

New Brunswick Board of Commissioners of Public Utilities

Hearing June 4th 2001
Delta Hotel, Saint John, N.B.

IN THE MATTER OF a generic hearing to establish the need for
and the evidence to be provided in connection with any
specific hearing held to review the maintenance or upgrading
of a generating facility of New Brunswick Power Corporation

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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 4th 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. Two or three items from the Board.

First of all it would appear that there are just two intervenors left with cross of this panel, and what the Board anticipates it will do is that we will finish with the cross-examination of those two intervenors and then if there is a necessity to have an in-camera hearing we will proceed with that in-camera hearing. We will then adjourn until tomorrow morning first thing. That gives Board staff and counsel an opportunity to review what has been covered in cross to this point and what needs to be

covered to make the record complete in reference to their opinion. So that -- and my experience always is that if you give Board counsel the opportunity to do that, it cuts the Board counsel's cross time by two thirds, and that makes it worthwhile. So that's how we are going to proceed in reference to that.

Could counsel give me an indication, is there anyone who wishes to have an in-camera proceeding? Mr. Hyslop, you do?

MR. HYSLOP: Yes, Mr. Chairman. We would anticipate a fairly short cross-examination on part of the in-camera record. It will not be very extensive.

CHAIRMAN: All right. Just following along, Mr. Hyslop, I'm just wondering towards the end of the day you were talking about the proceeding under the Right to Information Act and you being involved in the coverage, et cetera, et cetera, my recollection is that we had discussed that -- (Technical problems).

Mr. Hyslop, the second matter is concerning a possible application under the Right to Information Act and you wanting to make certain that that would not be covered by the Board's order. And you were asking that we specifically add counsel yet to be named, I think that's the way you put it. Do you still require the Board to

deal with that?

MR. HYSLOP: What I would do is if a Right to Information Act request is received by my client or it may come directly to NB Power, I don't know, if it is received then we will deal with it then, put everything in the right order I guess.

CHAIRMAN: Okay. Good. I just wanted to re-emphasize Mr. Easson's report has been put on the record. If any of the parties wish to ask some questions of Mr. Easson they should make the request to the Board and we will put Mr. Easson up as a witness. Otherwise the report will simply stand as presented.

Board counsel and staff have asked me to indicate that the financial information which was requested of NB Power on the 28th of May, anything further in -- we have received the document back and -- didn't we mark that? I think we did -- anything further in reference to that will be handled on cross-examination of Panel B.

The next heading is Groom trip to Toronto, Tuesday noon, and I said yesterday take it, and frankly the only thing, Mr. Groom, might be that when Board counsel and the Panel itself has reviewed the questions to be put we will put them to the remaining panel and if it turns out that you are the only person that can answer them why then upon

your return from Toronto next Monday or whatever we will make arrangements to have you come before us and answer that one question.

MR. GROOM: Yes, that's acceptable. Thank you.

CHAIRMAN: That's all I have. Any matters that the parties want to bring before the Board before we start with Mr. Hyslop's cross? The applicant?

MR. HASHEY: No, Mr. Chairman.

CHAIRMAN: No, Mr. Hashey. Any of the other intervenors?

No. Okay, Mr. Hyslop, go ahead.

CROSS-EXAMINATION BY MR. HYSLOP:

Q. - Thank you very much, Mr. Chairman, and good morning, witnesses. I just want to bring up a little bit of perspective to these proceedings. We have been talking about risk I think now for about a week and a half and I will deal with it, but I would ask that you start by looking at exhibit I believe A-1, and in particular -- and I know it's not your evidence but it's the integrated resource plan, and it would be page 23 of that integrated resource plan.

And I understand that -- and I'm not going to go into any great depth, I realize this is more of a Panel B issue, but the position of NB Power is that the Point Lepreau refurbishment is economically the most

advantageous plan by the sum of \$234 million over the natural gas combined cycle, would that be correct?

MR. WHITE: That's correct.

Q. - And to just put a little more perspective on that 234 million, in actual fact that number arises from the difference between \$6,775,000,000 and \$6,541,000,000, is that correct?

MR. WHITE: That's the differential, yes.

Q. - Yes. And as I understand these \$6,541,000,000, that's the present value that has been established for all the costs over the next 20 years -- or the next 13, 14 years in relation to the costs of the Point Lepreau refurbishment brought back to its present value, would I be correct on that?

MR. WHITE: The details of that is a Panel B answer, but generally you are correct. That adds up all the costs that would be involved in the nuclear option going forward.

Q. - And obviously because all of these costs are costs going forward, what we have done is we have made our collective best judgments as to what those costs would be, is that correct?

MR. WHITE: That's correct.

Q. - And in the total scheme of things, the difference between

the \$6,775,000,000 and the \$6,541,000,000 results in a difference, by my calculation, of roughly three-and-a-half percent, would that also be correct?

MR. WHITE: I haven't done the computation, but --

Q. - I see Ms. McKibbon with her trusty calculator there for us.

MR. WHITE: I accept that you are probably close.

Q. - Hopefully I can do that basic math.

MS. MCKIBBON: Yes.

Q. - Very good. And I'm just going to throw out the suggestion, and I wouldn't even want to hazard a guess how many assumptions have to be made to come to those professional judgments, those totals of six-and-a-half billion dollars, but given the number of assumptions that would have to be made I just throw out the suggestion to you that the case between the Point Lepreau refurbishment and the natural gas combined cycle to me would look like a pretty thin case. It's almost a wash. Would that be overstating it too much to make that suggestion?

MR. HASHEY: Mr. Chairman, I really and truly believe that we are dealing with Panel B issues here. The evidence on this whole point was the evidence of Mr. Marshall.

Q. - I will pass along if that's the position that the panel wishes to take.

Now the contracts that are the subject matter of this hearing, you indicated to me that they were the results of negotiations between NB Power and AECL?

MR. WHITE: The three contracts that we presented from AECL to NB Power, that's correct.

Q. - Sure. And who made up the negotiation team for NB Power?

MR. WHITE: We had the two people on the left of me on the witness panel here.

Q. - Okay.

MR. WHITE: Okay. We had one of our corporate staff from head office that led that negotiation process. And the reviews of material were carried out of course by our internal counsel and an external counsel as we have already talked about. And certainly I oversaw much of the development of that work.

Q. - Sure. And I think you have pointed out on a couple of occasions that the negotiations are always give and take. You try to get more things your way than you give up, would that be correct, Mr. White?

MR. WHITE: Well the initial base we started out with a typical document that we would use in a tender call, and we proceeded from there on a negotiation basis.

Q. - Sure. And as you go forward, for example -- I'm going to use the example of a Ford Taurus, only because we had that

car referred to in an earlier hearing, and if you go and buy a Ford Taurus, for example, you can buy a certain amount of warranty, say 60,000 kilometres in three years, as part of the purchase price of a new car, would I be correct in stating that, Panel?

MR. WHITE: I think that's what I got on my Taurus.

Q. - Yes. And often times in fact, if you want to pay a little extra money you can buy something called an extended warranty, is that correct.

MR. WHITE: That's true.

Q. - Yes. So what you are doing there is adjusting the purchase price given whatever it is you want in terms of a warranty package and extras with regard to a car, would that be correct?

MR. WHITE: Correct.

Q. - Okay. And I'm going to suggest to you that to some extent the final purchase price in refurbishing a nuclear power plant ties into a lot of other factors, such as guarantees, warranties and provisions, would that be a correct statement, Mr. White?

MR. WHITE: It's the total package at the end of the day.

Q. - That's right. And the price -- if for example, we didn't pay any bonus to AECL, they would probably want a little bit more money on the front end?

MR. WHITE: They would want something that is to their benefit somewhere probably.

Q. - And for example, if you weren't able to get the liquidated damages, maybe you would want a little lower price?

MR. WHITE: They are all factors of the negotiation for sure, you know. The liquidated damages was intended to reflect a penalty on AECL's profits going forward. We recognized that it certainly wouldn't cover replacement power costs.

Q. - No. I'm not getting into whether it recovers that, but my point is that if they weren't in a position to be paying the liquidated damages, you might have got a little lower price on the construction of the -- on the construction price?

MR. WHITE: It's all part of a package.

Q. - It's all give and take as part of the negotiations, you agree with that, Mr. White?

MR. WHITE: Yes.

Q. - Thank you. Now the scope of work, and I know this has been covered, but I just want to be perfectly clear, as I understand it, AECL is developing some new technology to carry out this refurbishment project. Is that correct, Mr. White?

MR. WHITE: They are utilizing the combined experiences that they have had in the past from replacing pressure tubes and Calandria tubes. And they are developing faster retube capabilities to reduce the schedule. Investing in the computer graphics to understand the sequences and the specifics of tooling. And developing any additional tooling that they would require to do this in a more economical, expeditious and lower dose approach.

Q. - Right. And in fact what I understand is they have developed some new machinery that can go in and pull the feeder tubes and the -- and the Calandria tubes up and cut them up and then drop them into the storage boxes. Is that correct, Mr. White?

MR. WHITE: I don't know which pieces of the tooling are different in the withdrawal. But they certainly developed tooling to be able to -- once they have pulled the tube out to be able to chop it up into two and a half inch squares and deposit that into small flasks. So they don't actually take the whole tube out. They pull it out and then break it up into smaller pieces that are easier to handle.

Q. - And is there a name for this machine, fast removal? Does it have a name?

MR. WHITE: We don't have any name for it. Probably

somebody has nicknamed it somewhere.

Q. - Okay. So we have got some really new machinery that as I understand it, is the first time, and then I appreciate that there is a great deal of engineering experience and background that has gone into this. But the fact is that this is new machinery that is being developed for its first real use at Point Lepreau. Am I correct on that?

MR. WHITE: That's correct.

Q. - Yes. And I also understand that -- and this point, I think, has become quite obvious. But the refurbishment of Point Lepreau is a full refurbishment of the 380 fuel tubes that exist in the reactor. Is that correct?

