INDEX

Exhibits

Undertakings

with exports is of the total CO2 emissions at the plant during that year within the pro mod model

page 221 - would it be possible to reduce SO2 emissions to the 40,000 tonne limit by reducing exports from the plant?

New Brunswick Board of Commissioners of Public Utilities

Delta Hotel, Saint John, N.B.
January 14th 2002
10:00 a.m.

IN THE MATTER OF an application dated July 12th 2001 by New Brunswick Power Corporation in connection with a proposal to refurbish its generating facility at Coleson Cove

New Brunswick Board of Commissioners of Public Utilities

Delta Hotel, Saint John, N.B.
January 14th 2002
10:00 a.m.

IN THE MATTER OF an application dated July 12th 2001 by New Brunswick Power Corporation in connection with a proposal to refurbish its generating facility at Coleson Cove

CHAIRMAN:	David C. Nicholson, Q.C.
VICE-CHAIRMAN	James E. Bateman
COMMISSIONERS:	Robert Richardson Emilien LeBreton Jacques Dumont
BOARD COUNSEL	Peter MacNutt, Q.C.
BOARD SECRETARY:	Lorraine Légère

.....

CHAIRMAN: Good morning, ladies and gentlemen. This is a hearing of the Board of Commissioners of Public Utilities of the application to the New Brunswick Power Corporation in connection with a proposal to refurbish its generating facility at Coleson Cove.

Can you hear me all right? Because I seem to be getting an echo here. But it is all right? Good.

I have a number of housekeeping items I want to go through before we start the actual hearing. I note that there are, including Board staff and counsel, there are 21 Intervenors or parties to this proceeding.

What I'm going to ask is -- one of the first items of business after I get through the housekeeping things here is that I will ask for appearances.

And if any of the Intervenors really don't anticipate at this time that they want to cross-examine any witnesses but rather are, as the lawyers would say, performing a watching brief, then I would like you to indicate that to me so that when we do go through motions and cross-examination I won't have to call your name out and that sort of thing.

However, if at anytime during the proceeding, even though you said you probably won't want to question witnesses, you change your mind, why, you just raise your hand and say, I do want to question witnesses. And that will just mean I won't have to go through all 21 names every time I call for participation.

You all have received an exhibit list, I understand, from the Board Secretary. If not there are some on the table just outside the door, Mrs. Légère --

MRS. LEGERE: Yes.

CHAIRMAN: -- is that correct? Yes.

And also out there is a letter dated May of 2001 which outlines the procedure that we agreed upon in that generic hearing is the handling of exhibits. That is available for each of you to look at.

We will follow that procedure unless any of the parties have difficulty with it, with the exception that the Power Commission's, Corporation or others' exhibits will be marked with an A for applicant rather than it was on that list. But all the rest of the parties will be the same.

We are asking that this table is left vacant for cross-examination purposes. I see the applicant's witnesses are there now, which is fair enough. But normally that will be left. And anybody asking questions comes up to that particular mike and asks questions of the panel.

Argument and summation will occur, as is the normal, after the close of the record. That will be at the end of this hearing.

If there are Intervenors who have said we wish to have informal status, and I understand from the Secretary there are two parties in that category, then normally all they wish to do is make a statement to the Board and that is their level of participation in the hearing. If when I'm calling for appearances you are in that category, I would ask that you indicate to the Board.

And then since we can't have these premises on Thursday morning, I'm going to suggest to you that perhaps we could have the statements made to the Board at the

Board's hearing room on Suite 1400, Market Square on Thursday morning. Now that is just a suggestion.

The Board has to go to Sussex in the afternoon for a prehearing conference out there in the Potash Corporation of Saskatchewan application.

But we do have the morning available for those statements, if that is more convenient. Otherwise those statements can be made at the end of the hearing on the close of the record.

Transcripts can be obtained for the parties by approaching the shorthand reporter. And she also I understand will give an update each morning of the exhibit lists.

As I have just indicated the tentative timetable is that we take -- this hearing takes this Thursday, January the 17th off and reconvenes again on Friday morning. We do however have to be out of this room by 4:00 at the latest on Friday because the hotel has to set up for other matters. However, we have -- the following week we have all five days.

As you are aware, we had a Motions Day which was held on the 14th of December. And I want to read the Board's decision. Because I think there were only three parties that were present, maybe four. Was it five? Okay. It is five.

Anyhow there are a substantial number of you who were not present. So I will quote from the transcript at page 64, line 18 to page 66 line 5 of the transcript of that December hearing.

And I quote. "The Board has listened to counsel from both sides in this matter. And in reference to the actual motion itself we do find that certain of the business arrangements and agreements between the applicant and New Brunswick Power Corporation and BITOR America Corporation concerning cost, price and price indexation of Orimulsion are confidential. The Board, pursuant to negotiation between counsel and Board counsel, direct that NB Power shall provide all documents governing the arrangements for Coleson Cove between itself and BITOR in a redacted form to the Board and registered Intervenors. Redacted items are to be identified by way of a description of the subject matter. Any party may submit further motions with respect to redacted items other than cost, price and price indexation or Orimulsion. To assist the Public Utilities Board and the Intervenors, a qualified independent auditor will be appointed by the Public Utilities Board to review the agreement, the spreadsheets and input and output information with respect to the analysis, the preparation of all models and statements of all conclusions contained in the NB Power evidence in relation to BITOR in reference

to this application. The auditor shall sign a confidentiality agreement with NB Power. The auditor shall be permitted access to any and all information and data, including electronic data and personnel that he deems necessary or required to complete his report. This auditor shall express his opinion to the Public Utilities Board and the Intervenors as to the accuracy of the inputs and outputs and identify and report on the extent of any inaccuracy in the analysis and conclusions. The Public Utilities Board and the Intervenors will be permitted to file additional interrogatories with respect to the redacted copies and the report of the auditor. The auditor shall be subject to examination on his report at the hearing in this application. The auditor cannot be examined with respect to any redacted items. And the Board so rules."

And as a result of that, Mr. Easson was appointed the auditor for the Board and has produced a report which has been sent to all of the parties which will be introduced in evidence in a short time. And the Board will then call Mr. Easson and allow any of the parties to ask questions of him.

As you know, there was a scheduled Motions Day on December the 19th. But as no parties indicated a desire to have that Motions Day held, it was not held.

Now Mr. Hashey has indicated to the Board that he wished to change the way in which certain witnesses are presented to the hearing and a combination of the panels, et cetera. And I'm not going to attempt to paraphrase what it is that Mr. Hashey wants to say, I will let him say that himself. I would suggest that after he has done that, if there are any motions to be made in reference to what he is suggesting, why then that is the appropriate time to do it. So those are my housekeeping items.

I will now go back and take appearances please. And the first intervenor is Bowater Maritimes Inc. Is anyone here representing Bowater Maritimes Inc.? Okay.

The second is Canadian Unitarians for Social Justice?

MR. FLATT: Yes, I am Don Flatt. I don't expect to be cross-examining at this point.

CHAIRMAN: You understand, Mr. Flatt, that if you change your mind wave your hand, okay. Great. City of Saint John.

MR. CAMPBELL: Yes. Craig Campbell here for the City. I don't expect to be cross-examining.

CHAIRMAN: All right. And again, you understand, Mr. Campbell, all you have to do is raise your hand if you change your mind.

Conservation Council of New Brunswick. I would say that has something to do with last night's snow storm.

Fraser Paper Inc. Rodney J. Gillis.

MR. GILLIS: John Gillis. And I would also not anticipate cross-examining at this time.

CHAIRMAN: Not like your father, Mr. Gillis.

MR. GILLIS: Not yet.

CHAIRMAN: Irving Oil Limited.

MR. EARLE: Brian Earle from Irving Oil. We don't anticipate cross-examination at this time.

CHAIRMAN: Thank you, Mr. Earle. J.D. Irving Limited.

MR. MOSHER: Mark Mosher from J.D. Irving. We do not expect to be cross-examining.

CHAIRMAN: That is Mark Mosher?

MR. MOSHER: Mosher, yes.

CHAIRMAN: Thank you. The Province of New Brunswick as represented by the Department of Natural Resources and Energy.

MR. HYSLOP: Yes, Mr. Chairman. Peter Hyslop and later in the day as well it will be Mr. Donald Barnett. I would also note for the record we are also representing the Department of the Environment.

CHAIRMAN: I have always treated you as sort of a blanket appearance on any department that wants to make representations. is that fair, Mr. Hyslop?

MR. HYSLOP: That's fair, Mr. Chairman. Without interrupting the process, I do note one small thing. The

exhibits, last year we were represented with the acronym DNRE. For this setting of hearings I guess we would use PNB. I just thought I would bring that to the Board's attention. And in our interrogatories were filed with PNB as opposed to --

CHAIRMAN: So that is actually on the list that I have in front of me here to the left. But you are referring to that whole May --

MR. HYSLOP: 14th.

CHAIRMAN: Yes, okay. All right. Appreciate you bringing that to our attention.

The Saint John Citizens Coalition for Clean Air.

MR. DALZELL: Yes. Gordon Dalzell present.

CHAIRMAN: Saint John Energy. Union of New Brunswick Indians. UPM Miramichi Inc. And the City of Edmundston. Westcoast Power, staff indicates that they were unable to make the air connections to get in this morning and they are hopeful to be here after lunch.

Canadian Manufacturing and Exporters. Emera Incorporated. Enbridge Gas New brunswick Inc. We have got a full room but they are not calling out, I can tell you that.

Saint John Board of Trade.

MR. BORDAGE: Harold Bordage representing the Saint John Board of Trade.

CHAIRMAN: Mr. Bordage you want to reserve the right then to cross-examine witnesses?

MR. BORDAGE: No, sorry. I don't expect to wish to cross-examine.

CHAIRMAN: And again, if you change your mind let us know. Saint John Construction Association Inc. And Board staff.

MR. MACNUTT: Yes, Mr. Chairman. Represented by Peter MacNutt as counsel for the Board.

CHAIRMAN: Any intervenors that I have missed? Now both of the parties Emera Inc. and EGNB or Enbridge Gas New Brunswick who had indicated to us that -- and the Canadian Manufacturers I believe, yes, and Exporters -- those were the three parties that indicated they wanted to have informal status, which would entitle them to address the Board at some point. None of them are represented here today, so perhaps at lunch time we will try and figure out when it is they want to make their address to the Board.

Mr. Hashey, would you like to tell the room your intended plan?

MR. HASHEY: Thank you, Mr. Chairman. Would it be okay if I sit? I don't want --

CHAIRMAN: Yes, by all means.

MR. HASHEY: -- to talk to the back of people. But I think you can hear me in here.

CHAIRMAN: If you can't hear Mr. Hashey let us know by

raising your hand.

MR. HASHEY: Thank you, Mr. Chairman. As we have indicated to everyone in writing, there was been a slight change in what we propose as far as how the evidence is presented. Since the evidence has been filed and the interrogatories filed, Mr. Stewart MacPherson has become President and Chief Executive Officer of NB Power. To require Mr. MacPherson to stay throughout the hearing would be very difficult, as you can understand he has a number of other obligations that would attach to this new position.

Mr. MacPherson, however, is here. He is sitting directly behind me. And he will present his evidence. And we request that he be allowed to present his evidence solely without being part of the panel. Mr. MacPherson would give an overview of the project and I would request that he be stood down after he has presented this evidence and then we proceed with the panel.

Now Mr. MacPherson will return if requested by the Board or any Intervenor to answer questions. The panel that is being put forward are prepared to answer any questions that would relate to Mr. MacPherson's evidence or the general evidence that has been presented here.

As a result of this change in intended plans which we would request that you consent to, we would then have one panel that would consist of a chairman which is Mr. James

Brogan and he would chair the panel rather than what was intended as Mr. MacPherson would be chairing the first and then the second by Mr. Brogan. But Mr. Brogan would take over the overall chairmanship of that.

The panel will -- the panels that were listed, being A and B, we would request be combined as one panel. Now that is not intended to any way interfere with cross-examination as it may be intended. We still have the same people that gave the evidence here. They are all very high officials of NB Power, as you can see. And they are prepared to answer any questions in any order that you may or the Intervenors may wish to have.

Now prior to putting the panel forward for cross-examination, we would request that the panel be permitted to give a short presentation. Each member of the panel will give an indication of sort of a summary of his evidence. Now this is being done hopefully for the benefit of the Board. You have had books and books of evidence and interrogatories. And what I would hope in a presentation that I would expect would not take more than a couple of hours maximum, that the members of the panel could give you a summary of their evidence so you can understand where they are coming from. It's not intended to give any new evidence per se. The evidence is there.

There may be in the case of Mr. Thomas a bit of

extension on his evidence. There was a lot of requests made for more detail in relation to construction cost. Well things have moved ahead since the time that these interrogatories were asked and it would be intended that a more detailed breakdown be provided by Mr. Thomas.

We will have slides that we would use similar to the fashion that we did when we had the earlier generic hearing. Hopefully this approach would simplify the matters for the Board and sort of pull things together a little better than maybe would happen by way of the massive evidence and even more massive interrogatories that you have been receiving.

We would intend to hand out copies of the projection slides to all Intervenors and all parties, so that they could follow what was being said. Then we would be prepared to proceed with the cross-examination. Prior to that there are a couple of little -- well, little -- there is a couple of -- not a problem, there is a couple of small areas in the evidence that we would like to have Mr. Marshall address. And he will do that in his presentation and then go on a little bit further to clarify a couple of changes that have resulted from calculation differences.

I would think that in the time that people tried to complete interrogatories we realized the massive material. To have done that in a week and not have a small flaw

here

and there would be pretty, pretty difficult. I mean, it's a -- you can imagine the massive task. I don't really personally understand how it is possible to complete those things but they were done on time and they are all before us.

So I guess the first request I would have, if need be, by way of motion then you allow us to proceed in only a slightly different fashion which has been necessitated by the change in the hierarchy of NB Power as a result of Mr. MacPherson becoming the President.

CHAIRMAN: Just so I understand it, Mr. Hashey, your intention is that Mr. MacPherson will give his examination in chief and then be stood down and be returned at some time in the future for cross-examination if necessary, is that correct?

MR. HASHEY: That is correct, Mr. Chairman.

CHAIRMAN: Well let's just deal with that one now. I'm not going to go -- let me see. I think the better way to proceed on this, rather than calling out all, is to ask if there are any parties -- I know the Province of New Brunswick has some difficulty with this proposed change. Any of the Intervenors who appear before the Province of New Brunswick on the list and that includes Bowater, Canadian Unitarians for Social Justice, City of Saint John, Conservation Council, Fraser Papers, Mr. Gillis,

Irving Oil and J.D. Irving. Do any of those have difficulty with it -- what is requested? If not, I will call on you, Mr. Hyslop, to address the Board.

MR. HYSLOP: Thank you, Mr. Chairman.

CHAIRMAN: You can stay seated. It probably means that your voice will be picked up for translation and magnification even better.

MR. HYSLOP: Thank you, Mr. Chairman. As I understand from my colleague's comment, it is his intention to have Mr. MacPherson give his very short statement or something this morning and then be stood down to the end of hearing. Am I correct in that? I interpreted the earlier letter we received differently. Perhaps that could just be clarified so I know what Mr. Hashey is asking.

MR. HASHEY: That would be the intention. I mean, it would be a matter of at the convenience of the Board or Board members with a little bit of notice provided to us we could bring Mr. MacPherson here if required. As indicated, there is no intention not to try to restrict -- or we do not intend to try to restrict cross-examination of the remaining panel members on anything that Mr. MacPherson may have touched upon either.

MR. HYSLOP: And on the understanding that if it was requested by the Intervenors at a later date to have Mr. MacPherson brought back, that part of Mr. Hashey's motion

is not objectionable to the Province then, Mr. Chairman.

CHAIRMAN: Okay. Thank you then, Mr. Hyslop. Mr. Dalzell?

MR. DALZELL: No. We don't have any objections because some of the questions that we have are with panel B and other witnesses, so we would not object to their request.

CHAIRMAN: And from my notes here, the other Intervenors are either not present or have indicated they have no questions, so Mr. Hashey would you therefore -- from the Board's perspective, that seems to be a reasonable suggestion and we will proceed in that fashion. And if Mr. MacPherson is required to come back, we will all try and cooperate to make it convenient to both Mr. MacPherson, but also to the hearing process itself.

As to the second one, that has to do with the combining of the panels which would mean that there would be five witnesses and that would be all the evidence that -- that would conclude the evidence for NB Power. Am I correct there, Mr. Hashey?

MR. HASHEY: That is correct, Mr. Chairman. There are no additions or deletions from those witnesses that have been indicated.

CHAIRMAN: Okay. And again, from my scanning of the notes, the -- any of the intervenors that appeared before the Province of New Brunswick either are not here, indicated they don't want cross-examination, so I call again on Mr.

Hyslop to indicate his difficulty with this proposal.

MR. HYSLOP: Yes, Mr. Chairman, thank you. The structure proposed by Mr. Hashey I think creates some logistical problems. The evidence consists of two sections, one is the construction, and the details of construction, the methodology of supplying various product. I think that that is separate from the policy issues to the broad -- broad evidence as to the cost of the different projects.

And I think that the evidence has been presented and responded to consistently on the basis and on the understanding that that was the way that the method would be presented. I think it stands to reason that -- reasonably expect that that will be the continued way of presenting the evidence and presenting the case of the applicant, and it certainly allows I think the parties to -- some of whom may have had more interest perhaps in construction costs and others dealing with policy issues to deal with that part of the case that they are interested in. So I -- while we are certainly at the discretion of the Board, we are of the view that mixing the two up may create confusion, it may create some difficulty for some of the parties who may not be represented by counsel in preparing their cross-examinations in a fashion consistent with the presentation of the evidence.

Our view would be to proceed with section A with the first panel consisting of Mr. Marshall, and Mrs. MacFarlane and have them deal with the evidence that was presented in the section A.

CHAIRMAN: Thank you, Mr. Hyslop. And, again, I don't think there is anyone appearing on the list of Interveners after the Province that wishes to speak. But if there is, by all means raise your hand and you can have your input into this motion.

Mr. MacNutt, do you have any wisdom you wish to share with the Board?

