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1 (10:03 a.m.)

2 CHAIRMAN:

3 Q. Good morning. Ladies and gentlemen, this

4 hearing of the Public Utilities Board convened

5 this morning in the matter of an application

6 pursuant to the Public Utilities Act by

7 Newfoundland and Labrador Hydro for an order

8 approving, (1) its 2005 Capital Budget,

9 pursuant to Section 41(1) of the Act, (2) its

10 2005 capital purchases and construction

11 projects in excess of \$50,000 pursuant to

12 41(3)(a) of the Act, (3) its leases in excess

13 of \$5000 pursuant to Section 41(3)(b) of the

14 Act and its estimated contributions in aid of

15 construction for 2005 pursuant to Section

16 41(5) of the Act and for an order as well

17 pursuant to Section 78 of the Act, fixing and

18 determining its average rate base for 2003.

19 I'd like to take the opportunity at this

20 time to welcome the participants and any

21 registered Intervenor and the parties and

22 Board staff and any members of the public who

23 are here to observe what goes on. My name is

24 William Finn, I'm acting as Chair of the

25 Panel. And sitting with me on this Panel, to

Page 3

1 my right, Commissioner Gerard Martin and to my

2 left, Commissioner Don Powell. The Board is

3 assisted by Board counsel, Mark Kennedy, the

4 Board secretary, Mrs. Barbara Thistle and

5 Discoveries Unlimited will be providing

6 written transcripts on a 24 hour turn around

7 basis. I'd ask if the parties would introduce

8 themselves, beginning the Applicant?

9 GREENE, Q.C.:

10 Q. Good morning, Mr. Chair, Commissioners. My

11 name is Maureen Greene and I am counsel for

12 Newfoundland and Labrador Hydro, the

13 Applicant.

14 HAYES, Q.C.:

15 Q. Good morning, Mr. Chair, Gerard Hayes,

16 appearing Newfoundland Power, and with me, Mr.

17 Peter Alteen.

18 HUTCHINGS, Q.C.:

19 Q. Good morning, Mr. Chairman, Joseph Hutchings.

20 With me, Mr. Paul Coxworthy. We represent the

21 Industrial Customer Group of Hydro which

22 consists of Abitibi Consolidated Company of

23 Canada in both its Stephenville and Grand

24 Falls operations, Corner Brook Pulp and Paper

25 Limited, North Atlantic Refining and Voisey's

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1 Bay Nickel Company Limited.

2 CHAIRMAN:

3 Q. Thank you. Mr. Kennedy, at this time could

4 you address any preliminary matters that are

5 appropriate?

6 MR. KENNEDY:

7 Q. Yes, Chair, I don't believe there are any

8 preliminary matters.

9 CHAIRMAN:

10 Q. Okay. Would you indicate for the record,

11 please, the notices that have taken place

12 prior to the Application?

13 MR. KENNEDY:

14 Q. Yes, Chair. Thank you. Put the matter

15 before, basically before the Board in the

16 matter of an application by Newfoundland and

17 Labrador Hydro for an order approving its 2005

18 Capital Budget pursuant to Section 41(1) of

19 the Act; its 2005 capital purchases and

20 construction projects in excess of \$50, 000

21 pursuant to Section 41(3)(a) of the Act; its

22 leases in excess of \$5000 pursuant to Section

23 41(3)(b) of the Act; and its estimated

24 contributions in aid of construction for 2005

25 pursuant to Section 41(5) of the Act; and for

Page 5

1 MR. KENNEDY:  
 2 an order pursuant to Section 78 of the Act  
 3 fixing and determining its average rate base  
 4 for 2003. Chair, I can confirm that the  
 5 matter is properly constituted in compliance  
 6 with the Act and that the Board is properly  
 7 seized of the matter.  
 8 Notice of the application and public  
 9 hearing were issued by the Board providing  
 10 notice to the public concerning the conduct of  
 11 the hearing. That notice is properly filed as  
 12 part of the record of the Board was inserted  
 13 into the Telegram, the Western Star, the Grand  
 14 Falls Advertiser, the Aurora, the Labradorian,  
 15 and the Northern Pen.  
 16 I can confirm, Chair, that we received  
 17 notices, written notices of intervention by  
 18 Newfoundland Power Inc. and written notices of  
 19 intervention by collectively the Industrial  
 20 Customers, Abitibi in Stephenville and Grand  
 21 Falls, Corner Brook Pulp and Paper, North  
 22 Atlantic Refining Limited and Voisey's Bay  
 23 Nickel Company Limited. Confirm as well,  
 24 Chair, that rules of procedure for the conduct  
 25 of Hydro's 2005 Capital Budget application

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1 able to submit that settlement report, if  
 2 possible, today. Thank you, Chair.  
 3 CHAIRMAN:  
 4 Q. Thank you. Do either of the parties have any  
 5 preliminary matter they wish to raise?  
 6 GREENE, Q.C.:  
 7 Q. Mr. Chair, not a preliminary matter, but just  
 8 for the record to indicate that Voisey's Bay  
 9 Nickel is not a customer of Newfoundland and  
 10 Labrador Hydro at this time. I assume, as in  
 11 the GRA that they are intervening as a  
 12 potential customer. We obviously do not  
 13 object to their intervention, but I thought  
 14 the record should reflect the factual  
 15 situation.  
 16 CHAIRMAN:  
 17 Q. Okay. Thank you.  
 18 HUTCHINGS, Q.C.:  
 19 Q. That is, in fact, the case, Mr. Chair.  
 20 CHAIRMAN:  
 21 Q. Thank you, Mr. Hutchings. The sitting times  
 22 that were referred to, particularly for days  
 23 following, obviously would not be hard and  
 24 fast. I think we'll have to judge how the  
 25 schedule is going and we may adjust the matter

Page 6

1 have been forwarded to all the parties and  
 2 they would be subject to the subsequent orders  
 3 of the Board, the rules under which this  
 4 hearing will be conducted.  
 5 Confirm as well the sitting times, Chair,  
 6 that for today's session the sitting times are  
 7 from 10 a.m. to 12:30 and then from 2 p.m.  
 8 until 4:30 p.m. with two 15 minute breaks at  
 9 the discretion of the Panel, both during the  
 10 morning session and during the afternoon  
 11 session. And I confirm as well it's the  
 12 intention to move to a schedule of commencing  
 13 at 9:30 in the morning and proceeding until  
 14 1:30 in the afternoon with two 15 minute  
 15 breaks at the discretion of the Board for both  
 16 Thursday and if necessary, Friday's sitting.  
 17 Lastly, Chair, I confirm that there is a  
 18 mediation report, settlement report that's  
 19 being forwarded among the parties concerning  
 20 some of the projects contained in Hydro's  
 21 Capital Budget application. This is the same  
 22 procedures that were used as part of Hydro's  
 23 2004 Capital Budget application. And I would  
 24 hope to have a final position from the parties  
 25 on their review of that document in time to be

Page 8

1 if necessary to try and conclude this  
 2 particular hearing by the scheduled time on  
 3 Friday, if at all possible. With that, then,  
 4 turn the matter over to Newfoundland Hydro to  
 5 begin its presentation.  
 6 GREENE, Q.C.:  
 7 Q. Thank you, Mr. Chair. In the past I guess the  
 8 practice has been to have opening comments. I  
 9 didn't know if that was wish of the Panel this  
 10 morning?  
 11 CHAIRMAN:  
 12 Q. Certainly.  
 13 GREENE, Q.C.:  
 14 Q. Okay. My comments are only very brief with  
 15 respect to the opening statement. As has been  
 16 mentioned already this is an application under  
 17 Section 41 of the Public Utilities Act for two  
 18 purposes. One is to approve the 2005 Capital  
 19 Budget and that is under Section 41 of the Act  
 20 and the other purpose is under Section 78 of  
 21 the Act to fix and determine the average rate  
 22 base for 2003.  
 23 Looking at the first issue, the 2005  
 24 Capital Budget, I would point out that under  
 25 Section 37 of the Act, which when Mr.--Hydro

Page 9

1 GREENE, Q.C.:

2 as a utility has an obligation to provide

3 service and facilities which are reasonably

4 safe and adequate and just and reasonable. In

5 order to fulfil that obligation and in order

6 to provide our customers with least cost

7 reliable power capital expenditures are

8 required each and every year by a utility.

9 That is the nature of the business we are in.

10 I'd like now to go to Section 41 of the

11 Act, because that is the section of the Act

12 under which the application is brought. Under

13 Section 41(1), Hydro is required to file no

14 late than December 15th its Capital Budget for

15 the next year for approval. I will point out

16 that Hydro filed this application on August

17 the 10th. Under subsection 3 of the Act we

18 are not allowed to proceed with projects over

19 \$50,000 or leases over 5000 without the prior

20 approval of the Board. So that is the section

21 of the Act under which this application is

22 brought.

23 With respect to the justification for

24 projects, I would point out that the Board in

Page 11

1 unit in 2005 which is project B-11 which will

2 leave us with one unit which we have in our

3 five year plan to do next year. Another

4 example would be the motor drive disconnect,

5 motor drive mechanism on the disconnect

6 switches which is project B-38, and this will

7 be the third and final year to do that for all

8 of the 230KV system. We have already done two

9 years and this would complete that program.

10 So that's one category. And we have a number

11 of projects in that category which are a

12 continuation of ongoing programs. Each year

13 is discrete so one year could be disallowed,

14 but it is part of an ongoing program.

15 The third--or the second, rather,

16 category are a continuation of multi-year

17 projects. These are really the examples of

18 where we have one project and we are partway

19 through a project which the Board has already

20 approved the cash flow for prior years. And

21 we have quite a number of those in this year's

22 budget. To give you an example, we have the

23 upgrade of the control system at Holyrood

24 which is project B-16, a \$2.6 million project.

25 The Board has already approved 1.6 million.

Page 10

1 P.U. 7, which was dated in June, 2002, gave

2 direction to Hydro as to the type of

3 documentation that had to be filed to support

4 a capital budget. This is our third budget

5 submitted in compliance with the directions of

6 the Board in P.U. 7. We believe, of course,

7 that we have complied with all of the

8 requirements the Board asked us to do with

9 respect to Capital Budget justifications.

10 I'd like now to just briefly talk about

11 the proposed 2005 Capital Budget. The

12 proposed budget is \$42.4 million. I think

13 that it can be broken down into four

14 categories which I'd like to outline now

15 because I believe it would be helpful to focus

16 the discussion at the hearing.

17 The first category is the continuation of

18 ongoing programs. Each year is discrete, but

19 it is part of a comprehensive program the

20 Board has reviewed before. For example, we

21 have a project the upgrade of spherical valves

22 at Bay d' Espoir. We have six units at Bay

23 d' Espoir, we have already done four units,

24 replacing the value which the Board have

25 approved. We are proposing to do the fifth

Page 12

1 We have \$1 million left for the project for

2 this year and we are literally halfway, more

3 than halfway through this program, which is

4 one project. Not like the previous category

5 where each year is discrete. Another example

6 of that is replacement of the energy

7 management system, B-114 at a total cost of

8 12.3 million. The Board has already approved

9 3.1 million, some in 2003 and some in 2004.

10 This is a multi-year project which will not be

11 finished until 2006, so we need funds in this

12 year as well as next year to carry on and

13 complete the project. So that's the second

14 type of project that we have which I call the

15 multi-year project.

16 (10:15 a.m.)

17 The third type of project are those that

18 you will see each and every year as I call

19 them the annual requirements that Hydro has,

20 similar to what Newfoundland Power has. Every

21 year we must do service extensions, which is

22 project B-48. Every year we must do

23 distribution line upgrades, which is B-50.

24 And they are the projects are based on our

25 historical experience for those types of

Page 13

1 GREENE, Q.C.:

2 projects. Another is corporate applications.

3 In the world in which we live today, which is

4 IT, each and every year there will have to be

5 a number of corporate applications for any

6 organization the size of Newfoundland Hydro.

7 So that's the third type of project where

8 there are annual allotments or requirements

9 each year.

10 The fourth type of project are the truly

11 new projects for 2005 and there are a few of

12 those, of course, as well. A good example

13 would be the anti-fouling system for Holyrood

14 which is a one year project, B-19, which will

15 be completed in the year and which is required

16 for the operational requirements at the

17 Holyrood plant. And as we go through the

18 evidence, you will see the various types of

19 projects that we are presenting for approval

20 and the justification for them.

21 I would like to point out that we

22 received 109 Requests for Information by

23 September 20th, and all were replied to with

24 the exception of one, which was withdrawn by

25 Board counsel, P.U. 13, by September 28th,

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1 application and as well the vehicle portion of

2 the general properties section of the budget.

3 That panel will have a short presentation

4 which I've distributed as well this morning

5 with respect to one particular project, the

6 wood management project, wood management pole

7 project, as well as some other information

8 with respect to a couple of other projects.

9 After the transmission and rural

10 operations panel Mr. Jim Haynes will be the

11 next witness. Mr. Haynes is the vice-

12 president of production for Hydro. He will

13 first speak to all of the Hydro plant projects

14 and the thermal plant projects which are on

15 pages A-4 and A-5 of the Capital Budget.

16 Following that Mr. Haynes will be joined

17 by Mr. Eric Dunphy (sic.) who is the director

18 of information systems and telecommunications

19 and Mr. Gerard Dunphy who is the manager of

20 infrastructure and software support, and those

21 three gentlemen, Mr. Haynes, Mr. Downton and

22 Mr. Dunphy as a panel will address the mobile

23 radio project. And I will come back to that

24 particular project in a moment.

25 Following the conclusion of the evidence

Page 14

1 with half being filed by September 24th and

2 the balance by the 28th of September.

3 The second part of the application

4 concerns our request to fix and determine the

5 average rate base for 2003. This is under

6 Section 78 of the Act where the Board can fix

7 and determine the rate base for the utility.

8 The Board has regularly done this for

9 Newfoundland Power for the last number of

10 years and Hydro is requesting that the 2003

11 rate base be dealt with and fixed at this

12 hearing.

13 I'd like now to turn to the witnesses we

14 will be calling, and I've already advised

15 other counsel of our plans with respect to

16 this.

17 The first area we will present is the

18 transmission and rural operations area. This

19 will be done through a panel of witnesses, Mr.

20 Fred Martin, who is the vice-president of that

21 division and Gordon Holden, who is the

22 director of engineering. So together the two

23 gentlemen will appear as a panel to speak to

24 all projects on the transmission and rural

25 operations which is found on page A-1 of the

Page 16

1 on the mobile radio project we will then have

2 a panel composed of Mr. Haynes and Mr. Downton

3 who will remain. Mr. Dunphy will be allowed

4 to leave the panel and Mr. Nichol will join

5 the panel to speak to the remaining IS and T

6 projects.

7 The final witness will be John Roberts,

8 who is the vice-president of finance and chief

9 financial officer, who will speak to a very

10 limited number of 2005 capital projects in the

11 administrative area and he will also give

12 evidence with respect to the financing of the

13 budget--the 2005 capital program as well as

14 the issues of the 2003 rate base.

15 I'd like to come back to one project,

16 which is the radio. Because in discussions

17 with counsel it appears, and based on the

18 previous experience of Hydro before the Board

19 that this undoubtedly will be one of the

20 significant issues for the hearing. So I

21 thought it would be helpful if in opening

22 comments I advised of Hydro's position with

23 respect to this project. From Hydro's

24 perspective, which is both management and its

25 Board of Directors, this project is a critical

Page 17

1 GREENE, Q.C.:

2 project. I think it has been determined now

3 in the previous two hearings that Hydro as the

4 major generator and transmitter in the

5 province cannot operate its system without a

6 mobile radio system. I think that has now

7 been accepted by the parties. That's the

8 first point. We need a radio to run the

9 system, a mobile radio. The second point is

10 that the current system is obsolete. We have

11 no vendor support, we have no spares. We have

12 been fortunate that the system hasn't failed.

13 In Hydro's and that of its management and

14 Board of Directors, we cannot allow the system

15 to run to failure. It is critical to operate

16 the system, number one, and number two, it

17 takes 18 to 24 months to replace it. We can't

18 operate effectively for that period of time if

19 the system is to fail. We will be placing our

20 customers in the position of longer outages

21 and we will be imposing additional constraints

22 we would have meet with respect to how our

23 employees could operate safely.