MR. WHITE: That's correct.

Q. - And it's also full replacement of the 380 Calandria tubes that are -- that are in the reactor. Is that correct?

MR. WHITE: That's correct.

Q. - And this is the first time this machine is going to be put to use anywhere to pull a Calandria tube and a pressure tube out of a reactor. Is that correct?

MR. WHITE: Well the machine you are referring to is the device for actually moving the tube into the tool that cuts it up into pieces. Okay. There is other pieces that -- there are other tools that actually free up the Calandria tube and do the initial pull on it.

Q. - This is the first time on this large a scale this particular technology is going to be used?

MR. WHITE: That's my understanding.

Q. - Thank you. Now one of the big issues that -- that's been before this hearing seems to be whether or not we can get this done in 18 months. And I would like to go on to that and -- although yesterday's cross examination was all the worst case scenarios. I want to talk a little bit about the real world there that may exist.

And in that regard, I want to discuss a little bit the role of the Canadian Nuclear Safety Commission. And now as I understand it, they would have inspectors on site at Point Lepreau throughout this refurbishment, would that be correct? And maybe, Mr. Eagles or I don't know who is in charge of --

MR. WHITE: The CNSC has seven people that are dedicated to the Lepreau licence, and three of those are on the site full time.

Q. - Would that even be in a -- during a period of time where there is no refurbishment going on?

MR. WHITE: That's correct.

Q. - Would they be likely to increase the number of inspectors that would be present during the refurbishment process?

MR. WHITE: Not necessarily. They have indicated that they

intend to put extra people on site from time to time depending on what their priorities are for licencing requirements.

Q. - I see. And as I understand it, they would be there throughout the construction process to review from the safety regulator's point of view the refurbishment process. Is that correct?

MR. WHITE: That's correct.

Q. - And yesterday my colleague, Mr. Gillis, reviewed a number of technical and regulatory risks that were in, I believe, exhibit A-6 and the minutes of the December 18th 2001 meeting. And would they be there during the construction to analyze and review the particular risk that was discussed yesterday? In other words, when you start tearing this reactor apart and you start looking at these other items, would the Canadian Nuclear Safety Commission be inspecting to make determinations whether further work is done or not?

MR. WHITE: Yes, they can do that inspections. They would ask from us reports of all the inspections that were carried out. And any items of note in those inspection reports they would want to thoroughly review those. And they would provide their view back to us as to whether they felt that further work was necessary.

Q. - All right. And who makes the determination whether this further work has to be carried out, is it AECL, NB Power, the regulator? Or how does that occur on the job, on the construction site?

MR. WHITE: It's the station manager's obligation to ensure that the plant is in the condition that is described in the licence and the design basis.

Q. - Okay. And if during the process of this refurbishment something wasn't the way it was supposed to be, it would be reported to the Canadian Nuclear Safety Commission. And they would decide whether -- what further work or additional work might have to be done. Is that correct?

MR. WHITE: Well, they typically wouldn't decide. We would propose to them what we are going to do about it to bring the plant back into conformance with the design requirements.

Q. - So I take it some type of ongoing discussion and negotiation -- and I'm on the construction site. And I appreciate your guys are the nuts and bolts guys, that they get the job done. So every time something like this comes up, you have got to prepare a report, send it to the Safety Commission. They review it. They get back to you. And I'm sure while all of that is going on you are talking to them every day about these issues. Would that

be a

fair statement of what happens on a construction site?

MR. WHITE: Well you wouldn't necessarily prepare a report on everything. It depends on what the items is that you would keep the regulator informed. And those areas that we are required to provide reporting on, we would do that.

Q. - And I take it though critical to this process though, is at some point in time the Nuclear Regulator makes a decision on what has to be done and either approves your proposal, or comes back to you with something a little different. Would that be correct?

MR. WHITE: Generally, yes. We have already established a basic framework with the Regulator as to what work we propose to do. And we got a position back from them in terms of their comfort letter. So that process would continue.

Q. - I appreciate you have a comfort letter. But what I'm also suggesting is that it's my understanding from Mr. Gillis' cross examination yesterday, there is a number of risk items that may or may not come to the fore during the construction process that will have to be dealt with. Is that correct?

MR. WHITE: There are some that may turn up during then, yes.

Q. - Yes. And some may turn up during the planning stages for

this as well?

MR. WHITE: That's correct.

Q. - And every time one of these turns up, there is a process that has to be gone through in order to determine if further work has to be done. And at the end of the day, it involves a decision by the Canadian Nuclear Safety Commission. Is that correct?

MR. WHITE: It involves their acceptance of the proposal that we have put forward to them in terms of how to deal with the issue.

Q. - Now what I'm getting at is this process of give and take, and managing of the construction site, that takes times, correct?

MR. WHITE: Well it's a normal ongoing process. We do that every day under the operating licence and under the operating licence that will exist during this refurbishment. We don't have to change the operating licence for it, so we have a -- we will have an operating licence in place. And the normal processes that we use every day, including today, for any issues that arrive in the nuclear station that need to be brought to the attention of the regulator will be followed.

Q. - And again, what I'm getting at is the decision making that has to go on a day to day basis involves time?

MR. WHITE: Well certainly.

Q. - Now I would like to refer you to exhibit A-6, which is the minutes of the December 18th meeting. And, Mr. Eagles, you might be -- you did the skill testing questions yesterday with my colleague on costs, but my question is more in terms of time. And the point that I want to make -- and I'm not going to go through all of them and ask for the worst case. But is it fair to say that, for example, we were to get into the technical issue of the reactor assembly component inspection and we found problems as that went forward, would that add -- tend to add (technical problems)

And I am referring to the ubiquitous page 15 again, Mr. Chairman. And, for example, the reactor assembly components inspection. If you got into problems with that, how much time could that add on to the construction process, Mr. Eagles? What is the worst case on that?

MR. EAGLES: We had analyzed in our evidence that was submitted in confidence, an impact of -- potential impact of issues around that particular item, reactor component inspections. And of course, as the reactor is being retubed there are opportunities to do inspections when otherwise there are no such opportunities.

The impact that we have included in our analysis was

for about -- I believe, in the order of a month and a half delay to the outage if in fact, there were some things identified that were out of norm. And again, that is the outside worst case. There is also the opportunity that an inspection even in finding something could be dispositioned with analysis. And that would be a very low cost.

Q. - I appreciate there is two aspects, there could be costs --

MR. EAGLES: Mmmm.

Q. - - but there also could be time. Is that correct?

MR. EAGLES: Yes.

Q. - And I don't want to go through a litany and have you estimate. But the bottom line is if any of these potential risk occurs, it's not just a money matter, Mr. Eagles, it also can become a time factor. Is that correct?

MR. EAGLES: That is correct.

Q. - And I would suggest, for example that in some cases would it not be beyond the scope of reason for some of these items we could run into an additional couple of months in order to resolve them in terms of time?

MR. EAGLES: I think the one that we spoke of is probably the worst case in that list of items. And that's why when

we spoke of schedule and the float, I guess, it was in the existing schedule in our work to reduce it. The schedule further gives us some degree of confidence in that conservatism, yes.

Q. - But again what I want to go back to is the decisions, not just -- not just the time to do the work. Part of what has to go into this is the time to determine the scope of work with the regulator. Is that correct?

MR. EAGLES: That's correct.

Q. - And I would suggest that in the nuclear industry the regulator is going to -- I'm going to suggest would often work to his schedule and not yours. Would that be a fair statement, Mr. Eagles?

MR. WHITE: That wouldn't be in Mr. Eagles' area to normally talk about. The regulatory involvement when you run into some of these issues that you are potentially referring to usually involves early notification. A lot of parallel updating of the regulator as you go through the solution to the issue and come up with a solution that you intend to put in place. And you present appropriate cases to the regulator in terms of fitness for our returning to service.

Q. - And what I'm getting at though, is that some of the time that's required here is really beyond your control because

it's in the control of the nuclear regulator. Is that correct?

MR. WHITE: I think the answer is yes, to that. If you look at --

Q. - Thank you.

MR. WHITE: -- issues around the feeder outages that we have had for cracking, the process that I described is exactly what happened. And I think the impact from the Regulator was no more than about a week and a half on that by the time we cleaned up all the activities that needed to be done at the site.

Q. - That was what, the feeder in --

MR. WHITE: That was a feeder cracking issue that we had last April -- or March and April.

Q. - That was one feeder.

MR. HYSLOP: We did three feeders. We had one that cracked and on an investigation we found two others that needed to be replaced. And so we replaced two others as well.

Q. - Now I refer you to -- first of all, this contract before I look at the exhibit. The scope of work in this construction of the retubing and the refurbishment contracts, there is more to it than just the scope of work that is defined right now. Would that be correct, Mr. White?

MR. WHITE: The scope of work that we believe is necessary is defined in those contracts. And we have made some slight allowance for other pieces of work that might come along.

Q. - And what I am getting at is some of these things that may happen during the construction process that have to be fixed, that is dealt with in the contract itself, isn't it, the retubing and the refurbishment contracts? And in particular I refer you to exhibit A-6 and the retube agreement part two at page 27.

MR. WHITE: You are in A-6 and what tab?

Q. - The retubing agreement. I apologize, it is A-13, Mr. White.

MR. WHITE: The Province of New Brunswick supplemental 9?

Q. - Yes. And in particular I am looking at part two at page 27. Do you have it?

MR. WHITE: Yes, sir.

Q. - I am looking in particular at clause 2.37 which deals with changes in the work.

MR. WHITE: Yes.

Q. - And this part of the contract deals with situations where work in addition to that originally set out in the contract is to be completed. Is that correct, Mr. White?

MR. WHITE: That is correct.

Q. - And I take it that the changes in the work that would occur may well relate to many of the items that are considered the technical and regulatory risk items that are referred to in exhibit A-6. Is that correct?

MR. WHITE: It certainly could be.

Q. - Yes. And there could be more as well?

MR. WHITE: Well certainly if anything else was discovered in the work that is emergent, that may require change.