MR. MACNUTT: Nothing other than to say, Mr. Chairman, that all the panel -- both panels will be in one single panel and anybody who structured their questions in a particular order, I think you will be able to do so even with the combined panel, because all members are available simultaneously.

CHAIRMAN: Thank you, Mr. MacNutt. We will hold the decision on that for a few minutes.

The third part, as I recollect Mr. Hyslop's letter, is that it deals with the possibility that by adopting this use of slide showing and a quick overview by each witness of their evidence, that that causes some difficulty. Am I correct in classifying the third thing here, Mr. Hashey, in that fashion?

MR. HASHEY: I believe that's what Mr. Hyslop said. We don't intend to give any great new evidence here. It's a matter of trying to bring it together as I have stated, Mr. Chairman, but Mr. Hyslop can speak.

CHAIRMAN: Okay. Mr. Hyslop, do you want to address the Board on that?

MR. HYSLOP: Thank you, Mr. Chairman. It's a fine line between new evidence and summing what is already there. And, again, my understanding of the practices that this Board has normally allowed short opening statements, essentially setting out what they are going to try to establish and the nature of the panels, and an overview of the evidence.

If there are going to be slides, I have never seen the slides yet. There may well be a summary of the evidence. If there is new evidence or new comments, or new information contained in those slides, that's the first time I have seen it. I understand that we are supposed to receive the evidence and have the opportunity to ask questions about it, and have responses before we get here. I would hope that if the Board was to allow a motion, extreme caution would be exercised by the Power Commission that they are not going into new materials. We felt -- I remember we went through this process at the generic hearings. And on the generic hearings, Mr. Chairman, in

fact the slides contained a lot of information and became the subject of cross-examination themselves and formed part of the evidence. And, again, it's a fine line. I just don't want to be taken -- have to deal with new information coming out.

CHAIRMAN: Mr. Hyslop, your concern, does that extend to -- I forget whether it was Mr. Wilson or Mr. Thomas that Mr. Hashey mentioned was going to be filing more detailed information in reference to costs because of the nature of interrogatories that have been submitted. Would that be included in your -- in your concern here?

MR. HYSLOP: Yes, it would be, Mr. Chairman. If there is new information in Mr. Thomas' whatever -- whatever he is going to say or whatever slides he is going to refer to, if they are materials we haven't seen before, the Province would be of the view that it should be presented to all of the parties, and if we have questions we can ask him. They are obviously going to create a delay for the Board. But at least we would like to see it ahead of time and not for the first time on the screen if it's new information.

I don't know the policy of the Board, but I'm told that this interrogatory process has been a procedure of the Board in these hearings. And under the Pipelines Act there is a procedure that sets that out.

And I just don't know where Mr. Hashey's presentation

fits into the procedure as contained in the Pipeline. I realise this is not a pipeline application.

CHAIRMAN: The approach actually in reference to interrogatories is an attempt through written question and answers to remove time from the hearing process itself, and to narrow down the issues for the hearing. That has been the approach. If in fact certain things arise on the second set of interrogatories, then it is a -- it's a given that counsel and parties will cross-examine the witnesses in reference to that.

The Board is going to retire for just about three minutes to discuss both of these motions.

MR. MACNUTT: Mr. Chairman?

CHAIRMAN: Sorry?

MR. MACNUTT: Just a couple of comments. It is my understanding if the slides were handed out now, then the slide presentation could take place with people having the material in hand to view it as it goes on. And therefore they can prepare any questions they may have arising out of the slides.

And it should be noted that the presentations made or the summaries given obviously will be open to cross-examination.

And just a final point. It is a little bit outside of what we are dealing with now. It would be my

understanding that immediately before Mr. MacPherson begins his summary, that Mr. Easson, the Board's witness with respect to the report, would be put on the stand and qualified before Mr. MacPherson. Or if you wish him to follow Mr. MacPherson before the panel give evidence?

CHAIRMAN: Before. I thought I made that clear in my housekeeping things, but perhaps not.

The Board would appreciate it if you would draw the mike over a little closer to the front of you, Mr. MacNutt.

MR. MACNUTT: Mr. Chairman.

CHAIRMAN: Thank you.

MR. HASHEY: Mr. Chairman, could I just give a --

CHAIRMAN: Yes, Mr. Hashey.

MR. HASHEY: -- brief response to that?

Really what you will be hearing are short opening statements if you decided to go with this panel idea and their presentation. There would be nothing more. The visual aids I thought would be helpful.

Yes, they will be distributed. They haven't been because we haven't got a ruling from you yet. If you would like me to distribute those at anytime, we do have them for everyone.

I should also add that Mr. MacPherson won't be using visual aids as far as this morning goes.

The third point I would make if Mr. Hyslop is taken by any of this, which I'm sure he really won't be, then if he needs some extra time to cross-examine and return with further questions, it seems to me that we have got this Thursday break that would accomplish that quite nicely as well.

But I don't think you will find that there is any significant new evidence, just concisely summarize what has already put forth given this massive amount of material.

Thank you, Mr. Chairman.

CHAIRMAN: Thank you, Mr. Hashey. We will take a quick break. (Recess - 10:40 a.m. - 10:55 a.m.)

CHAIRMAN: Board counsel indicates to me or indicated that you had arrived and you had been made familiar I understand with the three parts of -- or the three motions that are before the Board right now.

And the first one the Board will hear you on has to do with Mr. MacPherson's attendance as a witness and his recall at a later time for cross-examination.

Do you want to address the Board on that matter?

MR. COON: Yes, Mr. Chairman. I just want to clarify though will Mr. MacPherson be available today for cross-examination?

CHAIRMAN: That was not the intention, no.

MR. COON: No? Okay.

CHAIRMAN: No.

MR. COON: And if there are questions on his evidence initially can they be directed to other members of the panel?

CHAIRMAN: Yes.

MR. HASHEY: Yes.

CHAIRMAN: Mr. Hashey is indicating yes. And if they don't feel qualified to answer, then they will be referred to Mr. MacPherson when he comes back for cross-examination, if necessary.

MR. COON: That will be acceptable to us.

CHAIRMAN: Okay. Well, then that is fine. Because all parties then agree to that.

The second part had to do with combining the two panels. And your position on that, Mr. Coon?

MR. COON: On that, Mr. Chairman, we oppose the proposal to combine the two panels A and B. We have prepared all of our interrogatories of course on the basis of that split and our cross-examination on the basis of that split.

We feel it important to keep that structure to keep some adherence to our cross-examination.

CHAIRMAN: To be quite frank we -- the Board recognizes there are pros and cons to that. I mean, if your cross-examination -- I would anticipate that you would be able

to ask your questions of the first panel witnesses and then on cross and deal with them and then go on to the last panel and deal with them. And if any of the first panel want to assist in answering, then good.

I can understand if you are not -- if counsel or parties are not prepared and they were counting on the time between the first panel concluding its evidence to get ready to cross-examine the second panel.

The Board frankly has some difficulty in anticipating why combining the two would cause the Intervenors difficulty. If I were counsel for the applicant I would have difficulty with having the two combined more than I would anticipate the Intervenors.

If you want to -- either you or Mr. Hyslop want to address what I have just said, please do.

MR. COON: Well, I guess when we just see the evidence of initially the original two panels as separate enough that our preference would be to be able to deal with them on a consecutive basis rather than in a combined manner.

CHAIRMAN: Well, we hear what you have said. And if it turns out during the hearing that a pretty obvious difficulty arises because of the combination, then we will approach this again at that time. But otherwise we will grant Mr. Hashey's motion to allow him to combine the two panels at this time.

The third matter that we are dealing with, Mr. Coon, had to do with Mr. Hashey's proposal with the use of some audiovisual assistance, not for Mr. MacPherson, but for the five panellists who would be called after, use audiovisual slides. And they will present a brief summary of each witness' testimony with the assistance of those slides.

And Mr. Hashey made it known that he has paper copies of the slides here today and is prepared to provide them to the various parties.

And Mr. Hashey, correct me if I'm wrong, but you anticipate that the panel won't be getting into that until probably after the lunch break today, is that correct?

MR. HASHEY: Correct, Mr. Chairman. And we do have those available.

CHAIRMAN: Okay.

MR. HASHEY: To hand out immediately if you authorize.

CHAIRMAN: Yes. All right. Any comments on that, Mr. Coon?

MR. COON: Yes. Our primary concern on that would be as long as it is -- well, if it were more than brief -- in other words, if this was going to take an awful lot of time -- we would have concerns.

Because we have had plenty of time to review all of the evidence and gone through the interrogatory process, so -- and prior to this the information meetings. We just

don't feel much need to hear all presentations on the evidence.

CHAIRMAN: Thank you.

MR. HASHEY: And they won't be long.

CHAIRMAN: Okay. Well, frankly any method that can be used to bring greater clarity to the evidence is always appreciated by the Board.

And I emphasize that if something the parties opposite believe is new comes in, why then draw it to the Board's attention in these summaries.

We will allow the method that Mr. Hashey is proposing to proceed. And in particular on the undertaking that they will be brief summaries. But that is what we are here for is to try and have this evidence as clear as it possibly can.

And if that will assist in this panel doing it then we are all in favor of it and hear what both you and Mr. Hyslop have said. And we will keep that in mind. So we will let Mr. Hashey proceed in that fashion too.

Maybe now is a good time, Mr. Hashey, for you to have someone hand out those slide matters before we --

MR. MACNUTT: Mr. Chairman --

CHAIRMAN: I can't hear you, Mr. MacNutt.

MR. MACNUTT: I know. They haven't turned on the mike.

MR. MACNUTT: Mr. Chairman, you have covered points 2 and 3

of the three issues raised by Mr. Hashey. What exactly is your position and the position of the Board on Mr. MacPherson's --

CHAIRMAN: Mr. MacNutt keeps me in line, you see. In fact the two Intervenors had indicated that they were prepared to go along with it, Mr. MacNutt, subject to the ability to recall Mr. MacPherson.

And I should have said well, that is fine, since all the parties see eye to eye we will proceed in that fashion.

MR. MACNUTT: Perhaps while the documents are being distributed, if I can have Mr. Easson come up to the witness stand and take position 6.

CHAIRMAN: Did you give one to all parties?

MRS. LEGERE: Yes.

JOHN EASSON, having been duly sworn, testified as follows:

DIRECT EXAMINATION BY MR. MACNUTT:

CHAIRMAN: Now I think, Mr. MacNutt, subject to what you and Mr. Hashey have to say, I believe there are some exhibits that should be introduced.

And they probably should be introduced now before you begin with Mr. Easson, in that his report is to be put on the record.

But there are some other things. And the Secretary will shoot me if I don't get them on in the sequence she

wants them. Because she has got them already prenumbered.

MR. MACNUTT: Yes, Mr. Chairman.

CHAIRMAN: Maybe the thing to do is that when the parties are first speaking they could raise their hand so that the technician in the back of the room can tell who is trying to speak.

In this case Mr. MacNutt raises his hand.

MR. MACNUTT: It is my understanding, Mr. Chairman, you want me to provide the documents. I would propose to have the witness identify and mark as exhibits and provide them to the Secretary now? Well, there are -- I was going to do them in sequence.

CHAIRMAN: Well, the last one I have on my exhibit list, Mr. MacNutt, is A-5 for the applicant.

MR. MACNUTT: No. Yes. This will be B-2, my understanding.

There is one Board exhibit now which was from the December 5 --

CHAIRMAN: Okay.

MR. MACNUTT: Excuse me. PUB-2 will be the first new document introduced.

CHAIRMAN: You are not close enough to that mike, Mr. MacNutt. I'm sorry.

MR. MACNUTT: As like you, I can hear an echo. So I think I'm doing as well now.

CHAIRMAN: Yes. I -- apparently my concern was ill-founded.

Because of course they are under -- you can introduce whatever exhibits you want to on behalf of the Board now.

Then Mr. Hashey can introduce the applicant's ones which include the prefiled evidence and interrogatories, et cetera. And he can do that after you have, Mr. MacNutt. It doesn't interfere with the exhibit marking scheme.

MR. MACNUTT: Thank you, Mr. Chairman.

CHAIRMAN: Okay. So what is it that you wish to introduce?

MR. MACNUTT: Well, I will go through in sequence with the witness, Mr. Chairman.

CHAIRMAN: Okay. Your witness.

Q.1 - Please give us your full name and address?

A. My name is James Harvey Stephen Easson. My address is 4378 Maisonneuve Boulevard West, Westmount, Quebec. H3Z 1L3.

Q.2 - And what is your normal line of work, Mr. Easson?

A. I'm a Chartered Accountant, a sole practitioner.

Q.3 - Have you prepared a curriculum vitae?

A. Yes, I have.

Q.4 - I'm going to show you a copy. That is your c.v. as prepared by you?

A. Yes, it is.

MR. MACNUTT: Move to introduce the document as identified by the witness as an exhibit, Mr. Chairman.

CHAIRMAN: That will be PUB 2.

Q.5 - Mr. Easson, would you please provide us with a very brief overview of your professional qualifications?

A. I'm a Chartered Accountant. I have 22 years experience as a partner with KPMG which was formerly Peat Marwick Mitchell & Co.

I was an engagement audit partner. I predominantly looked after clients of -- in the industrial sector, large Canadian and international clients. I was also the engagement partner for Nova Scotia Power Corporation for years.

And since 1988 I have acted as a consultant to the Board of Commissioners in the regulation of NB Tel, NB Power and then Enbridge Gas New Brunswick.

MR. MACNUTT: Mr. Chairman, based on the witness' qualifications I move to have him to be declared as an expert in the field of chartered accountancy and regulatory accounting and entitled to give opinion evidence with respect thereto.

CHAIRMAN: Any objections to Mr. Easson being so qualified?

Okay. Fine. The Board will recognize Mr. Easson as an expert in the field that you have requested, Mr. MacNutt.

And you can proceed with opinion evidence.

MR. MACNUTT: Yes.

Q.6 - Mr. Easson, would you please explain how you became

involved with this Coleson Cove Refurbishing Project hearing before the Public Utilities Board?

A. I had received and reviewed the evidence prepared by NB Power in support of its application. On December the 5th I was contacted by the Chairman of the Board who described the order of December the 5th to me.

And he requested that I act as what is called the auditor in the order. And I accepted the arrangements. We signed an engagement letter on December the 6th.

MR. MACNUTT: Mr. Chairman, I'm going to read from the transcript of the December 5 Motions Day at pages 64 to -- 64 through 66.

I know it is a little repetitive. But I would like to have the Board's order on the record in the context of Mr. Easson's testimony if you don't mind.

CHAIRMAN: I thought I did a fine job reading.

MR. MACNUTT: Mr. Chairman, I'm on page 64 of the transcript of the December 5 Motions Day. "The Board has listened to counsel from both sides in this matter and in reference to the actual motion itself we do find that certain of the business arrangements and agreements between the applicant and New Brunswick Power Corporation and BITOR America Corporation concerning cost, price and price indexation of Orimulsion are confidential.

The Board, pursuant to negotiation between counsel and

Board counsel direct that "NB Power shall provide all documents governing the arrangements for Coleson Cove between itself and BITOR in a redacted form to the Board and registered Intervenors. Redacted items are to be identified by way of a description of the subject matter. Any party may submit further motions with respect to redacted items other than cost, price and price indexation of Orimulsion."

"To assist PUB and the Intervenors, a qualified, independent auditor will be appointed by the PUB to review the agreement, the spread sheets and input and output information with respect to the analysis, the preparation of all models and statements of all conclusions contained in the NB Power Evidence in relation to BITOR in reference to this particular application. The auditor shall sign a confidentiality agreement with NB Power. The auditor shall be permitted access to any and all information and data (including electronic data) and personnel that he deems necessary or required to complete his report. This auditor shall express his opinion to the PUB and the Intervenors as to the accuracy of the inputs and outputs and identify and report on the extent of any inaccuracy in the analysis and conclusions.

"The PUB and the Intervenors will be permitted to file additional interrogatories with respect to the redacted

copies and the report of the auditor. The auditor shall be subject to examination on his report at the hearing in this application. The auditor cannot be examined with respect to any redacted items. And the Board so rules." That's the end of the quote.

You were provided with a copy of this, Mr. Easson?

A. Yes, I was.

Q.7 - And what did you understand your mandate to be?

A. I understood that NB Power was bound by a confidentiality agreement with BITOR not to disclose details of its supply of Orimulsion, including the prices and price indexation, et cetera.

And, accordingly, NB Power could not provide supporting evidence for the tables and opinions that it expressed in its evidence.

And that my mandate was to review the contract with BITOR, and to ensure that the prices quoted and supply conditions quoted in the -- in the contract were accurately reflected in the various calculations carried out by NB Power and included in evidence in various illustrated tables and figures.

Q.8 - Did you sign a confidentiality agreement with NB Power?

A. Yes, I did.

Q.9 - Do you have a copy with you?

A. Yes, I do.

Q.10 - You have a copy. And you have compared the copy with the original, and the copy is a true copy of the original?

A. Yes, I have.

Q.11 - I move to introduce the agreement. What is the date of the agreement?

A. The agreement is dated 11th of December 2001.

Q.12 - And it's between?

A. It is between New Brunswick Power Corporation and James Easson.

MR. MACNUTT: I move to introduce a copy of the agreement as identified by the witness as an exhibit, Mr. Chairman.

CHAIRMAN: It will be PUB-3, unless there is an objection.

Q.13 - Mr. Easson, with respect to information in the files of NB Power in relation to BITOR and Orimulsion relevant to the Coleson Cove refurbishment application, in carrying out the review of the agreement, the spreadsheets, and input and output information with respect to the analysis, the preparation or all models and statements and all conclusions contained in the evidence in relation to BITOR and expressing the opinion as to the accuracy of the input and output and reporting on the extent of any inaccuracy in the NB Power analysis and conclusions, what professional standards and code of conduct did you adhere to when doing same?

A. In carrying out the review I adhered to the standards

specified by section 9100 of the CICA handbook which covers the application of specified quality and procedures to specific information. This is financial information other than financial statements.

So the procedures I followed are described in my report of December the 13th 2001. I would like to point out that although the court order referred to the appointment of an auditor, I did not do an audit of the information. Simply on the specific information related to the cost of Orimulsion in the BITOR contract.