24 CHAIRMAN:

25 Q. When you're--excuse me. When you're referring

Page 19

1 accommodate Newfoundland Power at a time in

2 the future when it does need to replace its

3 radio, if it is the least cost option for

4 Newfoundland Power at that time. The third

5 conclusion from the analysis is is that

6 Hydro's proposal, which we have before the

7 Board today, to proceed to replace the mobile

8 radio with participation from the Department

9 of Work Services and Transportation with the

10 ability for Newfoundland Power to join later

11 is the lowest cost option for this system for

12 all rate payers.

13 So having done the analysis as required

14 and having reviewed the issue again, I thought

15 it would be helpful if we advised the Board

16 again of Hydro's position on this and for the

17 reasons we've stated we believe that the radio

18 is critical to be approved at this time and we

19 will be leading significant evidence with

20 respect to that. Because we understand the

21 fact that we've been here twice before for the

22 radio, it's of concern to the Panel and to the

23 other Intervenors and hopefully through all of

24 the evidence you will hear over the course of

25 what I hope is only the next three days, you

Page 18

1 to system failure, are you referring to the

2 radio system?

3 GREENE, Q.C.:

4 Q. The radio, yes, yes, Mr. Chair. Last year the

5 Board deferred the approval of the radio

6 project and directed that a consultative

7 process be undertaken with Newfoundland Power

8 to ensure that various issues raised by the

9 Board were addressed. And through our

10 evidence we will provide information to the

11 Board how both utilities did provide--did

12 respond to that direction and did the analysis

13 as required. Hydro has filed a report

14 outlining its participation in that process

15 and Newfoundland Power has filed a report

16 which we will review with you during the

17 hearing. The conclusions from that analysis

18 in very high level summary is that

19 Newfoundland Power does not need to replace

20 its mobile radio system until at least 2011.

21 It therefore is not cost effective for

22 Newfoundland Power to join Newfoundland

23 Hydro's radio system at this time. It is also

24 clear from the analysis that Hydro's

25 functional specifications will be able to

Page 20

1 will be satisfied and any additional questions

2 you may have will be answered during the

3 course of that proceeding.

4 So in conclusion, for all of the 2005

5 Capital Budget Hydro believes that the

6 projects that we have submitted are the

7 essential ones that are required to provide

8 reliable lowest cost power to our customers

9 and that they therefore should be approved.

10 We believe we have provided sufficient

11 documentation justifying the need for the

12 projects, and secondly, we believe it is

13 appropriate in this hearing to fix and

14 determine the 2003 average rate base. Thank

15 you, Chair, Commissioners, that concludes our

16 opening comments.

17 CHAIRMAN:

18 Q. Thank you, Ms. Green. Mr. Hayes.

19 HAYES, Q.C.:

20 Q. Yes, Mr. Chair, thank you, very much. As

21 noted in our Intervenor submission,

22 Newfoundland Power is the principal purchaser

23 of Hydro's production on the Island

24 Interconnected System. As such, we obviously

25 have a significant interest in Hydro's Capital

Page 21

1 HAYES, Q.C.:

2 Budget. We do not intend to call evidence at

3 this proceeding. However, we have identified

4 several projects upon which we may ask

5 questions. Most noteworthy among those

6 projects, obviously, is the VHF radio project.

7 And as Ms. Greene has pointed out,

8 Newfoundland Power had cooperated with Hydro

9 in a consultative process during the past

10 year, guided by the Board's comments in order

11 P.U. 29 (2003). The outcome of that process

12 is before the Board today. And Newfoundland

13 Power will have some questions to address to

14 the panel that's dealing with that issue.

15 There are also several other questions with

16 respect to other projects that we may find

17 necessary to ask during the course of the

18 proceeding. We expect, Mr. Chair, that our

19 questioning will be relatively brief. Thank

20 you. Those are our opening submissions.

21 CHAIRMAN:

22 Q. Thank you, Mr. Hayes. Mr. Hutchings?

23 HUTCHINGS, Q.C.:

24 Q. Thank you, Mr. Chair. The Industrial Customer

25 Group of Hydro obviously are significant users

Page 23

1 province.

2 Specifically with respect to capital

3 items, obviously, this budget itself will

4 not change today or at the end of this hearing

5 the rates that our clients are paying for

6 their electricity. However, if a capital

7 project is approved and if it is subsequently

8 added to the rate base, that does increase the

9 return to which Newfoundland and Labrador

10 Hydro is entitled, it does increase the

11 depreciation expense that it can claim and it

12 will have impacts on other operating expenses

13 and related expenses, interest costs and so on

14 that ultimately end up in the rates that our

15 clients pay. So, it is in our interest to

16 insure that the electricity continues to be

17 provided at the lowest possible cost and

18 hence, that these expenses be limited as far

19 as possible.

20 The world that our clients live in is

21 different again in that they face limited

22 ability to fund capital projects. There are

23 many situations where an operation such as one

24 of the paper mills is simply told by head

25 office there is no available capital money

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1 of electric power in the province. Their

2 operations are the backbone of the island

3 economy outside of the area of St. John's, and

4 the price that they pay for electricity is a

5 serious consideration for each of them, given

6 the significant proportion of their own

7 operating costs that are related to electric

8 power. And we all know enough about pulp and

9 paper operations and oil refineries to know

10 that power, electric power is a very

11 significant input into these operations.

12 These customers obviously live in a different

13 world than the utilities in the sense that

14 they are price takers in their own markets,

15 and it is therefore vital to them to ensure

16 that their input costs are kept to the lowest

17 possible level. Their interest in electricity

18 is as a commodity and they purchase it, they

19 want to purchase it at the lowest possible

20 price and the legislation that governs public

21 utilities in this province says that

22 electricity should be made available to users

23 at the lowest possible cost, and that's why

24 the Industrial Customer Group has involved

25 itself in public utilities regulation in this

Page 24

1 this year or there is a very limited amount of

2 capital money available this year, and hence,

3 you must make do with what is available.

4 There's no such market limit on Hydro in this

5 sense, and it is for that reason that this

6 sort of control exists from the Board so that

7 there is a proxy, if you will, for the notion

8 of the market limit that exists in respect of

9 private enterprises. This Board must try to

10 keep the level of capital spending of

11 Newfoundland and Labrador Hydro and other

12 utilities under control since there is no

13 market force that does that.

14 That leads to another conclusion that

15 will be the theme of this hearing is the

16 notion that where a capital expenditure can

17 safely and legitimately be deferred. The time

18 value of money indicates that such an

19 expenditure should be deferred if it is not

20 necessary that a project be undertaken in 2005

21 but the system can be preserved adequately if

22 that project is undertaken in 2006 or 2007,

23 the further away that expenditure is, given

24 the time value of money, that is when the

25 expenditure should be made and no earlier than

Page 25

1 HUTCHINGS, Q.C.:

2 when necessity demands that it be made. That

3 is one theme.

4 The other issue here, another issue is

5 the notion that Hydro, by reason of its method

6 of regulation, is fixed in what it can recover

7 for operating expenses. Its rates have been

8 fixed by this Board by order and that allows

9 for a certain level of operating expenses to

10 be recovered by Newfoundland and Labrador

11 Hydro. And until such time as there's another

12 general rate hearing, its ability to recover

13 additional operating expenses is severely

14 limited, in fact, doesn't exist.

15 The concern that that gives rise to with

16 respect to these proceedings is that if Hydro

17 casts as a capital expenditure something that

18 really should be characterized as an operating

19 expense, then this will ultimately allow Hydro

20 to increase its own net income to the extent

21 that it is intended to recover its operating

22 expense from existing rates, its net income

23 will fall out of the result of its operations

24 when properly assigned operating expenses are

25 assigned to the operating account. To the

Page 27

1 project that needs to be--that's being

2 proposed needs to be done this year and cannot

3 be deferred to another year. And that

4 scrutiny needs to be applied to this budget.

5 In the course of the hearing as has been

6 the case in the past, Mr. Coxworthy and I have

7 divided the various projects between us such

8 that each of us will, in accordance with the

9 rules, be participating in the cross-

10 examination of each of the panels or each of

11 the witnesses who appear, but one of us will

12 begin and finish the examination that we need

13 to do and then the other will start and

14 complete the examination in total. We do not

15 intend in this hearing to be calling evidence,

16 but we will be obviously cross-examining in

17 respect of a good number of projects.

18 Just for clarity, and this will become

19 clear when the settlement agreement is filed,

20 the expenses or the projects here that are

21 related solely to the Hydro Rural System don't

22 affect the rates of the Industrial Customers

23 and therefore generally speaking we take no

24 position with respect to those. It is perhaps

25 somewhat unfortunate that there is not a

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1 extent that some of the projects that we may

2 see here should properly be regarded as

3 operating expenses, that the Board should

4 enforce that in order that there is not an

5 opportunity to Hydro to spend additional money

6 that should have been properly assigned to

7 operating when in fact there is not a proper

8 capital expenditure associated with it.

9 (10:30 a.m.)

10 So this hearing is intended to deal with

11 capital expenses only and this Board can

12 authorize Hydro to spend capital money in this

13 hearing.

14 This Board should not be authorizing

15 Hydro to spend additional money on operating

16 expenses in this hearing. If that's an issue,

17 then that has to be dealt with in a general

18 rate hearing. So, from the point of view of

19 the Industrial Customers, we need to ensure

20 that there is control.

21 This budget is quite clearly higher than

22 the typical capital budget that Hydro has

23 experienced, and that is a matter of concern.

24 Where the budget is higher than normal, there

25 should be extra vigilance to ensure that every

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1 Consumer Advocate or someone here to speak to

2 those projects, Newfoundland Power may speak

3 to some of them, Board counsel may speak to

4 some of them, but that is a bit of a gap. As

5 I say, it doesn't affect our clients and

6 hence, we do not generally speak to those

7 projects, although we may find some things in

8 those projects that enlighten us as to how

9 Hydro approaches things, and sometimes we have

10 difficulty with that.

11 That being said, we must acknowledge that

12 since we became more actively involved in

13 these capital budget matters, since about the

14 year 2001, the level of explanation and

15 justification that is included in Hydro's

16 materials has, in our view, improved very

17 considerably and there is a great deal more

18 material and better justification in the

19 explanations generally now than there was some

20 years ago. That doesn't mean that we still

21 don't have some issues in that regard, and we

22 will speak to those as they go along.

23 The second issue in the hearing is the

24 issue of the approval of the rate base. And

25 we do take issue with that application as

Page 29

1 HUTCHINGS, Q.C.:

2 well. The affect of the approval of the rate

3 base for 2003 is to allow an increase in that

4 rate base. And given the nature of public

5 utilities, the increase--the rate base almost

6 inevitably is increasing as opposed to

7 decreasing year over year. What that does, of

8 course, is to allow additional dollar recovery

9 by Hydro in respect of its income to the

10 extent that it is allowed a larger rate base.

11 The dollar value of its return on rate base

12 increases and whatever mechanism the Board may

13 put in place with respect to limiting the

14 income or excess earnings of Hydro will be

15 affected such that Hydro will be able to

16 retain a greater proportion of any excess

17 earnings to the extent that a larger rate base

18 is approved. This is a complete departure for

19 Newfoundland and Labrador Hydro. It has never

20 before undertaken to request an approval of

21 rate base outside a general rate hearing. We

22 feel it is singularly inappropriate to do it

23 at this time. As the Board is fully aware,

24 there is a Capital Budget review process under

25 way and we feel strongly that that--whether or

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1 panel and those are B-139, 141, 143 and 144.

2 But I don't think they were specifically

3 identified as associated with one of the

4 panels. That's the -

5 GREENE, Q.C.:

6 Q. That is correct, Mr. Chair, those projects

7 will be spoken to by the IS and T panel

8 composed of Mr. Haynes, Mr. Downton and Mr.

9 Nichol.

10 HUTCHINGS, Q.C.:

11 Q. Okay. And I'm taking the ones that, the few

12 projects that Mr. Roberts will be speaking to

13 to include B-152, 153, 154 and 155, is that--

14 am I correct in that?

15 GREENE, Q.C.:

16 Q. That's correct.

17 HUTCHINGS, Q.C.:

18 Q. Yes, okay. I just wanted that clarified.

19 Thank you, Mr. Chairman.

20 CHAIRMAN:

21 Q. Thank you, Mr. Hutchings.

22 GREENE, Q.C.:

23 Q. Mr. Chair, I have a question of clarification.

24 The issue raised by Mr. Hutchings in his

25 opening statement taking exception to the

Page 30

1 not it is appropriate to join the approval of

2 rate base with the annual Capital Budget

3 application is an issue that should be dealt

4 with in that process and not changed now

5 precipitously in this fashion when the

6 implication is that there may be additional

7 costs imposed on the system as a result,

8 additional costs that people like our clients

9 will have to pay. We acknowledge that this

10 has been the practice in respect of

11 Newfoundland Light, Newfoundland Power. That

12 means that one of two utilities here has

13 followed that practice. I think it is

14 appropriate for the Board to consider whether

15 or not that is the appropriate practice, and I

16 think the appropriate forum to do that is the

17 ongoing Capital Budget review process which is

18 under way at the present time. So we will be

19 making final submissions on that in due

20 course.

21 Those are most of my remarks. I would

22 ask if Ms. Greene could clarify for us in

23 respect of the witnesses who will be speaking

24 to projects. There are four projects which

25 I'm assuming will be spoken to by the IS and T

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1 fixing and determining of the rate base, I'm

2 assuming that this issue will be addressed in

3 final argument. It has been in our

4 application since it was filed on August 10th.

5 I'm not sure if--Mr. Hutchings has not taken a

6 motion to have this part of the application

7 deferred, etcetera, so I am assuming at this

8 point that we will proceed through the hearing

9 and address the issue in final argument. And

10 I will be calling evidence with respect to the

11 rate base issue.

12 CHAIRMAN:

13 Q. That would be an assumption on my part, as

14 well, Mr. Hutchings.

15 HUTCHINGS, Q.C.:

16 Q. Yes, that's what I understood would be

17 happening, Mr. Chair. I didn't think it was

18 necessary to isolate the issue. I would

19 expect that the Board will want to hear the

20 evidence and make a determination at the end

21 of the day as to whether it's appropriate in

22 the course of this process and at this time to

23 fix the rate base.

24 CHAIRMAN:

25 Q. Fine. Thank you. Ms. Greene?



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1 GREENE, Q.C.:

2 Q. Yes, thank you. Thank you, Mr. Chair. Our

3 first area to be covered is transmission and

4 rural operations. And as I indicated, we have

5 two people who will appear as part of the

6 panel, Mr. Fred Martin and Mr. Gord Holden. I

7 wonder if they could come up, please?

8 MR. FRED MARTIN (SWORN)

9 MR. GORDON HOLDEN (SWORN)

10 CHAIRMAN:

11 Q. Individually state your names for the record.

12 MR. MARTIN:

13 A. My name is Fred Martin.

14 MR. HOLDEN:

15 A. My name is Gordon Holden.

16 GREENE, Q.C.:

17 Q. And, Mr. Chair, Commissioners, during the

18 course of the direct evidence there will be

19 some slides presented through the monitors and

20 copies of that presentation and those slides

21 have been distributed. Good morning. Mr.

22 Martin, could you please advise the Panel what

23 your current position is with Hydro and what

24 are the responsibilities of that position?

25 MR. MARTIN:

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1 Q. Mr. Martin, how long have you been in your

2 current position?

3 MR. MARTIN:

4 A. I've been in my current position since August

5 1st, 2003.

6 Q. And how long have you been with Hydro and what

7 type of positions have you held in your career

8 at Hydro?

9 MR. MARTIN:

10 A. I've been with Hydro for approximately 30

11 years. Prior to my current position, I was

12 Director of Engineering in TRO division from

13 1995 to 2003. Before that, I held the

14 position of manager of telecontrol, from 1998-

15 -I'm sorry, from 1988 to 1995. I have held

16 other positions within Hydro prior to that,

17 such as senior protection and control

18 engineering, both the engineering and

19 construction division and the operations

20 division, and I've also been a plant engineer

21 at the Bay D'Espoir generating station and at

22 the Holyrood thermal generating station.