Q. - Right.

MR. WHITE: Either plus or minus.

Q. - Right. And in particular then there may be work items over and above the risk items that you have specifically identified in exhibit A-6. Is that correct?

MR. WHITE: It could be, yes.

Q. - You are in a situation where you are doing a refurbishment. And until we get the reactor opened we are not -- I mean, and I appreciate everybody has used their best professional judgment in making these analyses. But until you really get it opened you don't know what you are going to find. Is that a fair statement?

MR. WHITE: Well I think the fairness of that statement falls around the fact that we have identified the major issues that we think we are going to deal with. And that the items that would come up in most -- in all probability

would be minor issues.

We have identified the major ones in that technical risks list.

Q. - Right. And when you say in all probability, again, you are exercising your best professional judgment in making those assessments. Is that correct?

MR. WHITE: We have attempted to do a diligent job of assessing the condition of the plant and identifying the risks that we might face in attempting to quantify those appropriately.

Q. - And what I want to get to, Mr. White, is not withstanding all the best professional judgement and all the diligence, until you get that reactor opened you can't say unequivocally what you are going to find, can you?

MR. WHITE: I think that is true. But we also recognize that we are maintaining this plant on a running basis. We are looking at most of the components on a running basis.

And so those judgments are based on good information.

Q. - Right. Again, I want to go back. You have said it is technically true, and I appreciate your professional judgment. But there could be things in that reactor that you have never anticipated that may have to be fixed during this process. Is that correct?

MR. WHITE: Your car could quit and won't start when you

want to go back to Fredericton this afternoon too. Yes, you are right. Those things can happen.

Q. - Thank you. And we have all had -- I don't know who has had experience with Ford Tauruses not starting or not.

Now to go on to this 2.37.1. It says the owner may at any time by written instructions to the contractor request additions to the work, further if the contractor is delayed in the performance of the work by delays attributable to the owner.

Now my question is is it possible there will be delays attributable to the owner during the construction process?

MR. WHITE: We are operating under the operating license of the plant and the contractor has to comply with the requirements that we would have in the plant.

Those always have potential impacts on contractors in working. But again, we know what they are. And we have engaged the contractor in other work in the plant so that he has familiarization with what the normal operating practices and policies are so that we anticipate that those have been accounted for in the way that he has addressed the work.

Q. - And what I am suggesting is though, Mr. White and Mr. Eagles, with regard to this construction, if we get in and we run into these problems in the everyday environment, it

may be necessary to have additional work done. Correct?

MR. WHITE: Maybe, yes.

Q. - And that may involve additional time. Correct?

MR. WHITE: It could. Until we understand its impact on the critical path, it is difficult to say for sure.

Q. - Sure. And that is why in this contract that we have set out in 2.37, a process to go through if these unexpected or even if expected items that we don't expect will have to effect, but the identified risks have to be fixed up. Isn't that correct?

MR. WHITE: Yes.

Q. - And as I understand the contract, the process would be that you would contract the extra work through what we call a change order. Is that the right type of wording to use?

MR. WHITE: Yes.

Q. - Now I want to go back just a little to one page to 2.36.

2.36 is entitled "Extension of Time and Adjustment of Contract Price". Correct?

MR. WHITE: Yes.

Q. - And it says, "If by reason of negligence or default on the part of the owner or its agents, failure on the part of other contractors employed by the owner if changes in the work, deviation from the specifications or temporary

suspension of work by direction of the engineer, the contractor has been delayed in the progress of its work, other than for reasons attributable to the contractor, it shall be entitled to an equitable extension of time for completion of the work and to an equitable extension to the contract price for the cost incurred in relation to such extension of time." Is that part of the contract, Mr. White?

MR. WHITE: That is correct.

Q. - And as I understand it, the contractor would put something into this contract to protect himself from the unknown risks or even risks that have been identified, but you don't think you are going to have to fix. Is that correct?

MR. WHITE: The contractor has recognized that we have set out a time schedule for the execution of this work which is dependant on the owner supplying certain services facilities and tasks. And if the owner fails to supply them in accordance with the expectations of the time schedule, then the contractor can't be held liable for that.

Q. - Well can't be held liable for that. In this contract that is what you have agreed to. Correct, Mr. White?

MR. WHITE: That is what we agreed to.

Q. - Yes. But when you say the contractor can't be held liable for that, I am going to perhaps suggest to you that you could have contracted with him to be responsible for all that and change the purchase price. Would that have been possible, Mr. White?

MR. WHITE: Well in the first case, we contracted him for the project management. So if -- if it is something that we have done that he hasn't managed appropriately then he is still responsible. Okay.

If he has attempted to manage it responsibly and we have still not completed our end of the bargain, then he has a case to present in front for a claim.

Q. - Right. So sometimes you get into disputes over whose fault or who is responsible in relation to any extra work that has to be done? Is that part of the real world on a construction site?

MR. WHITE: You changed the context here a little bit. You said in regard to extra work that is to be done. Extra work that is to be done is a matter of defining that and deciding whether you want to do it or not want to do it. And what the price and time frame is that you want to do it on.

Q. - Okay. Well let's assume something comes up that has to be fixed. Has it ever occurred that there is a dispute

over it is it the contractor's fault or an act of default of the owner. Has that ever occurred on a construction site?

MR. WHITE: Well if it is something that came up that is emergent work that had to be fixed, one would have to look and say did it rightfully belong within the scope of work that it was already defined for the contractor in terms of I have to complete this work in whole to make the plant functional and operational. And the intent of the contract is to do that. Or is it something that is completely outside of the scope of the work that the contractor had and therefore it can rightly be deemed as extra work.

Q. - So what 2.37 does and 2.36 does in the retubing contract is it leaves the risk of these extra items that may come up, or the unexpected items that you have as part of your analysis identified, they essentially stay the risk of NB Power. Is that correct, Mr. White?

MR. WHITE: Please rephrase that again so that I get the exact point.

Q. - Well, if extra work comes up, NB Power has to pay for it?

MR. WHITE: If extra work comes up that is not within the intent of the work scope that the contractor has already signed on for, then that is the responsibility of NB

Power. And they can determine how they wish to disposition it.

Q. - And as I also understand the evidence, any of the items that are a part of the technical risks that are referred to in the minutes of the December 18th meeting, if those items arose, they would be extra work?

MR. WHITE: They are items that are beyond what is defined for the scope of work for the contractor today.

Q. - Yes. So not everything that is part of this refurbishment contract is covered or -- everything that you expect to be needed in the contract is covered by the scope of work attached thereto, is that right, Mr. White?

MR. WHITE: Everything that we believe is necessary to allow this unit to run for an extended life of 25 years beyond the normal O&M functions that will support that operation has been included in this contract.

Q. - And if everything has been included in this contract to do the work, why would we even need sections 236 and 237?

MR. WHITE: 236 and 237 are in full recognition of the fact that during the volume of work like this you may have changes that are necessary as part of either emergent work or in terms of things that are necessary to be supplied as additional scope to the job to complete them.

Q. - And any of those extra items that come along it is not

AECL that picks up the tab on those, it would be NB Power?

MR. WHITE: Well that would be certainly true, we could assign them to AECL, they might be work that we got done through somebody else.

Q. - But it would be to your cost?

MR. WHITE: Well that's what it normally is.

Q. - Yes. And if any of these extra items came along and added to the time of construction, would that impact on what AECL would have to pay on their liquidated damages?

MR. WHITE: Again, it -- you need to have an interpretation at the time of what the cause was and whether it's really within the contract that we have already given to AECL or whether it is beyond the contract.

If it's outside of the contract and it is affecting their schedule in terms of achieving their acceptance dates, then yes, that could affect it.

Q. - Right. So in other words, if there were matters that came up that caused for extra work and this was extended to 24 months, AECL would not have to pay liquidated damages until the plant was delivered after 24 months, is that correct?

MR. WHITE: If the causes were not of their making within the contract terms.

Q. - It seems to me that there is a fair amount of things that

can go wrong in a construction.

In the real world, on a construction project of this magnitude, there are a lot of items that come up that have to be attended to outside the scope of the contract, is that correct? Some are very small. Some are very big.

MR. WHITE: In relationship to the size of this contract, the type of things that would come up in construction environment would be the normal types of activities that occur on construction sites and that need solutions on a day-to-day basis.

And that isn't a lot different than the fact that when we run the plant today there are things that come up every day that need to be addressed in operating a complex facility. And they need to be resolved.

Q. - If AECL made a design change that wasn't accepted by the Canadian Nuclear Safety Commission, that is something that can occur?

MR. WHITE: Any design changes that are made to the station have to meet the requirements of the licence and support the safety case for the station.

And so all design changes ultimately have to be accepted by the licensee ourselves and demonstrate to the Canadian Nuclear Safety Commission that they meet the safety basis for the station.

Q. - So going back to the real world of rebuilding Point Lepreau, you know, there are a number of things that are identified. And there are things that are completely unexpected that can occur.

But you use your best professional judgment to identify those, correct?

MR. WHITE: Well, we spent two years going through detailed condition assessments so that not only the view of the station is included, but we have had the external view of the designer.

And we have also had expert reviews on both the safety analysis side, the technical side and the process side of how we are going through these reviews to say that we have done a duly diligent process.

And we have had the process verified to ascertain what condition the station is really in and what components would need to be addressed during a refurbishment outage.

And we believe that that was a thorough process and that we have had it verified by outside parties and outside experts and that it fairly represents the work that would need to be done.

Q. - Yes. And to go back to my question, there are still issues that can occur in that plant during the construction that can cost you extra money and take extra

time, correct?

MR. WHITE: Those issues can happen any day from now forward.

Q. - So although you have some confidence -- and I will ask Mr. Eagles, because as I understand it, you are in charge of carrying out the construction, Mr. Eagles?

MR. EAGLES: That is correct.

Q. - And you have indicated I think yesterday to Mr. Gillis that you are quite confident as an engineer that this can be carried out in the 18 months.