Q.14 - You just mentioned -- you just mentioned that you prepared a report, is that correct?

CHAIRMAN: The mike doesn't appear to be working.

Q.15 - Ah, we are operational again.

Mr. Easson, I just heard you mention that you prepared a report of your work. Do you have a copy of it there?

A. Yes, I do.

Q.16 - Have you compared the copy with the original and find it exact?

A. Yes, I have. Yes, it's a photocopy.

Q.17 - Or do you wish to introduce the original signed copy?

A. Well the original signed copy is a master which has been reprinted on letterhead.

Q.18 - Okay.

A. I have taken a copy of the --

Q.19 - You have a true copy of the --

A. Yes.

Q.20 - -- report there? I move to introduce the report as identified by the witness as an exhibit, Mr. Chairman.

CHAIRMAN: That will be PUB-4, subject to any comments of Intervenors.

MR. MACNUTT: Mr. Chairman, the witness is now available for examination with respect to his report in accordance with the limitations contained in the Board's order.

CHAIRMAN: Since it is a Board witness, I will ask if the applicant, New Brunswick Power Corporation, has any questions would they put them to the witness now.

Mr. Hashey, do you have any questions?

MR. HASHEY: No questions.

CHAIRMAN: Okay. Then with the Intervenors, I presume Mr. Coombs -- well, I know that you want to be able to ask questions. We went through the whole thing before you came. Anyway, do you have any questions of this witness?

MR. COOMBS: No questions, Mr. Chairman.

CHAIRMAN: Okay. Mr. Hyslop?

MR. HYSLOP: Yes, Mr. Chairman.

CHAIRMAN: Okay. Raise your hand so that -- yes.

CROSS-EXAMINATION BY MR. HYSLOP:

MR. HYSLOP: I have a few short questions, Mr. Chairman.

Mr. Easson, I understand that you reviewed the tables and

what are referred to as screening curves in the evidence to test their accuracy. Is that correct?

A. That's correct.

Q.21 - Many of these screening curves and tables are based on evidence or information, for example, overhead variable costs, would you have tested the accuracy of the input numbers that were provided by NB Power to prepare those tables and screening curves?

A. The only element of variable cost I would have looked at would have been the cost of Orimulsion.

Q.22 - So, for example, any curves involving the variable cost of natural gas, you accepted the numbers as presented to you by NB Power?

A. Yes, I did.

Q.23 - And would that same set of assumptions hold to other input factors used by NB Power in the preparation of these tables and screening curves?

A. Could you tell me what you are referring to, please?

Q.24 - Okay. For example, they assumed a discount rate of 7.15 percent as being reasonable. Part of your engagement was not to test the reasonableness of that assumption?

A. It was not to test any of the other variables, no.

MR. HYSLOP: Okay. Thank you very much, Mr. Chairman.

CHAIRMAN: Any questions by any of the other intervenors? Okay. Thank you, Mr. MacNutt.

CHAIRMAN: You may stand down, Mr. Easson, thank you.

MR. EASSON: Thank you, Mr. Chairman.

(Witness stood down)

CHAIRMAN: Now, Mr. Hashey, do you have some exhibits that you wish to have the Board mark at this time?

MR. HASHEY: Mr. Chairman, you are referring to our evidence and the interrogatories?

CHAIRMAN: I am.

MR. HASHEY: Now the documents in the list circulated marked A-1 to A-5 are already marked, is my understanding?

CHAIRMAN: That's correct, Mr. Hashey.

MR. HASHEY: So we would offer the direct evidence of NB Power as being marked as A-6. I believe everyone has a copy of that.

CHAIRMAN: During the lunchtime break I will physically mark the Board's original copies rather than hold the hearing up now. So that's the pre-filed evidence is A-6.

MR. HASHEY: Then as A-7 would be NB Power's responses to interrogatories number 1, which was dated November 20, 2001. There are two volumes to this. And we would suggest that volume 1 be marked as A-7.

CHAIRMAN: And volume 2 is A-8?

MR. HASHEY: Correct. Thank you.

CHAIRMAN: Yes.

MR. HASHEY: Then there is the -- as A-9 we would suggest is

NB Power's additional responses to CCNB supplemental 25 and PNB interrogatories 20, 27, 29, 31, 35, 45, 51, 53, 54 and 56 and is undated but it's binder volume 1 of 1 which has been circulated. And I request that that be marked as A-9.

CHAIRMAN: All right. Next?

MR. HASHEY: As A-10 would be the NB Power responses to supplemental interrogatories dated December 5, 2001. And that's binder volume 1 of 1.

CHAIRMAN: Okay.

MR. HASHEY: The only other possible exhibit at some point I expect, Mr. Chairman, you would want to mark the presentations but maybe you would want to do that afterwards or just before?

CHAIRMAN: In other words, when the witnesses are going to be called after lunch?

MR. HASHEY: Yes.

CHAIRMAN: Yes. We will do that perhaps at that time. Thank you.

MR. HASHEY: No further.

CHAIRMAN: Would you call your first witness then, Mr. Hashey?

MR. HASHEY: Yes. The first witness is Mr. Stewart MacPherson. Mr. Chairman, it would not be my intention to specifically put questions to Mr. MacPherson. I believe

he is known to most everyone here in the room and his position, of course, currently is President and CEO. And we would ask Mr. MacPherson if he is ready to give his overview of this project?

CHAIRMAN: Go ahead, Mr. MacPherson. And the Board's congratulations, by the way.

MR. MACPHERSON: Thank you very much. Mr. Chairman, Board, Intervenors, ladies and gentlemen, with the introduction of the energy policy by the Province of New Brunswick in the spring of last year, it was evident that NB Power was going to have to continue an obligation to supply all customers that wanted to get -- or to obtain supply from NB Power. Now we went through that with the generic hearing in the summer.

And three criteria that NB Power has with respect to meeting these obligations are 1) to provide a reliable source of electricity for our customers. 2) to meet all the environmental standards that are required of a generator in New Brunswick. And thirdly, to do that at our least possible cost.

During the generic hearing we presented to this Board our load forecast and the available resources that we had to meet that forecast. And in the decision of the generic hearing the Board stated "The Board is of the opinion it is unlikely that any changes to the marketplace would be

significant enough to eliminate the need for the 1,000 megawatts of capacity from Coleson Cove."

Just to give you a reference 1,000 megawatts of capacity at Coleson Cove represents approximately a third of the load that we supply in the province at peak load during the wintertime. So it's not insignificant in terms of our meeting our obligation to supply our customers.

When we did a review of the Coleson Cove generating station, it was precipitated by a couple of factors. Number 1 was the existing operating licence at Coleson Cove required us to provide a plan to reduce our SO2 emissions below 40,000 tonnes per year at that plant. That was specific to that plant, so that precipitated a plan with respect to how we could operate that plant in the future.

Secondly, negotiations that the New England governors and Eastern Canadian premiers have had over the last number of years have set targets with respect to SO2 and NOx and CO2 that NB Power is going to be a participant in enabling the province of New Brunswick to meet the targets set. Coleson Cove being one of our -- being the largest individual source of emissions from NB Power's system in the province, obviously will play a major role in terms of allowing us to meet those targets.

When we did a review of Coleson Cove it was evident

that continuing the existing operation of that plant, which is burning heavy fuel oil, three percent heavy fuel oil would not allow NB Power to meet these future environmental standards.

We analyzed the numerous options that were available to us in order to maintain that thousand megawatts of capacity into the future. In order for these options to be viable they had to meet two criteria. Number 1, they had to meet the environmental standards that we saw coming in the future, and secondly, it had to provide reliable energy to meet the obligations that we have. Once it met those criteria, then we then analyzed the various options based on cost.

The lowest cost options were then analyzed against the various scenarios that were identified at the generic hearing. So at that generic hearing we identified how we wanted those various options analyzed, and that was what was presented in evidence with respect to this project.

Under all of these scenarios the Coleson Cove Orimulsion project was the least cost option. From a planning point of view that is rather unique that when analyzing projects based on different variables, that one project continually comes to the top with respect to being the lowest cost option.

From the two rounds of interrogatories it is apparent

that there are a number of issues which we needed to address. In layman's terms, one is why not utilize natural gas and the second is what is the future impact of CO2 obligations. The interrogatory process dealt with those quite extensively. And the panel will be prepared to deal with those quite extensively as well.

As well issues were raised with respect to timing of this project, why do it now? Why conduct these hearings at this present time? I would just like to review those from our perspective.

In addition to the issue of cost of natural gas and assumptions that were used in analyzing the options, a key issue with respect to natural gas is the volatility, and that was responded to in the interrogatory process. The historic volatility of natural gas is 65 percent. Volatility with respect to heavy fuel oil, which is the fuel that we burn at Coleson Cove today, 35 percent. And with respect to Orimulsion, 6 percent. We consider that this Orimulsion fuel will allow us to bring some stability to our cost and thereby to the rates that we charge our consumers over time.

There are a number of issues with respect to natural gas, not the least of which is what the price will be or what the availability will be. We felt that through the whole process of analyzing the option of natural gas we

would be as aggressive as we could with respect to the pricing and availability of natural gas. So we gave it, we felt, every advantage that we could with respect to pricing and availability to make sure that we didn't give it short shrift with respect to it as an option for Coleson Cove.

CO2. Coleson Cove Orimulsion project provides we realize a minimal reduction in NB Power CO2 emissions. And we are going to improve the efficiently of the plant. That will provide some reductions of CO2. However, we realize that in meeting a global target that that is not all that we are going to have to do with respect to reducing our CO2 emissions.

We have a plan that we have put forth with respect to redispatching our system and to reducing our export sales and allowing us to meet those CO2 targets. The bottom line for us is that this project along with the resultant plan is the most cost effective solution to meet those future CO2 targets for New Brunswick.

Lastly, with respect to timing of this project. As we have identified through the interrogatory process and through the initial evidence, there is significant value to NB power of getting this project on line without delays. We are looking at having it in service in the fall of 2004. And there is significant value of getting

it -- of not seeing it delayed for a year with respect to implementation.

PUB is now part of the process. And we feel that we are at a good stage now with respect to the project such that it's time to bring it before this Board for a decision.

These issues will be dealt with by our panel but to give you some idea of where we think we are with respect to this project and why it's appropriate now to make a decision with respect to whether or not we move forward. First off, we feel we have a good estimate on the project. We have contractually been able to deal with the fuel supply for the project and we feel we have a credible project plan. And our panel will address all of those issues for you, to make sure that you are comfortable with that as well. The time is now to deal with whether or not we move this project forward and start spending the dollars that are required to bring it on line by the fall of 2004.

In conclusion, we feel that the implementation of the Coleson Cove Orimulsion project will result in our environmental requirements being met and a significant reduction in the environmental emissions from Coleson Cove, a reliable generation supply to meet the obligations that we have to supply customers in the

province. It will put downward pressure on our costs. This is a project where the savings from fuel costs will more than offset the additional capital costs associated with making the environmental improvements in that plant, so it has downward pressure on our costs.

Cost stability. Cost stability is a real concern we hear from a lot of our customers who have to make commitments and make investments in the province in order to ensure their long term future. So stability is a key factor in that regard in that the volatility of Orimulsion we feel that we can contribute to price stability for our customers.

And lastly, it is going to allow us increased competitiveness in export markets. These export markets -- the margins that we get from those export markets go to reducing costs to all of our consumers in the province today. And we believe and it -- that it is important to continue to maintain those benefits that we get from export sales in order to continue to provide them back to our customers by virtue of reducing their costs of energy in the province.

I appreciate -- in closing, I appreciate the concessions that have been made by the Board and the Intervenors with respect to myself and the -- with respect to combining the panels to allow a full hearing of this

project and I would be more than willing and more than happy to come back and address any issues or concerns that the Board or any of the Intervenors may have at the conclusion of this process. Thank you very much.

CHAIRMAN: Thank you, Mr. MacPherson. The witness may stand down subject to recall at a later time. Mr. Hashey, you can, and I'm sure you will, brief Mr. MacPherson about talking about testimony between the time of his examination in chief and cross, which will be difficult in that he is now the President and CEO of NB Power. But I will leave that up to you, Mr. Hashey.

Thank you, Mr. MacPherson.

(Witness stood down)

MR. HASHEY: Mr. Chairman, we now are at the point that I would like the panel to come forward. I might suggest that we might take a bit of an early noon hour. There has to be some redistribution here of the screens and things to be done.

If that is -- it won't be long, you know. We certainly -- by the looks of things now we are going to be at to cross-examination this afternoon. Whatever your pleasure is.

CHAIRMAN: Precisely what do you want done here? Do you -- I think it is a little early to break for lunch now.

MR. HASHEY: Well, we would have to have a break to change

to bring the screen out --

CHAIRMAN: Okay.

MR. HASHEY: -- to reconfigure the room just a little bit for the panel.

CHAIRMAN: All right. We will take a break. And let us know when you are done reconfiguring, Mr. Hashey.

MR. HASHEY: Thank you.

(Recess - 11:40 a.m. - 11:58 a.m.)

CHAIRMAN: Mr. Hashey, is it your intention to give the slides that you passed out before the break an exhibit number at this time?

MR. HASHEY: Yes, Mr. Chairman, if that would be suitable.

CHAIRMAN: Okay. Anybody any objections? If not the binder called "Coleson Cove Refurbishment Project, presentation to the Public Utilities Board, January 14th 2002" will be A-11.

Okay. Go ahead, Mr. Hashey.

MR. HASHEY: Thank you, Mr. Chairman. If it would suit your convenience, what I would like to do is introduce the panel and then request that Mr. Brogan give his overview evidence prior to the break.

It could be then followed by the other panel members. And you of course have to swear the witnesses at some point.

CHAIRMAN: Sounds good. Could somebody open the door back

there? It is an open public hearing. Thank you, sir.

MR. HASHEY: I'm reminded or somebody has informed me that we are now having some technical difficulties with the machine. Hopefully that will be up before Mr. Brogan has to testify.

But we will have to have a short break while it is corrected.

CHAIRMAN: Do you think the operator is able to do this?

MR. HASHEY: I think Mr. Bhutani has come through again. Thank you.

Mr. Chairman, the presentation overview, on the second page of your exhibit A-11 it indicates who the participants are and the nature of the overview that they will be giving.

Mr. Brogan, who is Vice-President, Generation Business Unit Conventional, will be giving the project requirement and project particulars initially.

Then from panel A as it was originally set forward, Mr. Bill Marshall, the Director of Strategic Planning, will deal with the project planning.

Then following Mr. Marshall will be Sharon MacFarlane, the Vice-President of Finance and Information Systems, who will be giving a presentation on the financial statement impact analysis.

We will then go to the second part which you have

previously identified as part B which is the project costing process to be given by Gaetan Thomas, the Project Director, followed by the environmental process which is Glen Wilson, the Director of Environmental Affairs. Mr. Brogan would then conclude the presentation in a very short manner.

Possibly this would be the appropriate time to swear in the panel.

CHAIRMAN: It would be if we could find the Secretary. There she is. While the Secretary is approaching the panel we will be suggesting that each panel member, as their turn comes, to make their presentation, they would move to where you see the computer set up so that they could operate the screen themselves.

And they will be speaking from that area. They have microphones which are attached to them. The remaining panel would stay in place where they are currently sitting.

MR. HASHEY: That seems fine.

CHAIRMAN: Thank you.

SHARON MACFARLANE, BILL MARSHALL, JIM BROGAN, GAETAN THOMAS, GLEN WILSON, sworn:

MR. HASHEY: Thank you. The panel having been sworn, Mr. Chairman, I would ask that Mr. Brogan would proceed with his presentation.

MR. BROGAN: What I would like to cover in my presentation is the drivers, the requirement to refurbish the Coleson Cove facility. There is a requirement to reduce the environmental impacts from the station.

We do need the reliability or the energy from the Coleson Cove generating station as well. And finally it is the most economic option and contributes to stable and competitive rates. Those are the primary drivers.

First on the environmental side there is a requirement, as Mr. MacPherson stated earlier, to reduce our emissions to 40,000 tonnes in 2005. That is a requirement of the existing operating licence.

As well an agreement between the Maritime Premiers and New England Governors calls for a 30 percent reduction in the system emissions from all of NB Power in 2005. So our total emissions have to be reduced to 86 and 1/2 thousand tonnes by 2005. Further requirement to reduce 50 percent or bring all emissions down to 61,500 by 2010.

In the area of NOx emissions, again there is a requirement placed on us between the Eastern Canadian Premiers and New England Governors to reduce our NOx emissions at Coleson Cove -- or sorry, the whole system by 30 percent in 2007. And Coleson Cove is our largest emitter of NOx.

Again we do need a highly reliable source of energy to

meet our winter electricity requirements. And Coleson Cove provides a 30 percent or approximately a third of our peak demands in the winter.

However, also in the winter, when we have our highest demands, our hydro system is limited. We have 880 megawatts of hydro capacity. But there is very little water. So we are very limited on the amount of energy we can get from our hydro system in the winter. And Coleson Cove is needed to supply this demand.

Basically the hydro system is not available to us in the long term. It is only available for a few hours in the winter on a daily basis.

Now the hydro system does have other benefits. It helps meet our reserve requirements where we -- there is a requirement to have energy available within a very short period of time. It is a matter of minutes.

So our hydro system is very quick to respond to meet our reserve requirements. So it can be brought on very quickly. And it is used in that fashion.

The next major benefit from our hydro system is that even in periods of a year, where there is limited water, basically we can pond our water or have no energy production in the middle of the night and save water to meet the peak demand in the morning. So that is another very valuable benefit from our hydro system.

Coleson is a critical source of energy. It is more assured than run of hydro, again because there are limitations on weather, the rainfall that is available. It also is less costly and more reliable for continuous operation than combustion turbines.

Combustion turbines, the primary role is to provide a reserve or a backup, similar to our hydro system. The primarily role is to supply capacity. The energy is very expensive coming off of combustion turbines. And the best way to get reliable low-cost energy would be from the Coleson conversion or refurbishment project.

As well, Point Lepreau Generating Station is scheduled for an 18-month refurbishment outage or for retirement in 2006. So the Point Lepreau station will have to be replaced for a minimum of 18 months as part of the refurbishment of it.