23 Q. Similarly, Mr. Holden, how long have you been

24 with Hydro? What positions have you held with

25 Hydro?

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1 A. Yes. I'm vice-president of transmission and

2 rural operations. My division has overall

3 responsibility for the design, construction

4 and ongoing operation and maintenance of

5 Hydro's high voltage transmission network, its

6 high voltage terminal stations, its

7 distribution systems, three gas turbines and

8 27 diesel plants on the Island Interconnected,

9 Labrador Interconnected and the Isolated Rural

10 Systems. I also have corporate wide

11 responsibility for environmental services,

12 transportation, drafting, revenue metering and

13 properties.

14 Q. Mr. Holden, could you advise the Panel what

15 your position is at Hydro and the

16 responsibilities of that position?

17 MR. HOLDEN:

18 A. Yes. I am the director of engineering in the

19 transmission and rural operations division.

20 And as director of that department I'm

21 responsible for all engineering services to

22 the operations and I also have responsibility

23 for drafting and metering services for the

24 whole corporation.

25 GREENE, Q.C.:

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1 MR. HOLDEN:

2 A. I've been with Hydro for 23 years. I've been

3 in my current position since August 2003. I

4 started with Newfoundland Hydro in 1981 as

5 electrical design engineer in the engineering

6 and construction division, and was promoted to

7 supervising electrical engineer in 1998, and

8 appointed to the Director of Engineering in

9 August of 2003.

10 Q. Mr. Martin, have you appeared before the

11 Public Utilities before?

12 MR. MARTIN:

13 A. Yes, I have.

14 Q. In Capital hearings as well as in the recent

15 General Rate Application? Is that correct?

16 MR. MARTIN:

17 A. That is correct.

18 Q. Mr. Holden, have you appeared before the Board

19 before as well?

20 MR. HOLDEN:

21 A. Yes, I appeared before the Board at the

22 Capital Budget hearing for 2003, which

23 occurred in 2002.

24 Q. Turning now to the 2005 Capital Budget, we see

25 page A-1 there on the screen. Is it correct,

Page 37

1 GREENE, Q.C.:

2 Mr. Martin, that you are responsible in your

3 division for all projects that appear there

4 under "Transmission and Rural Operations" with

5 a total for 2005 indicated as 19.8 million?

6 (10:45 a.m.)

7 MR. MARTIN:

8 A. That is correct, yes.

9 Q. And there on the next heading "General

10 Properties" I believe you've indicated you are

11 responsible for vehicles and is vehicles found

12 within that heading of General Properties, Mr.

13 Martin?

14 MR. MARTIN:

15 A. Yes, vehicles is found within that heading of

16 General Properties. I am responsible for that

17 portion of the vehicles in the administrative

18 category, which for 2005 is estimated at

19 \$1,328,000.

20 Q. Okay. Before we get into the specific

21 projects, I wanted you to outline for the

22 panel the system, to provide a brief

23 description of the system for which you are

24 responsible in TRO and during the course of

25 the description, I wanted you to give an

Page 39

1 Goose Bay terminal station. We also have an

2 interconnected standby diesel plant at Happy

3 Valley with a capacity of approximately 11. 7

4 megawatts, as well as distribution facilities

5 at the Sheshatsheits Northwest River, as well

6 as the Happy Valley-Goose Bay area. In

7 Western Labrador, we also have distribution

8 facilities for Labrador City and Wabush.

9 Obviously we also have isolated diesel plants

10 in Labrador, and I'll cover those in a later

11 slide.

12 This is a map of our high-voltage

13 transmission system at the 230 kV level.

14 Hydro owns and operates all of the 230 kV bulk

15 transmission system on the island with

16 terminal stations all the way in the east from

17 Oxen Pond through Hardwoods, Sunnyside, west

18 to the Bay D'Espoir generating station, and

19 you'll see connections then to the Upper

20 Salmon and Granite Canal plant. Then north

21 from Bay D'Espoir to Stoney Brook, west to

22 Buchans. All of these lines are parallel in

23 the main, as you'll see, and then west again

24 to Massey Drive near Corner Brook and Bottom

25 Brook near Stephenville. We also have a 230

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1 indication of the age of the facilities and

2 other factors that might be significant from a

3 Capital Budget perspective.

4 MR. MARTIN:

5 A. Certainly. Mr. O'Rielly, could you go to the

6 first map, please?

7 Q. And this is where you will see, in the slide

8 that we have distributed, Mr. Martin will be

9 reviewing the system maps and they will come

10 up on the monitor as well.

11 MR. MARTIN:

12 A. I'd like to start off by saying that systems

13 that fall under the responsibility of TRO are

14 at various stages of their service lives. One

15 of the most important issues, I think, facing

16 Hydro, the Public Utilities Board and the rate

17 payers is the aging infrastructure that we own

18 and operate and maintain. On the slide you

19 see here now, this is a very basic

20 representation of the facilities we have in

21 Labrador. As you'll see, the green-lined

22 138kV line from Churchill Falls to Happy

23 Valley-Goose Bay is roughly 255 kilometres

24 long. We own, operate and maintain that, as

25 well as a gas turbine at the Happy Valley-

Page 40

1 kV connection from the Cat Arm Generating

2 Station down into Deer Lake and then connected

3 back again to Massey Drive near Corner Brook.

4 Laid on top of that, we have our 138 kV

5 transmission system, roughly 1500 kilometres,

6 very similar to our 230 kV system. I'll start

7 in the Deer Lake area with the 138 kV radial

8 transmission line to St. Anthony airport

9 terminal station. It's close to 400

10 kilometres long and feeds approximately 10,000

11 customers in the Great Northern Peninsula

12 area. We also have a 138 kV loop coming out

13 of Stoney Brook in the middle of Newfoundland

14 there, back around to South Brook, Springdale,

15 Indian River, Howley, with an interconnection

16 to our 75 megawatt Hydro plant at Hind's Lake.

17 We also have 138 kV facilities from Bottom

18 Brook down to Doyles on the southwest coast,

19 as well as down to a terminal station at

20 Grandy Brook, which feeds the Burgeo LaPoile

21 area of the province. In addition, we have

22 two 138 kV lines from Sunnyside down to

23 stations at Linton Lake and Salt Pond, and

24 they are basically providing service to our

25 customers, our Newfoundland Power customer at

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1 MR. MARTIN:  
 2 those locations for the Burin Peninsula.  
 3 Overlaid on that, we have our 69 kV  
 4 transmission, roughly 700 kilometres long,  
 5 primarily on the Northern Peninsula. This was  
 6 the original transmission system providing  
 7 service to customers on the Great Northern  
 8 Peninsula, running again from Deer Lake up  
 9 through Rocky Harbour, Sally's Cove, Cow Head  
 10 and Daniel's Harbour. We also have 69 kV  
 11 transmission from the St. Anthony airport  
 12 terminal station on the tip of the Great  
 13 Northern Peninsula to the community of St.  
 14 Anthony, Main Brook and down into Roddickton.  
 15 In addition, we have a 69 kV line from the Bay  
 16 D'Espoir generating station down to our  
 17 English Harbour West terminal station,  
 18 providing service to customers on the  
 19 Connaigre Peninsula.  
 20 Hydro operates and maintains  
 21 approximately--not approximately, exactly 23  
 22 Isolated Diesel plants, all the way from Nain  
 23 on the north cost of Labrador to L'Anse au  
 24 Loup near the Labrador/Quebec border, in the  
 25 Labrador Straits area. We have Isolated

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1 age or over. On the Interconnected system, we  
 2 have standby diesel plants at Happy Valley,  
 3 St. Anthony and Hawke's Bay. A significant  
 4 portion of the infrastructure at those sites  
 5 is between 30 and 56 years of age, with 13 of  
 6 our 18 diesel generators of that vintage. The  
 7 other important factor to remember in all this  
 8 is that practically all of these systems are  
 9 required to operate under very harsh  
 10 environmental conditions.  
 11 Q. Earlier, Mr. Martin, you said that one of the  
 12 biggest issues for Hydro, the Board and its  
 13 customers is the aging facilities, and you've  
 14 just indicated the age of a significant number  
 15 of the facilities. Why is the age such an  
 16 issue for you?  
 17 MR. MARTIN:  
 18 A. Primarily because the Board is going to see a  
 19 requirement for ongoing increases in  
 20 maintenance costs and capital replacement  
 21 costs. All of these equipments have service  
 22 lives that could range anywhere from say 25  
 23 years for a diesel generator set to 50 years  
 24 for a wood pole transmission line.  
 25 Eventually, this age is going to catch up with

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1 Diesel plant on Little Bay Islands, another  
 2 one on St. Brendan's, as well as plants on the  
 3 south coast of Newfoundland from Ramea to  
 4 Rencontre East.  
 5 I'd just like to give you an overview of  
 6 some of the aging facilities that we have. Of  
 7 our 3700 kilometres of transmission line, we  
 8 have 2500 kilometres of wood pole line, 26,000  
 9 poles on that system, and approximately 35  
 10 percent have been in service for 30 years or  
 11 more. Of our 55 high-voltage terminal  
 12 stations, they contain assets such as power  
 13 transformers, circuit breakers, protection and  
 14 control systems and other ancillary equipment.  
 15 Approximately 43 percent of Hydro's power  
 16 transformers are in excess of 30 years of age.  
 17 Almost 50 percent of our high-voltage circuit  
 18 breakers, numbering 214, have been in service  
 19 for over 30 years. Of our 3,000 kilometres of  
 20 distribution lines, there were 75,000 poles.  
 21 Many of those have been in service for well  
 22 over 30 years. For the 23 Isolated Diesel  
 23 systems that serve 4400 customers in the rural  
 24 areas, we operate and maintain 79 diesel  
 25 generating units, 19 of which are 20 years of

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1 us and we need to do whatever we can to try  
 2 and extend the life of those assets, squeezing  
 3 as much value out of them as possible.  
 4 Q. And is this an issue that's now becoming of  
 5 concern to other electrical utilities of  
 6 similar age to Hydro?  
 7 MR. MARTIN:  
 8 A. I'm sure it is, and I'm sure it's a concern  
 9 for our sister utility at Newfoundland Power  
 10 as well.  
 11 Q. Turning now to the specific budgets. First,  
 12 Mr. Martin, you are responsible for the  
 13 projects as we've already seen under  
 14 transmission and rural operations. The  
 15 project justifications for projects over  
 16 \$50,000, for those projects, were those  
 17 descriptions that are contained in Section B  
 18 for Transmission and Rural Operations projects  
 19 prepared under your direction?  
 20 MR. MARTIN:  
 21 A. Yes, they were.  
 22 Q. Do you accept them as your evidence for the  
 23 purpose of this hearing?  
 24 MR. MARTIN:  
 25 A. Yes, I do.

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1 GREENE, Q.C.:

2 Q. Mr. Holden, what was your involvement in the

3 project descriptions in Section B for the TRO

4 projects?

5 MR. HOLDEN:

6 A. My involvement in the preparation of those

7 justifications and explanations was to review

8 those cost estimates and explanations and

9 justifications for accuracy and clarity and

10 then to assist with the assembly of the budget

11 document for submission to this Board.

12 Q. Mr. Martin and Mr. Holden, evidence was pre-

13 filed for transmission and rural operations on

14 August 10th. Do you accept the pre-filed

15 evidence as your evidence for the purpose of

16 this hearing?

17 MR. MARTIN:

18 A. Yes, I do.

19 MR. HOLDEN:

20 A. Yes, I do.

21 Q. Mr. Martin, before we look at the specific

22 projects, I wanted you to outline for the

23 Board what is the capital budget, from your

24 perspective, and what is your involvement in

25 it as a vice-president?

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1 to submission to Hydro's Board for approval

2 and then ultimately, the Board of Public

3 Utilities.

4 Q. And Mr. Holden, as the director of

5 engineering, what's your involvement in the

6 process Mr. Martin just outlined?

7 MR. HOLDEN:

8 A. Well, as Mr. Martin described, the budget for

9 both of us can originate either with the

10 regional operations groups or within

11 engineering, and in either case, the

12 engineering department completes the project

13 descriptions and justifications and the

14 project estimates, and they do that in

15 consultation with the originating region and

16 department and with the planning department,

17 and then before they're submitted then to the

18 budget review at the departmental and

19 divisional level, before it goes to executive

20 management for review and approval.

21 Q. And you mention the engineering department.

22 That's the department for which you are

23 responsible as director? Is that correct?

24 MR. HOLDEN:

25 A. Yes, that is correct.

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1 MR. MARTIN:

2 A. The capital budget process in TRO starts at

3 the regional level within the engineering

4 department. Each of the three regions

5 develops their own individual proposals to

6 address legislative, safety, environmental,

7 reliability and productivity improvements.

8 These are then reviewed by the managers in the

9 regions with their senior staff. The

10 engineering department also develops proposals

11 related to overall system reliability,

12 performance, protection and control and

13 metering.

14 Following review at the regional and

15 departmental level, a divisional budget

16 package is then prepared for my review. There

17 are a series of meetings held between myself,

18 the director of engineering and the regional

19 managers to conclude which proposals will be

20 presented to executive management for

21 approval. The executive management then

22 reviews each individual project to ensure that

23 it must be done to address customer and

24 employee requirements and that there is

25 sufficient justification for the project prior

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1 Q. After a project is approved by the Public

2 Utilities Board, Mr. Martin, what would be

3 your involvement in the TRO projects that are

4 approved?

5 MR. MARTIN:

6 A. Following approval of the Capital Budget by

7 the Board, my role is to ensure at a high

8 level that the projects are initiated and

9 completed as per schedule. Also, I conduct a

10 monthly review of the project summary status

11 reports which highlight such things as cost

12 incurred to date, projected final completion

13 date, and final forecast costs. It is also my

14 responsibility then to make sure that any

15 anomalies or concerns that are observed during

16 my review are addressed and reacted to.

17 Q. And Mr. Holden, as director of engineering,

18 what's your role after a project gets

19 approval?