But as a professional -- as a professional, would you certify that it can be carried out in 18 months?

MR. EAGLES: Well, I don't -- I don't understand what you mean by certifying that it would be done within 18 months.

Q. - Well, if you were to give a certificate that could be done in 18 months, and you were an outside engineer using your professional ability, after looking at all these plans, you could be sued on that certificate?

MR. EAGLES: I don't understand what kind of certificate --

MR. HASHEY: I don't believe --

MR. EAGLES: -- that might be.

MR. HASHEY: -- Mr. Chairman, that there is any evidence that there was ever any such certificate ever issued that I ever heard.

MR. HYSLOP: Well, I'm just asking if he would be prepared to certify it, Mr. Hashey, as a Professional Engineer.

Q. - Would you take the risk, as an engineer, and issue a certificate stating that this could be done in 18 months, and be sued if you were wrong? Would you take that risk, Mr. Eagles?

MR. HASHEY: I don't think that is a fair question.

MR. EAGLES: Again I don't understand what kind of certificate that might be that you are referring to. It is not something I'm familiar with. I can tell you that in my evidence I said I'm confident that it can be completed within 18 months.

And I have also addressed the issue of where we have already in the schedule float and where we are taking opportunities to improve the schedule even further that would provide conservatism within that schedule, and that we believe that that conservatism is part of the risk mitigation in the business case.

And we have analyzed the business case on 18 months. But we believe that that schedule can be completed in a shorter period of time.

Q. - Well, I appreciate what you believe. And I believe --

THE COURT: Mr. Hyslop, I agree with Mr. Hashey.

MR. HYSLOP: I will stay away from using the certificate,

Mr. Chairman. I was going to rephrase it.

Q. - I appreciate you have a level of confidence on this. But can you tell me with absolute certainty, absolute certainty that in 18 months this plant will be up and running for the price tag in the contract?

MR. WHITE: Mr. Hyslop, I believe that you are a lawyer. You understand opinion. It is not certainty. We have used our professional judgment on this as engineers in this province.

We have an ethics requirement to provide honest and forthright information based on the best available information that we can make engineering decisions upon. And we do that.

We don't write out certificates that guarantee input. And neither do you as lawyers. You give opinions based on your professional capability.

Q. - I sign lots of certificates that I'm wrong on. I have to pay.

I will go back to the question. Mr. Eagles, I want to know -- I'm going from quite confident to absolute certainty.

Can you be absolutely certain that in 18 months you will deliver this plant refurbished for the price that you said in the contract?

And I appreciate your professional judgment. But what I'm saying is can you tell me you are absolutely certain?

Yes or no?

MR. EAGLES: I think, sir, that the reason we identified a number of risks in the operation of the station and a number of those with very, very low probabilities is because there is always the outside chance that there is something that may come up.

And so we have identified those in our risk assessment. And that is why we have done that.

Q. - Sure.

MR. EAGLES: We need to manage those risks.

Q. - So the answer then is no?

MR. EAGLES: There is no way that anybody could guarantee that that would be completed in absolute certainty.

Q. - Thank you. Now if in the real world we ran into problems -- have we done an assessment of a bell curve, what the probabilities are of getting outside the 18 months, Mr. Eagles, at any stage of this process, of the analysis?

MR. EAGLES: A number of the risks that we had identified in our Ernst & Young report were risks to schedule and the information surrounding the impact on schedules contained there.

Q. - So I want to talk a little bit and move on maybe to a

little different area. And in particular there were a couple of items that came up in the evidence.

There was some talk about a steam generator. There was a generator maybe having to be fixed. And I think there was -- and I heard two numbers.

And I'm trying to find out what the difference in the numbers. I heard a cost somewhere of \$600 million and a cost to replace of \$125 million.

First, is there a distinction between those two numbers? Or am I missing something?

MR. WHITE: I believe I gave the evidence that our estimate on steam generator replacement is \$125 million.

Q. - And that is if it was carried out at the time of the refurbishment, Mr. White?

MR. WHITE: That is correct.

Q. - If the steam generator issue was deferred and had to be repaired say six or eight years down the road, would it be a different price?

MR. WHITE: Well, it certainly would be a different price from an escalation point of view, depending on when you do it. And it does not include the outage time that would be required for that additional outage.

Q. - Okay. So would that perhaps tie into the \$600 million that was the other number I thought I heard somewhere in

the evidence?

MR. WHITE: I have no idea where you got that number, sir.

Q. - So we are dealing with 125 million, to the best of your knowledge?

MR. WHITE: That is correct.

Q. - The other item is on A-16 which was the slides that we were dealing with. Slide 82. 2013 there is a fairly significant blip to a little over \$40 million for ongoing capital spending?

MR. WHITE: Mr. Pilkington can reply to that.

MR. PILKINGTON: Yes, Mr. Hyslop.

Q. - Yes. There is -- you are answering yes to my question which is that there is a blip to over \$40 million in --

MR. PILKINGTON: Yes, there is a blip over \$40 million.

Q. - That's right. And then the bar graph goes up there anyhow. My point is that I understand that that is for some computer replacement that is going to be carried out at that time frame?

MR. PILKINGTON: That's right. The station's digital control computers will be approaching end of life and reliable operation past that point. The probability of that would be diminished, so the plan is to replace them in that year. And the cost of the that is about \$30 million.

Q. - Okay. And my understanding is that that 430 million is -
- could that be part of the refurbishment that would be
carried out during this refurbishment? Is that something
that could be considered?

MR. PILKINGTON: I am confused.

Q. - Why wouldn't you carry that out now? Bring your
computers right up to date?

MR. PILKINGTON: Oh. Let me -- Mr. Eagles may correct me on
this because really he has --

Q. - Sure.

MR. PILKINGTON: -- looked at it. But my understanding
would be that first of all the computers haven't reached
end of life and so there are a significant number of years
of reliable service that they can provide. And secondly,
by replacing them later in life we will be able to take
advantage of experience of others doing similar work.

Q. - And there was no -- we talked at the first about the 234
million, there wasn't any attempt to skew some of these
capital costs that might be carried out now to later in
the future just to benefit this project?

MR. PILKINGTON: You will have to -- I think that's a Panel
B question, but I suspect this 30 million is clearly
costed into the future cost at Lepreau.

Q. - Now two important factors to this contract -- these

contracts with AECL are the requirement to complete the work in 18 months and to have the plant run for 25 years at an 80 percent capacity factor. Is that two in part important ingredients to the contract?

MR. WHITE: Well that's the base for them, yes.

Q. - Yes. And as I understand the way the contract has been put together, if anything extra comes along New Brunswick Power is going to be absorbing those risks, correct?

MR. WHITE: That's a normal part of our obligation of running a nuclear facility.

Q. - Yes. Okay. And my question is did you go to AECL and say to them gentlemen, I have got a Point Lepreau nuclear plant, its pipes are sagging, it needs to be refurbished. And I want to eliminate all the risks from our point. And can you give me a price that you would charge to fix up my plant. Only two things I want you to do is to ensure it's back to me in 18 months and it runs for 25 years. Did you go to AECL with that type of a proposition, Mr. White?

MR. WHITE: Not in that context.

Q. - Why not?

MR. WHITE: We went out in the market to look at the management proposal that we were putting forward that said we should consider extending the life of this nuclear

facility for another 25 years. And we would like to

mitigate some of our risk in doing that in terms of either the capital funding of the project. And so we looked for people who were interested in doing that. And as evidence has already stated, we went through three large suppliers out there to see what interest there would be in doing that. And at the end of the day, AECL's proposals were the ones that best aligned with the objectives that we had.

Q. - Sure. But I want to go back. I want to just turn this a little bit. As I understand it your refurbishing contracts, \$163 million, correct?

MR. WHITE: Yes, that's correct.

Q. - And your retubing contracts, \$288 million?

MR. WHITE: That's correct.

Q. - So you are putting out roughly \$450 million to have this refurbishment carried out?

MR. WHITE: That's correct.

Q. - And as we have discussed and with your analysis, anything extra that comes along NB Power is absorbing the risk of it, both in terms of time and money?

MR. WHITE: That's correct. And we have attempted to properly define those --

Q. - Yes.

MR. WHITE: -- so that we have a total package.

Q. - Sure. And I guess my question is if you said that AECL instead of paying you \$450 million, we are prepared to pay you \$900 million on two conditions, the first condition is I want the plant back in 18 months and the second one is it runs for 25 years and if it doesn't you are on the hook. Would AECL have done the deal?

MR. WHITE: I don't know.

Q. - Let's put it this way -- let's assume we have got a new construction company in the refurbishment and it's run by you, and Mr. Eagles, and Mr. Groom and Mr. Pilkington here. If you were in the construction business and NB Power came to you and said we will give you a billion dollars, but you have got to have it back to me in 18 months, and you have got to have it running for 25 years. And I can even give you a confidential report, I will slip it to you that sets out what the risks are. Think you would take that contract on?

MR. WHITE: I think I would want to weigh my risk and what I want to expose against that. And I would ultimately have to get whoever owns my company, my board or whatever to decide that they wanted to do that.

Q. - You are the shareholder, you are the board of directors and you are the president. Do you want to take that risk on for a billion dollars? Would you take it on for \$234

million, Mr. White?

MR. WHITE: We think this is the right thing to do because it's against the alternatives that exist in New Brunswick. This is the best alternative.

Q. - Mr. White, I'm absolutely satisfied of your judgment on that. But my question is -- my question to you again is if I took that \$450 million and I added \$234 million to it on the condition that you deliver it back to me in 18 months and that it runs for 25 years at 80 percent capacity, would you take that contract on?

MR. HASHEY: Mr. Chairman, I think we are getting into hypotheticals here.

CHAIRMAN: We are not getting, Mr. Hashey. In my opinion, we are deeply into hypotheticals. And I -- you know, you can go at it -- the bits and pieces I think, Mr. Hyslop, but to force this panel to answer that question is beyond scope, so --

Q. - If -- perhaps if I could phrase this another way. I'm trying to put a value on these risks that are out there. And my concern is that these risks add to the cost of the project to a point where the \$234 million difference isn't -- doesn't exist anymore. And my question would be is there any way at all you fathom what those risks -- the value of those risks might be?