So we need a reliable replacement energy to satisfy the energy requirements here in the province. The Coleson Cove project can economically help us meet this load or this need while Point Lepreau is shut down.

A statement coming from the generic hearings in June 2001, it is unlikely that any changes to the marketplace would be significant enough to eliminate the need for the thousand megawatts of capacity from Coleson Cove.

Coleson Cove provides one-third of provincial winter

demand, as I said. So it absolutely is essential to the in-province requirements during the winter.

Project particulars, cost is estimated at $747 million. The plant would be in service in November 2004. And its life would be extended from 2017 to 2030.

Major work to be undertaken as part of the conversion project are boiler modifications and combustion equipment to allow the switching from the heavy fuel oil used today to the Orimulsion fuel.

So boiler modifications just allow the burning of the new fuel. Burner modifications in the boiler are required to reduce the NOx emissions.

Also our plans would be to install a scrubber to reduce the SO2 emissions. As well we would add a wet electrostatic precipitator to reduce fine particle emissions.

And finally turbine improvements will be undertaken to improve the efficiency of the total plant.

The plant layout, just highlighting the major areas of work and what has to be undertaken as part of refurbishment, number 1 depicts a new supply system to the plant. So we need a new delivery system, depicted as item 1. The plan would be to use the existing pipeline that is now moving heavy fuel oil into the station.

Item 2 are the existing oil storage tanks at the

plant. We would not propose to add additional storage capacity at the station. But the existing tanks will have to undergo modifications to handle the new Orimulsion fuel.

3 depicts the boiler where we would do the boiler modifications to allow the fuel switch itself plus burner modifications to address the NOx emissions and reduce those emissions. So that will be handled by in-furnace or boiler modifications for NOx emissions.

4 depicts the existing electrostatic precipitator. It is at the station now. And it will be rebuilt as part of the project just to bring it back to a new status.

5 depicts the fly ash or the particulates which are currently collected at the station. We will also collect the particulates from Orimulsion and we will sell the fly ash into the U.S. steel industry, as we are doing today and as we do at our Dalhousie operation. So that byproduct will be sold.

8 depicts the scrubber, 6 the limestone. Scrubber functions by create a slurry of limestone and water, mix that or inject it into the flue gas stream. And that is how we remove the SO2.

And the byproduct there is gypsum which is used in the wallboard industry. Gypsum is depicted as 7.

9 shows the location of the wet electrostatic

precipitator. It would be added in the flue gas stream after we have scrubbed the flue gas stream and removed the SO2. Then we would install new equipment, wet electrostatic precipitator to remove the final particles that are left in the flue gas stream.

And 10 shows a requirement to build a new stack as part of the project.

Just to give you a sense of the burner modifications that are needed to reduce the NOx emissions, A depicts the existing burners in the boiler. That equipment will be totally replaced with what is called low NOx burners, burners that produce less NOx by their very design.

We would also add re-burn burners. This would be a complete additional row of burners where in the main burners we may put in about 80 percent of the total fuel volume, there would be another row of burners depicted as B called re-burn burners where we would inject the remaining 20 percent.

At this point in the design, basically the furnace is what we call starved of air. There was not enough air to complete combustion. And that is how you reduce the NOx emissions. You actually starve the flame.

So C would have added to the boilers an over-fire air injection system to complete the combustion process and keep the efficiency of the boiler up.

Now looking to the scrubber and SO2 emissions, A depicts the flue gas stream going to the scrubber, having just left the dry electrostatic precipitator. So A is the flue gas entry.

B is the slurry of limestone and water that is injected into the flue gas stream to mix with the SO2 and create the gypsum.

Now the final step in creating the gypsum, we depict the nozzles at the very bottom, we would inject oxygen in as well. So the final project would be gypsum which is removed, comes out of the bottom of the wet precipitator. D just depicts the flue gas on its way to the stack.

Now the wet electrostatic precipitator which is being added to remove the fine particulates, A depicts the flue gas stream having left the scrubber, now entering the wet electrostatic precipitator.

In the areas of B and C the equipment creates a high voltage electrical field. And by creating that high voltage and ionizing the particulates that are still in the gas stream, they are attracted to the plates depicted as C in the pictorial.

So that is the technology. We ionize the gas. Particles are attracted to the collector plates. From there the -- or a certain frequency, those plates are washed to keep the plate clean.

And that washed particles end up dropping into the scrubber and form part of the gypsum. That is where they are trapped and locked at the end of the process.

And F just shows the flue gas leaving the wet electrostatic precipitator and now traveling to the new stack.

Fuel delivery is another major piece of the refurbishment project. We have three possible options. First is to offload the fuel at Canaport, the existing Irving Oil Limited operation. Next option is offload at Pier 10 right here in the harbour in the city. And the final option is the installation of a mono-buoy at Coleson Cove. It would be a dedicated mono-buoy simply to receive the fuel right at Coleson Cove.

At the present time all negotiations and all work is focused on either the Canaport option or the Pier 10 option. Putting a mono-buoy in at Coleson Cove is at the back burner right now, and there is no work going on in that area. So we are focused on making a final decision be it either Canaport or Pier 10.

MR. HASHEY: Thank you, Mr. Brogan. I believe that completes, Mr. Chairman --

CHAIRMAN: Just I have one thing.

MR. HASHEY: Sure.

CHAIRMAN: Can you go back one slide? It had an area called

mist eliminator. What on earth is that?

MR. BROGAN: Because the process -- it does need a large volume of water mixed with the limestone, and if -- the reason we have the mist eliminators is actually to remove as much of that water as possible, and it will drop back down into the scrubber. We will separate out the gypsum and re-use the water. So we are trying to capture as much of the water as we can with those mist eliminators.

CHAIRMAN: Thanks, Mr. Brogan.

MR. HASHEY: Thank you, Mr. Chairman. That completes Mr. Brogan's presentation. The next one would be Mr. Marshall, but it might be appropriate to break and then we could finish the presentation this afternoon at a reasonable hour.

CHAIRMAN: We will break for lunch then. Does 1:30 give people sufficient time? All right. We will rise and be back at 1:30 then.

(Recess - 12:30 p.m. - 1:30 p.m.)

CHAIRMAN: Any preliminary matters before we start on with the panel?

MR. HASHEY: No, Mr. Chairman.

CHAIRMAN: Mr. Hyslop does.

MR. HYSLOP: Yes, Mr. Chairman. Very briefly. There was some issue as to any instructions the Board was going to give with regard to Mr. MacPherson and discussion of his

evidence between now and any later date that he may be recalled. And I was of the view that he should be restricted to some extent in the discussion of his evidence as it goes forward.

CHAIRMAN: As I said, we will leave that up to Mr. Hashey to -- during the break this morning, I have supplied Mr. Hashey with a copy of the Board's regulations in reference to procedure under the Gas Distribution Act and that I think covers it quite well, so we will let Mr. Hashey give it to his client on that basis.

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

CHAIRMAN: Thank you, Mr. Hyslop. Anything else?

MR. HASHEY: If Mr. MacPherson is being recalled, I assume that somebody would indicate, you know, we would like to have him back. We want to question him on a specific area, I have no problem either. But as far as trying to coach him on something, I don't know how you can do it but we will leave that. I understand your instructions, and thank you for that. Fine.

CHAIRMAN: If there is nothing else then go ahead, Mr. Hashey. Mr. Marshall please.

(Off the record)

CHAIRMAN: Mr. Marshall, you are now on.

MR. MARSHALL: Well I know there has been some objections to these presentations. I didn't know they would go quite so

far to deal with the technical problems.

The planning exercise that we have gone through to deal with the project involves two main areas. First of all, screening of all the possible supply options in comparison to the project option. And then a detailed integration analysis where the supply options and -- are integrated into the existing system and modelled over the long term. And from that analysis we get the project economics and environmental emissions. And I will talk about those two things.

So in the screening the Orimulsion conversation project was screened against all available supply options for Coleson Cove replacement. And that includes purchases, Coleson Cove redevelopment on different fuels, oil, natural gas. The development of new power plant on oil, gas, coal, nuclear, Orimulsion. Renewable developments with wind and hydro, and alternative developments with fuel cells and microturbines.

The screening analysis involves the following activities. First of all, it's a definition of what the possible supply options are. Then a determination of power costs for each of the options. A comparison of the results and out of that identification of the potentially viable options for detailed evaluation that could be compared against the Orimulsion project.

So to determine the lowest cost options, the life cycle power costs of each option was computed at various capacity factors. And these comparative power costs were then plotted as screening curves to indicate which options would be the lowest cost.

And this is an example of the screening curve with the face options. And I will take a little bit of time here to point out how to read this graph.

First of all though, before we go through that I want to point out that there -- in going through our reevaluation of all of the data and evidence submitted, we did discover that there was an error in the screening curve spread sheet related to the gas conversion option. There was a double counting of the capital costs inside the spread sheet. And you can see on this graph -- I want to report this error. You can see the dotted line here is where the reported information was. The solid red line at this point now is what the corrected value is for the gas conversion option.

And when you look at the -- and the gas conversion option in this case is the refuelling option of the existing Coleson Cove power plant using the same boiler, the same turbine, same generators but firing the boilers with gas rather than with oil.

Now to read the screening curve, this is really a

fixed variable cost analysis over the life cycle of the power project. You can see that at zero capacity factor on the X axis, zero capacity factor over at the origin, the intercept on this axis is the fixed cost of the project. And the slope of the line will be the variable costs. So depending upon what capacity factor it operates at you then get what the total cost is at that point. Clearly the lowest cost is the lowest line on the graph.

So you can see that out in this range the Orimulsion conversion option, the blue line, is lowest cost for all capacity factors above 40 percent. The oil blend option is lowest cost for capacity factors up to 40 percent.

And the error that we discovered in the gas conversion option lowers the cost of the gas conversion option. But as you can see, it's still a higher cost than the existing oil blend and a higher cost than the Orimulsion. At no time is the gas conversion option on the screening curve the lowest cost except for 1 percent capacity factor at this point in time. So that the error that we found really has no bearing or impact on the overall results of the case or on the application.

CHAIRMAN: May I interrupt you, Mr. Marshall? Mr. Hashey, do you have an exhibit that we can mark to replace the chart that has that error on it?

MR. HASHEY: Yes, Mr. Chairman. At noon today we discussed

this. The intention was at the conclusion of Mr. Marshall's testimony and that of the rest of the Board, we will point out in the evidence exactly where these -- where this error is found and how it affects it. And we will have at that time a handout for people so that they needn't just take their book and mark it up, is that suits you?

CHAIRMAN: Mmmm. Subject to what the other players have to say.

MR. HASHEY: It would seem like --

CHAIRMAN: You are going to highlight wherever this error occurred.

MR. HASHEY: Yes.

CHAIRMAN: So it's not just in the reproduction of this graph. There is an underlining error then?

MR. HASHEY: There is a correction to be made in other places, yes. And we will have that -- we will have that for everyone.

CHAIRMAN: All right.

MR. HASHEY: Maybe -- and I don't know if there are any other errors that you found but perhaps --

MR. HASHEY: Two other small ones we will deal with through -- one through Mr. Marshall and one through another witness.

CHAIRMAN: All right. Perhaps --

MR. HASHEY: Not ones that we consider to be significant in the overall presentation.

CHAIRMAN: I guess the rest of us will have to pass --

MR. HASHEY: You will have to judge that too.

CHAIRMAN: But I would suggest, Mr. Marshall, when you hit the other error on yours explain what it is. For instance on this one say it's not just in the graph. It's also in a couple of other exhibits and we are going to be correcting those at the end. Okay. Fine. Thank you. Sorry to interrupt.

MR. MARSHALL: So as a result of the screening curve process, where all the options were compared, the three potentially lowest cost alternatives were identified. And those three alternatives are the conversation at Coleson Cove Generating Station to Orimulsion fuel. The continued operation of Coleson Cove on blended oil with additional boiler NOx controls. And a new 400 megawatt natural gas combined cycle plant combined with the continued operation at Coleson Cove on oil. And in the third case, the NOx controls were deferred to 2014, but the operation on oil would also be blended oil if necessary to stay below the 40,000 tonne limit at Coleson Cove.

Now in response to interrogatories there were requests for additional analysis. That analysis was done. And two natural gas options were also considered as alternatives

for Coleson Cove. One being the refuelling conversion of Coleson Cove burners to burn natural gas. And it's this particular option in which the error was determined in reevaluating and going back through the details of those calculations where we found that error.

Initially it was not found because the results that we got on the Coleson Cove conversion were in the same ranges as we expected the results to be. In looking at them we didn't see there was any error to be detected until we went back through in a lot more detail to find where it was.

The additional option that was evaluated was replacement of the entire Coleson Cove plant with new natural gas capacity, 800 megawatts of combined cycle and 200 megawatts of combustion turbines.

And these two options really were done in response to interrogatories from the City of Saint John, I believe it was.

Now as a result of the screening process the three potentially lowest cost options for Coleson -- where do we go? I'm going backwards here. Excuse me. Now following then identification of the three main options and the two alternative gas options, the proview analysis which is the integration of the options with all of the existing system data was done. And this begins by modeling the system at

this point in time and projected into the future with all known and projected data.

That is the load forecast, all the supply resources available, retirement schedules, maintenance schedules of all units, fuel prices, escalations, discount rates, environmental emission constraints and environmental emission rates from units, export sales, export revenues. So all of those are modeled in addition to the alternatives.

And this integration analysis then generated development plans with all possible combinations of all of the supply options. It models these plans in detail out to 2020 and then determines end effect costs between 2020 and 2030. And then based on the total costs it ranks these plans in order of their net present value cost to compare the relative economics.

Now by net present value cost we determine the cost of the capital, the cost of the O & M, the cost of the fuel in each year for each option. And then the total cost in each year is discounted at the 7.15 percent discount rate back to 2001 to determine the total cost in 2001 discounted that would be the cost over the full 30 years out to 2030. So that is what a net present value cost is.

And then following the economic evaluation the models were also run in detail and computed environmental

emissions were determined to ensure a compliance with all the environmental standards.

The runs that were done with the proview computer modeling program, a base case analysis was completed using all of the projected data. And the projected data is our best projection of the future in terms of cost, load, everything. So this is -- this is what we consider our best projection of the future situation.

In addition to that, sensitivity analyses were conducted on a number of variables, load forecast, natural gas prices, discount rates, capital cost variation, export market variations, environmental emissions costs.

All of those were ones that were identified in the preliminary hearing, the generic hearing back in June to be done and considered through evaluation of any refurbishment project.

In addition to that, we added a sensitivity of removal of the Point Lepreau refurbishment. Because in the underlying assumptions, Point Lepreau refurbishment is assumed to go forward in the base case.

But in order to determine the impact if Point Lepreau did not go forward, we took it out and reevaluated everything. So it was reevaluated with and without the assumption Point Lepreau would go forward.

In addition a stress case assuming a combination of

sensitivities which would disadvantage the project was developed. And these ones that we included in this stress case were the low gas prices, reduced export sales.

And the reduced export sales are a reduction in the quantity of exports and also a reduction in the price of exports. So it would be a reduction in revenue as well as a reduction in quantity, no load growth beyond 2010 and adding in environmental emissions costs.

And the results of the analysis, for the base case the results are that the Orimulsion option is the lowest net present value cost over the study period to 2030. It is $393 million lower than the oil blend case, 503 million lower than the gas oil blend, 1,086 million lower than the gas conversion, the refueling conversion.

And you can see here the impact of the error. And this would be in Saint John Energy interrogatory number 1, I believe, where this was run and this analysis was provided. It was reported as 1,372. It would be 1,086 after the corrected error in the refueling conversion option.

And Coleson Cove was also lower cost, 1,402 million lower than the 1,000 megawatt new gas case which was the combined cycles plus the CT's.

For the sensitivity cases the results showed that the Orimulsion option remained the lowest net present value

cost of the three alternatives, actually of the five alternatives, adding the two gas ones as well, for each of the sensitivity evaluations.

And this is a unique situation. My experience in terms of evaluation of projects, usually one alternative under some sensitivity will come up to be lower cost than the main project. In this case the Orimulsion project is lowest cost under every one of the sensitivity evaluations.

For the stress case, results of the stress case are that Orimulsion option remains the lowest cost again. But its margin decreases. And the ranking of the other options changes -- well, in this case with only two it doesn't. It is 76 million lower cost than oil blend, 173 million lower cost than gas/oil. And it is also lower cost than the two natural gas cases.

When you look at the environmental effects of the project, Coleson Cove Orimulsion option can provide significant reductions in sulphur dioxide, nitrous oxides and particulate emissions.

The average emissions rates are reduced for NOx by 70 percent or better, sulphur dioxide by 77 percent or better and particulate by 55 percent.

Now these charts were provided and reported in the evidence in the integrated resource planning document.

You can see the SO2 emissions in comparison here to the actual emissions from the year 2000.

And then we look at the three main options that were considered, Orimulsion, blending and the gas/oil case. And we can see here that for SO2, the Orimulsion option is the lowest SO2 emitter of all three options in 2010, 2015 and 2020.

For NOx emissions -- let me just back up a minute too. I also want to note that the current limit on sulphur dioxide emissions that NB Power has to adhere to is 123,000 tonnes.

The limit for 2005 is about 86,000 tonnes, right in this range here. And the limit for 2010 is 61 and 1/2. And you can see that all options get below the limit. Orimulsion is well below the limit.

For NOx emissions the proposed limit as from the New England Governors and Premiers for 30 percent reduction in NOx emissions by 2007, we have interpreted that as 30 percent of actual 2000 emissions.

And so we have set a limit of 18,000 tonnes to be met by all options. Orimulsion stays well down below this, below 15,000 tonnes. So we have about a 3,000 tonne cushion against that limit.

And it is the lowest cost case -- lowest emitter case in 2010. Out in the longer term they adjust, depending

upon the development option.

As you move out to 2015 the blending case builds a new gas combined cycle unit. So that is where you get the reduction here. We install the NOx control equipment in this case where you get the reduction. So it is a question of timing on the alternatives for NOx removal capability.