20 MR. HOLDEN:

21 A. Following approval of the Capital Budget, my

22 role as director is to assign the project

23 managers and teams for the individual projects

24 and to ensure that they are completed on

25 schedule and within budget, and I also conduct

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1 MR. HOLDEN:  
 2 monthly review meetings on all projects with  
 3 all the project managers to ensure that the  
 4 capital program is being implemented according  
 5 to the plan and according to the budget.  
 6 Q. Now I'd like to turn to the specific 2005 TRO  
 7 capital projects, and I wonder, Mr. O'Rielly,  
 8 if you could just show us page A-2? Again,  
 9 just to confirm, Mr. Martin, for those that  
 10 are listed--if you could scroll down a little  
 11 bit, Mr. O'Rielly. And I just realized, I  
 12 should have indicated, Mr. O'Rielly as well.  
 13 Even though he's not a witness for Hydro, he's  
 14 a very important part of the process, and I  
 15 know that Commissioners Martin and Powell have  
 16 seen him before, but Mr. O'Rielly will be here  
 17 for all, the assistance of all counsel  
 18 throughout the course of the hearing, with  
 19 respect to information requirements. Sorry I  
 20 didn't introduce you, Terry.  
 21 Under transmission and rural operations,  
 22 Mr. Martin, just to confirm, those that are  
 23 shown there under transmission and rural  
 24 operations with the total of 19.8 million,  
 25 those are the ones that you are responsible

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1 project. Mr. Martin, could you please  
 2 describe the project?  
 3 MR. MARTIN:  
 4 A. Certainly. This proposal covers the first of  
 5 a multi-year program involving the inspection,  
 6 testing, treatment and where necessary,  
 7 refurbishment or replacement of poles,  
 8 conductor, insulators and hardware on Hydro's  
 9 2500 kilometres of wood pole transmission  
 10 lines. The program is estimated to cost  
 11 approximately \$36 million over its 20-year  
 12 duration and have a minimum net present value  
 13 benefit of approximately 4.5 million.  
 14 (11:00 a.m.)  
 15 At this time, the program is planned to  
 16 cover all lines in two ten-year cycles. All  
 17 inspection and test results will be organized  
 18 in a comprehensive data base at the individual  
 19 pole level. Test results will determine  
 20 whether a pole or other items need to be  
 21 replaced. It is anticipated that this program  
 22 will extend the life of these transmission  
 23 line assets by a minimum of ten years.  
 24 Q. Now, Mr. Martin, I believe, if you would like  
 25 to lead us through the presentation at this

Page 50

1 for under transmission and rural operations?  
 2 Is that correct?  
 3 MR. MARTIN:  
 4 A. Yes, that's correct.  
 5 Q. Now if we could go to page A-3, Mr. O'Rielly,  
 6 please. Again, we talked about vehicles  
 7 before and I believe you indicated that the  
 8 vehicles show up in the administration.  
 9 They're a portion of the administration  
 10 category here, under General Properties? Is  
 11 that correct?  
 12 MR. MARTIN:  
 13 A. That's correct.  
 14 Q. Turning now to the breakdown of those projects  
 15 for which you are responsible, I wonder if we  
 16 could go to page A-6? This is where the  
 17 breakdown of your projects start. The very  
 18 first one there is replace the wood poles,  
 19 which is one of the significant TRO projects  
 20 for 2005, at a cost of 2.6 million. Mr.  
 21 Martin, I wonder if you could please describe  
 22 this project? And here for the panel, I would  
 23 indicate that this is the one project where  
 24 Mr. Martin would like to--has circulated  
 25 slides to further describe and explain the

Page 52

1 time, please?  
 2 MR. MARTIN:  
 3 A. Yes, if we could go to the next slide, Mr.  
 4 O'Rielly, please? As I mentioned before,  
 5 Hydro operates and maintains 43 wood pole  
 6 transmission lines on the bulk electrical  
 7 system, roughly 2500 kilometres in length,  
 8 containing 26,000 poles. These two pie charts  
 9 here, if you just break it down in simple  
 10 terms, show that of those lines approximately  
 11 one-third of them are in excess of 30 years.  
 12 Another third are between 20 and 30 years old,  
 13 and the final third is less than 20 years old.  
 14 Q. Excuse me, Mr. Martin. You mentioned the bulk  
 15 electrical system. What did you mean by that?  
 16 MR. MARTIN:  
 17 A. Referring back to our original maps showing  
 18 the 230, 138 and 69 kV Interconnected system,  
 19 I'm talking about the wood pole lines that are  
 20 as part of that system.  
 21 Q. And we use the phrase "the bulk electric  
 22 system" to describe that. It doesn't include  
 23 the distribution lines. Is that correct?

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1 MR. MARTIN:  
 2 A. No, it doesn't include the distribution at  
 3 all. The 75,000 wood poles that I mentioned  
 4 on the distribution system are not included in  
 5 this program.  
 6 Just a brief review of our historical  
 7 maintenance practices that we've used just  
 8 until recently, it's a time-based program or  
 9 it was a time-based program, primarily visual  
 10 in nature. We were doing helicopter patrols,  
 11 typically four times a year. We would do  
 12 climbing inspections of all of our  
 13 transmission lines on a five-year interval,  
 14 which translates into roughly 20 percent of  
 15 each line we would inspect on a climbing  
 16 inspection each year. As well, in the  
 17 wintertime, we also did snowmobile patrols.  
 18 In the past, we've done some additional  
 19 work, if you will, on some of these wood pole  
 20 lines and through the results of those  
 21 inspections, dating back to 1985, we did some  
 22 preservative retention testing of some of the  
 23 poles to determine what the preservative  
 24 levels were in the poles after that particular  
 25 aging period. So in 1985, on the Avalon, we

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1 \$420,000 to replace those poles. In 2002, we  
 2 inspected 273 wood poles on TL220, that's the  
 3 69 kV line I mentioned previously from Bay  
 4 D'Espoir feeding down to English Harbour West  
 5 on the Connaigre Peninsula. 27 of those poles  
 6 were rejected, and the replacement cost of  
 7 those is currently under analysis, and I'll  
 8 get back to that in a minute. In 2003, we  
 9 went island wide and we inspected 1943 poles  
 10 and 133 of those were rejected, and again,  
 11 they are currently under analysis.  
 12 What this slide is meant to show you is  
 13 that in that 13-year period from 1985 to 1998  
 14 on to 2003, the number of poles that had to be  
 15 rejected through inspection had obviously  
 16 significantly increased, percentage wise.  
 17 I thought the Board might be interested  
 18 in some of the things we found. This is the  
 19 butt end of a wood pole that has obviously  
 20 been attacked. It is severely rotted. It had  
 21 to be replaced. This is attributable to  
 22 bacteria and fungi. The depletion level of  
 23 the preservative in the pole had gone to the  
 24 point where it was easily attacked and the  
 25 pole destroyed. The second picture you see

Page 54

1 inspected basically 1270 poles. None of those  
 2 poles were rejected. They were all basically  
 3 20 years old. They were still in fairly good  
 4 shape. The preservative retention level in  
 5 the pole, which protects the pole from  
 6 bacterial attack, fungi attack and insects and  
 7 so on, had depleted but not to the point where  
 8 the poles were severely affected, and there  
 9 were none of those poles were rejected. In  
 10 1998, during the upgrade of the steel  
 11 transmission lines on the Avalon Peninsula,  
 12 the Board will remember the question came up  
 13 as to "well, what are you planning to do with  
 14 your wood pole lines?"  
 15 And as a part of the consequences of  
 16 looking at that, we went out again and  
 17 inspected another 1500 poles on the Avalon,  
 18 which are of the same sample as the ones that  
 19 were inspected in 1985. You'll see on the  
 20 chart that 79 of those poles were rejected.  
 21 The cost of the replacement of those 79 poles  
 22 in 1998 was \$600,000. In 2000, we did a  
 23 series of inspections in the Central region,  
 24 again, roughly 1500 poles. 82 of those were  
 25 rejected and it cost us 42--I'm sorry,

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1 there is a pole that has been obviously  
 2 severely damaged by ant infestation, again  
 3 because the preservative level in the pole had  
 4 been significantly depleted. In the top  
 5 right-hand corner, you'll see what we call a  
 6 ball link eyebolt. This is a standard piece  
 7 of hardware on our transmission system, and  
 8 you can see that one of the pieces of  
 9 apparatus has been severely worn and if it had  
 10 not been found, it was only a matter of time  
 11 before it wore through, resulting in failure.  
 12 This particular picture is not ours, but  
 13 it is meant to indicate the kinds of things  
 14 that you can get into with regards to a  
 15 conductor on our high-voltage lines. The  
 16 arrow is pointing to a broken strand of  
 17 conductor that has apparently fatigued, failed  
 18 under fatigue, as a result of vibration.  
 19 Fortunately, we haven't seen a lot of that yet  
 20 on our system. One of the things we have seen  
 21 is that the steel core of many of our  
 22 transmission conductors is showing signs of  
 23 corrosion and deterioration and will  
 24 ultimately have to be replaced. And last, but  
 25 not least, the infamous insulators. This is

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1 MR. MARTIN:  
 2 obviously one that has slashed over, very  
 3 likely as a result of lightning or some other  
 4 fault condition. So these are the types of  
 5 things that in these inspections, we are  
 6 finding on an annual basis.  
 7 I mentioned the preservative retention  
 8 levels in poles. I'll go back to what we  
 9 found in 1985, and as I mentioned before, it  
 10 was a very small percentage below what we  
 11 called the effective level, and this is a bit  
 12 of a busy graph, but if you go down to the  
 13 graph, you'll see the horizontal red line  
 14 across the page, and that is what we call the  
 15 threshold level. In other words, we want to  
 16 try and keep the preservative level in the  
 17 pole to a minimum of .18 cubic feet. If we  
 18 can do that, the pole should be resistive to  
 19 attack. You'll see the other red curve coming  
 20 down shows you a typical depletion curve for  
 21 Penta, which is one of our standard  
 22 preservatives, and after 25 to 30 years, you  
 23 can see that that starts to cross over that  
 24 minimum threshold line. The blue chart or the  
 25 blue part of the graph, if you will, the

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1 program, and we certainly think it's an  
 2 improvement of what we've been doing in the  
 3 past, is instead of something that's just time  
 4 based and visual in nature, we would base it  
 5 on condition of the pole and we would vary the  
 6 inspection rate, looking at initially a ten-  
 7 year cycle, but depending again upon the age  
 8 of the pole and what we found, that inspection  
 9 cycle could be varied. The schedule itself  
 10 will be revised based upon annual results of  
 11 the program to date. We would be using  
 12 improved inspection techniques over and above  
 13 what we had been using in the past, which  
 14 again were pretty well just sounding, just  
 15 tapping the pole with a hammer or some other  
 16 device to see what kind of sound it would  
 17 make, and from that determine whether or not  
 18 the pole had been affected. We also did some  
 19 boring in the past, but now in addition to  
 20 that, we are looking at treating the pole.  
 21 We're looking at non-destructive testing of  
 22 the pole and in some limited sense,  
 23 destructive testing again perhaps at the  
 24 University.  
 25 Another significant part of this proposed

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1 horizontal axis is the threshold for what we  
 2 are using to retreat our poles now. We're  
 3 using Boron, Boron rods, and what that does is  
 4 it raises the preservative level in the pole  
 5 to a level again where it is resistive to  
 6 attack by insects and bacteria, fungi and so  
 7 on, and theoretically, at least by doing that,  
 8 you should be able to preserve the pole from  
 9 those types of attacks into the future. How  
 10 long is anybody's guess, but we are convinced  
 11 that we can, by doing this type of program, we  
 12 can get at least another five, six, eight  
 13 years out of these poles by retreating them  
 14 with Boron.  
 15 Another part of the program that we  
 16 initiated, we set up a full-scale test bed at  
 17 Memorial University for actual destructive  
 18 testing of some of these poles, and the  
 19 interesting thing that we found there was that  
 20 approximately 25 percent of the strengths of  
 21 the original strength of the poles 35 years  
 22 and older had gone. So a pole that initially  
 23 had a strength of say 8,000 psi was now down  
 24 to 6,000 after 35 years.  
 25 What we're proposing under this new

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1 program is the analysis of the data that we  
 2 collect in the field as part of the inspection  
 3 before we replace the pole. We are convinced  
 4 in the past that--when I mentioned rejection  
 5 rates before, these are rejection rates from  
 6 the actual inspections in the field. We think  
 7 in many cases it's not necessary to completely  
 8 replace the pole. We are convinced that of  
 9 the rejection rate, approximately one-third of  
 10 those poles would not be required to have  
 11 anything done with them immediately. Another  
 12 third would probably be refurbished or somehow  
 13 treated with regards to its overall strength  
 14 by guying or something else like that, maybe  
 15 putting in a stud pole, something much less  
 16 costly than replacing the pole in total. And  
 17 of course, another one-third then would  
 18 probably have to be replaced. So this  
 19 analysis part of the program, we think, is  
 20 something that is certainly worth doing.  
 21 I mentioned before that the results of  
 22 the testing in the field we would put into an  
 23 overall comprehensive database to catalog  
 24 basically every pole that we have out on the  
 25 high voltage system. This program, in our

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1 MR. MARTIN:  
 2 estimation, will also give us a more effective  
 3 coordination of line maintenance, in that  
 4 instead of just going out inspecting poles at  
 5 one time, insulators at another time, we're  
 6 inspecting the entire transmission line system  
 7 at the one time. We're going a climbing  
 8 inspection, we're looking at guys, poles,  
 9 insulators, hardware, and so on. Every  
 10 component of the transmission structure  
 11 itself, the transmission system, would be  
 12 inspected at that one time under this program.  
 13 These are just a couple of photos of some  
 14 of the inspection and treatment techniques  
 15 we're talking about using. In this photo  
 16 here, we have a couple of line workers who are  
 17 drilling a pole. They will drill three holes  
 18 around this connection point for a cross  
 19 brace. Three holes, approximately at a 45-  
 20 degree angle around the pole and then--next  
 21 photo, they will insert the Boron rods. This  
 22 is actually a shot of a Boron rod being  
 23 inserted into a pole. When the Boron rods are  
 24 inserted, the hole is capped with a plastic  
 25 cap, and over time, the Boron rod dissolved

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1 The program objectives, we're looking at  
 2 next year we would hope to inspect 4, 000  
 3 poles. That number would decrease to 1600  
 4 poles by the end of the first ten-year cycle.  
 5 Obviously what we're trying to do is to get  
 6 the older poles first, the ones that need to  
 7 be treated immediately, and then we can  
 8 decrease the program to catch, if you will,  
 9 the younger poles or the newer poles later in  
 10 the cycle. All the poles that we would  
 11 inspect would be non-destructive testing. As  
 12 I mentioned before, showing you the gentlemen  
 13 there with the test set on the ground. They  
 14 would all be tested. Any pole 20 years or  
 15 over would be treated with the Boron rods and  
 16 approximately 10 percent of those that are  
 17 treated would be cored and the core of the  
 18 pole would be taken and analyzed to determine  
 19 what the preservative level in that particular  
 20 pole had decreased to.  
 21 (11:15 a.m.)  
 22 The rejection rate, again, would not be  
 23 just based upon visual inspection. It would  
 24 be based upon condition and structural  
 25 analysis. Many of the poles on our

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1 and disperses throughout the pole at that  
 2 particular location and raises the retention  
 3 level again of the preservative in the pole,  
 4 thereby protecting it from future attack.  
 5 This technician here is doing some non-  
 6 destructive testing using a test set, using an  
 7 ultrasonic method, again to try and measure  
 8 the actual strength of the pole in situ. This  
 9 is a vibration detector that we've used in the  
 10 past and are using now on our high-voltage  
 11 transmission lines. It's basically looking  
 12 for vibration which could ultimately lead to  
 13 the fatigue and the failure of the conductor  
 14 strains, as I showed you previously. And  
 15 here's an item that we don't have yet, but is  
 16 in development and is, I think, now being  
 17 tested by some utilities in North America.  
 18 This is a corrosion detection device, and what  
 19 that--that piece of equipment is pulled along  
 20 a transmission line conductor and is meant to  
 21 be able to identify if the internal steel core  
 22 of a conductor has become corroded. As I  
 23 mentioned before, we have found some of those  
 24 corroded conductors and have had to replace  
 25 them.

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1 transmission system are not loaded to their  
 2 ultimate capability, so if a pole has lost  
 3 some of its strength, it doesn't necessarily  
 4 mean that it's got to be replaced. If it's  
 5 only at half-loading in that particular point  
 6 in a transmission system or transmission line  
 7 and its lost a quarter of its strength, you  
 8 don't necessarily need to replace the pole.  
 9 You may be able to do some other things or  
 10 even just leave the pole like it is. So  
 11 before we replace any poles, we're talking  
 12 about looking at each one of them individually  
 13 with regards to condition and where it is in  
 14 the line and making a conscious decision as to  
 15 whether or not the poles should be replaced.  
 16 Any rejected equipment, such as poles,  
 17 insulators, hardware, unless it's very serious  
 18 and has to be done immediately, would be  
 19 included for replacement in the next year's  
 20 program, and obviously we would be prepared  
 21 and want to update the Public Utilities Board  
 22 on an annual basis with regards to the results  
 23 and the effectiveness of the overall program.  
 24 I'm really starting to get into it now  
 25 with some of these curves, but I'll carry on



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1 MR. MARTIN:  
 2 anyway. This is just meant to give you an  
 3 indication of how we think this thing will  
 4 work. This is what they call an IOWA curve.  
 5 It was produced by the University of Iowa in  
 6 consult, I think, with the U.S. Army, and it's  
 7 meant to show the survival rate of wood poles.  
 8 This is what they call the 50-year IOWA curve.  
 9 And if I can give you an example, I wish I had  
 10 a pointer here, Mr. O'Rielly. If you could  
 11 take us to the--I'll say the 35-year age,  
 12 right. The blue line is, I'll say, the  
 13 typical 50-year IOWA curve. What this shows  
 14 you is that after 35 years in service, you  
 15 would expect a wood pole or the average of the  
 16 wood poles to have a survival rate of 90  
 17 percent. In other words, 10 percent would be  
 18 rejected, okay. After 45 years, the rejection  
 19 rate would be closer to--actually closer to 30  
 20 percent, okay. What we're talking about doing  
 21 is by treating these poles before they get to  
 22 that stage, the survival rate will be  
 23 significantly improved and we are looking at  
 24 the second red line there is what we postulate  
 25 to be the improvement rate under this program.