MR. WHITE: Two answers to that question. The first one is that Panel B in their evidence, and you will get to it, has done stress cases as to what happens if capital cost changes and schedules changes. And I'm sure you can explore that there.

And the second thing is that -- in your first reference in looking at our risks, we have attempted to define what we think are the risks that we could run up against. And we have done some work, as you have in your hand over there, a risk assessment to attempt to quantify those and that's the basis for us adding a contingency to this project.

Q. - And that contingency was \$35 million?

MR. WHITE: That's correct.

MR. HYSLOP: If I'm going down the road too far, Mr. Chairman, you may cut me off.

CHAIRMAN: Well I'm sure Mr. Hashey will have something to say, Mr. Hyslop.

Q. - You didn't answer yes at 234 would I assume correctly you wouldn't take those risks for \$35 million over the \$450, Mr. White?

MR. WHITE: Well what I may or may not do personally I guess is not really pertinent to this.

Q. - But if I understand it you are the team at NB Power that

is responsible for seeing this project through?

MR. WHITE: We are the team that's responsible for seeing this through, and we are the team responsible for properly identifying all constituents on the front end. And this process would help us to ensure that we have properly covered them.

MR. HYSLOP: We will mark a document for identification, Mr. Chairman.

CHAIRMAN: I think this is 5. This is a sheet headed "Financial Impact Performance Agreement on Point Lepreau. Performance, 1983 to 2013" marked for identification number 5. Surely Mr. Hyslop is going to give the Board more than one copy. If he hasn't it's not good planning.

MR. HYSLOP: It's number 5, Mr. Chairman?

CHAIRMAN: Yes, it is.

Q. - Thank you. I will show you a document marked number 5 for identification. Just to run through the -- the second column in there purports to identify the capacity factors that Point Lepreau has run at since its inception in 1983. Do those capacity factors look correct?

MR. WHITE: They appear to, yes.

Q. - And what we have tried to do here is -- and at the bottom there are some assumptions -- and what this document purports to do generally is it says that if this

performance agreement that we now have had been put in place in 1983 what would have been the financial result? So some of the assumptions just to go over and you can tell me whether or not the assumptions are correct?

In years zero to 15 a bonus would be paid to AECL of .67 million for every percent that the plant runs at a capacity greater than 80 percent, is that a correct assumption?

MR. WHITE: That's what the current contract says, yes.

Q. - Yes. And they would also pay a penalty back to NB Power if during the first 15 years the plant ran at less than 80 percent of .83 million per one percent, is that correct?

MR. WHITE: That's correct.

Q. - And during years -- and I have extended this to the life of the original plant which was 30 years, .83 million per one percent for in excess of 80 percent capacity factor, is that correct, Mr. White?

MR. WHITE: That's correct.

Q. - Right. And if it was less --

MR. WHITE: Correct in that it goes to 25 years. It doesn't go to 30 years.

Q. - Okay. As I understand it, however, the expected life of the original Point Lepreau was 30 years?

MR. WHITE: Yes, these numbers that you are talking about

though are only good for 25 years.

Q. - Okay. Well we will go back to 25 years at the end of the day. And if it was less than 75 percent capacity factor in years 16 to 25 or 30 it's .83 million per one percent, is that correct, Mr. White?

MR. WHITE: Again up to 25 years, that's correct.

Q. - Right. And the maximum in any one year would be \$24.9 million in a given year?

MR. WHITE: That's correct.

Q. - And the maximum total that would be paid would 225 maximum, is that correct?

MR. WHITE: That's correct.

Q. - And the value of the Point Lepreau energy, as I understand it, is that if this plant didn't run in a particular year the replacement of Point Lepreau energy would be \$200 million per year? That's the number we have been kicking around.

MR. WHITE: That's a calculation by Panel B and that is the number we have been using.

Q. - Okay. And we have assumed for purposes of the calculations that at 80 percent capacity factor we have done the calculation to make it approximately 160 million, that that calculation would be obvious?

MR. WHITE: I understand your math.

Q. - Yes. Thank you. That is one of the few that maybe has over my life. And so each one percent in the capacity factor would result in the need to purchase \$2 million of additional power. Again the math would appear correct?

MR. WHITE: I understand your math.

Q. - Thank you. So what we have done is we have taken the performance of Point Lepreau since 1983 and we have calculated the total amount of payments to or credits received from AECL in the third column. And I do understand that you have had the opportunity to review this document prior to me presenting it this morning?

MR. WHITE: Yes. You gave it to us yesterday.

Q. - Right. And I also understand, if my assumptions are correct, and I will certainly give you the opportunity to revise it to 25, but would my calculation that at the end of the day AECL would have had to pay NB Power \$127.1 million be correct assuming this performance contract was in place in 1983?

MR. WHITE: Well, you have assumed that we have go zero power out of this thing since 2006, and if you want to use this hypothetical case you can calculate the numbers you have got on the sheet.

Q. - Right. Okay. And the power surplus, the amount extra that NB Power would have had to pay, is calculated in

column 4. And assuming again that this contract was in place for a 30 year performance, the total extra energy NB Power would have had to buy we have calculated at \$1,16,000,000. Does my math appear correct on that, Mr. White?

MR. WHITE: I take you for whatever you have put down there, sir.

Q. - Okay. So you have no reason then to dispute any of the calculations on this document marked for identification as number 5?

MR. WHITE: It's a hypothetical case. I guess you can put down whatever numbers you think are appropriate to it. It's interesting to note that at the end of 2006 in accordance with your document that we have paid AECL 55.6 million and we have received 104,000,000 of benefit.

Q. - No, my calculations on that I believe were different. If we took five years off we maybe have a year difference at the end of the day. I'm not talking 2006. 25 years would take you to 2007, 2008, Mr. White?

MR. WHITE: I'm saying if it went to 2006.

Q. - Okay. Now the 25 years from 1983 would be 2007, 2008?

MR. WHITE: That's about right.

Q. - And I would suggest if you do the math on that AECL would have paid you back \$2.6 million and in fact the power

replacement would have been \$216 million?

MR. WHITE: That's the numbers you have got on your page.

Q. - Do you have any reason to doubt them?

MR. WHITE: Well as I say, it's analysis. I don't know what the basis for it is, but I see what you have done.

Q. - Thank you.

MR. PILKINGTON: Excuse me, Mr. Hyslop. In strictly looking at the numbers on the page, you asked if there is any dispute on the numbers?

Q. - Yes.

MR. PILKINGTON: If I look at the year 2000, 2001 --

Q. - Yes.

MR. PILKINGTON: I make that to be year 18 of operation.

Q. - Yes.

MR. PILKINGTON: Well at year 18 of operation, would that not follow the algorithm for years 16 to 30?

Q. - That's correct.

MR. PILKINGTON: Well if that's the case and capacity factor was 65 percent, would that not be 10 percent less than 75 percent expected?

Q. - Yes. There is a mathematical error there, Mr.

Pilkington. So that would change the cumulative by 10 million down in your favour. I will leave that.

MR. WHITE: There is also three other in total errors on

that sheet on the same columns.

Q. - We would be prepared to correct it if there is a mathematical error of Mr. Thompson. We will adjust it.

Can you give me the years?

MR. WHITE: 99/00, 2000/01 and 05/06.

MR. HYSLOP: We will recalculate and reprint that, Mr. Hashey.

MR. HASHEY: Mr. Chairman, this thing is so irrelevant that I really don't care.

CHAIRMAN: Well if you do that would you correct the spelling error too, Mr. Hyslop, on surplus, s-u-r.

MR. HYSLOP: I see that.

Q. - I would refer you to document A-9, tab A, page 30.

MR. DUMONT: Would you repeat that please?

Q. - Under tab A at page 30 --

MR. WHITE: In A-9? There is no tab A.

Q. - Okay. It is the Hagler Bailly report. I have at tab in mine.

MR. WHITE: PNB-24?

Q. - Yes.

MR. WHITE: Right. Page reference, sir?

Q. - Page 30 under section 10.3.

MR. WHITE: Yes.

Q. - And dealing with "Conclusions" in the third paragraph --

and first of all Hagler Bailly, they were commissioned to do a review of the Point Lepreau nuclear power station, Mr. White?

MR. WHITE: They were commissioned to do a technical and economic assessment of Point Lepreau, yes.

Q. - And their recommendation was that there could be refurbishment for a price of \$550 million?

MR. WHITE: On "Conclusions" --

Q. - Yes.

MR. WHITE: -- on page 30?

Q. - Yes.

MR. WHITE: Third paragraph?

Q. - Yes. I'm just asking --

MR. WHITE: Last line it says, "Refurbishment investment nominally at 550 million including replacement power and cost of refurbishment."

Q. - Yes. And it is a capital investment that may not be in the best option in a competitive environment with a higher discount rate?

MR. WHITE: Yes.

Q. - Now they were questioning the investment at \$550 million without a -- with the possibility of a higher discount rate.

In view of the fact that there is some reorganization,

possible reorganization of NB Power which may affect discount rate, does this in any way affect your belief that this project is the proper way to go?

MR. HASHEY: Mr. Chairman, I believe that the decision of this Board was that they would have to deal with the existing legislation and not speculate on what might happen in the future. And I think --

THE COURT: Well, that is right. And the Board ruled that way, Mr. Hyslop, in reference. I believe it was Mr. Coon, I could be wrong there, but previously in the hearing.

Q. - Well, I will just deal with the issue of the \$550 million. They were suggesting that at \$550 million this project may only be considered with the current investment rates at this time.

Does the fact that it is now costing \$850 million in any way affect your confidence in this project?

MR. HASHEY: Again I hate to interrupt. But this surely has got to be a Panel B issue where the sensitivity analyses were done on these very things.