Now there are different targets for carbon dioxide emissions. The Eastern Canadian Premiers and New England Governors have set stabilization at 1990 levels by 2010 and 10 percent below 1990 levels by 2020.

The Kyoto Accord has targeted a 6 percent reduction below 1990 levels on the average of 2008 to 2012. On this basis New Brunswick Power's baseline 1990 CO2 emissions are 8.3 million tonnes.

So comparing that 8.3 million tonnes against the projection in the evaluation, we see here -- here is our actual emissions from year 2000 of about 9.4. And in the modeling there are not significant reductions in carbon emissions in any of the cases.

We can see here that Orimulsion is higher than the proposed Governors' limit and higher than the Kyoto limit. The gas/oil case meets the Governors' limit but does not meet the Kyoto requirements. And all options are higher out in the 2020 time frame. So we have a significant

challenge here.

But dealing with the 2010 time frame, to meet 2010 targets, NB Power would need to reduce current and projected levels by about 1 and 1/2 million tonnes. And we have identified that this can most economically be achieved by taking two actions.

The first action would be a redispatch of up to 1,500 gigawatt hours of lower emission generation. Now by redispatch what I mean is normally the power system is dispatched in terms of lowest cost. And the last ones you put onto the highest cost units.

But if you include a cost effect of the emissions as well as the fuel in doing the dispatch you can now -- there will be an economic advantage to lower emitters to be dispatched ahead of a higher-emitting plant. And you can gain some reductions.

This is what happens here, that Orimulsion actually, under this scenario, Orimulsion would dispatch ahead of coal and reduce emissions.

In addition to that we would reduce up to 1,500 gigawatt hours of export sales. And these are export sales at a low margin of about $12 a megawatt hour.

Now the New England market price ranges over a wide range. Over the last two years the price would range from zero -- and sometimes, even some hours I think it has gone

negative -- but from around zero to $6,000 a megawatt hour has been the range of volatility on the New England market price.

In our models we are assuming a $55 average price as the revenue in terms of export sales. We would -- we would reduce these exports in the off-peak periods when the margin is a much lower price, so that the cost is the least amount. And we would continue to sell into the high-margin prices in order to get the best advantage for our customers.

Now as a result of these two options we have responded to interrogatories, I think PNB 55 where the calculations are shown that with the redispatch and the export sale reduction, the reduction cost is about $15 a tonne. And I believe in response to the interrogatory, specifically it is $14.7 a tonne.

Now this is a cost that we see as the cost of CO2 reduction that we can undertake unilaterally. But if there are trading opportunities that are available and the governors and premiers have targeted in their plan to have -- investigate and try to put in place markets to provide for CO2 trading throughout the region by 2010, if there are trading opportunities available at that point in time then potentially we could buy credits if they are lower than $15 a tonne or if we had more credits at 15 we could

sell some economically.

Now achieving the 2020 targets will require additional actions. We could do some more redispatch but there are limits to the amount of redispatch with coal and we would have to redispatch with much higher -- if we redispatched with gas the cost of the reductions will be significantly more. We can do greater reductions of exports but if we reduce more exports we have to go to higher margin exports and the cost will be more.

We can go to new wind and hydro developments, so we are developing new emissionless sources, potentially even nuclear. And of course we can go to conservation energy efficiency so that the load wouldn't be there to supply it and again the emissions wouldn't be associated with it. So all of these things are things that are necessary to look at and to pursue in order to get to emission targets for 2020.

Now the stress case that we did economic evaluation on gives an indication of the kinds of emissions that are possible given some of these options are achieved. And the amount of emissions in the stress case is reasonable but the cost of achieving the emissions that are shown in the stress case will clearly I think be higher than the $15 a tonne.

And in response to an interrogatory to the province of

New Brunswick we were asked about those additional costs. We have not quantified those costs and are not able to at this time until the mechanisms are in place that we know what trading is possible, we know what we really would -- we would redispatch but -- so there will be some additional costs, but it is possible to get emissions down and under the stress case you can see that the Orimulsion case gets below not only the 2010 target, also below the 10 percent reduction by 2020 of 7.5 million tonnes.

So in conclusion I would like to state that based on our economic evaluation and our evaluation of emission, system emissions that the Orimulsion option is the least cost option on a net present value basis over the 30 years. Not only is it least cost over the 30 years, it is robust and maintains its least cost advantage for all of the sensitivity evaluations, so over a wide range of change of variables it remains the least cost.

The project will help stabilize costs in the long term and, actually as Mr. MacPherson said this morning, helps to put pressure on cost reduction in our system or reduces pressure for increasing costs, because the first year accounting costs of the project is lower than the average system costs and lower than our current costs. So there is a contribution to cost reduction.

The project will bring environmental improvements in

sulphur emissions, NOx emissions and with some work we will be able to achieve our carbon targets. And not only will it do so it will achieve the carbon emission targets at lower costs than any of the other options.

And that concludes my presentation.

MR. HASHEY: Thank you, Mr. Marshall. Mr. Chairman, we will recall Mr. Marshall on that point that you mentioned. Maybe it would be best -- I would think that we continue on -- we don't have a long presentation to go from here on as you can see from your book, and then we will deal with that error again to straighten that out.

CHAIRMAN: Yes, fine, Mr. Hashey.

MR. HASHEY: Thank you.

CHAIRMAN: Just before you start with Ms. MacFarlane. The City of Saint John has -- is represented -- I'm sorry, not the City, but Saint John Energy. Ms. Coughlan came in I guess shortly after the break this morning, has been here ever since. And I just want the record to show that.

Go ahead, Mr. Hashey.

MR. HASHEY: Thank you, Mr. Chairman. Ms. MacFarlane.

MS. MACFARLANE: It's the net present value evaluation that Mr. Marshall referred to that let's look at what is the least cost option for meeting reliable load provision into the future and meeting our environmental targets. But we also need to understand the impact of all of these

alternatives on NB Power's financial position in order to have a full picture.

And the evidence does include financial statement impact analysis for each of the three alternatives. That financial statement impact analysis builds off the business plan and financial projection that we did in March 2001. And as with any business plan, it represented management's best view of the future at that time. It also assumed both the conversion of the Coleson Cove plant and the Point Lepreau plant and it took us out over a period of eight years.

Now typically we would provide a business plan for a five year period, but in this instance because of the development of these major refurbishment projects we wanted to go beyond that period and look at what would be a representative normal year of operations. So we chose 08 09 being the first year of full operations once Lepreau comes back on line and of course Coleson is operating at that period of time.

So we are defining for the analysis 2008, 2009 as representative of a normal year of operations.

And then finally the business plan was based on existing rates. We wanted to focus the discussion in our business planning on the projects and on the impacts these projects would have on achieving our strategic objectives.

So we chose not to deal with the rate plan in that business case -- or business plan.

So in terms of doing the financial statement impact analysis for provision of evidence, we took the financial statements in that March 2001 business plan and we adjusted them for changes to the Coleson Cove schedule. At the time when we were doing the business plan back in the spring of 2001 we were still looking at a project that would come on line in November 2005 and of course with further detailed engineering we have advanced that schedule so the plant now comes on in 2004. So we have adjusted the financial statements in the business plan to file for evidence for that advanced schedule. And of course we also took a look at what the financial statement impact would be for the other alternatives.

The focus of the financial statement impact is on net income because of course net income is a determiner of rates, and on the capacity to service our debt.

Certainly in sound business practice and in determination of future business planning, future financial forecasting, setting of rates, et cetera, we have to have a net income, a rate level that will ensure recovery of all of our operating costs.

And further we have to provide sufficient net income to deal with a variety of circumstances that may arise.

From the perspective of our financial community, the investment community and maintaining their confidence, we clearly have to prove the ability to service our debt, and we also need to be able to attract new capital to maintain and expand facilities as required. So again how the financial community, the investor community, the debt rating communities look at our financial forecast is clearly important and that's one of the reasons why our analysis has focused on our ability to service debt.

I am going to start by looking at net income under the three alternatives. The -- you can see on the screen that the net income in the representative year of normal operations -- and I will just circle it there -- for the Orimulsion conversion case is 27 million. For the oil blend case we would have a net loss of 13 million and for the natural gas oil blend case a net loss of 51 million. And you can see here the relative advantage. The oil blend is $40 million worse off from a net income perspective from the Orimulsion conversion and the natural gas oil blend is $78 million worse off from a net income perspective than the Orimulsion conversion.

And clearly there are rate impacts if we have to have net income sufficient to cover our operating costs. In order for the oil blend to provide the same net income as the Orimulsion conversion rates would have to increase by

4.5 percent. In order for the natural gas oil blend to provide the same level of net income as the Orimulsion conversion rates would have to increase by 8.7 percent.

You can also see here the impact of the projects on net income over the seven year period out to 2008, 2009. Over that seven year period the Orimulsion case provides cumulative income of 99 million. The other two alternatives provide a cumulative loss. The oil blend would provide a cumulative net loss of 146 million, which is 245 million worse off than the Orimulsion conversion. And the natural gas blend provides a net loss of 230 million cumulatively, which is 329 million worse off than the Orimulsion conversion.

So the conclusion here cumulatively and in the year following the completion of the major refurbishment projects, the Orimulsion alternative provides the highest net income and the least pressure on rates.

I did want to point out, Mr. Chairman, that in the response to the interrogatory PUB-2, and Mr. Marshall will go through this with you when we look at corrections, this percentage was stated as ten percent. It should have been 8.7 percent. You can see it does not impact the relative analysis but that number was misstated in the interrogatory responses.

In looking at our ability to service debt you have to

first recognize that the utility industry is by its nature capital intensive. And consistent with the economic analysis, in order to determine what the lowest cost alternative over time is, you can't focus merely on the project spending. You must look at the combination of the project spending and the ability to service that through operating cash flows to get the total overall least cost.

You can see here the project spending for the three alternatives. For the Orimulsion conversion it's 747 million. For the oil blend it's 98 million. And those costs arise from the addition of NOx emission controls. And in the natural gas oil blend it's 475 million.

Total debt as of the year ended 2008/2009 for these three projects. For the Orimulsion conversion it would be 3.303 billion at the end of that period. The oil blend would be 2.988 billion at the end of that period. And the natural gas oil blend would have the highest debt at the end of the period, 3.408. And that, of course, is directly related to the overall cost of the project, both capital and operating, and our ability to service it through operating cash flows.

You can see here that Orimulsion conversation -- and these would be cash flows in that representative year, so they would be representative future -- of future operations. The operating cash flow for the Orimulsion

case is 262 million. The oil blend case is 203 million, almost $60 million lower on an annual basis. And the operating cash flows for the natural gas oil blend are the lowest at 178 billion which, of course, is why even four years after the project the debt for natural gas oil blend is higher than for the Orimulsion conversation because there simply aren't the cash flows there to service the debt to the same degree.

The operating cash flow is what the investor community looks at to measure liquidity. The investor community looks at interest coverage in order to measure flexibility and your ability to service your commitments. And interest coverage really tells how much flexibility you have in your net income in order to be able to service your commitments. And a number greater would -- greater than one would indicate that you do have some flexibility. Obviously the larger the number the more flexibility you have to deal with unexpected circumstances in your operations.

A number less than one would indicate that, in fact, you cannot service your obligations without leading to a net loss.

You can see in the Orimulsion conversion we do have an interest coverage greater than one, 1.09. In both the oil blend and the natural gas oil blend options, we have an

interest coverage of less than one. And of course, that's collaborative evidence of the previous line that would indicate that both those lead to a net loss and would require rate increases in order to provide the same degree of flexibility as the Orimulsion conversion.

So you can see that in the year following the completion of NB Power's major refurbishing projects that normal year of operations, the Orimulsion alternative provides the strongest measure of liquidity through operating cash flow and of our capacity to meet our financial commitments through interest coverage.

So in summary, the analysis demonstrates that the Orimulsion alternative has the greatest positive impact on NB Power's financial position by producing positive net income both cumulatively and in a year that is representative of normal operations. And it has the strongest capacity to service our debt as measured by operating cash flow and interest coverage.

That concludes my presentation.

CHAIRMAN: Mr. Thomas, please. Before you start, I understand that Mr. Norvel Getty is present in the room representing the Union of New Brunswick Indians. Thank you. Go ahead.

MR. THOMAS: Any typical project of this size has three phases. Phase I being the conception, where the project

is born. It usually lasts about three months. And it leads to a definition authorization.

The second phase of the project would be the definition phase where the project is scoped and where we work to produce an estimate that leads to a project approval. And that phase lasted about six months. And this is where we are today with the project approval.

The third phase of the project is the execution phase. And for this project it is expected to last approximately 32 months.

Now in a project of that size we had to -- we had to divide it in three major categories which are the balance of plant, the boiler modification and the scrubber.

And there are different approaches to come up with an estimate that required a lot of effort. For example, on the balance of plant it took 150 person months of detailed engineering to produce the estimates using New Brunswick consultants.

For the boiler modification it required 120 person months of detailed engineering with the original equipment manufacturer, Babcock & Wilcox, who was -- who had all the initial data and measurements information on our boiler at Coleson Cove. And we achieve an estimate through a negotiation with your original equipment manufacturer.

For the scrubber, because -- and the wet electrostatic

precipitator -- because these will be installed in a new green field area, we went out in the market through the tendering process and it required 30 person months of consultant's work to produce a tender and evaluate the results of these tenders. And we are also ongoing with the tender evaluation and negotiation on the scrubber and wet electrostatic precipitator.

Now Mr. MacPherson explained where we are on the process. And we are here. And why we have to be here at this time, February 2002, for approval on the project. This represents an S curve of the spending that is expected to go on the project from 0 to $7.47 million. In order to move ahead with the project after about $7 million of engineering, as you can see, the slope of the curve is very sharp. And actually, for this to actually occur in September 2002, we have to make some commitment ahead of time on that curve.

Now we also have another process that is worth explaining here is we are going to a full environmental impact assessment. And this is illustrated by the green arrow. And it's expected to be completed in July 2002.

So the site construction where most of the money will be spent will start in September, if the project is approved, and to be completed in November of 2004. This also shows the three phases of the project. The

conception, the definition and the execution phase of the project.

When we get into the detailed cost breakdowns on the project, we have listed a number of items in the evidence. And they are exactly like -- as presented in the evidence. The boiler modification at $184 million, that includes the low NOx burners, the reburn system, the overfire system, all the duct work to connect the existing boilers to the new pieces of equipment that we will install, the scrubber, wet electrostatic precipitators.

We are going to put larger fans, because we are going to have to push the flu gas through these control equipment. And we -- with the boiler manufacturer we came up with an estimate of $184 million. And we feel very confident about that estimate.

On the scrubber and wet ESP, wet electrostatic precipitator, the expected cost is $137 million. And there, as well, we went through the markets. We got some prices. And we are -- we are quite confident that these two numbers which represent about 50 percent of the total direct cost on the project, we can get into a lock -- a lock turn-key price, fixed price, which will basically minimize the risk of cost overruns on the project.

As for the stack, it is expected to cost $19 million. This is the chimney. And we have built a similar stack -

a similar sized stack in Dalhousie. So we have construction experience and also data for the estimate.

The plant distributor control system is a plant wide control system that will interface to all the plant systems, including turbine, boiler, all the remaining equipment. And again, we undertook a project of that size in Dalhousie and we were successful at it in 1994.

On the balance of plant systems, the total expected cost here is about $180 million. And I will explain the details of those costs in the next slide, which could be perceived as new evidence. And the reason we -- we didn't provide that evidence at the time, is that we were in the middle of negotiations, and it would have jeopardized the negotiation process in order to obtain the best price for our ratepayers in the province of New Brunswick. But today we are in a position to -- in the stage of negotiations to present some of those details.

The owner's engineer is expected to cost $47 million. And the owner's engineer is our representative on the project doing the estimating, project cost control, site construction management, project management, scheduling, planning and the design for most of these balance of plant system.

The efficiency improvement initiatives will cost approximately $48 million. They have been included in the

total $747 million. And they include upgrades to our three turbines so that the heat rate is improved on the turbine, which means that at the bottom line we will -- we will need less fuel to produce the same megawatt output.

As well we are -- for the large fans I was mentioning earlier, we are going to put variable frequency drives which will reduce the power requirement for those fans and reduce the station service requirements.

The interest during construction is expected to cost about $47 million. And the interest during construction is the interest as -- you remember the S curve there? As we spend the capital money on the project, the financial people make sure that we pay the interest right -- all the way along the project.

The contingency is about 10 percent of the project. It's $71 million. At the time we submitted the evidence that's what we felt that was required. We verified that through our risk financial analysis, and it determined that we had the right amount of contingency for a project of that size for the total of 470 -- $747 million.

We had a lot of questions with respect to balance of plant cost breakdown and most of the questions were related to the fuel delivery system which were -- we were in negotiation with the option -- for the options at Canaport and Pier 10. So -- but now we are in a position

that we can release those costs. They are expected to be about $60 million for the fuel delivery and storage system. That included also the repairs and modification, insulation at the existing five owned site tanks that needs to be done as well to receive Orimulsion.

The electrical systems is approximately $20 million. These include the motor control centres, the high-voltage switch gear, a cabling and miscellaneous protection for the new motors for the new fans.

The scrubber building is expected to be $19 million. The scrubber building will enclose some auxiliaries for the scrubber and wet electrostatic precipitators such as the ball mills that are used to grind the limestone and also the dewatering filters which are used to dewater the water that we have in the gypsum so that we can produce commercially acceptable gypsum that will be sold to wallboard industry.

On the materials handling we are expected to see a cost of approximately $16 million. And these are the fly ash, the gypsum and the limestone. A brand-new waste water treatment plant is expected to cost about $10 million.

And again on all these systems, we have converted a similar station in Dalhousie in 1994. And all these estimates have been verified against what we have done

there from our past experience. So we have a high level of confidence in these estimates as well.

On the construction services $14 million. These are all the on-site related construction services, trailers, et cetera. These balance of plant estimates are all in 2001 dollars. So we provided some escalation cost at 1.8 percent per year for a total of $18 million.

And the indirect costs are expected to be about $23 million. This will include the NB Power project team, the cost of the PUB process, environmental studies, legal fees and, you know, various miscellaneous human resources costs to perform this project, for a total of $180 million.