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1 years, reducing significantly to less than a  
 2 million dollars when we get out into the  
 3 program and are inspecting a fewer number of  
 4 poles of a newer vintage. Again, you'll see  
 5 out in 2015, after the first ten-year cycle,  
 6 the cost will rise again. Again, that's  
 7 because you're going to see more rejections  
 8 again of the older poles, and that program  
 9 will then continue out to around 2025, the 20-  
 10 year cycle.  
 11 I think we'll try one more, Mr. O'Rielly.  
 12 This again now is conceptual in nature. The  
 13 blue line, the blue line is what we are  
 14 proposing with regards to our full wood pole  
 15 line management program. The green line shows  
 16 you what the cost would typically be without  
 17 the treatment. You'll see in the initial  
 18 years we're spending incrementally just a few-  
 19 -or I should say a small percentage more, and  
 20 where the big payoff starts to come is out ten  
 21 years in 2015 where you can see the cost under  
 22 the no-treatment program are going to  
 23 significantly increase. That's because the  
 24 number of rejected poles is going to  
 25 significantly increase. It's like the old oil

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1 We think it can have significant impact and a  
 2 positive impact on the costs to all of Hydro's  
 3 customers.  
 4 I think we got one more, have we? No, we  
 5 got several more. The estimated cost of the  
 6 program, as I mentioned before, is we  
 7 anticipate a savings of roughly four and a  
 8 half million dollars over the next 20 years,  
 9 and I need to say that's just due to the  
 10 treatment alone. The analysis aspects of this  
 11 program, we think will save significantly more  
 12 dollars. Again, we're not sure of what  
 13 they'll be, but we're comfortable in saying  
 14 they'll be significantly more. To do that, we  
 15 need a required budget of \$36 million over the  
 16 next 20 years, and here again, I need to add,  
 17 these are not all new dollars. These dollars  
 18 include everything from the inspection, the  
 19 treatment, the testing, and where necessary,  
 20 the refurbishment or replacement of these  
 21 components. And it's not a flat line. This  
 22 is meant again to indicate or give you an idea  
 23 of the expected cash flow of that program that  
 24 we're looking at. We're looking at dollars in  
 25 the order of \$2.5 million in the initial

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1 filter commercial, you can pay me now or pay  
 2 me later. By doing this program now, we will  
 3 avoid significant costs ten years from now.  
 4 What the red line is meant to indicate is  
 5 if we don't get into the analysis and looking  
 6 at these poles, where they are, and looking at  
 7 the condition of them and the loading, where  
 8 they are in the system, we don't know where  
 9 the red line can go, but we are sure that it  
 10 will be significantly more than if we went  
 11 ahead with this program. We could be looking  
 12 at line replacements here now in 2015 or  
 13 shortly thereafter where now we think we  
 14 can extend the life of these lines by at least  
 15 20 years through this program.  
 16 In conclusion, we think this program will  
 17 assist in the long-term planning of the high-  
 18 voltage transmission network. It will provide  
 19 a more reliable transmission system. It will  
 20 extend the life of the line by a minimum of  
 21 ten years, and result in significant cost  
 22 savings to the rate payers.  
 23 Q. Mr. Chair, that concluded the direct evidence  
 24 with respect to that project, and I didn't  
 25 know your plans for this morning, if you

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1 GREENE, Q.C.:

2 wished to take a break. If you do, this would

3 be a good time.

4 CHAIRMAN:

5 Q. Very good then. We'll take a 15-minute break.

6 Thank you.

7 (BREAK - 11:21 a.m.)

8 (RESUME - 11:41 a.m.)

9 CHAIRMAN:

10 Q. Ms. Greene, please.

11 GREENE, Q.C.:

12 Q. Mr. Martin, I did have one final question for

13 you on the wood pole management program and

14 it's with respect to your slide 10 that's

15 there on the screen. At the time you reviewed

16 it, you indicated you wanted to come back and

17 explain what "currently under analysis" meant

18 for the year 2002 and 2003 and I wonder if you

19 can do that, please.

20 MR. MARTIN:

21 A. Yes. What I meant was that when we completed

22 the inspection of the poles on TL220 and had

23 the reports of the 27 rejections, our first

24 analysis was that first of all it was not

25 critical that they be replaced. In other

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1 there which is upgrade of TL221. And here,

2 Mr. Holden, could you please describe this

3 project for the Board, please.

4 MR. HOLDEN:

5 A. Yes, this program upgrading of TL221 involves

6 the replacement of insulators on wood cross

7 arms throughout a 27 kilometer section of the

8 line. The line itself runs 53 kilometers

9 altogether from Peter's Barren Station to

10 Hawke's Bay Station. And the work will also

11 include as well as wood cross arms, it will be

12 additional guying, selected structures and

13 some mid-span poles. The performance on this

14 line over the period 1999 to 2003 was very

15 poor with an average frequency rate of 18.79

16 per 100 kilometers per year for both momentary

17 and sustained categories. And this is

18 approximately 260 percent higher than what the

19 Hydro average is of 7.11. This project was

20 identified in the Acres International Report

21 System Performance Review on the Great

22 Northern Peninsula which was submitted to this

23 Board in June 2003 and Acres' Consulting

24 identified, one of the recommendations was to

25 identify the points of concern on TL221 and

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1 words, it's not necessary that we spend the

2 funds to replace those 27 poles right away.

3 And by being currently under analysis we are

4 looking at other ways and means of correcting

5 the problems that was identified with those 27

6 poles, other than replacement. That's what I

7 meant by currently under analysis. They will

8 be remedied. The problems noted will be

9 remedied in the future. As a matter of fact,

10 the significant ones will be done as part of

11 next year's program.

12 Q. And that's the same for the year 2003, is that

13 correct?

14 MR. MARTIN:

15 A. That is correct.

16 Q. Okay. Mr. O'Rielly, if you could go back,

17 please to page A-6 of the application. The

18 first project there is the one we just talked

19 about, to replace wood poles and I don't plan

20 to do every project here, I'm sure everyone

21 will be happy to hear, but there are the

22 significant ones that we will have briefer

23 commentary on them, the direct evidence, than

24 we did for the wood poles. The next one I

25 would like to talk about is the second one

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1 correct them. So when we finish this project,

2 this project will be implemented, proposed

3 upgrade, will significantly improve the

4 reliability and service to the 1,300 customers

5 served in the Hawke's Bay distribution area.

6 Q. In the next category of projects shown on page

7 A-6 is "System Performance and Protection."

8 What types of projects are in that category,

9 Mr. Holden?

10 MR. HOLDEN:

11 A. The types of projects in the "System

12 Performance and Protection" category includes

13 such items as the addition of the supervisory

14 control for the reclosure breaker at the

15 Farewell Head terminal station and the

16 installation of a digital fault recorder at

17 the Bottom Brook terminal station, the various

18 upgrades also to protective relaying equipment

19 and other parts of the system. Collectively,

20 these projects will enhance Hydro's ability to

21 be able to detect and limit the consequences

22 of power disturbances, as well as provide us

23 with better tools to analyze the performance

24 and protection of the system following these

25 disturbances. The result will be a more

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1 MR. HOLDEN:  
 2 reliable service to our customers.  
 3 Q. The next category there is entitled,  
 4 "Terminals." What type of projects are in  
 5 that category project?  
 6 MR. HOLDEN:  
 7 A. In the "Terminals" category, the types of  
 8 projects that you will find there are  
 9 primarily to provide for replacement of assets  
 10 that have reached the end of their normal  
 11 service lives, such as battery banks,  
 12 instrument transformers and surge arrestors.  
 13 One significant project in this category is  
 14 the installation of motor drive mechanisms and  
 15 associated controls on the 230,000 volt  
 16 disconnect switches. This is the last year of  
 17 a three year program to eliminate the safety  
 18 hazard created by these switches requiring to  
 19 be manually operated.  
 20 Q. Could I have page A-7, Mr. O'Rielly, please.  
 21 The next category of projects in TRO is  
 22 "Distribution" and the largest project here  
 23 from a dollar perspective is the  
 24 interconnection of Rencontre East. I wonder,  
 25 Mr. Martin, please, for the Panel, if you

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1 the Rencontre East to the island  
 2 interconnected system.  
 3 As the capital cost of the modular diesel  
 4 plant was approximately 50 percent higher than  
 5 the conventional plant, while other operating  
 6 and maintenance costs were very similar, the  
 7 modular concept was eliminated from further  
 8 analysis. A cumulative present worth analysis  
 9 of the remaining two options shows a  
 10 significant positive net benefit in favour of  
 11 the interconnection over the study period. In  
 12 addition, the interconnection provides for a  
 13 reduced annual net revenue requirement over  
 14 the new diesel plant after the first year of  
 15 operations. The interconnection of Rencontre  
 16 East is the least cost alternative to provide  
 17 reliable service to customers in this  
 18 community over the long term.  
 19 And what we have here is just a couple of  
 20 photos of what I call the makeshift  
 21 installation that our guys valiantly put  
 22 together within 36 hours of that plant being  
 23 burned to the ground. There are numerous  
 24 things here with regard to this plant.  
 25 There's no insulation in the building, there's

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1 could describe what this project involves.  
 2 MR. MARTIN:  
 3 A. Yes, the proposed interconnection of Rencontre  
 4 East provides for the construction of a 14.4kV  
 5 single-phase distribution line from our  
 6 English Harbour West distribution system to  
 7 the community of Rencontre East.  
 8 In September 2002, the diesel plant  
 9 serving the community was completely destroyed  
 10 by fire and a temporary plant was established  
 11 under emergency conditions. The current  
 12 arrangement at Rencontre East is not suitable  
 13 for the long term and I'll come back to  
 14 address that in a second through the photos.  
 15 Since that time Hydro has completed a  
 16 comprehensive study of the most cost-effective  
 17 way to provide long-term service to Rencontre  
 18 East. As a matter of fact, we filed a report  
 19 with our application under Tab 2. The report  
 20 is entitled, "Rencontre East Interconnection  
 21 Study." In that study, three alternatives  
 22 were analyzed and evaluated. The first was to  
 23 construct a new permanent diesel plant. The  
 24 second was to construct a new modular diesel  
 25 plant and the third was the interconnection of

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1 no heating, there's exposed rafters. It's a  
 2 wood framed building with plywood covering.  
 3 You can see the space limitations. The engine  
 4 directly behind, if you will, on the far wall  
 5 in the yellow is a the small unit that we  
 6 salvaged from the Harbour Deep plant when that  
 7 particular facility was retired. The two  
 8 engines, one of which you can see clearly on  
 9 the right hand side with the Battlefield logo  
 10 on it, there's very cramped conditions in  
 11 there, very little room to work. The flooring  
 12 itself, believe it or not are 2 X 4 studs laid  
 13 on their side on the ground covered in  
 14 plywood. There's no fire protection in there.  
 15 The fuel system is not up to standard. We  
 16 have no permit from the Department of  
 17 Environment to operate this facility. We have  
 18 an understanding with them that this is a  
 19 temporary arrangement that we are going to  
 20 remedy.  
 21 I think we have a shot of the exterior  
 22 and I must say, the guys went above and beyond  
 23 the call of duty in making this look like, at  
 24 least esthetically, a fine looking facility.  
 25 But you'll see the ends of the two mobile

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1 MR. MARTIN:  
 2 diesel generator sets sticking out through the  
 3 buildings walls. The stack heights are  
 4 inadequate. You can see there's no exhaust  
 5 fans on the roof. This is in every sense, a  
 6 temporary facility and I think it's a credit  
 7 to our fellows that they've kept this thing  
 8 going for two years.  
 9 Q. Going back to page A-7, what are the other  
 10 types of projects, Mr. Holden, here in this  
 11 category called "Distribution."  
 12 MR. HOLDEN:  
 13 A. In the "Distribution" category the other  
 14 projects include job provision for service  
 15 extensions and distribution system upgrades.  
 16 These are annual allotments based on the  
 17 average of the previous five years of  
 18 expenditures. The estimates provide for the  
 19 connection of new customers and the  
 20 replacement of damaged and defective equipment  
 21 such as poles, insulators, conductor and  
 22 transformers in the various distribution  
 23 systems serving the Hydro customers. That's  
 24 all over the three regions. And there are  
 25 additional projects that are targeted at

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1 a four year program, estimated to cost  
 2 approximately one million dollars and is  
 3 required to bring Hydro's facilities into  
 4 compliance with recent legislation passed by  
 5 the provincial government.  
 6 Q. Turning now to page A-8, the category there  
 7 called "General", what types of projects are  
 8 in this category?  
 9 MR. HOLDEN:  
 10 A. Within the "General" category there are three  
 11 sub-categories; metering, properties and tools  
 12 and equipment. The purchase of meters and  
 13 associated hardware is required for new  
 14 customer services and to replace worn or  
 15 damaged equipment. This is an annual  
 16 allotment based on historical data. Projects  
 17 under the sub-heading of "Properties" are  
 18 generally upgrades or expansions to existing  
 19 buildings or terminal stations to provide  
 20 adequate space and working conditions for  
 21 employees. A significant project under the  
 22 "Tools and Equipment" budget provides for the  
 23 purchase of a heavy off-road track vehicle  
 24 equipped with a 100' boom. This will replace  
 25 a similar unit which had a 57' boom and it

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1 specific systems where analysis of performance  
 2 statistics or the maintenance inspections have  
 3 identified particular problems which we're  
 4 trying to correct.  
 5 Q. The last major category shown on page 7 is  
 6 called, "Generation." What types of projects  
 7 are in this category?  
 8 MR. HOLDEN:  
 9 A. Projects in the "Generation" category include  
 10 capacity additions to meet increasing load  
 11 requirements. For example, replacing a diesel  
 12 unit at the L'Anse au Loup plant was one of a  
 13 larger rating from one that was retired from  
 14 the main plant is necessary in 2005 to meet  
 15 the forecast peak on that particular system.  
 16 Another type of project which is found in  
 17 this category is the replacement of diesel  
 18 generators which have come to the end of their  
 19 useful service lives. In 2005 Hydro was  
 20 proposing to replace the unit at Williams  
 21 Harbour which has been in service for 30 years  
 22 and has already five major overhauls to it. A  
 23 program to install fall arrest equipment at  
 24 approximately 310 locations across the Hydro  
 25 system is proposed to begin in 2005. This is

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1 reached the end of its service life. This is  
 2 an important piece of equipment required to  
 3 ensure timely response and correction of  
 4 transmission line problems, particularly on  
 5 Hydro's steel transmission structures which  
 6 range in height from 60 to 85 feet. The  
 7 consequences of not having this equipment  
 8 would be extended forced outages, especially  
 9 during icing conditions which make climbing  
 10 the structures impossible.  
 11 Q. The last area in the 2005 capital budget under  
 12 "Transmission and Rural Operations" is  
 13 "Vehicles" and I wonder here if we could go to  
 14 page A-11, please, Mr. O'Rielly.  
 15 Transmission and rural operations is the  
 16 area in Hydro responsible for the submission  
 17 of the capital budgets for vehicles shown  
 18 there, is that correct, Mr. Martin?  
 19 MR. MARTIN:  
 20 A. Yes, it is.  
 21 Q. At the last Capital Budget Hearing it was  
 22 indicated that Hydro was undertaking a review  
 23 of its fleet vehicle requirements. Has the  
 24 review now been completed?