MR. HYSLOP: I will leave it at that. I just wanted the commitment that it would go to Panel B.

MR. HASHEY: Oh, yes.

THE COURT: How much longer, Mr. Hyslop?

MR. HYSLOP: Probably another half-hour, Mr. Chairman.

THE COURT: Okay. Time for our mid morning -- we will take a 15-minute break.

(11:00 a.m. - 11:15 a.m. - Recess)

THE COURT: Just before we continue with your cross, Mr. Hyslop, it is my understanding that Board counsel spoke with you.

And your preference is that the in-camera portion of this hearing should be tomorrow after effectively the public hearing has completed with this panel?

MR. HYSLOP: That would be my preference. And I would advise the Board that the questioning wouldn't exceed half an hour. But I think --

THE COURT: I remember somebody yesterday saying that their examination would take less than an hour. Fine, Mr. Hyslop. We will do it tomorrow.

MR. HYSLOP: I will be done by noon, in fact probably a little quicker than that.

Q. - There was some discussion yesterday about some other options that were looked at early on in the negotiations. They included a lease arrangement with NUCO and some type of a contractual arrangement with Siemens. And the Siemens one indicated it may have been too expensive, Was the type of contract discussed with Siemens what is commonly referred to as an EPC contract?

MR. WHITE: No. When we were looking at companies that were prepared to take on the refurbishment, we were essentially looking for some capital infusion on the front end of the project, as I explained earlier.

And so that was the basis that we were sitting down with companies listening to what they would propose, what they were interested in and what our interests were and to see if there was an alignment that would allow them to participate in the contract for refurbishment of the station and do it in a way that they provided equity with it.

As it turned out with Siemens, they concluded after sitting down with us for the day that they weren't prepared to enter into an equity position and they were only interested in contractual work.

Q. - Are you familiar with the term EPC contract, Mr. White?

MR. WHITE: Engineer, procure and construct, I believe.

Q. - Yes. And my understanding, and correct me if I'm wrong, but that type of a contract is often used in construction projects where it is felt there is a very low or insignificant risk, is that correct?

MR. WHITE: Well, I don't know what kind of risk profile would apply to it. I thought in this province the highway project was a bit like that at one stage in time. And it

depends on the parties as to what they want to put into it.

But essentially it says that one party takes on the responsibility to engineer it, procure the components and actually carry out the construction of the item.

Q. - Okay. So in reference to Point Lepreau, an engineer, procure and construct contract would be a contract where the contractor would carry out the total project at his risk, is that correct?

MR. WHITE: Well, I wouldn't say that it implies that. It implies that he has a turnkey contract. And who takes the risk is a matter of how the contract is set up.

Q. - Okay. But generally speaking, on the turnkey or the EPC contract, you set out the scope of work and what has to be done. They would evaluate the risk. And they would give you a price to do the job.

Would that be correct, Mr. White?

MR. WHITE: That is correct.

Q. - And the only thing that is expected at the end of the day is you sign -- they deliver what you require in terms of the refurbishment. And you write them a cheque. Would that be correct?

MR. WHITE: No.

Q. - There would be more to it than that?

MR. WHITE: Certainly the parties would have to understand what risks they are taking and how they define that in the contracts.

Q. - That is right. And if you wrote out a scope of work that said, I want you to refurbish Point Lepreau so it is built in 18 months and it is going to work for 25 years at 80 percent capacity, would that be the type of a contract you would normally subject to an EPC type contract?

MR. WHITE: Well, you could do it. I mean, the proposal we had from NUCO was essentially EPC for a piece of it.

Q. - Okay. Now on the EPC with NUCO -- I guess my question is did they set a price which they would do the work?

MR. WHITE: They established a price with us. And as I already said, they wanted three components, that they would fund the refurbishment project.

They wanted a reciprocal contract with us that we would operate the plant and that we would take all of the power out of the plant.

And when we evaluated the proposal that they put in front of us, it wasn't as economic as the gas proposal.

Q. - So it was more expensive than the gas?

MR. WHITE: Yes, it was.

Q. - So that would imply that the net present value of the NUCO proposal was greater than \$234 million or more than

the gas proposal?

MR. WHITE: I'm sure Panel B will give the answers in detail to that.

Q. - Sure. Now as part of their proposal though they would take the plant and refurbish it?

MR. WHITE: Well we never got into the details obviously. We got into what they were proposing up front. And those proposals weren't economic. And so we didn't pursue them.

And we asked them if they had other ones that were more economic. And they withdrew.

Q. - And was there a proposal that they would absorb the cost of refurbishing the plant and the intended risk of doing that refurbishment?

MR. WHITE: They proposed to refurbish the plant. And recognize that was done long before the condition assessment. So they didn't have any of that information to work on at that time.

Q. - But again my point is they proposed to accept the risk of refurbishing the plant?

MR. WHITE: Well again the details of the risk never got discussed at that stage. They put their economic proposal on the table. And the economic proposal didn't float.

And so it didn't go farther. It didn't go down into the details of the risks and all the other things. They

proposed to fund it.

Q. - Okay. Now I understand you are doing some routine maintenance at Point Lepreau right now?

MR. WHITE: Yes. We are in our annual outage.

Q. - And I understand as part of that outage you are doing -- working on approximately 70 tubes with the moving of the spring mechanisms, the SLAR work?

MR. WHITE: 68, I believe.

Q. - 68? And if this work is carried out successfully will that have any impact on your views as to the plant life beyond -- potential plant life beyond 2006?

MR. WHITE: The 68 tubes is based on 2006 with three years of margin to 2009 as Mr. Groom explained in his evidence.

Q. - So if this work is successful, albeit there is some risk, the plant life could be extended out to 2009 at the far end, that would be accurate, Mr. White?

MR. WHITE: We have 2006 with three years of margin on that.

Q. - Are you familiar with any developments in the nuclear industry relating to the next generation nuclear reactor?

MR. WHITE: Yes. I'm aware that AECL is working on that.

Q. - Do you have any idea of current time lines as to when that nuclear reactor may be a marketable item?

I will rephrase that. Do you have any idea when the technology relating to the nuclear reactor may be

completed?

MR. WHITE: It is my understanding that it is something past 2005.

Q. - Would it be before 2010?

MR. WHITE: It is my understanding that AECL is targeting to do that work in the order of 2005, a little past 2005. So yes, my understanding is it would be available before 2010.

Q. - And at this stage, and I appreciate that it is early on, but is there any -- do you have any understanding or knowledge to the extent that the costs of producing nuclear energy with this type of a plant would be substantially lower than the cost of an existing CANDU reactor and by how much? To a new CANDU reactor, yes.

MR. WHITE: I haven't seen the cost profiles on the CANDU next generation. We have the CANDU-6 cost profiles. And they are in evidence in Panel B if you want to look at the details of those.

Q. - No. I understand that it is with regards to a new CANDU-6. I'm just asking from your knowledge of the industry are you aware of what the costs or the difference in cost might be with the next generation nuclear reactors? Do you have any idea at this time?

MR. WHITE: It is my understanding that AECL is targeting on

a two-pack basis, that is two reactors, to get to a thousand dollars U. S. per kilowatt.

Q. - And that would compare to roughly \$2,000 per kilowatt with a new CANDU-6?

MR. WHITE: Those numbers are in Panel B. I don't remember the exact number.

Q. - Okay.

MR. WHITE: I think they are -- they are more than that.

Q. - So what I'm getting at, as an additional option for the replacement of nuclear energy, is the possibility of a next generation nuclear reactor, something that if we were able to go for another year or two, something that could be fathomed into the equation?

And I appreciate that might be more a question for Panel B.

MR. WHITE: Well, Panel B has evaluated those kind of alternatives. Just from the numbers we have talked about it is more expensive than the refurbishment.

Q. - Well I don't recall anything in their evidence about the next generation. I do recall with the CANDU-6. But I will take that up with Panel B.

There has been some discussion, and I understand that NB Power is the first nuclear CANDU reactor where there is going to be replacement -- complete replacement of the

Calandria tubes. And that is the evidence on that point.

My question is, has consideration been given just to retubing the pressure tubes and leaving the Calandria tubes? And what are the pros and cons on that, Mr. White?

MR. WHITE: Well, in our initial pricing we had separated out just doing the reactor with I think 35 Calandria tubes. Those are the ones that most sagged and would most likely contact some of the other horizontal mechanisms that we have in the reactor.

When you look at doing that, you are kind of taking a bit of a stop gap measure and hoping you can deal with the other sagging issues of the remaining tubes over the remaining life of the reactor. And this is really the only opportunity to get in there and do it completely. And so we felt it was more prudent to replace all of the tubes rather than just take a small sampling of those that are potentially most sagged.

Q. - My understanding is that other nuclear plants, especially the Bruce plants, they are doing more of a stage retubing over time of Calandria and pressure tubes. Is that correct, Mr. White?

MR. WHITE: I have no knowledge that Bruce is undertaking Calandria tubes. Bruce is attempting to restart their reactor to run for the original life.

Q. - And my point is in dealing with the Calandria tubes is that if that could be -- if part of it could be spread out, that would have the effect of reducing the scope of work so that the price would come down at least as part of this refurbishment?

MR. WHITE: You can't spread out Calandria tubes. The only time you can do them is when you have taken the pressure tubes out.

Q. - And would an option be to just do 35 or 50 or spread them out over five or six years, would that option not have the effect of reducing the net present value of this particular refurbishment project?

MR. WHITE: There is no option to do that. You have to replace them at the time you take the pressure tubes out.

Q. - During the refurbishment itself I understand that there are measures that will have to be taken to protect the environment, additional mitigative measures. Is that correct, Mr. White?

MR. WHITE: Would you be specific, please?

Q. - The question was handed to me by the Department of the Environment. My understanding though is that you have to present an EA for solid radioactive waste management facility during the actual refurbishment. Is that -- am I correct on that?

