

CHAIRMAN: Mr. Galbraith, as you recollect or at least Board staff and/or counsel too, I can't remember if counsel was involved or not, did discuss with various of the labour representatives about Professor Gordon's participation in the hearing, and I believe at that time, that is, before we got underway, we suggested that it sounded as if it would be opinion evidence and the way opinion evidence should be presented to the Board would be by way of offering up Professor Gordon as a witness so he could be subject to cross-examination.

Obviously that doesn't appear to be possible from his or your perspective at this time.

So what the Board will do is that we will allow you, as has been suggested by the applicant and concurred in with -- by the province, that you can file it with the Board. We will not give it an exhibit number because we

will simply give it whatever weight that we believe is appropriate.

MR. GALBRAITH: Mr. Chairman, as we discussed -- or actually we had some conversations before. Mr. Gordon's health is such that he is not able to travel as much as he one time did, or else we would have been delighted to actually have him here. We did think though that certainly his opinions shed some light on what is going on here and it's such an important decision to the people of this province that we, you know, wanted to bring forth some of his views although we couldn't bring him down here, and certainly appreciate your decision, Mr. Chairman.

CHAIRMAN: Thank you, Mr. Galbraith. Now which of the other branches or districts of labour wish to go next?

MR. DOWNEY: Good afternoon, Mr. Chairman, Members of the Board. My name is Don Downey and I'm the executive member of the Canadian Nuclear Workers Council of Canada. And I would like at this time to introduce Dan McCaskill, who is the president of the International Brotherhood of Electrical Workers, Local 37.

The Canadian Nuclear Workers Council is pleased to have this opportunity to come before you. We appear on behalf of the nuclear industry workers in Canada and specifically in support of one of our member

organizations, Local 37 of the International Brotherhood of Electrical Workers District 1, which represents workers at the Point Lepreau Generating Station of New Brunswick Power.

As do all other member organizations of CNWC, IBEW Local 37 holds health and safety of workers to be paramount. Point Lepreau management and the union have established a very good understanding and an excellent working relationship. The union fully endorses and supports the very active health and safety culture promoted and established by New Brunswick Power. It works closely with management to establish safety policies and procedures to maintain a safe and healthy workplace and to protect surrounding natural environment.

The CNWC has reviewed the evidence presented to the Board of New Brunswick Power in February 2002. We agree wholeheartedly with the statement of Mr. Bill Pilkington that "Point Lepreau presents a clean, safe working environment for its employees. In 19 years of operation, Point Lepreau has never had an occupational death or permanent injury. In the past three years, the station has twice exceeded 1 million man-hours without a lost time accident." We submit that this record provides assurance that there exists an excellent safety culture at Lepreau.

The CNWC and the IBEW and its members are dedicated to the maintenance of this safety standard. We therefore support the statement position of Mr. Rod Eagles that "Safety is a prime concern and this would be emphasised during the design stage (of rehabilitation) with the human factors engineering program to address safety issues in constructability and operability" and that "the ALARA principle will govern the approach to every aspect of the work... throughout the design, construction and operation phases of the project."

The CNWC endorses the approach of New Brunswick Power to the development of labour stabilization for the construction phase of the project. Such agreements, details of which were provided in the evidence, should ensure a stable labour climate during construction and give the Board assurance that the project can be completed on time and within budget.

Point Lepreau provides employment to approximately 800 New Brunswick residents, most of them at the generating station. The majority of these highly paid, highly skilled, high-tech jobs. If Point Lepreau is not refurbished, the vast majority of people in these positions would find little difficulty in finding similar positions elsewhere in Canada or abroad. This would not

only be a major blow to the local economy but a significant loss to the New Brunswick economy. It is the retention of these long-term jobs and expertise, and the 450 person years of work in the construction trades during the refurbishment project, which makes the refurbishment of Point Lepreau a very worthwhile investment in jobs for the province. The proposed refurbishment project is such an attractive investment opportunity that it could only be prudently rejected if there was an available alternative that offered significantly lower long-term electricity rates to New Brunswick residents and industry. No such alternative has been identified. Indeed, the evidence of Bill Marshall, Mr. Bill Marshall showed in detail that the refurbishment of Point Lepreau promises a net economic benefit of millions of dollars over available alternatives.