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1 MR. MARTIN:  
 2 A. Yes, it has.  
 3 Q. Could you please advise the Panel of the  
 4 results of the review?  
 5 MR. MARTIN:  
 6 A. Yes, the fleet review was conducted by our  
 7 Manager of Transportation Services and three  
 8 other managers representing the operational  
 9 divisions of TRO and Production. The purpose  
 10 of the review was to ensure that Hydro's  
 11 vehicle and mobile equipment fleet was at the  
 12 minimum required. In summary, the results of  
 13 the fleet review were as follows: A reduction  
 14 in the number of on road vehicles; i.e., cars,  
 15 pickups, cherry picketer, etcetera, by 23  
 16 units; a reduction in the number of off-road  
 17 vehicles, heavy track equipment such as  
 18 muskegs, etcetera, by six units; and a  
 19 reduction in the number of mobile equipment  
 20 units, that is, ATV's, snowmobiles, etcetera,  
 21 by 34 units. The total estimated savings in  
 22 capital replacement cost is approximately 2.2  
 23 million dollars over a five year time frame  
 24 with an annual operating budget savings of  
 25 approximately \$100,000.

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1 going to direct this question to either Panel  
 2 member in particular, whoever wishes to answer  
 3 it can do so. Newfoundland Power's question  
 4 in the request for information asks for the  
 5 levelized cost of production at the Roddickton  
 6 Mini Hydro generating station and you've  
 7 provided in your response, a levelized cost of  
 8 4.4 cents per kilowatt hour. We also asked  
 9 that you include in your analysis any material  
 10 costs associated with the refurbishment or  
 11 replacement of facilities or structures over  
 12 the next 10 to 15 years. Hydro's response  
 13 doesn't provide any detail on the timing of  
 14 future capital expenditures other than the  
 15 proposed dam replacement, does it?  
 16 MR. MARTIN:  
 17 A. No, it doesn't.  
 18 Q. Then is it Hydro's engineering judgment that  
 19 there are going to be no other significant  
 20 capital expenditures on the Roddickton Mini  
 21 Hydro plant in the study period?  
 22 MR. MARTIN:  
 23 A. Hydro does not foresee any additional major  
 24 capital expenditures at the Mini Hydro  
 25 facility over the study period.

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1 Q. Looking specifically at 2005, how was the 2005  
 2 capital requirements for the fleet affected as  
 3 a result of the review?  
 4 MR. MARTIN:  
 5 A. The implementation of the recommendations on  
 6 the 2005 capital budget is estimated at  
 7 \$500,000 in reductions for on road vehicles  
 8 and an estimated \$60,000 reduction for mobile  
 9 equipment units.  
 10 Q. From earlier years, is that correct?  
 11 MR. MARTIN:  
 12 A. That is correct.  
 13 Q. Does this conclude your direct evidence at  
 14 this time?  
 15 MR. MARTIN:  
 16 A. Yes, it does.  
 17 Q. Thank you, Mr. Chair, that concludes our  
 18 direct evidence.  
 19 CHAIRMAN:  
 20 Q. Thank you, Ms. Greene. Mr. Hayes.  
 21 MR. HAYES:  
 22 Q. Thank you, Mr. Chair. Good morning, Mr.  
 23 Martin. I'd ask Mr. O'Rielly if he could  
 24 please bring up the response to request for  
 25 information NP-02 NLH. Thank you. I'm not

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1 Q. Thank you, that's all the questions for this  
 2 Panel, Mr. Chair.  
 3 CHAIRMAN:  
 4 Q. Thank you, Mr. Hayes. Mr. Hutchings.  
 5 HUTCHINGS, Q.C.:  
 6 Q. Thank you, Mr. Chair. I can still say good  
 7 morning, Mr. Martin, Mr. Holden. Just  
 8 reviewing first, Mr. Martin, your witness  
 9 profile, do I understand correctly that you  
 10 basically went from your university training  
 11 directly into Hydro and you've spent your  
 12 entire working career there?  
 13 MR. MARTIN:  
 14 A. I started with Hydro in 1971 as Plant Engineer  
 15 at Bay D'Espoir. Between 1978 and 1982, I had  
 16 left Hydro to pursue other endeavours, we'll  
 17 say, returning in 1982 and I've been with  
 18 Hydro ever since.  
 19 GREENE, Q.C.:  
 20 Q. And we joke with him that he saw the light and  
 21 returned.  
 22 MR. MARTIN:  
 23 A. Something I will never forget, nor be allowed  
 24 to I might add.

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1 HUTCHINGS, Q.C.:

2 Q. And were you employed in the private industry

3 during that time?

4 MR. MARTIN:

5 A. I operated my own business, yes, I did.

6 Q. And did that involve you in capital budgeting

7 for an enterprise during that time?

8 MR. MARTIN:

9 A. No, not very extensively at all.

10 Q. Mr. Holden, I think you spent some time with

11 the provincial government before joining

12 Hydro, is that correct?

13 MR. HOLDEN:

14 A. Yes, that's correct.

15 HUTCHINGS, Q.C.:

16 Q. Have you worked in a private enterprise during

17 your career at all?

18 MR. HOLDEN:

19 A. No, I haven't.

20 Q. I just want to get--make sure we're oriented

21 properly with respect to the documentation

22 that we have. Mr. Martin, maybe if we brought

23 up page A-1 of the budget. This is entitled,

24 "2005 Capital Budget Overview" and as I

25 understand it, this represents the total

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1 A. Correct.

2 Q. If we could--for instance, on page A-7, the

3 last line on that page refers to replacement

4 of battery banks at L'Anse au Loup and Hawke's

5 Bay. And there are a number of projects

6 within Section B that deal with replacement of

7 battery banks as I recall, is that correct?

8 MR. MARTIN:

9 A. That's correct.

10 Q. But this one doesn't make it to Section B

11 simply because the dollar amount there is

12 \$37,000 as opposed to in excess of 50.

13 MR. MARTIN:

14 A. That's correct.

15 Q. Okay. And how is it determined that this

16 project is to deal with battery banks at

17 L'Anse au Loup and Hawke's Bay as opposed to

18 being rolled in with battery banks for other

19 locations?

20 MR. MARTIN:

21 A. Well, we usually try to roll these projects

22 together if we can and this one here just

23 didn't get included in the other battery bank

24 replacements that you see farther along in

25 Section B. I think for clarity as well,

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1 amount of the capital budget that Hydro is

2 proposing for 2005 under these--in these four

3 areas, is that correct?

4 MR. MARTIN:

5 A. That's correct, totalling \$42,431,000.

6 Q. If we could look now to Page B-1. This has

7 the same heading, "2005 Capital Budget

8 Overview" but the totals there for the capital

9 budget in most cases are slightly less than

10 the amounts are, at least for the 2005 capital

11 budget and for the total, those two totals are

12 somewhat less.

13 (12:00 p.m.)

14 MR. MARTIN:

15 A. That's right.

16 Q. Yes. And as I understand it, this reflects

17 the fact that the Section B deals only with

18 the projects that Hydro regards as being over

19 \$50,000, is that correct?

20 MR. MARTIN:

21 A. That's correct.

22 Q. Okay, all right. So there are items within

23 Section A, obviously, that don't show up in

24 Section B.

25 MR. MARTIN:

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1 because of the sub heading, if you will, the

2 ones referred to in B-40, if you will, come

3 under the heading of "Terminals." These are

4 all battery banks at our terminal station

5 locations whereas the two referred to on the

6 last line of page A-7 are at a couple of our

7 diesel installation facilities. They come

8 under the heading of "Generation" so we group

9 them under the heading of "Asset", if you

10 will.

11 Q. So if it had happened that there was a third

12 location that needed battery bank under the

13 "Generation" heading, we might well find this

14 project in Section B, is that correct?

15 MR. MARTIN:

16 A. You certainly should.

17 Q. And, equally, with respect to the project at

18 B-40, those are battery banks at, as you say,

19 various stations and lines. If there were

20 only one or two banks to be replaced, then

21 this project might not show up in Section B at

22 all simply because of the dollar value, am I

23 understanding that correct?

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1 MR. MARTIN:  
 2 A. No, as Mr. Holden suggested, what we would try  
 3 to do is if we are replacing a group of  
 4 battery banks in terminal stations, they would  
 5 be grouped together as a single project,  
 6 described as a single project and put under  
 7 the heading of "Terminals". Similarly with  
 8 diesel plants back on page A-7. So whether  
 9 there's one, two or five, our intention would  
 10 be to combine them altogether under the asset  
 11 group, if you will, of terminals, generation  
 12 and bring forward one proposal for that  
 13 particular group of batteries.  
 14 Q. But it is a question of happenstance as to  
 15 whether or not there's enough being replaced  
 16 under any particular heading in a given year  
 17 to bounce it into Section B, is that correct?  
 18 MR. MARTIN:  
 19 A. Absolutely, yes. If it doesn't meet the  
 20 \$50,000 threshold, it doesn't go into Section  
 21 B.  
 22 Q. Is a battery bank regarded as a unit of  
 23 property by Hydro?  
 24 MR. MARTIN:  
 25 A. Yes, it is.

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1 or a turbine or a wood post structure?  
 2 MR. MARTIN:  
 3 A. In the context of it being a unit of property,  
 4 yes.  
 5 Q. Yes.  
 6 MR. MARTIN:  
 7 A. Yes.  
 8 Q. Just at a very general level, Mr. Martin, and  
 9 referring back again to the set-up of your  
 10 application here, we've referred to Section A  
 11 which is the total budget and Section B which  
 12 are the projects over \$50,000, Section F is,  
 13 as I understand it, the report on status for  
 14 the 2004 capital expenditures, is that your  
 15 understanding?  
 16 MR. MARTIN:  
 17 A. Yes, that's correct.  
 18 Q. And that has been updated in one of the RFIS  
 19 but I don't think we need to go there for now.  
 20 But just by reference to Section F of the  
 21 current application, the existing application  
 22 itself and by reference to Section of last  
 23 year's application, I think we can access the  
 24 TRO capital budget numbers for the years 2003,  
 25 2004 and 2005, correct?

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1 Q. What--and I'm referring you now to the  
 2 response to IC-86. And at line 20 of that  
 3 response, the answer speaks of the  
 4 classification of units of property. Why  
 5 would Hydro regard a battery bank as being a  
 6 unit of property within the definition that  
 7 they provided here?  
 8 MR. MARTIN:  
 9 A. Again, you know, this is perhaps better  
 10 referred to somebody in Finance who is  
 11 actually involved in setting up the unit of  
 12 properties. But, again, I would refer you to  
 13 line, starting on line 24, "A unit of property  
 14 is defined as that which is independently  
 15 operational, readily separable from the prime  
 16 asset and useful in its own right." So, for a  
 17 battery bank it could be taken out of the  
 18 Hardwoods terminal station and theoretically  
 19 moved somewhere else on its own right and  
 20 operated as a battery bank somewhere else. It  
 21 is a distinct entity, if you will, or asset  
 22 and that's why it's set up as such under  
 23 "Units of Property."  
 24 Q. And you regard it then in the same class as  
 25 the other examples that are here, like a dam

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1 MR. MARTIN:  
 2 A. I'm not sure where you're going to get the  
 3 2003 years.  
 4 Q. From Section F of the 2004 application we  
 5 could do that.  
 6 MR. MARTIN:  
 7 A. Section F, yes, of the 2004 application.  
 8 Q. Yes.  
 9 MR. MARTIN:  
 10 A. Certainly.  
 11 Q. All right. I've looked at that and I don't  
 12 know whether last year's application is on the  
 13 system or not, but I've just looked at that  
 14 quickly this morning and the numbers that I  
 15 come up with for the TRO Capital Budget go  
 16 from 10,276 (sic.) in 2003 and this is Section  
 17 B numbers because Section F deals with Section  
 18 B questions. So it's 10,276,000 in 2003;  
 19 12,102,000 in 2004 and then 19,124,000 in  
 20 2005. So at that broad, general level, can  
 21 you explain for us why this budget is almost  
 22 doubling over this two year period?  
 23 MR. MARTIN:  
 24 A. I can certainly say that the budget is  
 25 increasing for various reasons. In the 2005

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1 MR. MARTIN:  
 2 application, we have several projects that we  
 3 will call extraordinary projects, if you will.  
 4 We're looking at the interconnection of  
 5 Rencontre East, which is an extraordinary  
 6 project or certainly a separate project from  
 7 one you would normally do on an annual basis.  
 8 Our wood pole management program, totalling  
 9 \$2.4 million, is a new program that we're  
 10 recommending to the Board be carried out over  
 11 a 20-year period. So that's roughly \$6  
 12 million right there, just in those two  
 13 specific projects that would not perhaps  
 14 normally be carried forward as part of our  
 15 normal annual capital budget expenditures.  
 16 I would refer to the Board similarly back  
 17 when we were doing the Avalon upgrade in the  
 18 late 90s and early 2000, the budget was even  
 19 significantly more because of that \$45 million  
 20 program spread over five or six years. So the  
 21 budget ebbs and flows with regards to the work  
 22 that has to be done, and we only bring forward  
 23 those projects which have to be done.  
 24 Q. Do you recognize, given the existence of those  
 25 unusual projects, that there should be an even

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1 MR. HOLDEN:  
 2 A. Yes, that's correct. It's primarily a  
 3 diagnostic device that helps us collect the  
 4 information on disturbances on the system and  
 5 improves our ability to be able to diagnose  
 6 system events, troubles, and reduce our  
 7 response times.  
 8 Q. So this is not a device that is, in itself,  
 9 essential to the production or delivery of  
 10 electricity, is it?  
 11 MR. HOLDEN:  
 12 A. It's not a device that's essential to the  
 13 production or delivery of electricity, but it  
 14 is one that is essential to the engineering  
 15 associated with the utility and the  
 16 performance and protection of the system. And  
 17 as I said, it will enable our system  
 18 performance people to analyze and diagnose  
 19 system events and disturbances at a much  
 20 faster rate and thereby reduce the duration of  
 21 outages and help us to identify problems on  
 22 the system, and help us -  
 23 Q. I'm sorry, go ahead.  
 24 MR. HOLDEN:  
 25 A. - and to improve the performance overall, and

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1 greater vigilance to ensure that all of the  
 2 other projects ought to be demonstrated to be  
 3 absolutely necessary in this year? Do you  
 4 recognize a potential difficulty arising  
 5 simply from the fact that the budget is high?  
 6 MR. MARTIN:  
 7 A. I realize the concern with regards to the  
 8 budget being higher, but I certainly wouldn't  
 9 say the budget process or the budget review is  
 10 any more stringent, whether the budget is low  
 11 or high. The budget process and the approval  
 12 of the budget, within Hydro, is as stringent  
 13 in any year, from one year to the next,  
 14 whether it's a \$10 million expenditure or a  
 15 \$20 million expenditure.  
 16 Q. I want to deal with a number of the specific  
 17 projects that fall within this heading and  
 18 look, first of all, at page B-35. That's the  
 19 digital fault recorder for Bottom Brook. I  
 20 think, Mr. Holden, you mentioned this in the  
 21 course of your direct evidence, and am I  
 22 understanding correctly that this is  
 23 essentially a diagnostic device which will  
 24 allow you to determine where and to some  
 25 extent what a particular fault is?