MR. WHITE: Not precisely. The requirement for refurbishment is that the radioactive materials that are removed from the plant we propose to store them at our radioactive waste management site. And in doing that we would then have to construct additional concrete vault structures in order to contain those radioactive components. Construction of that vault structure requires a change to the licence. And as a result of that licence change, that triggers environmental assessment under the Canadian Environmental Assessment Act.

Q. - And those EA guidelines and approval, they are not completed as yet?

MR. WHITE: That was the subject of the 22nd of May hearing in front of the Canadian Nuclear Safety Commission relative to the waste site licence only.

Q. - Who -- there was a fuel channel that was replaced in 1996-97, who did that work?

MR. WHITE: Channel R-16, I believe. And it was done by Canadian General Electric.

Q. - Was there some reason AECL was not used to do that particular project?

MR. WHITE: AECL bid on it. And General Electric bid on it. And the economic price was from General Electric.

Q. - Was there also a channel that was removed in about 1989?

MR. WHITE: That is correct. I don't know the exact time, but roughly then.

Q. - Was AECL involved with that work?

MR. WHITE: I would have consult. I don't know who took it out.

Q. - There is also additional warranty in the tubing agreement with regard to the welded feeders and spacers of 96 months. I am sorry. I should --

MR. WHITE: I thought we were relating to the first question.

Q. - I apologize.

MR. PILKINGTON: I was going to say, I believe AECL was involved in the last channel that was removed.

Q. - Thank you. There is also a warranty, additional warranty with regard to the welded feeders and spacers. And again, my question is simple. It is 96 months, I believe?

MR. WHITE: It is a total of 10 years that covered any design changes. And those design changes are the welded feeder.

We don't actually have the fixed spacer in this particular design. And it also will cover the seamless Calandria tube.

Q. - Is there any reason in particular that the welded feeders and spacers were selected for this additional warranty and

not other new items?

MR. WHITE: Yes. The reason was that the other design features of the pressure tubes are ones that are standard in the industry and have been exercised at this stage in time. And so we understand reasonably the impact of those on running pressure tubes. But these are new designs for this particular application. And therefore we wanted an extended warranty covering any design changes.

MR. HYSLOP: That completes the cross-examination, Mr. Chairman. I would like to thank the panel for their cooperation.

CHAIRMAN: We will take a four minute recess to let you move. And it is my understanding that Saint John Energy has some questions and that will give them an opportunity to come up.

(Recess)

MR. HASHEY: We are awaiting one panel member, Mr. Chairman. Mr. Groom, of course, has left.

CHAIRMAN: Yes, I know that.

MR. HASHEY: You can see that there is still one to come here.

CHAIRMAN: Better take his sign down. Also some of the -- they don't believe me when I say a four minute recess.

MR. YOUNG: If you like, Mr. Chairman, I will get started or

do you want to wait?

CHAIRMAN: We will wait for Mr. Pilkington.

Yes. Just while we are waiting, Mr. Albert, or Albert, rather, sorry. You are not -- you are not privileged to look at the confidential documents are you, it's just Mr. Gillis.

MR. ALBERT: Yes.

CHAIRMAN: Yes. So you can let him know that we will be proceeding with the confidential portion of the hearing tomorrow after the Board Counsel and Board questions.

MR. ALBERT: I will tell him that, Mr. Chairman.

CHAIRMAN: Let him know. But if he does, in fact, wish to partake, why he has to be there in person. Mr. Coon?

MR. COON: Mr. Chairman, do you anticipate that Panel B being called tomorrow afternoon?

CHAIRMAN: That would be my anticipation, yes.

MR. COON: And so just to clarify the order of things here.

Board Counsel is not going to cross-examine today?

CHAIRMAN: No.

MR. COON: And the confidential -- the in-camera hearing will not be today?

CHAIRMAN: No. What will happen is after Saint John Energy, Mr. Young, concludes his questions, we will rise for the day. And reconvene tomorrow morning at 9:30. At which

time Board Counsel will conclude the record. And any questions we might have. Mr. Hashey if he has any redirect. And then we will go into the in-camera portion of the hearing, which Mr. Hyslop has indicated -- it's not going to be that long is it, Mr. Hyslop? Are we talking an hour or so?

MR. HYSLOP: I would not be more than an hour. I think I have got three points I want to develop. And they are -- they are not -- it shouldn't take too long.

CHAIRMAN: Well I think the safe thing to do is to say that Panel B will be on after lunch tomorrow.

MR. COON: And Wednesday is the final day of this week, and we recommence Monday?

CHAIRMAN: That's right, yes.

MR. COON: Thanks for clarification.

CHAIRMAN: Okay. Well we were are all -- Mr. Dalzell?

MR. DALZELL: Just in terms of the Panel B tomorrow, Ms.

Flatt and myself will be attending this air quality and health seminar tomorrow all day. Would it be possible to have our opportunity for questioning other than tomorrow on the Panel B?

CHAIRMAN: Oh, I don't see any great problem with that. I think if you want to you can, instead of slipping in Canadian Unitarians for Social Justice's slot, you can go

down to Saint John -- Saint John Coalition -- Citizens Coalition for Clean Air, if you would like. That's okay with us.

MR. DALZELL: Thank you.

CHAIRMAN: All right. All right, go ahead, Mr. Young.

MR. YOUNG: Thank you, Mr. Chairman.

CROSS EXAMINATION BY MR. YOUNG:

Q. - Good morning, Panel A. I have just a few short questions. Just looking for clarifications on a few of your earlier responses to interrogatories from other intervenors.

To begin with can we go to exhibit A-16, which is the slide presentation. And slide 20, if we could begin on that one.

CHAIRMAN: 20, was that 20?

MR. YOUNG: Yes, please.

CHAIRMAN: Yes.

Q. - And if any of these questions are out of your -- your realm, please let me know to go to Panel B.

MR. WHITE: This is a Panel B slide you know?

Q. - Yes. I just wanted to ask you for direction on this. At the bottom of that slide 20 it talks about the Point Lepreau alternative provides least pressure on rates.

From this panel's perspective, what is your idea and

what is your understanding of least pressure?

MR. WHITE: Okay. -- the details you should ask Panel B, please.

Q. - Okay. Thank you. How about slide 24. That slide says, "Can NB Power support the debt?" At the bottom of that slide it says, "Current rates generate sufficient cash flows to service current and projected debt."

MR. WHITE: Again, these are Panel B slides.

Q. - Thank you. If we go to slide 25, part way down through that slide 25 it says, Dominion Bond Rating Service notes, "While NB Power's rates are above average in comparison to other Canadian utilities, partially due to the thermal-based nature of generating capacity." From this technical panel's point of view, what is your understanding of the relationship between the mode of generation and rates?

MR. WHITE: The details of this statement are Panel B. But modes of generation, obviously if you have got to buy fuel, they are different than if you got hydro generation where Mother Nature supplies the fuel.

Q. - From NB Power's perspective, what is your order of least -- or, excuse me, most cost effective to least cost effective mode of generation?

MR. WHITE: Well once you have the plant built, then hydro is the least expensive because, as I say, Mother Nature

supplies the fuel.

Lepreau fueling costs are next. And so we always run that next.

And the prices of Orimulsion and depending on coal, sometimes they are comparable. Sometimes Orimulsion is a little bit cheaper, depending on the coal market.

Then you normally move into oil and gas.

Q. - Thank you. Since Mr. Groom is gone I will leave it to the rest of the panelists. Could someone explain to me basically what a SLAR program -- what the purpose of it was originally when it went in place?

MR. WHITE: Yes, Mr. Pilkington can deal with that. And he might want to refer to the model we have here.

MR. PILKINGTON: Okay. Well, I would -- I will start by just speaking to it. We recognized in the 1980s that -- that there was a problem with garter springs moving. And that as a result of garter springs moving that pressure tubes or the fuel channels would not be properly supported. It's also recognized that without that support the pressure tubes would sag and contact the calandria tubes. And that there was the potential for forming hydrogen blisters at those locations which weakened the pressure tube.

So the industry undertook a research program to try

and develop a technique for moving garter springs back to the design locations. And the only alternative to that would be to replace the entire fuel channels prematurely.

And so SLAR technology became available to NB Power in about, I think 1992 or '93. At that time, we had proposed to retube the entire Lepreau reactor in about 1998. When SLAR technology became available, we determined it was more cost effective to do repositioning of the garter springs.

And so we undertook a program in 1995 to take a six month plant shutdown and to "SLAR the whole reactor". Which meant to visit every fuel channel and to reposition the garter springs using SLAR technology.

Q. - Okay. What technology are you going to put in place this time to stop the chances of springs movement and moving back and forth?

MR. PILKINGTON: Okay. The reason that the springs moved is that they in fact were -- were loose fitting on the pressure tubes and also loose with respect to the calandria tubes.

In the original -- in the original design it was believed that simply the weight of the fuel channels and with fuel loaded would be sufficient to clamp the garter springs in position. And that was the design flaw. It

proved not to be true.

In the design that will be installed, we will be using what is called tight fitting garter springs. And that they actually have a spring fit to the pressure tube and so they will not -- they will not move in service.

Q. - Okay. So there will be no need in the future to ever do another SLAR project with this new technology?

MR. PILKINGTON: That's correct.

Q. - Thank you.

MR. PILKINGTON: Was that -- was that a sufficiently complete answer?

Q. - Definitely.

MR. PILKINGTON: Okay.

Q. - Ms. McKibbon, can you give me just a brief understanding of what your role is right now at Point Lepreau?

MS. MCKIBBON: I am a business manager at Lepreau.

Q. - Okay. What would be your role leading up to and during refurbishment?

MS. MCKIBBON: My responsibility would be for the business planning and financial reporting for the plant. And as we move towards the refurbishment project, I would be responsible for making sure that financial reporting was in place for that as well.

Q. - Were you required to do any financial evaluation of any

of the information and material leading up to refurbishment to give your perspective on it?

MS. MCKIBBON: No, I was not. My responsibility was around the financial projections for post-refurbishment operation only.