I hope that this will answer a lot of the questions we receive through the interrogatories.

We have a high confidence in our cost estimate. Because we have extensive experience in construction and operating in Dalhousie since 1994.

There has been significant progress made on tendering and contract negotiation. We are that close to be able to sign a contract on a fixed price basis for the key component of the project which is worth close to 50 percent of our direct cost. So this will certainly minimize the risk of cost overruns.

And we spent 25 plus person-years on detail engineering on the project which is equivalent to 300

person-months. We also spent over $5 million so far.

We have a high level of confidence that we can make this project under the budget of $747 million.

Thank you very much. Merci beaucoup.

CHAIRMAN: Thank you, Mr. Thomas.

MR. HASHEY: Finally, Mr. Chairman, Mr. Wilson will address the environmental process. I'm sorry. Mr. Brogan will conclude.

MR. WILSON: The environmental aspects of the refurbishment project is being handled through the environmental impact assessment regulations of the Province of New Brunswick. Those regulations are administered and managed through the provincial Department of Environment and local government.

And the purpose of the EIA or the environmental impact assessment is to look at the environmental impacts of the project, both positive and negative, to provide an opportunity for the technical experts with the Province as well as the public and the local residents of the area of Coleson Cove to have some input into the project.

And that EIA process is ongoing. And I have a couple of slides just to explain where we are in that process now.

What we have completed to date is that we submitted the EIA application. And we have been told by the Minister of Environment that it would go to a full EIA.

The Province has issued draft guidelines. And those guidelines would explain the type of study that would have to be completed and a bit of scope around those studies. Those are out for comment.

The remaining steps in the EIA process are what is on the screen. Those guidelines that I mentioned, they have to be finalized. We expect those shortly. The studies which are ongoing now that we have started for the project, they have to be completed.

Then there has to be a draft EIA report prepared which we will do. And those will have to be -- that report will be reviewed by the Technical Review Committee, which is a committee that the Province sets up and has set up of course. Following that there will be public meetings which will take a look at the whole EIA report.

And of course following that the Minister, that is the Minister of Environment of local government, will make a recommendation to the Lieutenant-Governor-in-Council. And then the Lieutenant-Governor-in-Council will make her decision.

The EIA process as we stand has not identified any changes to the scope of the project that would lead to any additional expenditures.

And that is the end of my presentation. Thank you.

MR. HASHEY: I told you these would be short, Mr. Chairman.

CHAIRMAN: That certainly is the head of the pack. Thank you.

MR. HASHEY: Next Mr. Brogan would conclude.

MR. BROGAN: Now in conclusion I too will be brief. There are only two slides. Number one, NB Power, we are confident we can deliver the project on time and on budget. Because we have a lot of confidence in our schedule and the budget estimates that we have.

We have been burning Orimulsion at our Dalhousie plant since '94. The refurbishment of that plant, the rebuilding of it in '94 was very successful. And we have had tremendous experience ever since then in burning the fuel, high confidence in the ability to convert the plant plus be able to operate it at a high level.

The project will allow NB Power to meet all emissions targets including CO2 and meeting those targets more economically than any of the other options we were able to compare to.

The Orimulsion project will allow NB Power to stabilize generating costs while meeting those emission targets.

And finally the project, by contributing to stable and competitive rates, will help sustain the highly electricity-intensive economy of New Brunswick.

Thank you very much.

CHAIRMAN: Before you sit down, Mr. Brogan, something that I believe it was Mr. Thompson said in his evidence, dealing with fuel delivery and storage systems and expected cost at 60 million. And that is the first time he has been able to put that kind of exact figure out there.

Does that mean that in fact you have reached a stage in negotiations where you are able to say which of the fuel delivery systems you are going to use?

MR. BROGAN: No, we have not. But we are looking at -- as we compare the two options we are looking at the capital cost for the investment. As well we are looking at the operating costs, the O & M costs to operate both options or both systems.

And there is another issue. There is one option over the other has greater benefit when it comes to the shipping costs. One option we can use much larger vessels.

So all three areas are being reviewed in the options. The $60 million estimate includes sufficient funds to make the investment at either location.

CHAIRMAN: Can you share with us when you might anticipate being able to let us know which option you have chosen?

MR. BROGAN: Well --

CHAIRMAN: I don't want to cause any problems in your negotiations. But I'm just saying can we ask for a

reasonable estimate when we would know that?

MR. BROGAN: Certainly. When it is available. However I don't believe that we will have a final decision on the delivery while the hearings are taking place.

CHAIRMAN: Okay. Good. Thank you very much.

MR. BROGAN: I should point out -- and the outstanding issue is the shipping costs and the benefit one over the other. That is the only remaining item to be addressed.

CHAIRMAN: Yes. Good. Thank you.

Your panel is now ready for cross-examination, Mr. Hashey?

MR. HASHEY: No, Mr. Chairman. I would like to deal with the issue of the --

CHAIRMAN: Oh, yes.

MR. HASHEY: -- errors if we might. It shouldn't take very long. We could continue right on with that if you --

CHAIRMAN: Okay. Go ahead.

MR. HASHEY: While we do that I possibly would like to have a distribution that has just been completed. It is a -- Mr. Marshall will take us through that. It looks like a lot of figures.

But I think if it is -- he can simplify it and indicate that it is down to this two little issues that -- one was addressed by Ms. MacFarlane. He will deal with that.

And then the other one of course deals with the issue of the miscalculation in relation to this natural gas option.

CHAIRMAN: Mr. Hashey, so that is a handout. Does that deal with all of the changes or errata?

MR. HASHEY: Save one.

CHAIRMAN: Save one?

MR. HASHEY: At noon today Mr. Thomas indicated to me that there was one issue in his evidence that should have a correction. And we might even ask him to address that first while this is being done. We don't have a handout on that.

CHAIRMAN: Yes.

MR. HASHEY: But it is a matter of referring to a page in the evidence.

CHAIRMAN: All right. My suggestion is that -- I concur with you, Mr. Hashey, that we will have Mr. Thomas do that now. And then we will take a break.

And will you share the errata document with the parties here so they have over the break to look at it and get a greater appreciation of what you are talking about?

MR. HASHEY: I think the greater appreciation will come when Mr. Marshall speaks to it. But yes, we will do that.

CHAIRMAN: Okay. Great. Mr. Thomas, you had one correction you wanted to make in your evidence?

MR. THOMAS: Yes, Mr. Chairman. The correction is in my direct evidence on page 138 of the direct evidence.

CHAIRMAN: That is exhibit A-6. And what page was it, Mr. Thomas?

MR. THOMAS: Page 138, line 3. As we got more information from our vendors we recalculated the direct jobs on the project. And the 3,400 will now become 2,150 person-years -- 2,150 person-years on line 3, page 138. And as a result the indirect jobs, which is a ratio of 1.6, changes to 3,400.

MR. DUMONT: Could you repeat all that, Mr. Thomas?

MR. THOMAS: Okay. Yes. No problem. The direct jobs were recalculated to be 2,150 person-years. And the indirect jobs 3,400.

It is also referred in appendix D, page 168. Page 168, table 7, 3,400 direct impact becomes 2,150. The spinoffs or the indirect jobs becomes 3,400 for a total of 5,550.

At this stage we haven't recalculated the actual impact on the income injection. But it will change slightly as a result as well.

MR. DUMONT: Why so big a difference?

MR. THOMAS: Initially, we did the calculations based on Dalhousie. And we used a ratio of 2.6. That was the best we had at the time because we had received no information

from our vendors.

But with the construction plan, which is an integrated resource plan, for the scrubber and the boiler, which is basically where the biggest amount of manpower or person-hours will be required, we recalculated and the numbers are approximately 2,150.

And this was as a result of a question to Mr. Brogan during public meetings, you know, where were these numbers based? And we did some more work to get a more accurate number.

So on the way up yesterday I had to get this resolved. So my lawyers told me that we should do it now.

CHAIRMAN: Good. Thank you, Mr. Thomas. We will take a 15-minute recess.

And Mr. Hashey, you are going to hand out that sheet, are you?

MR. HASHEY: Yes.

CHAIRMAN: Good. Thank you.

(3:00 p.m. - 3:18 p.m. - Recess)

CHAIRMAN: During the break the representative from the Union of New Brunswick Indians approached me. And he indicated that they would join the company of those who had no cross-examination questions. And I pointed out to him that if he changed his mind he could raise his hand and I would recognize him.

It would appear to me that it is Conservation Council of New Brunswick that goes first on cross of the panel.

MR. HASHEY: Correction.

CHAIRMAN: Yes, corrections. But on --

MR. HASHEY: Oh, yes.

CHAIRMAN: -- cross-examination.

MR. HASHEY: Oh, I'm sorry.

CHAIRMAN: I was trying somehow to figure out how I could get the Department of Natural Resources or something in there first. But I was unsuccessful.

And Mr. Dixon from Westcoast Power is here as well, I understand. There he is. Okay.

Mr. Dixon, just before we start, I don't know if anybody has explained to you. But I indicated -- asked Intervenors who felt that at this time they would not be cross-examining witnesses, et cetera, and really we are here on a watching brief basis, to let me know.

If they changed their position, as with the Union of New Brunswick Indians, they could simply raise their hand, I would recognize them. It saves me from reading off 20 names every time we have a motion.

MR. DIXON: Yes. We will be the same as that.

CHAIRMAN: Okay. Great. Thanks, Mr. Dixon.

All right. Mr. Hashey, the changes?

MR. HASHEY: Yes, Mr. Chairman. There has been a document

circulated at the break. Unfortunately when we started circulating, people were leaving the room.

I should point out that there are extra copies of this. There is a couple of them in front of me. And there is a number on the table outside of the room, if someone doesn't have one, which is to follow it.

I guess the first thing I should do, Mr. Chairman, is ask you if it would be appropriate to mark this document as an exhibit for ease of identification.

CHAIRMAN: Yes. I agree, Mr. Hashey. That will be A-12.

MR. HASHEY: Correct.

CHAIRMAN: Go ahead, Mr. Hashey.

MR. HASHEY: Thank you, Mr. Chairman. I would refer this document, if I might, to Mr. Marshall and request Mr. Marshall to take the Board through this evidence and relate it possibly to the evidence that he just gave as part of his summary.

Mr. Marshall?

MR. MARSHALL: Yes. In the screening curves that I just gave in the presentation, the first change in the evidence would be on page 16.

CHAIRMAN: The evidence is A-6, is it not, Mr. Marshall?

MR. MARSHALL: Yes.

CHAIRMAN: We are trying to be consistent and refer to the documents that way.

MR. MARSHALL: And the screening curve on page 16 of exhibit A-6, the Coleson Cove gas conversation line on that chart is the dotted line that was in the presentation that we had just given. And it would lower slightly and should be replaced with the screening curve chart on page 2 of the exhibit just handed out.

You can see that in the -- on page 2 of the exhibit the screening curve revised direct evidence page 16, the Coleson Cove gas conversion (revised). And you can see that the line on the Y axis intersects down at the lowest point and then goes up and essentially follows very close to the purchase line. So that chart should replace the chart on page 16.

And then if we go to page 52 of exhibit A-6, table 3-1, the third line in the table. And on the handout exhibit A-12 with the corrections, there is a replacement line on the table.

You can see that, if you look on page 52, in the third line, Coleson Cove natural gas conversion per unit, the second column, the 393 would change to 119.

And in the fourth column, the representative heat rate, the 10,400 would change to 10,100. And because of the heat rate change the CO2 emission rate would also reduce proportionately from 1,269 to 1,232.

And then if we go to page 56, table 3-3, again the

third line, Coleson Cove natural gas conversion, the third number column over, the 1.29 would be replaced with 0.63. The 5.7 was a typo error before that was already corrected. But it is now revised again to 7.25. The 6.98 is 7.89. The 1.46 is 0.72. The 8.44 is 8.20. The 9.90 is 8.92. And the rank of the gas option changes from rank 14 to rank 12.

I wish to point out at this point that the error, although significant with relation to the capital cost being doubled, inadvertently doubled because of errors in the spreadsheet, when you look at it on a power cost basis and you make the adjustments all the way through, the power cost only changes the rank of the gas conversion refueling option from number 14 to number 12. And it's still significantly higher cost than any of the other options.

So on that basis it would still be screened out and not included in any of the detailed calculations by our standard. But again, as we were asked in interrogatories to do the evaluations, we did the evaluations on that option and have the information presented.

Also the correction on that table 3-3, because of the change in rank to the Coleson and natural gas conversion from 14 to 12, down the table, Grand Falls Morell pump storage, its rank changes from 13 to 14. And the wind

generation changes from 12 to 13.

And then if we go to page 61 again of the original filed evidence, exhibit A-6, figure 4-2, again a screening curve that has Coleson gas conversion, that line would be taken off the curve. The line would slide down the Y axis. That should be replaced with the curve on page 2 of exhibit A-12 labeled "figure 4-2 revised."

And again, as I explained earlier, screening curves, to be a low-cost option you have to be the lowest line on the chart. The change in the gas conversion lowers its position on the chart, but doesn't lower it relative to any of the other options. It just gets it closer.

Then we would go to responses to interrogatories.

CHAIRMAN: A-7?

MR. MARSHALL: That would be document A-7. It would be interrogatory under City of Saint John, under the first tab. Interrogatory NBPCSJ-1, part 2, which is on page 6 of that tab. And on page 6 of that tab you have table 4(1) with all gas options. Under the gas conversion column the net -- differential net present value at the bottom of the table, instead of 1372 that would change to 1086. And that's the same change I had pointed out in the presentation on the present value differences.

And if you turn over the page to page 7, the same interrogatory, or table 413 with all gas options, the 1169

would change to 880.

And then if we go to interrogatories from JD Irving Limited, JDI number 12. Then I will get the page. Page 12. The last line of the first paragraph of the response, two-thirds of the way across, 60 percent higher would reduce to 55 percent. A little further over, the 10,400 BTU per kilowatt hour heat rate is 10,100. And in the bottom paragraph this was a correction from the typo that was there before, the 7.5 should change to 7.25. And in the last line, the 8.89 should change to 7.89.

And then interrogatory JDI 13 on the next page, page 13. On the far right of the response about 8 should be 7.0. And the rank from 14 to 10, instead of 10 it should be 6. And the 14 should be 12 since it was corrected previously. And I might add that this interrogatory was a request to do gas with the low gas cost and add it in. It was an addition to the table and if it was done and done in the table would also cause changes to all the other rankings, because it would insert a new one in and shove other ones around. So we didn't go through all of those changes. But specifically in response to that question, it would be 7.0, 12 and 6.

And then the next interrogatory, the province of New Brunswick, 32 (a) on page 39. This is the interrogatory on the breakeven price for natural gas, which would make

Orimulsion not the favorable project. And we had done analysis and the number in the response (a) of $2.05 US per million BTU. That should be changed to $2.10. This is the only substantive change in any evidence as a result of the change in the natural gas conversion case. It's a nickel change in the price of gas.

And finally in response to Public Utility Board, PUB number 2, on page 2 of the last tab. And Ms. MacFarlane referenced this in her presentation. The response was given in response to direct testimony of mine and the interrogatory was asked. The interrogatory was responded with reference to the financial information. The error occurred on the second last paragraph on the right-hand side. Net income in 2008 -- '9 is 94 million. The 94 million was miscalculated from the net incomes of the financial analysis. It should be 78 million, as was given on the presentation by Ms. MacFarlane. And as a result of the reduction from 94 to 78, the rate impact in the next line changes from 10 percent to 8.7. And in the table at the bottom, the right-hand column of the table the ten percent increase with oil gas should be 8.7 and the four numbers down the column for residential general service industrial and wholesale rate impacts should be 0.7, 0.7, 0.4 and 0.5.

And the final two corrections on page 3 of exhibit

A-12 relate to exhibit A-9, additional responses to the supplemental and other interrogatories. This is the exhibit that provided printouts of the screening curve spread sheet model of all the data and calculations behind the screening curves. It also provided all of the print outs of the proscreen proview optimization runs. So these are all of the computer print-out reports.

The first change is in the screening curve evaluation. So if you go to the first tab for screening curve evaluation, and rather than go through all of the changes in that we have provided an attached replacement pages that highlight the two columns that would be affected.

So if we look on page 4 of exhibit A-12, look down at the bottom it is labelled as page 4 of 12, screens with end effects. So if you go in exhibit A-9, four pages down, you get to page 4 of 12, screens with end effects.

You can see at the top, the first column, Coleson Cove Gas Conversion for a wholesale gas price sensitivity. The fourth column, Coleson Cove gas conversion at regular wholesale gas.

So at the two different gas prices the gas conversion option was evaluated. Those two columns are replaced and marked on the handout exhibit A-12. Those are the calculations and all of the data behind the screening curve diagrams.

And finally the proscreen proview optimization output, the numbered tabs from 1 to 13. If we look at tab 13, the stress case. And this evidence is a printout of the expansion plans developed by proview under the stress case evaluation at low gas, low export margins, low export quantities, environmental emissions. The number 1 ranking plant is still Orimulsion. Number 4 is the oil blend.

There are no changes to the first page. But on the second page with the gas, change in the gas conversion option, there are two pages provided that are attached, pages 9 and 10 of exhibit A-12.

And you can see that just option -- ranking plan number 12 would now be replaced with the gas conversion plan. And all the others would be shifted backwards.

So in the handout exhibit A-12 we have highlighted the change. And the rankings would change. And then on page 10, the gas conversion options, some scenarios come up again on plans 18, and 19 and 20, again shifting some other options a little further down.

I might point out that the stress case is the only case in which the gas conversion plan got up into the pages to cause any changes. Under all the tabs from 1 to 12, for the base case and all of the sensitivities, the gas conversion case did not make it up high enough to affect any of the evidence that was submitted.

And that concludes the corrections.

CHAIRMAN: Anything else, Mr. Hashey?

MR. HASHEY: Mr. Chairman, I don't know if they are ready yet. But we have requested that exhibit A-11 be recirculated at some point this afternoon, so that the pages will be numbered -- or the slides will be numbered, so it would make it better if somebody is cross-examining or make it a better reference.

In the document that was submitted as an exhibit there was no numbering of the pages nor of the slides.

CHAIRMAN: Mmmm.