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1 particularly on this system here, the Bottom  
 2 Brook system, where there have been a number  
 3 of system events over the last five years that  
 4 do warrant the use of this recorder at this  
 5 site.  
 6 Q. This system has been functioning without this  
 7 recorder for, I guess, for its entire life?  
 8 Is that correct?  
 9 MR. HOLDEN:  
 10 A. The system has been functioning without this  
 11 recorder up 'til now, yes.  
 12 Q. Okay. And have you maintained records of the  
 13 time it takes you to clear faults on this  
 14 system?  
 15 MR. HOLDEN:  
 16 A. Yes, we've maintained records on fault  
 17 clearing times, but that's not what this piece  
 18 of equipment is for. This piece of equipment  
 19 is to help us diagnose--it's not a protective  
 20 device. The protection systems will still  
 21 clear faults and protect the system. What  
 22 this fault recorder does is to record the  
 23 events pre-fault and immediately following the  
 24 fault and allows us to be able to analyze the  
 25 system events and diagnose the trouble,



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1 MR. HOLDEN:  
 2 whether it be a cross arm break or an  
 3 insulator failure or a jumper disconnection.  
 4 The information from the relays are collected  
 5 together into this recorder and summed up in  
 6 such a way that we can improve and greatly  
 7 increase our analysis times.  
 8 Q. The purpose of the diagnosis that this  
 9 recorder does is for the purpose of allowing  
 10 you to correct the fault quicker? Is that not  
 11 correct?  
 12 MR. HOLDEN:  
 13 A. Allows us to analyze the fault quicker and  
 14 thereby implement a correction. That's  
 15 correct.  
 16 Q. Okay. So I got the impression from your  
 17 earlier answer that, you know, the protection  
 18 on the system would deal with the fault anyway  
 19 and this is just a recorder that you could  
 20 look at later on and that's not a correct  
 21 situation description, is it?  
 22 MR. HOLDEN:  
 23 A. No, that is correct in a simple form, yes, but  
 24 it's a recorder that collects all the  
 25 information so that we can analyze it

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1 performance engineers to diagnose a problem.  
 2 Q. I mean, from the customer's point of view,  
 3 obviously the faster the better, but how much  
 4 money do you throw at making it a minute or  
 5 two minutes faster is the real issue here and  
 6 what my question is is: is there some standard  
 7 that is being violated on this system that  
 8 mandates that you do need more capital  
 9 expenditure in order to get this system up to  
 10 the standard of the rest of the system?  
 11 MR. MARTIN:  
 12 A. Maybe I could just offer a--no, there is no  
 13 standard we're violating. This piece of  
 14 equipment will be invaluable in analysing  
 15 faults on the west coast of the system.  
 16 Basically what it does is it's sitting there  
 17 continuously monitoring what's going on at the  
 18 Bottom Brook terminal station and beyond, in  
 19 the immediate vicinity of the station. On the  
 20 detection of a disturbance, the recorder is  
 21 triggered and what is saved is the pre-fault,  
 22 fault and post-fault data. It saves all of  
 23 that. And what that data is invaluable in  
 24 doing, after the fault occurs and everything  
 25 is put back on and all the rest of it, one of

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1 immediately. If we got a fault on the system  
 2 in the middle of the night, then our  
 3 performance engineer and our operating people  
 4 can look at the sequence of events at that  
 5 particular station collectively and be able to  
 6 determine very quickly where the fault is and  
 7 what the nature of the fault was, and then  
 8 thereby enable them and our operations people  
 9 to be able to restore power much faster.  
 10 Diagnose a problem and restore the service to  
 11 the customers faster.  
 12 (12:15 p.m.)  
 13 Q. Okay. So you're improving your response time  
 14 as a result of this device?  
 15 MR. HOLDEN:  
 16 A. Yes, that is correct.  
 17 Q. Okay. My question to you is did you compile  
 18 the statistics to show that your response  
 19 times up to this point were not up to  
 20 standard?  
 21 MR. HOLDEN:  
 22 A. No, we didn't compile statistics to record our  
 23 response times. When I'm talking about  
 24 response times, I'm talking about response  
 25 times and diagnosis times required by the

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1 the biggest added benefits of it is that it  
 2 allows our performance engineers to go in an  
 3 analyze what happened during that disturbance.  
 4 Did the relaying operate properly? Did the  
 5 remote end relaying operate properly? Did the  
 6 breaker operate properly? Did the  
 7 transformers, if they had to do anything,  
 8 operate properly? Did disconnects perform  
 9 properly? Was the reclosing for the line to  
 10 put the line back in service, did all of that  
 11 stuff perform properly? And what it will  
 12 allow the performance engineer to do is say  
 13 yes, look, during that disturbance, the  
 14 equipment at that site and at remote sites and  
 15 in the vicinity operated the way they should  
 16 have.  
 17 Now perhaps sometimes you would find they  
 18 didn't and then that tool is invaluable in  
 19 allowing us to go out and change relay  
 20 settings, look at perhaps breaker problems or  
 21 some other functional control problems we may  
 22 have had there, and make sure that the next  
 23 time around, when we get into a disturbance  
 24 like that or something similar, the system  
 25 reliability will be improved because we will

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1 MR. MARTIN:  
 2 have found that problem and corrected it.  
 3 That's really the gist of what that piece of  
 4 equipment is for.  
 5 We have them at most of our 230 kV  
 6 transmission sites across the island. We just  
 7 this year had one approved by the Board last  
 8 year to put one in Bay D'Espoir. We have them  
 9 in Massey Drive. We have them in Buchans.  
 10 This is a standard piece of utility equipment  
 11 that's used by protection and performance  
 12 engineers across the country, and it is  
 13 invaluable, as I say, in being able to analyze  
 14 these system disturbances so that in the  
 15 future, the reliability to our customers will  
 16 be increased overall. And pardon me for the  
 17 speech.  
 18 Q. No, no, this is helpful because it's sending  
 19 us where we need to get to. I take it from  
 20 what you said that not all of your terminal  
 21 stations are so equipped at this time?  
 22 MR. HOLDEN:  
 23 A. No, that's correct.  
 24 Q. Okay. And this is really a performance  
 25 enhancement device?

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1 have to take the information from all the  
 2 individual protective relays in the station  
 3 and somehow or another manually correlate it  
 4 in order to find the sequence of events and be  
 5 able to diagnose the trouble. What this fault  
 6 recorder will do, and that process there of  
 7 manually correlating this protection  
 8 information may take hours, it may take days.  
 9 But with the digital fault recorder, this is  
 10 automatically collected as system events  
 11 happen. So immediately upon the disturbance,  
 12 our performance engineers now can look at the  
 13 record and the sequence of events and speed up  
 14 their analysis and diagnosis time to the point  
 15 that we could probably be able to correct the  
 16 problem on the system within hours, instead of  
 17 much longer times.  
 18 Q. So this -  
 19 MR. HOLDEN:  
 20 A. So it's a diagnostic tool.  
 21 Q. And it's a great convenience to be able to  
 22 have that information so quickly?  
 23 MR. HOLDEN:  
 24 A. It's a great benefit, from the point of view  
 25 of being able to maintain reliable service to

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1 MR. HOLDEN:  
 2 A. This is a performance enhancement device, as  
 3 it relates to the system performance and the  
 4 delivery to the customers, yes.  
 5 Q. And are you able to quantify the value of the  
 6 enhancement that is being provided by this  
 7 equipment?  
 8 MR. HOLDEN:  
 9 A. That's difficult to quantify in the terms that  
 10 I think you may be asking. As Mr. Martin  
 11 pointed out, the fault recorder has three main  
 12 functions. First of all, it helps us to  
 13 determine that the protection equipment is  
 14 operating properly, and it helps us to  
 15 determine if the protection equipment is  
 16 operating improperly. And the third great  
 17 value to this piece of equipment is that when  
 18 you do get a disturbance, right now what  
 19 happens is the performance engineers, in order  
 20 to diagnose what happened, supposing the power  
 21 was off on the line, supposing the line  
 22 tripped off coming out of Bottom Brook and it  
 23 was off and we were trying to find out where  
 24 the trouble was or what the nature of the  
 25 trouble was, the performance engineers would

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1 the customers and to be able to restore power  
 2 as quickly as possible.  
 3 Q. All right. But you're not in a position to  
 4 say to us that the clearing time in respect of  
 5 faults on the Bottom Brook system is excessive  
 6 in comparison to any other system at this  
 7 time?  
 8 MR. HOLDEN:  
 9 A. No. The clearing times are not excessive, no.  
 10 Q. Thank you. If we could look briefly then at  
 11 the motor drive mechanisms on the disconnect  
 12 switches at B-38. This is a project that  
 13 we've discussed before and I understand this  
 14 is the third, I believe, similar project that  
 15 the Board has had before it, last year of a  
 16 three-year program. The difficulty, as I  
 17 understand it, is the inability of the  
 18 operator to be able to see the switch at the  
 19 time that he is operating it and thereby  
 20 ensure that he is in a safe position when this  
 21 function occurs. Is that correct?  
 22 MR. HOLDEN:  
 23 A. Yes, that's generally correct. What happens  
 24 with the 230 kV disconnect switches, they're  
 25 such large switches that they're mounted on

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1 MR. HOLDEN:  
 2 steel structures and the operating handles to  
 3 operate those disconnects are inside the  
 4 perimeter of the steel structure. So the  
 5 operator, in order to open and close the  
 6 switch by the manual mechanism, the person has  
 7 to stand directly under the disconnect switch.  
 8 That's what we consider to be an unacceptable  
 9 hazard. It's a safety hazard to the employees  
 10 and by installing the motor operators, the  
 11 employees now can open and close these  
 12 disconnect switches either from the control  
 13 room, in some cases, or in some other cases,  
 14 by remote push-button station that allows them  
 15 to stand clear of the switch while it's going  
 16 through its operation.  
 17 Q. Is this a function that would ordinarily be  
 18 undertaken by one single operator?  
 19 MR. HOLDEN:  
 20 A. Normally that's a function that would be  
 21 undertaken by one single operator.  
 22 Q. And I understand that there have been  
 23 inspections and while the risk is not  
 24 completely eliminated, the risks have been  
 25 considerably reduced as a result of the

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1 station, and in 2004, we're just in the  
 2 process now of completing seven disconnects  
 3 and they were on the west coast stations. So  
 4 that's 17. And next year, we plan to finish  
 5 the program by completing eight more  
 6 disconnects in the stations that we have  
 7 identified there in B-38.  
 8 Q. And how did you prioritize those? Which did  
 9 you choose to do first?  
 10 MR. HOLDEN:  
 11 A. Well, we had identified all the disconnect  
 12 switches that had manual operators on them,  
 13 and we prioritized them basically on where  
 14 they were on the system and how frequently  
 15 they may be operated, and we worked our way  
 16 from there.  
 17 Q. Okay. So the ones that are left now are the  
 18 ones that are least at risk, as among the  
 19 whole group?  
 20 MR. HOLDEN:  
 21 A. The ones that are left are the ones that we  
 22 consider to be operated less frequently than  
 23 the ones we've already done, but they're not  
 24 the ones that provide the least risk to the  
 25 employee.

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1 inspections. Is that correct?  
 2 MR. HOLDEN:  
 3 A. That's not correct. The inspections help us  
 4 to find problems, but the risk of an insulator  
 5 failing or some other part of the disconnect  
 6 switch failing during operation is not  
 7 minimized to any great degree by the  
 8 inspections. We can only just look at the  
 9 disconnect and inspect it, and if there's a  
 10 part that appears to be broken, then it can be  
 11 replaced, but it doesn't eliminate the safety  
 12 hazards that you have when you operate the  
 13 disconnect.  
 14 Q. But if the device has been inspected, then the  
 15 chances of it failing in the course of this  
 16 operation are reduced, are they not?  
 17 MR. HOLDEN:  
 18 A. Yes, from a statistical point of view you  
 19 could say that.  
 20 Q. And this project involves eight of these  
 21 switches and how many have already been done?  
 22 MR. HOLDEN:  
 23 A. As we said earlier, this is the third year of  
 24 a three-year program. In 2003, we did ten  
 25 disconnect switches in the Sunnyside terminal

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1 Q. Not as an individual item, but I mean, these  
 2 are the ones that you were prepared to leave  
 3 to last?  
 4 MR. HOLDEN:  
 5 A. That is correct.  
 6 Q. Yes, okay. And is it possible for you to  
 7 identify any specific risk of delaying this  
 8 project for a single year?  
 9 MR. HOLDEN:  
 10 A. Well, the risk, if this project were delayed,  
 11 would be that our employees would have to be  
 12 subjected to this safety hazard for an  
 13 additional year, and we don't consider that to  
 14 be a wise thing to do.  
 15 Q. So your judgment was that you could leave  
 16 these to the third year of a three-year  
 17 program, but your judgment is that you can't  
 18 defer them for another year? Is that what  
 19 you're saying?  
 20 MR. HOLDEN:  
 21 A. That is correct.  
 22 Q. Okay. Close to 12:30 at this point, Mr.  
 23 Chair. Might be an appropriate time to take  
 24 the lunch break.

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1 CHAIRMAN:  
 2 Q. Fine. Thanks, Mr. Hutchings. We'll adjourn  
 3 until 2:00.  
 4 (LUNCH BREAK - 12:26 p.m.)  
 5 (RESUME - 2:01 p.m.)  
 6 CHAIRMAN:  
 7 Q. Ladies and gentlemen, are there any  
 8 preliminary matters before we begin the  
 9 afternoon session?  
 10 MR. KENNEDY:  
 11 Q. Yes, Chair. Just one oversight. We need to  
 12 enter the power point presentation that the  
 13 current panel witnesses used at the beginning  
 14 of their direct as an exhibit. And with the  
 15 Board's permission, it would be FM GH No. 1.  
 16 CHAIRMAN:  
 17 Q. What's that again, Mr. Kennedy?  
 18 MR. KENNEDY:  
 19 Q. FM GH No. 1, where it's a panel we use both  
 20 sets of initials.  
 21 CHAIRMAN:  
 22 Q. Very good. Thank you.  
 23 MR. KENNEDY:  
 24 Q. Thank you, Chair.  
 25 HAYES, Q.C.:

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1 input to either protection and control  
 2 equipment or metering. So typically they drop  
 3 the high voltage of 230,000 volts down to 115  
 4 volts for relaying and metering purposes.  
 5 Current transformers do a similar thing for  
 6 the primary current in conductors either on  
 7 our transmission lines or bussers of phases of  
 8 power transformers in that they take the high  
 9 currents that are prevalent in those pieces of  
 10 equipment like 600 amps and reduce it down to  
 11 something suitable again for protective  
 12 relaying or metering typically five amps.  
 13 Q. So these are basically an inventory item for  
 14 you, there's a certain number of them that  
 15 fail or need to be replaced every year, you  
 16 take them from inventory and make the  
 17 necessary replacements, correct?  
 18 MR. MARTIN:  
 19 A. That's correct.  
 20 Q. Okay. So these aren't devices that operate  
 21 independently in the sense that they're all  
 22 attached to other pieces of equipment and are  
 23 designed to make an interface between two  
 24 levels of current effectively?  
 25 MR. MARTIN:

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1 Q. Just one other item, Mr. Chair. Mr. Alteen  
 2 had to leave and go back to the office and  
 3 I've asked Mr. Lorne Henderson, as  
 4 Newfoundland Power's director of regulatory  
 5 affairs to assist me this afternoon. He's  
 6 sitting here at the table.  
 7 CHAIRMAN:  
 8 Q. Fine. Thank you. Good afternoon, Mr.  
 9 Henderson. Mr. Hutchings, I think you're back  
 10 at bay.  
 11 HUTCHINGS, Q.C.:  
 12 Q. I am. Thank you, Mr Chair. Just moving along  
 13 now to another project to consider, gentlemen,  
 14 and I leave it to you whoever wishes to  
 15 respond to this. I'm looking at page B-42,  
 16 which, which is the replacement of instrument  
 17 transformers on the system. Can you explain  
 18 for us exactly what function these particular  
 19 transformers are performing?  
 20 MR. MARTIN:  
 21 A. Yes. Potential and capacitive voltage  
 22 transformers are used in our terminal stations  
 23 primarily to drop the primary voltage at the  
 24 station or at the bus such as 230 kV, 138 kV  
 25 or 69 kV down to a level which is suitable for

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1 A. Or voltage, yes.  
 2 Q. Or voltage, yeah.  
 3 MR. MARTIN:  
 4 A. Yes, that's right.  
 5 Q. Yeah, okay. And I think from the response  
 6 that we had these items run about \$10,000 each  
 7 on average?  
 8 MR. MARTIN:  
 9 A. On average. They obviously range depending  
 10 upon the voltage level.  
 11 Q. Okay. So what would the range be, do you know  
 12 offhand?  
 13 MR. MARTIN:  
 14 A. I would be making an estimate, obviously. I  
 15 would say they probably range on the voltage  
 16 transformer side somewhere between probably, I  
 17 don't know, 3000, \$4000 to maybe something in  
 18 the order of \$15,000. That's the kind of  
 19 range we're talking about.  
 20 Q. And I take it these are items that when  
 21 they're installed, they're not normally  
 22 removed and installed elsewhere?  
 23 MR. MARTIN:  
 24 A. We have at times. If we needed an increase in  
 25 the, I'll say current carrying capacity of a\