Q. - Okay. So you had no -- you had no need or chance to go through that risk assessment from Ernst & Young. You had no understanding of that?

MS. MCKIBBON: I was involved in the process from a point of view of my accountability only.

Q. - Okay. I was just looking for if there is any relationship between that and your previous life at Ernst & Young?

A. No, there is not.

Q. - Thank you. Another question, is there a higher risk of terrorism sabotage during refurbishment than during normal operations at Point Lepreau?

MR. WHITE: I'm not sure how you evaluate whether there is a higher risk of terrorism or sabotage at any time. We take our leads from the Canadian Security Intelligence Service through our regulator the CNSC.

But obviously during refurbishment where you have fuel out of the reactor, the reactor is in a -- and the plant is in a much safer state during those periods of time.

MR. PILKINGTON: I would just add that, first reiterate what Mr. White just said, is that with the fuel removed from the reactor, it's inherently in a safe state.

The other thing is that on the completion of refurbishment, we will be recommissioning the plant. That is doing start-up testing to confirm that, in fact, all of the systems and components are operating correctly.

Q. - Have you had a security risk assessment done on the plant just specifically for this refurbishment?

MR. WHITE: No, we have not.

Q. - Who is going to be doing your security clearance for your contractors?

MR. WHITE: That gets done through us. And we forward the appropriate information to those that are responsible for clearing it.

Q. - Who would be responsible for clearing it?

MR. WHITE: Our security officer for the corporation is the ultimate clearance. And if there is any question, he in conjunction with the station manager, makes the final decisions.

Q. - I guess, just from my perspective, just wondering where is the go or no go? Where is the benchmark for clearance of a contractor? At what point do you say, yes, you are cleared, no, you are not?

MR. WHITE: The process that we have in place is currently applied to all of our staff and all of our clearance people. And the details of that are -- are -- restricted from being able to discuss by our licence.

Q. - Could we go to A-9? Just to the response to the Province of New Brunswick by Hagler Bailly, it's the executive summary, page 1.

MR. DUMONT: Could you repeat that, please?

Q. - It would be the response from NB Power to the Province of New Brunswick and it was the Hagler Bailly report, page 1 of the executive summary. At the bottom -- I will wait -- everyone have that?

At the bottom of that page it states, this raised the concern that these components would have to be replaced at the end of the plant design life or before plant refurbishment was called for.

Are there any major components that you are aware of right now to the original life, these components that you now have to replace them during the refurbishment for a second time?

MR. WHITE: I'm not quite sure what that reference is to yet. We have analyzed the plant from the point of view of addition of equipment and what components would need to be replaced or refurbished in order to run this out for an

additional 25 years that would not be part of the normal O&M programs for the station. Those are the ones that we have identified in our refurbishment and retubing contracts.

Q. - Okay. Could we go to A-1 then, the direct evidence of Mr. White, page 7, line 30 and 31, the bottom of the page.

It says many systems and components --

CHAIRMAN: Hang on just a sec'.

MR. YOUNG: Oh, excuse me.

CHAIRMAN: Okay. Thank you.

Q. - It says, many systems and components had to be redesigned during construction to satisfy evolving standards. Are you aware of any new or evolving standards at this time that could affect refurbishment of Point Lepreau.

MR. WHITE: Well as evidenced earlier, we did a review of the station against current codes and standards to determine whether there were any items that we should undertake that would add to safety margins. And so we have evaluated the station against that. But the station is built to a set of codes and standards and the safety analysis for the station is carried out on the basis of those codes and standards that are included in our licence. So we are required to operate the station in accordance with that licence. And we have no indications

from the CNSC other than what we have identified through our licencing framework that they would intend to impose conditions different than those.

Q. - Okay. Just if I might, a hypothetical question. Could the results of the private interest involvement in Point Lepreau be the sale of Point Lepreau?

MR. WHITE: I don't know the answer to that.

MR. HASHEY: I think we are off into the other grey area.

CHAIRMAN: I'm sorry. I missed the question. If you want to repeat it, if I have to rule on it.

MR. YOUNG: Just hypothetically I am just wondering could the result of outside interests or private interests or outside monies be involved in the refurbishment of Point Lepreau.

CHAIRMAN: Okay. Once again, Mr. Hashey is correct in that we said, look, until such time as the legislation changes, we have to go with what exists on the ground today. We won't get into speculation on what may form part of the new regime.

Q. - Okay. For my last questions could we go to A-5. It's the Province of New Brunswick, page 312. It just talks about staff retention initiatives. Can you just walk me through your retention initiatives? It talks vaguely or briefly about salary adjustment range or salary

adjustments and personnel improvements.

MR. WHITE: The most significant issue in staff retention relates to licenced personnel. It takes about six years to get a licensed control room operator, about eight or nine years to get a licenced shift supervisor. And these people are very attractive in the industry. Not only that, we also have some that are near the retirement age and they can elect to retire as well. And we have the minimum levels of those at this point in time.

So having the prospects for longer term work is an important aspect of retaining staff if they were looking at uncertainty. Nobody wants to go into those programs and spend three to five years trying to get licenced and there is no job at the end of it because your licence does not allow you to go and operate another nuclear plant. It's specific to the plant that you are in.

And so from a staff retention point of view, it's important to retain the licenced staff, otherwise you don't run the plant. They are very attractive in the industry because of the knowledge and skills they have whether they are actually doing a licenced job or whether they are attracted to commissioning or other activities anywhere in the industry.

And thirdly, you won't get people going into those

programs if you don't have reasonable prospects that you are going to have a plant to operate because they are licenced on a specific plant and nobody wants to spend five years of their life doing that and find out there is no job.

There are other people of course that are also key technical staff in the station and we need those skills to run it on an ongoing basis, and that requires considerable training to have those people with the required skills and knowledge to properly carry out their functions.

Mr. Pilkington may want to add a few more items to that.

MR. PILKINGTON: I think Mr. White covered most of the responses to that specific question, but I would add that there is a lot of training within the nuclear industry that goes beyond the training and qualifications that people come in with. Because it's a very specific industry, most of the people that we hire go through fairly extensive training programs in order to do their jobs effectively.

And so being able to attract the best people into the industry depends on a future for the industry, and then being able to retain the best people again depends on being able to provide longterm employment.

So when you get into a situation where the market demands are high, then we have retention issues. If we get into a situation where we reach end of life of the plant, then retention of skilled staff will be a very big concern.

Q. - Can you tell me what the salary adjustment range might be, type of retention --

MR. WHITE: Just to point out the impact here, and we will get to that question. If you lose very many, two or three, of your shift supervisors, chances of us running this plant much more than six months is about nil. Okay.

And so when you are looking at the end of life, whether it happens to be in 2006 or 2032, you have got to have a pretty attractive package to keep those key people here so that they don't want to go away early when the next opportunity comes.

And so we have identified that we may have to pay upwards of an additional years worth of salary to do that so that they have an opportunity to finish the piece of work that they are doing with us and they have got a years time to find another job or do whatever else they need to do in terms of doing that.

Q. - So that's --

MR. PILKINGTON: Sorry. Just in terms of when we looked at

the eventual end of life of the plant post-refurbishment in 2032, we looked at having to provide retention bonuses or payments that would total about 20 percent over salary to about 65 percent of the staff over the last five years of operation. So it's a pretty significant retention cost.

Q. - Have you started doing those retention programs right now before your refurbishment?

MR. PILKINGTON: Well in fact as long as we have a longterm future, then retention isn't a big issue. The biggest issue for us right now is the fact that we have an aging work force and we will be seeing increasing numbers of retirements over the next five years or so, and we are addressing that through human resource planning where we are in fact bringing in new employees in a stage fashion to go through training and development, and then to be available to replace those that retire.

MR. WHITE: We would also make note that the licenced personnel are in very limited supply in Canada and the competitiveness in that industry has been escalating and we have to keep pace with those people in order to keep them.

Q. - Yes, I know. I just lost a senior engineer to Point Lepreau. Can you give me a detail on the pension

benefits, the changes that you would be putting in place for retention?

MR. HASHEY: I think we are maybe getting into labour issues and negotiations and things of that nature that really don't bear particularly. I have let it go quite far, but there are issues and obviously to disclose certain strategies is not a good idea and it really doesn't add anything, I don't think, to this hearing at all.

CHAIRMAN: Well I think that's the point, Mr. Hashey, is that I wonder, Mr. Young, how much it is going to add to what we are doing, and if it did, it to me would be in Panel B rather than this panel.

MR. HASHEY: I think this panel knows more about the resource side of it probably than Panel B.

CHAIRMAN: All right. If you can be far more general in that question, Mr. Young --

MR. YOUNG: I will direct future questions to Panel B and thank you, Panel A.

CHAIRMAN: Wait a minute. I said it seemed to me. I'm not the judge of this at all. But if you put your question again to this panel, but try and make it more general to take into consideration Mr. Hashey's concerns.

MR. YOUNG: I'm satisfied with the answers I have gotten so far. Thank you. Thank you, Panel A.

CHAIRMAN: Just before we rise this afternoon, we were looking at slide 12 in A-16, and -- sorry, it's slide 25 in A-16, and that refers to the Dominion Bond Rating Service notes, et cetera, and both Commissioner Sollows and I, in the back of our minds, had some recollection that NB Power was going to file the entire report rather -- from which that quote came.

MR. HASHEY: I wondered why that wasn't an exhibit. I went looking for it. We had a debate about that.

CHAIRMAN: Mr. Hashey, is there something you would like to put in as an exhibit?

MR. HASHEY: I certainly would. This is the document. I only have the one copy. We can make other copies available, you know, immediately. This is the only one, I just happened to have it in my file this morning.

CHAIRMAN: All right. Do you want to -- well then do you want to put it in first thing tomorrow morning --

MR. HASHEY: That's better.

CHAIRMAN: -- and get copies made.

MR. HASHEY: Okay. Thank you.

CHAIRMAN: All right. We will rise until 9:30 tomorrow morning.

(Adjourned)

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

Reporter