MR. HASHEY: And if the slides were numbered we felt it might be a little simpler for people to refer to them. So we have requested that be redone --

CHAIRMAN: Good.

MR. HASHEY: -- and recirculated on that basis, maybe even remarked.

CHAIRMAN: Yes, I will. Thank you, Mr. Hashey.

Mr. Coon, are you prepared to go ahead now, or do you want us to take a break or --

MR. COON: We are prepared to begin.

CHAIRMAN: Okay. Go ahead, sir.

MR. COON: Would you like us to move to the front table?

CHAIRMAN: Yes. That I will leave up to you on this occasion. I mean, there is nobody ahead of you, so --

MR. COON: Well, perhaps we will stay in these seats then if that is all right with the Board.

CHAIRMAN: Certainly.

MR. COON: Thank you. Mr. Chairman, Commissioners of the Board, I would like to just introduce my colleagues who are with me today, Andrew Secord to my immediate right and David Thompson to the right of Mr. Secord, both directors of the Conservation Council.

And Mr. Secord will begin our cross-examination.

CROSS-EXAMINATION BY MR. SECORD:

MR. SECORD: On page 7 of the evidence that is exhibit A-6 on lines 29 and 30, the last complete sentence on the page. There is a statement that reads Exports generate sales margins which help keep in-province power rates 10 to 15 percent lower than they would otherwise be. Could the panel please explain how the sales margins are calculated?

MR. MARSHALL: Well, as I explained in the presentation, the sales margin is the difference between our cost of providing the energy. So it would be the difference in the variable cost of energy from the New Brunswick system against the revenue price received for the sale. So it is that difference between the two.

So for example if our cost was $30 a megawatt hour and the sale price was $50 a megawatt hour, the margin is $20

contribution to our fixed cost.

MR. SECORD: In the calculation of sales margin is there any charge for transmission costs within New Brunswick?

MR. MARSHALL: The -- there is a cost for transmission. But the transmission is a reservation from the generation unit to transmission. It is a fixed cost. And it is sunk. So the contribution then is from their marginal cost against the revenue that they would receive. Now any transmission costs in the US or in the market to come back are taken out. So it is the cost of the transaction at the border relative to their variable costs.

MR. SECORD: So could you clarify it for me? Are you saying that there is a subtraction from the revenue for transmission costs? Is that how it is done? For transmission costs within New Brunswick.

MR. MARSHALL: No. As I said, the New Brunswick transmission cost is not subtracted. The US transmission cost is subtracted. If the sale price in the U S was $55 at the market and it was $50 at the border and it was $30 cost in New Brunswick, the margin would be considered $20 not 25. The cost of transmission in New Brunswick is not included in the margin.

MR. SECORD: Thank you. Do you include any costs for ancillary services associated with the additional export load?

MR. MARSHALL: No. The only ancillary services associated with an export contract, that would be on a point-to-point transmission reservation.

The ancillary services under point-to-point transmission service are for energy dispatch and control, system control and dispatch and for voltage support on the system. They are part of the New Brunswick transmission costs and are not included.

MR. SECORD: Does NB Power charge private generators ancillary services on export sales out of the province?

MR. MARSHALL: Anyone who takes a reservation to sell -- takes a transmission reservation on a point-to-point service to export power out of the province would pay the transmission tariff which includes a charge for transmission and the two ancillary services that I stated, system control and dispatch and voltage support.

MR. SECORD: So am I correct when I state that private power producers effectively do pay transmission charges to get from their generator in the province to the export market which includes ancillary charges?

MR. MARSHALL: Yes.

MR. SECORD: Am I correct when I say that in NB Power's calculation of sales margins they do not make such an adjustment?

MR. MARSHALL: No. The issue is that NB Power generation

makes the payment for the transmission service and it's an internal transfer payment from NB Power generation to NB Power transmission. The consolidated financial statements looking at the total picture give a margin of cost from marginal cost to revenue. That's why it ends up not being included. But NB Power generation does make payment to transmission for the transmission service. We treat our generation unit exactly the same way as we treat anybody else in order -- to make reservations on the systems.

MR. SECORD: So to come back to the statement at the bottom of page 7 when you say sales margins help reduce rates in the province by 10 to 15 percent. Have the transmission costs of getting power out of the province been subtracted from those sales margins?

MR. MARSHALL: No.

MR. SECORD: Thank you. Am I correct in inferring that there are no fixed costs associated with generating units, which are included as costs in the calculation of the sales margins?

MR. MARSHALL: For opportunity costs, short term opportunity costs there are no fixed costs included in the calculations. For longer term firm sales there would be fixed costs included, so there are different types of transactions. Depending on the nature of the transaction there could be fixed costs or there could be no fixed

costs.

MR. SECORD: Could you specify what the sales margins from exports are specifically used for at NB Power? That is, what I'm interested in is does some portion of those sales margins occasionally go to other things than rate reduction in New Brunswick?

MS. MACFARLANE: This issue is taking a view from looking at our financial statements, our total revenue versus our total expenditures to come to a bottom line net income. And as was indicated in one of the interrogatories, without the net benefit of the export sales less the cost of those sales, the variable cost of those sales, our net income would obviously be lower.

The cash flow from our financial position is used to finance capital expenditures, as well as, to reduce debt. And our net income position is presumably, as well, supporting those operating cash flows to keep our debt at the levels that it is -- that they are at and also to keep our rates low.

If we did not have those export margins, we would incur higher costs -- we would not incur higher costs, but we would have less net income and less ability to buff it, costs in other areas or to keep rates low.

MR. MARSHALL: I think just to add to that, I think if I understand your question correctly, you are asking whether

the contribution from those export sales is used for anything else other than keeping rates lower? Was that --

MR. SECORD: Anything other than explicitly being used for a rate reduction.

MR. MARSHALL: Well as Ms. MacFarlane said the differential cost from our fuel cost, which is a true out-of-pocket expense to make the sale and the revenue we receive, those contributions on margin come back to help pay fixed costs in the system. And if we didn't have that money, those fixed costs would have to be paid for by New Brunswickers in the system and our rates would have to be 10 to 15 percent higher. So as far as I know, we don't use the money for anything else other than keeping costs and rates down for New Brunswickers.

MR. SECORD: Which is what NB Power uses all of their money for. Specifically, I'm wondering to what extent export revenues are used to reduce debt at NB Power? In certain years, for example, when there are high export sales margins, from what you are saying am I correct in inferring that in certain years revenues from sales margins would go to debt reduction?

MS. MACFARLANE: We don't target them to a particular use. They represent part of our total operating cash flow and that total operating cash flow first funds new capital expenditures as required from time to time to keep our

facilities operating properly and to meet load requirements into the future. And whatever is left over after that is used to reduce debt. There is no specific targeting of a special transaction for a special purpose.

MR. SECORD: Okay. Thank you. Could you explain for us the pricing mechanism for the participation agreements at the Coleson Cove unit? Participation agreements between NB Power and American utilities. Specifically, in the case of the participation agreements, did they pay more -- did the purchasers in the United States pay more than incremental fuel costs for the power over the life of those contracts?

MR. MARSHALL: Just a clarification, which contracts you are specifically referring to?

MR. SECORD: Meco contracts.

MR. MARSHALL: Would those be the original contracts when Coleson Cove was constructed?

MR. SECORD: Yes. Right. The participation agreements when Coleson Cove was constructed.

MR. MARSHALL: Those would be the contracts from 1976, '77 up to 1986?

MR. SECORD: That's correct.

MR. MARSHALL: My understanding of those contracts was that the American utilities essentially bought a piece of the Coleson Cove plant and paid the full capital fixed costs,

O and M costs, and fuel costs related to their purchase. And in addition, I believe there was a site use charge tied as well. But again, that's my understanding of the contracts. They expired 15 years ago.

MR. SECORD: At present are you in negotiations for any such participation contracts for the Coleson Cove Orimulsion project?

MR. MARSHALL: Not that I'm aware of.

MR. SECORD: At present are you in negotiations for any bilateral export contracts from the Orimulsion project?

MR. MARSHALL: Not that I'm aware of. Mr. Brogan might be able to give you a more definitive answer.

MR. BROGAN: No, there are no negotiations going on along that line.

MR. SECORD: So am I correct then in inferring that all of the exports from the Orimulsion project will not involve bilateral contracts?

MR. BROGAN: Not at the present time. There are no negotiations going on for bilateral contracts.

MR. MARSHALL: Now in the modelling analysis that is done, the modelling analysis looks at the New England price as a market price and then calculates a return base as if they were spot market sales into that market. That doesn't mean that at some point in the future if somebody comes along and wants to do a contract that's more profitable

than spot market sales, we would consider negotiating and doing that if it's beneficial to New Brunswick rate payers.

MR. SECORD: I would now ask you to turn to exhibit A-10, which are the responses to supplementary interrogatories of December 5th. And on page 4 there is a supplementary response to CCNB interrogatory number 9.

MR. MARSHALL: Yes, I have it.

MR. SECORD: It provides information on annual emissions of SO2, NOx and CO2 from the Orimulsion project. And then under C -- excuse me -- the annual emissions in B associated with exports and under C the annual emissions from the project itself.

I would direct your attention to the data for the year 2008/2009 in both B an C and -- to see if you would confirm my interpretation of that data. In C in the year 2008 it indicates that the emissions of CO2 from the Orimulsion project will be 2.7 million tonnes. Part B it indicates that the CO2 emissions associated with export will be 2.53 million tonnes. Am I reading that correctly?

MR. MARSHALL: The 209 year in part C, you are saying CO2 emissions 2.7 and in part B 2008/9 the C02 emission is 2.53?

MR. SECORD: Yes.

MR. MARSHALL: Yes, I have that.

MR. SECORD: So am I correct in interpreting that to mean that in that year the exports from the Orimulsion project would contribute about 93 percent of all of the CO2 emissions?

MR. MARSHALL: Would you rephrase that again, please?

MR. SECORD: I will try repeating it. Am I correct in inferring from these numbers that in 2008 the CO2 emissions associated with exports make up over 90 percent of the total emissions from the project?

MR. MARSHALL: No. That's not correct. The -- we are comparing apples and oranges between the two charts. The table B as explained in the evidence comes from pro mod modelling which is the detailed modelling of the export markets and much more detailed modelling of the system. And the data is only available out to 2008/9. The data from section C comes from the pro view modelling. The pro view modelling has taken a more conservative view on exports to reduce the benefit of exports relative to Orimulsion.

So it's a conservative view on evaluation of the economics of the project over the 30 year life.

So the two are not comparable. The capacity factor in 2008 and '9 in this response to part C as you can see is 46 to 47 percent. And I believe the capacity factor under the pro mod modelling for 2008/9 was closer to 65 percent.

MR. SECORD: Is there a way to determine what percentage of the CO2 emissions are associated with the exports for 2008?

MR. MARSHALL: As stated in the response to C, the pro view model does not separate load into in-province load and export load. It's -- the exports are a transaction contract load added on top of the in-province load. And then the system is modelled against the total requirement. It does not break out what goes to serve one piece or what goes to serve another piece. The -- so that it's not possible to separate them out of the pro view modelling beyond 2008/9. It's only possible to separate them inside pro mod and inside the pro mod analysis the data was provided in response to part B of the question.

MR. SECORD: Inside the pro mod model could you tell us what percentage the 2.53 million tonnes of CO2 emissions associated with exports is of the total CO2 emissions at the plant during that year within the pro mod model?

MR. MARSHALL: We could check that at break. I think we should be able to determine close -- reasonably closely what it is, but I can't do it right at this instant.

MR. SECORD: So am I to interpret that to mean that you are giving us an undertaking to provide that information as evidence?

MR. MARSHALL: Yes.

MR. SECORD: Could you enhance that undertaking by doing it also for the years 2004 right through to 2008?

MR. MARSHALL: Yes.

MR. SECORD: Is it possible to do that for the years 2008 through to 2020?

MR. MARSHALL: No. As I explained, we don't have pro mod modelling beyond 2009. We use the pro screen model and inside it we cannot separate in-province from exports.

MR. SECORD: At this point I am just going to turn the questioning over to David Coon.

CROSS-EXAMINATION BY MR. COON:

MR. COON: Going back to exhibit A-6, please, is where I am going to work from. Okay.

Just finishing up on page 7 where Mr. Secord was focusing, I had one further question on page 7 regarding lines 29 and 30 concerning the export sales margins. As load grows domestically is there an impact -- would there be an impact on rates if those exports were turned into domestic supply?

MR. MARSHALL: It's speculative. I would think that there may be some impact, but most of the export sales are made during the summertime, during different times of the year, and not on our coldest hour of the year on peak load requirements.

So as our surplus capacity is used up and energy grows

we would meet in-province requirements. There may be a lesser amount of energy available to export and its margin may be slightly different in price. So it would have some impact but it would not reduce the numbers significantly.

MR. COON: Is there any room with respect to Coleson Cove in the winter months to accept any load growth in terms of its output right now? In other words, can it handle -- is it at its maximum capacity through the winter or can it accept some load growth in winter load?

MR. MARSHALL: We don't look at any one unit or one plant as I guess at its capacity. We run the whole system to meet our obligations to supply in-province load and then if there are surpluses we sell the surpluses where we can.

Currently to get through peak winter conditions we run Coleson Cove flat-out to meet in-province requirements.

MR. COON: Thank you. Now we will move on to page 8. Some questions under the response to the question 6 in the evidence. What is it exactly -- what is the legal requirement -- or sorry, what is the Act, I should say, or Regulation, under which NB Power is required to submit a plan to reduce SO2 emissions to 40,000 tonnes? Has that got some legal requirement?

MR. WILSON: The requirement to develop a plan and submit it is a requirement of our approval to operate, and that approval is a document that we receive from the Department

of Environment provincially and it's a requirement that they place on us in order to keep the plant operating.

MR. COON: So it's legally binding? Is it legally binding on NB Power?

MR. WILSON: I can't answer specifically whether you call that legally binding, but certainly there is no question in our mind that we have an approval to operate at the station and we have to meet that approval to operate.

MR. COON: Under what Act or Regulation is that issued -- is the approval to operate issued?

MR. WILSON: Well that would be under the Clean Air Act of the province of New Brunswick.

MR. COON: So this has been issued for -- or this is -- imposed a requirement to submit a plan by 2005 as outlined in the evidence. That certificate to -- or approval to operate was issued what year?

MR. WILSON: I don't have the year on me but it's within the last year or two we received an approval to operate from the province and that approval required us to submit a plan by the year 2005 to show how we are going to meet that reduction in CO2 emissions -- or SO2 emissions I should say.

MR. MARSHALL: It is my understanding that the approval to operate was issued in January of 2000, subject to check.

MR. COON: And can you tell me what the emission levels for

SO2 were in 2000 -- well I guess in 1999?

MR. MARSHALL: I believe they are in the evidence. I think -- I don't want to speculate, but let's -- I know that they are in the integrated resource plan document which is appendix B.

MR. WILSON: I believe the answer to that is 57,000 tonne.

MR. MARSHALL: And I confirm it's 56.9.

MR. COON: Thank you. Now -- so you have got a legal requirement as you say under the Clean Air Act to submit a plan by 2005. What is NB Power's expectation about when they would actually have to meet a legal requirement to achieve 40,000 tonnes of SO2 or less?

MR. MARSHALL: 2005.

MR. COON: So let me clarify then. This requirement under the Clean Air At issued under your licence to operate, was it to submit a plan or to achieve a regulatory target of 40,000 tonnes?

MR. MARSHALL: I believe the requirement was to submit a plan as to how we would get to 40,000 tonnes by 2005.

MR. COON: And when would you expect to receive or be subject to a legal requirement to achieve those emission levels?

MR. MARSHALL: Well the existing operating approval was a five year approval. So from January 2000 to December of 2005 -- is that it -- 2004. January 2000 to December

2004. So in January 2005 that permit is expired and we would need a new approval to operate.

MR. COON: So in this --

MR. MARSHALL: And we expect the requirement in any new approval to operate would be to implement the plan.

MR. COON: Do you expect the requirement of the new approval to operate be to achieve this target in year 1, 2, 3, 4, 5 of the --

MR. MARSHALL: We have indication from the Department of Environment it would be implemented immediately in any new licence.

MR. COON: So you are anticipating -- then you are saying you are anticipating that in the first year of the next licence to operate you will have a legal obligation to meet the 40,000 tonne limit?

MR. MARSHALL: Yes, but further to that we have a letter -- an indication in writing from the Department of Environment that that's their intent in order to make us meet that requirement.

MR. COON: Is it possible that through discussion with the Department of Environment in fact that target will -- can -- may be met at some later date within that five year period governed by the licence to operate?

MR. MARSHALL: It's not our understanding.

MR. COON: But would it be possible to discuss that with the

environment department and arrive at some target date other than 2005?

MR. MARSHALL: I guess we are open to discuss with the Department of Environment at any time what we may or may not do, but the indication from them is that they want the plan implemented in 2005. In addition they have laid out to us that with their agreement with the New England governors and premiers they want a reduction in system sulphur emissions by 2005. And so the 40,000 tonnes is targeted to be implemented at the same point in time in order to enable the province to fulfil its obligations to the governors and premiers.

MR. COON: Could you introduce that letter as evidence here?

MR. MARSHALL: Yes, I think so.

MR. COON: Thank you. Now moving down into lines 25 and 26, the New England governors and Eastern Canadian premiers have targeted a 30 percent reduction in nitrogen oxide emissions by 2007. Is this a target for the region as a whole and the province as a whole, NB Power's system, Coleson Cove?

MR. MARSHALL: The -- my understanding is the target from the governors and premiers was for a 30 percent reduction in NOx commitments of current commitments by 2007. Our interpretation of that is 30 percent reduction in actual emissions. So we have applied a 30 percent reduction in

emissions to all of the projects in our evaluation. We have used year 2000 as a base year where emissions were 25.8 I believe, somewhere in that range, close to 26,000 tonnes, and a 30 percent reduction from that gives us a target of 18,000 tonnes as a limit for 2007.

MR. COON: But my question remains. Is this -- was this negotiated as a provincial target, regional target or a target for NB Power?

MR. MARSHALL: The 18,000 tonnes?

MR. COON: The 30 percent reduction.