In addition to these socio-economic benefits, the continued operation of Point Lepreau also has significant environmental advantages over its closest economic competition. Generation of electricity from uranium eliminates the release of polluting gases such as SOX, NOX and CO2, which result from the combustion of coal, oil or natural gas. As outlined in the analysis provided by Mr. Marshall, refurbishment of Point Lepreau provides the most

economic method of which the province can meet its target levels for CO2 emissions. Or to state this another way, if the province were to decide not to permit refurbishment of Point Lepreau it would cost New Brunswick electricity users many hundreds of millions of dollars to meet the province's targeted CO2 emissions.

Now in conclusion, the CNWC fully supports the socio-economic and environmental rationale for the proposed Point Lepreau rehabilitation project. In particular, we believe that the safety of construction workers and station operations personnel is of paramount concern to New Brunswick Power. We further believe that the company recognizes the need to work closely with the labour unions representing construction workers and operating staff to ensure a healthy and safe environment both for workers and the public. We therefore have no reservations in urging that the Board recommend approval of the refurbishment project.

Thank you very much.

CHAIRMAN: And I think that deals with the three different labour bodies who indicated they would like to address the Board.

Is Hydro Quebec represented here? No. Okay. And no one has come from Canadian Manufacturers and Exporters

while the presentations were being made.

Okay. That concludes. I want to thank the presenters this afternoon for their very forceful presentations and we will rise and reconvene tomorrow morning at 9:30.

Mr. Hyslop, you haven't received any instructions from your client yet, have you, as to how to proceed? Or are you prepared to go ahead tomorrow afternoon with summation?

MR. HYSLOP: Mr. Chairman, I don't have instructions but we will likely be in a position to proceed at least with oral summation. We may not have a written brief quite completed, we were anticipating Wednesday for this, but any written summation would just set out in writing what we say orally in any event. So if we could file that the next morning I'm sure we could probably proceed.

CHAIRMAN: Certainly from where I sit now we will go ahead with -- if we conclude with Mr. Adams' testimony tomorrow morning that we have what I will call your summation-in-chief to occur tomorrow afternoon, and then we will adjourn over to Wednesday for rebuttal. And perhaps later on on Wednesday, just so that the Board can review what the various participants have said, and see if there are any areas that we would like the parties to particularly cover in their rebuttal, if we have any questions, et

cetera, but certainly we will go ahead tomorrow afternoon with summation.

Okay. We will rise then until tomorrow morning at 9:30. Mr. Hashey, yes?

MR. HASHEY: Sorry, Mr. Chairman. What you are suggesting is that we will present our submission tomorrow afternoon and the intervenors will be the following day, is that --

CHAIRMAN: No. What I'm saying is we will go around the room, you will go first.

MR. HASHEY: Yes. We will be ready.

CHAIRMAN: And they also will follow with their summation.

Then we like to take a break and come back and there will be comments that -- we will be calling on everybody to comment on everybody else's suggestions to the Board, if they want to, and we would just like to be able to cover what has been presented as fully as possible. And we may have some particular areas that none of you have bothered to cover that we want to see covered, and we will inform you of those areas as well. So everybody will have a second kick at the cat sort of thing.

MR. HASHEY: Thank you. I wasn't clear.

CHAIRMAN: Commissioner Dumont just reminds us that there were a few undertakings of NB Power that haven't been complied with yet. You are still working on those I

gather?

MR. MORRISON: We hope to have those finished, Mr. Chairman,
this afternoon. By the latest, tomorrow morning.

CHAIRMAN: All right. Good. Thank you. We will rise until
tomorrow morning, 9:30.

(Adjourned)

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

Reporter