MR. MARSHALL: The 30 percent reduction I understand is a regional reduction.

MR. COON: Have there been any discussions of its allocation among the jurisdictions within the Conference of New England governors and Eastern Canadian premiers?

MR. WILSON: I am not aware that there has been as to what the allocation would be.

CHAIRMAN: Mr. Coon, is this a good time for the Board to take a five minute recess?

MR. COON: If you allow me one further follow-up question, a recess --

CHAIRMAN: Sure, absolutely. Absolutely. That's why I asked the question.

MR. COON: -- would be good, yes. And then finally on this line of questioning, does this 30 percent reduction target

represent a regulatory obligation on the part of NB Power?

MR. MARSHALL: At this point in time, it's not a definitive obligation. It is one that is referenced in the letter from the Department of Environment on agreements between the governors and premiers on their NOx reduction and acid rain reduction plan and their intents to go forward.

So there is an indication that we will have to meet the requirements.

MR. COON: But at this time are their any regulatory standards or regulations, which would bind you to any -- to this target?

MR. BROGAN: No, there are none at this time. However, the message has been very clear what the expectations are, what has to be achieved.

MR. COON: Is this contained in a letter you referred to earlier that you agreed to enter into evidence, or is this a separate letter?

MR. MARSHALL: No, there is reference in the letter.

MR. BROGAN: The same letter.

MR. COON: Sorry?

MR. BROGAN: It is all in one letter.

MR. COON: Oh, it's the same letter.

MR. BROGAN: Yes.

MR. COON: Thank you. Mr. Chairman.

CHAIRMAN: We will take a five minute recess.

(Short Recess)

MR. HASHEY: Mr. Chairman, the document that we have here that I mentioned to you that would be renumbered --

CHAIRMAN: Yes.

MR. HASHEY: -- is a photocopy of A-11 with numbers on it. But it's not nearly as pretty as the ones that have colour. And it may be suggested that we could mark it something like A-11(a) or something. It's the same thing.

CHAIRMAN: Why don't you just call it the numbered page copy of A-11.

MR. HASHEY: Okay.

CHAIRMAN: And just do it that way.

MR. HASHEY: Sure. We will circulate those right now.

CHAIRMAN: Okay.

MR. MACNUTT: Mr. Chairman --

CHAIRMAN: Can't hear you, Mr. MacNutt.

MR. MACNUTT: -- I am trying to get his attention. Why don't we give it a whole new exhibit number, because it seems to be substitution for a previous exhibit?

MR. HASHEY: Well I don't think I want to substitute is my problem, because the other exhibit is much -- much better, much more impressive. I wouldn't throw those away.

CHAIRMAN: Thank you for your input, Mr. MacNutt, but the Board has ruled.

MR. MACNUTT: And it's to be called what?

CHAIRMAN: It is going to be called the numbered rendition of A -- what is it 12 or 11?

MR. HASHEY: A-11.\

CHAIRMAN: A-11, for ease of handling.

MR. HASHEY: Yes.

(numbered copy of A-11)

CHAIRMAN: Okay. The witnesses have returned, Mr. Coon. Go ahead.

MR. COON: Mr. Chairman, I am just wondering before resuming the questioning, whether Mr. Marshall returned with the calculations that we requested?

MR. MARSHALL: No, tomorrow morning.

MR. COON: Okay. Very good then. So we are still on exhibit A-6 to remind people where we are. Let's move to page 9, line six and seven, where it says, what drives the need to proceed expeditiously with the project as the planned refurbishment of Point Lepreau in 2006? Have -- what approvals are required for the Lepreau refurbishment?

MR. BROGAN: We will have to go before the Public Utilities Board seeking approval on the Lepreau refurbishment project.

MR. COON: Are there any other -- I mean are there other approvals that are required before you can go ahead with that project?

MR. BROGAN: Well obviously in the approval I guess from the

CNSC, the nuclear regulator, to move forward with the project. And also there is a requirement to undertake to an environmental impact assessment.

MR. COON: So just to be clear, have any approvals been received to go ahead with the Lepreau refurbishment?

MR. BROGAN: There have not.

MR. COON: On lines 11 and 12 in the context of Lepreau being unavailable it says, NB Power will need all the high quality replacement energy it can find to satisfy provincial energy requirements during that planned 18-month shut down. Is it fair to say that -- well you tell me what -- how much -- how much electricity will be required?

MR. BROGAN: About 4 and 1/2 terawatt hours of energy would have to be replaced.

MR. COON: On page 10, line one, the two alternatives, two most viable alternatives are described. In the first case, the alternative one includes an implementation of NOx controls, compared with alternative two, which defers NOx controls to 2014.

Can you explain why you would be comparing alternative one with NOx controls with alternative two without NOx controls until 2014?

MR. MARSHALL: Yes. In alternative two, there is a 400 megawatt natural gas combined cycle unit that is

constructed. That it is assumed that that unit dispatches ahead of the existing oil unit, so that the utilization of the existing Coleson Cove plant then is much lower and so that in that case emissions are not as high and we can achieve the 18,000 tonne projected limit without the need for NOx controls.

MR. COON: Thank you for that. In response to question 8, as concluded that the evidence demonstrates that the proposed project is the least cost option. Did NB Power -- was NB Power -- or let's put it this way, did NB Power review separate from this in developing its sulphur dioxide reduction plan for the Department of Environment as required under law, did it review other options besides the ones analyzed in -- for the purposes of this hearing or were they identical options?

MR. MARSHALL: I don't quite understand the question. You are referring to the options in this report or the options in a different report?

MR. COON: Well in developing this proposal as part of your sulphur dioxide reduction plan that you were required to submit to the Department of Environment local government, the options that you examined in producing that plan tabled with the Department of Environment, would they be the same options that you have looked at here or are there differences?

MR. MARSHALL: I would have to check, but I recall the document on sulphur dioxide emission plan submitted to the Department of Environment included a number of alternative options, at least I think it did. And I think it included blending fuel as well as Orimulsion. So I think the answer is yes, but again subject to check against -- that report was submitted to the Department of Environment two years ago, I believe. So I am a little -- my memory is failing me in my old age.

MR. COON: Could that plan be introduced as evidence.

MR. MARSHALL: Yes.

MR. COON: Thank you. On question 10, page 11, you point out the targets for greenhouse gas emissions, including carbon dioxide, that have been developed by the New England governors, Eastern Canadian premiers. Is there any expectation there that you will be required to meet those targets? Legally required to meet those targets, I should say?

MR. MARSHALL: Given the current state of ratification of Kyoto and projected refusal of the United States to agree, the issue of legal requirements and where we are relative to Kyoto requirements is unknown at this time. The governors' and premiers' targets were just released in August. And there are no definitive programs yet, or discussions yet as to how they will go about doing that.

So there are no mechanisms in place, or indications of what they would be at this time. So if there are agreements that go forward, then yes, we would legally have some obligations or be a part of the requirement to do that. But at this time, they are not clear.

MR. COON: This refers to targets, reduction to 1990 levels for 2010 and 10 percent reduction below those by 2020. Similar to my questions around NOx, are those regional, provincial or NB Power system targets?

MR. MARSHALL: I believe in the governors' and premiers' paper, they are regional targets. And in the sensitivity analysis that we have done here, and in our emissions comparisons, we have assumed that there was a prorated share for New Brunswick. But again, there is no agreement as to how that will be done. But as a measuring stick to see how we stand against it, we did a prorated measure against NB Power's requirements.

MR. COON: Have there been any discussions of allocating that CO2 target by jurisdiction or by sector?

MR. MARSHALL: I am not aware of any allocations by sector, or by jurisdiction.

MR. COON: So would it be fair to say then that the state of CO2 targets would be in the same category as the state of these NOx targets as laid out by the premiers and governors?

MR. MARSHALL: No, I think the NOx targets are a little closer. The CO2 agreement by the governors and premiers was only reached the end of August this year. So it's four months old. Whereas, the NOx agreement, I believe, goes back a few years prior to that. Even the letter from the provincial government, they reference the NOx requirements. I think that there is a little more strength behind the NOx. And acid rain and clean air negotiations ongoing. So I would say there is a higher probability of the NOx, a much higher probability of the NOx and closer to mechanisms, as opposed to carbon at this time.

MR. COON: So with that in mind then, would you foresee in an equal -- or a similar period of time hence when the couple of years have passed from the CO2 targets being negotiated that we will be similarly close to CO2 regulatory requirements, as you feel we are for NOx?

MR. MARSHALL: I would assume that in the next couple of years, we would have more information, and have more clearer mechanisms as to how we are moving forward on CO2, yes.

MR. COON: Thank you. Now on page 12 the issue of what options are available to NB Power to control and reduce greenhouse gas emissions, specifically CO2, is addressed. It outlines the impact of retiring Grand Lake. Adding 50

megawatts of small hydro, 50 megawatts of wind and 50 megawatts of energy efficiency. But it doesn't outline what the impacts would be of adding a 400 megawatt combined cycle gas plant at Coleson Cove. Can you indicate what percentage reduction could be expected by that -- by that option?

MR. MARSHALL: I could compute it. Under what assumptions. We would need to know how much the -- are you assuming that all of the energy produced from a 400 megawatt combined cycle gas unit -- if we assume all of our energy replaces Coleson Cove energy on oil today?

MR. COON: No, that's --

MR. MARSHALL: Then we could compute what the -- what it would be.

MR. COON: Let's say we are talking about alternative two that was outlined on -- or identified on page 10. The combined cycle gas unit combined with some reduced utilization of the existing units at Coleson Cove. Since that was one of the two alternatives identified, I'm just wondering what the impact of alternative two would be on CO2 reduction, since you outlined impacts --

MR. MARSHALL: Okay. Well, I believe the impact of that option on CO2 emissions is given in the evidence in the integrated resource document, appendix B. There are charts of CO2 emissions, one of which I gave in the

presentation here earlier today, that give the comparative CO2 emissions for the three alternatives.

That's on page -- for the base case is on page 111 of exhibit A-6. For the emission cost sensitivity case it's given on page 113. For the stress case it's given on page 114.

MR. COON: You are referring to the figures on those pages?

MR. MARSHALL: Yes, which plot different emissions of sulphur dioxide, NOx and CO2. So by comparing the height of the bars on the CO2 emissions comparison, could indicate the relevant differences between the options.

MR. COON: Is there -- have you done a numerical summary of that besides the figure itself that's in the evidence? I didn't notice it.

MR. MARSHALL: No, I don't think so.

MR. COON: So in looking then at, as you suggest on page 111 figure 4 -- 4-1, can you approximately give us a number in terms of the percentage reduction you would get with the gas, oil option?

MR. MARSHALL: Well looking at the chart on page 111, figure 4-1 for the CO2 emissions at the bottom of the page, you can look at the comparison between the Orimulsion bar and the gas, oil bar, I would estimate there is about a 10 percent reduction.

MR. COON: Thank you. On page 13 concerning evidence around

question 12, could NB Power reduce CO2 emissions by reducing export sales? I guess my question is it indicates that, yes, there would be an impact -- a positive impact on CO2. Would there also be a similar positive impact on reducing SO2 emissions by reducing export sales?

MR. MARSHALL: Yes.

MR. COON: Would those reductions in export sales identified here significantly impact on the current 10 to 15 percent advantage your evidence argues we gain in terms of power rate reductions in the province?

MR. MARSHALL: As I explained earlier, the reduction in export emissions that we would undertake to meet CO2 requirements would be the low margin sales, the ones that would make the least contribution to improving in province rates. So they would have an impact. But they would be a measured impact.

MR. COON: Thank you. Could I have you look at exhibit A-10, responses to supplementaries. Now there are two pages I want us to look at. Page 2, which is CCNB 2 and CCNB 29, which is page 29. These outline the --

MR. MARSHALL: Excuse me. There is no page 29.

MR. COON: A-7. Oh, I'm sorry, A-7, wrong exhibit. Exhibit A-7.

CHAIRMAN: That would be page 3. And what was the second

one? I presume they are Conservation Council interrogatories you are referring to?

MR. COON: Yes. Let's start with 29.

MR. MARSHALL: Okay. I have the two of them.

MR. COON: Okay. Well, let's start with 29. The average capacity factor in those years runs around, let's see, 44 percent. And so that's the history I guess of Coleson Cove, an average of 44 percent capacity factor from when it came on line at full power to the present day.

What is the average capacity factor being projected for the next 15 years, less Lepreau -- you know, less the Lepreau downtime, because there is a couple of years there where it has to boost up to -- so for I guess 13 years forward.

MR. MARSHALL: In the PROMOD modeling, as I said before, in 2008/9, the number is close to 65 percent. And we will provide some calculations on those, as I said, tomorrow. In the proscreen modeling long term, we have taken an average number of -- it averages out closer to about 50 percent.

MR. COON: Can you explain the difference between sort of the historical operational experience with Coleson Cove with an average capacity factor of 44 percent versus what you are projecting into the future with an average of 65 percent or 50 percent, depending on which model you are

working from?

MR. MARSHALL: I think the key difference in the historical numbers -- particularly I look back to the numbers through the 1980's. And you can see the numbers from '83 through to '87. And you see some very low numbers for operation at Coleson Cove.

Back in that time frame we have had enough capacity to meet all of our requirements in New Brunswick. We had the same amount of installed capacity we have today.

But during that time frame we were able to purchase significant amounts of energy from Hydro-Quebec. And that energy was purchased on a replacement basis against our own generation. So it was essentially a lower cost fuel which we are able to do rather than run our own generation.

So to get the in-province reliance on Coleson Cove back in that time frame, you would have to go back and account for the replacement energy purchases from Hydro-Quebec and add it to those numbers to get an equivalent number.

As we go forward to the future we are now into a market situation. We now no longer have any preferential treatment from Hydro-Quebec or anybody else. Hydro-Quebec sell their energy into the highest priced markets which are New England, New York and expecting into Ontario,

coming this summer when the market opens there. So we have much less opportunity to buy low-cost energy to be able to back off the unit.

MR. COON: Thank you. Now I would like to move to the beginning of Mr. Marshall's evidence back to exhibit A-6, on page 15 which is the beginning of Mr. Marshall's direct evidence. It outlines in question -- well, from line 17 down on page 15 it outlines a series of supply options considered for the screening report.

Why would you not have considered simply Coleson Cove oil blend without NOx controls if the objective was to achieve the legal requirements to reduce sulphur dioxide emissions?

MR. MARSHALL: As we explained, the requirement is to meet sulphur emissions and to meet projected NOx emissions, the NOx requirement for 2010 but -- or 2007, excuse me. With the Lepreau retubing outage, if that proceeds, we would not be able to do anything with the Coleson Cove plant until after Lepreau came back on line. We need reliable energy during that period of time.

So we would not be able to achieve any additional reductions in emissions at Coleson Cove until 2009 or '10, after Coleson Cove is back -- or Lepreau is back and operating.

So for the blending case we cannot achieve 18,000

tonnes of emissions without NOx controls at Coleson Cove. So we implemented it prior to the Lepreau retubing outage.

MR. COON: You also didn't look at reducing exports as an option here to achieve these necessary reductions or the reductions you say are necessary. Can you explain why?

MR. MARSHALL: It cost.

MR. COON: Well, all these options cost?

MR. MARSHALL: Yes.

MR. COON: But why didn't it come into the screen?

MR. MARSHALL: But 10 to 15 percent impact on rates. The amount that we could reduce on oil is an issue -- the issue is we need the energy during the retubing outage. The plant is going to have to run through that period of time.

During that period we have very low projections of exports, so exports aren't the issue. It is quality energy in order to provide for New Brunswickers during that period.

MR. COON: But all the same, over the period looked at in terms of the life of Coleson Cove, why wouldn't have you examined, as one of the options, simply reducing exports?

MR. MARSHALL: Well, another reason is that the power supply options -- we have two requirements for power supply options. 1) is we need the capacity. And 2) is we need

quality energy in order to meet requirements.

We have established in the generic hearing that the 1,000 megawatt capacity of Coleson Cove, you know, is required in order to meet the supply load in New Brunswick.

Here we are looking at what are the alternatives to doing something with Coleson Cove. So continuing to run Coleson Cove in a status quo state essentially is the blending case of using -- continuing to run it on oil.

We have to blend the low-sulphur and high-sulphur oil in order to achieve the 40,000 tonne limit. And we need NOx controls in order to achieve the 18,000 tonne limit.

MR. COON: Okay. But would it be possible to reduce SO2 emissions to the 40,000 tonne limit by reducing exports from the plant?

MR. MARSHALL: We would have to check. It may be possible. The question is it would be -- it would be close. But we would have to check the numbers whether we could achieve it just with reduced exports or not.

MR. COON: Will you get back to us with those numbers? And finally, why wouldn't you have examined simply Coleson Cove as it is with pollution abatement technology as an option? In other words, adding pollution abatement technology to address the targets as you see them without other changes?

MR. MARSHALL: Well essentially that's what we have done.

The blending the one and the three percent sulphur oil to meet 40,000 tonnes is less expensive than installing a scrubber just to continue to burn oil. So the cost of running the existing plant -- continuing to run the existing plant on oil, the low cost option of continuing to do that, is the blending option with NOx controls.

MR. COON: I guess what I am getting at is maintaining the current sulphur content of oil is the current fuel being used but an option that would look at adding the scrubbers and NOx controls to that since you are maintaining a lower fuel cost.

MR. MARSHALL: As I said, that's more costly than blending the fuel, so we didn't look at it.

MR. COON: There are a number of items on this list that are more costly than blending the fuel which you did look at.

MR. MARSHALL: Yes, there are, but the list is to look at what are the alternatives. The -- and we have the alternative of continuing to run Coleson Cove on oil as one alternative, then the question is there are sub alternatives within that as to how do you continue to run it on oil. So what is the lowest cost way of continuing to run it on oil? That's the one we evaluated.

MR. COON: Okay.

CHAIRMAN: Gentlemen, is this perhaps a good time to recess

for the day?

MR. COON: I wonder if we can have -- apparently it would be a good time to recess, yes.

CHAIRMAN: Okay. Is a 9:30 start acceptable to everyone? All right. We will adjourn until 9:30 tomorrow morning then.

(Adjourned)

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

Reporter