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1 MR. MARTIN:  
 2 CT because of load growth or something else,  
 3 we have removed current transformers out of  
 4 station, put in a higher rated current  
 5 transformer and then obviously have been able  
 6 to use, where appropriate, the recovered one,  
 7 if you will, perhaps at another site where a  
 8 lower capacity would do.  
 9 Q. Okay. But I understand from the explanation  
 10 that's been provided that these are not  
 11 repairable items, if they fail, then they are  
 12 replaced?  
 13 MR. MARTIN:  
 14 A. Generally speaking when one of these devices  
 15 fails, it's a catastrophic failure and it  
 16 cannot be repaired.  
 17 Q. Okay. If we move along then to B-44, this is  
 18 dealing with surge arrestors. Maybe you could  
 19 briefly explain to us the function of that  
 20 item?  
 21 MR. MARTIN:  
 22 A. Yes. If I could refer you to the operating  
 23 experience on page B-44, it gives there  
 24 basically the usage, if you will, of a surge  
 25 arrestor where it states "Surge arrestors

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1 those items?  
 2 MR. MARTIN:  
 3 A. Yes, I believe that's correct.  
 4 Q. And that again would be a range from -  
 5 MR. MARTIN:  
 6 A. Yes.  
 7 Q. - something below to something above that?  
 8 MR. MARTIN:  
 9 A. Yes.  
 10 Q. Okay. And again, these aren't things that  
 11 operate independently at all, they're  
 12 associated with and protect the unit, the  
 13 equipment that's there installed beside, shall  
 14 we, if you will?  
 15 MR. MARTIN:  
 16 A. That is the purpose of the arrestor is to  
 17 protect the device that it's mounted adjacent  
 18 to, yes.  
 19 Q. Again, is that a repairable item?  
 20 MR. MARTIN:  
 21 A. No. Lightning arrestors, when they fail,  
 22 again, they fail catastrophically and you  
 23 can't repair them.  
 24 Q. Okay. And again, it's basically an inventory  
 25 item that you replace from time to time as

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1 provide critical overloadage protection of the  
 2 power system equipment from lightning and  
 3 switching surges." So these are generally  
 4 installed on the high voltage side of power  
 5 transformers and on the low voltage side of  
 6 power transformers to protect the power  
 7 transformer from either a switching surge or a  
 8 lightning strike. So they're used to protect  
 9 very valuable equipment. Some of these power  
 10 transformers could cost a couple of million  
 11 dollars each. And these protective devices  
 12 are used to protect that equipment from  
 13 lightning strikes.  
 14 Q. Okay. And these surge arrestors are all  
 15 pretty much the same item, are they, do they  
 16 vary in their characteristics?  
 17 MR. MARTIN:  
 18 A. Again, we use them on the bulk electrical  
 19 system, we would have them at 69 kV, 138 kV  
 20 and 230 kV voltage levels.  
 21 Q. So that would be a different item for each?  
 22 MR. MARTIN:  
 23 A. Yes.  
 24 Q. Voltage level, okay. I think you gave us an  
 25 estimate of about \$3000 in average cost of

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1 required?  
 2 MR. MARTIN:  
 3 A. That's correct.  
 4 Q. Okay. I'd like to move now if I may to B-46,  
 5 which is the purchase and installation of  
 6 conduit and control cables at Bay d' Espoir.  
 7 And if I understand correctly, these are  
 8 cables that have been damaged and are required  
 9 to be replaced?  
 10 MR. HOLDEN:  
 11 A. Yes, that is correct, these were cables that  
 12 were damaged last year and they need to be  
 13 replaced.  
 14 Q. Okay. And looking at the response to IC-17,  
 15 the damage occurred while Hydro staff were  
 16 doing other work at the plant, is that  
 17 correct?  
 18 MR. HOLDEN:  
 19 A. Yes, that is correct.  
 20 Q. Okay. So this is equipment that presumably  
 21 was installed on the basis of some capital  
 22 project some years ago for which approval was  
 23 given and Hydro in the course of its own  
 24 operations has destroyed this equipment?

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1 MR. HOLDEN:  
 2 A. I wouldn't characterize it as destroying that  
 3 piece of equipment. It did suffer some damage  
 4 in the course of our operations last year and  
 5 it was direct buried cable, and the exact  
 6 location of that direct buried cable was a  
 7 little bit off according to our drawing  
 8 information and that's how the damage  
 9 occurred. And it was equipment that was  
 10 installed back in the 1970s in the original  
 11 part of the Bay d'Espoir development.  
 12 Q. So somebody with Hydro obviously dug in a  
 13 place that they shouldn't have dug and this  
 14 was the result?  
 15 MR. HOLDEN:  
 16 A. That is correct.  
 17 Q. Okay. And you say the property wasn't  
 18 destroyed. But I take it it does need to be  
 19 replaced?  
 20 MR. HOLDEN:  
 21 A. Yes, it does need to be replaced. The damage  
 22 that we incurred, we were able to make  
 23 temporary repairs such that we could stay in  
 24 operation. But really, those temporary  
 25 repairs are not suitable for permanent

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1 MR. HOLDEN:  
 2 A. Yes, okay. In our operating experience we use  
 3 the term homogenous construction. And the way  
 4 this dam is built, it's built in timber cribs  
 5 much like you'd see at the base of a  
 6 distribution pole, and they're interlocking  
 7 from one crib to the next just like a wharf  
 8 would be built. And so it's very difficult to  
 9 take bits and pieces of that apart at any one  
 10 time and replace that part without extracting  
 11 to the next piece. So, it goes on and on for  
 12 the whole extent of the dam. Plus the fact  
 13 that the deterioration of the untreated timber  
 14 is more or less the same right across the  
 15 whole face of the dam, so you really can't,  
 16 and there's no point in replacing just one  
 17 part, you have to replace it all. So it's an  
 18 interlocking timber crib dam that has to be  
 19 taken apart in totality and put back together  
 20 in totality.  
 21 Q. And is the proposal to remove the existing  
 22 structure entirely and put in a new structure  
 23 in place?  
 24 MR. HOLDEN:  
 25 A. This proposal here is to remove the wood parts

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1 installation. And what we want to do in this  
 2 project here is to reroute these cables  
 3 through the duct bank to the station so that  
 4 it would be secured in a much better fashion  
 5 than what they are now.  
 6 Q. Okay. And just so I'm clear on the result  
 7 here, your customers having provided funds  
 8 earlier to put this cable in place, you're now  
 9 asking the customers to replace it after Hydro  
 10 did the damage to it, is that correct?  
 11 MR. HOLDEN:  
 12 A. That is correct.  
 13 Q. Okay. If we can move now, and I'm trying to  
 14 move through these as quickly as we can, given  
 15 the time that we have, and look at the project  
 16 at page B-71, that's the Roddickton mini hydro  
 17 dam? The operating experience here indicates  
 18 that engineering assessments indicated that  
 19 due to the construction of the structure it  
 20 was not feasible to repair or replace  
 21 individual sections, it would have to be  
 22 replaced in its entirety. Can you expand on  
 23 that at all as to why it's not possible to do  
 24 some repair to this dam rather than simply  
 25 having to replace the whole thing?

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1 of the structure, the rock that fills the crib  
 2 will be reused, and the crib itself, the  
 3 timbers for the crib and the wood face on the  
 4 dam will all be replaced.  
 5 Q. We put a request for information in connection  
 6 with this project to you, that's IC-18. If we  
 7 could look at that for a moment? You had  
 8 referred in the project justification to an  
 9 economic analysis. Do I take it that page 2  
 10 of 2 of IC-18 was a preexisting document that  
 11 was something that you had prior to the  
 12 question being asked?  
 13 MR. HOLDEN:  
 14 A. Yes. That's the economic analysis, I believe,  
 15 that we did in order to prepare the  
 16 justification for the project proposal.  
 17 Q. Okay. And is this the extent of the economic  
 18 analysis, is there anything, any other  
 19 background or other documents associated with  
 20 that?  
 21 MR. HOLDEN:  
 22 A. The extent of the economic analysis was to  
 23 estimate the repair cost and compare that  
 24 against the life cycle benefits for the plant  
 25 itself. And so this here is the extent of

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1 MR. HOLDEN:  
 2 that analysis.  
 3 Q. Okay. On this page under "Assumptions" you  
 4 simply list the capital for 2005 as 231,500,  
 5 that's the project that you're seeing approval  
 6 of at this point?  
 7 MR. HOLDEN:  
 8 A. That's correct.  
 9 Q. Okay. And the only other assumption you have  
 10 there is the operator and operator--operating  
 11 and maintenance costs in 2030 dollars at  
 12 19,100? Under the heading of "Assumption".  
 13 MR. HOLDEN:  
 14 A. Oh, yes, that's correct, yes.  
 15 (2:15 p.m.)  
 16 Q. Okay. On the left-hand side under that  
 17 heading of "Assumptions" I take it these are  
 18 all other assumptions that feed into this  
 19 particular analysis. We have the annual  
 20 escalation and so on. The install capacity  
 21 now existing at Roddickton is 400 kilowatts,  
 22 is that correct?  
 23 MR. HOLDEN:  
 24 A. Yes, that is correct.  
 25 Q. Okay. And the capacity value at the bottom

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1 MR. MARTIN:  
 2 A. Yes. The CT, the CT equivalent is combustion  
 3 turbine, it's a gas turbine equivalent, that's  
 4 right.  
 5 Q. Yes, okay, all right. So when we get down  
 6 into the analysis itself on the option of  
 7 replacing the dam the numbers would appear to  
 8 be reasonably straightforward, you have your  
 9 capital cost and your plant O and M and that  
 10 carries on right through the study period up  
 11 until 2032, one column being current dollars  
 12 and the other one being in the present worth  
 13 of in 2004 dollars?  
 14 MR. HOLDEN:  
 15 A. That's correct.  
 16 Q. And that column is cumulative to the end of  
 17 the study period, correct?  
 18 MR. HOLDEN:  
 19 A. Yes, that's correct.  
 20 Q. Okay. Now, I've got some questions in terms  
 21 of the second option, the one that you're  
 22 measuring this against with respect to the  
 23 retirement of the plant. Under the heading  
 24 "Operator" for the year 2005 you have an  
 25 amount of \$19,872. Can you explain what

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1 there, can you just explain for us what you  
 2 mean by that?  
 3 MR. HOLDEN:  
 4 A. If my understanding is correct, that's the  
 5 cost of equivalent energy produced at  
 6 Holyrood. I think that's how we calculate the  
 7 value of the production from this plant, we  
 8 calculate it by energy that would have to be  
 9 replaced by some other source.  
 10 Q. No, I understand that. I mean, you've got the  
 11 annual energy there, the Holyrood conversion  
 12 and the Holyrood variable O and M and so on,  
 13 but the capacity value, I take it that's  
 14 intended to be in some fashion related to the  
 15 capacity as opposed to the energy that this  
 16 dam--or the Roddickton, meaning Hydro,  
 17 provides to the system?  
 18 MR. HOLDEN:  
 19 A. Yes, if my understanding is correct, yeah.  
 20 Q. Okay. And this \$100 per kilowatt per year is  
 21 a number I've seen before, and that relates to  
 22 a gas turbine, does it, the cost for a new gas  
 23 turbine?  
 24 MR. HOLDEN:  
 25 A. Is it a gas turbine?

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1 that's intended to mean?  
 2 MR. HOLDEN:  
 3 A. I think that refers to the cost of operating  
 4 the plant, the daily operating costs. Is that  
 5 correct, Fred?  
 6 MR. MARTIN:  
 7 A. No. We currently in the Roddickton area have  
 8 a contractor up there who is responsible for  
 9 operating two mobile diesels at our previous  
 10 wood chip plant as well as the mini hydro.  
 11 And on a daily basis he goes in and inspects  
 12 the plant, depending up on the water level, he  
 13 puts the plant on or takes it off. And this  
 14 cost here relates to the dollars, the salaries  
 15 that he would be paid on an annual basis to  
 16 continue operation of that plant.  
 17 Q. Okay.  
 18 MR. MARTIN:  
 19 A. That's my understanding of it.  
 20 Q. All right. So does this assume that the plant  
 21 is operating or not operating in 2005?  
 22 MR. MARTIN:  
 23 A. This would assume that the plant is not  
 24 operating in 2005.  
 25 Q. Okay. So why do we have the cost of the

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1 HUTCHINGS, Q.C.:

2 operator in there?

3 MR. HOLDEN:

4 A. If I could elaborate on that, the cost of the

5 operator here, as Mr. Martin described, is the

6 operator for this plant. But this plant will

7 operate for a portion of 2005 before and after

8 the dam reconstruction. The dam

9 reconstruction will take probably three months

10 and then of course for the other nine months

11 of the year the plant will be in production.

12 Q. No, I understand that. I'm looking under the

13 option for this economic analysis of retiring

14 the plant. If the plant is going to be

15 retired, I'm assuming that it's not operating

16 in 2005. So, I don't understand why there's a

17 cost for the operator on the scenario whereby

18 the plant is being retired in 2005.

19 MR. HOLDEN:

20 A. I can't answer that question.

21 MR. MARTIN:

22 A. Again, you can see we're struggling with this.

23 But the way I would look at this is the

24 operator, we cannot--we have to do something

25 in 2005. You can't put a combustion turbine

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1 A. I think in the interests of time and all what

2 we need to do in the undertaking is to be able

3 to respond to all of those questions

4 surrounding the cost benefit analysis. This

5 particular analysis was done by our system

6 planning department.

7 Q. Okay.

8 MR. MARTIN:

9 A. And I think we need some time to regroup with

10 those to get a better understanding of exactly

11 how this was done.

12 Q. Yeah. No, that's fine. I took it, and maybe

13 in the undertaking you can clarify as to

14 whether or not I'm correct here, I took this

15 column to mean that there wouldn't be a

16 capacity deficit that you would have to

17 replace until 2011. Do you know if that's an

18 assumption of this economic analysis?

19 MR. MARTIN:

20 A. That sounds right. But again, I'd like the

21 benefit of counsel on that.

22 Q. Sure, okay. No, I just want to raise the

23 point so that you'll be able to respond to

24 them in that way.

25 MR. MARTIN:

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1 in or whatever right away. So there is a time

2 lag between the time you retire the plant and

3 come up with an alternative. And I'm thinking

4 here that the operator is still--I think I'm

5 with Mr. Holden, I really don't understand the

6 -

7 Q. Okay. All right.

8 GREENE, Q.C.:

9 Q. We will provide the answer to the question in

10 the form of an undertaking. (UNDERTAKING)

11 HUTCHINGS, Q.C.:

12 Q. Yeah, I'd like an undertaking that we get that

13 information. And I have a few other questions

14 on this and it may be that these witnesses

15 will be able to help and we may need to get

16 other undertakings, I guess. The other

17 primary question I had, Mr. Martin and Mr.

18 Holden, is in relation to the heading of

19 "Capacity" under the option of retired plant.

20 And in the year 2011 there's a charge there

21 that starts at \$13,113 and continues on for

22 the balance of the life of the study. Can you

23 provide us with the derivation for that

24 number?

25 MR. MARTIN:

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1 A. Sure.

2 Q. Just from a point of view of operations,

3 though, I take it that we're agreed that

4 around the 2010, 2011 time frame Hydro will be

5 looking at adding additional base capacity to

6 its system. Is that, is my understanding on

7 that still correct?

8 MR. MARTIN:

9 A. It's in that time line. My recollection is,

10 and again, I can be corrected on this, I

11 thought it was in the 2009, 2010 time frame.

12 But again, we'll clarify that as part of the

13 undertaking.

14 Q. Okay. No, I mean, the only point being there

15 that there's going to be capacity added to the

16 system again around 2010 anyway.

17 MR. MARTIN:

18 A. Sure.

19 Q. So the fact of taking out the mini hydro dam

20 in Roddickton wouldn't necessarily mean you

21 would have to go and buy a gas turbine in

22 2010, would it?

23 MR. MARTIN:

24 A. No, it would not.

25 Q. No. And certain if you're going to do that,



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1 HUTCHINGS, Q.C.:

2 you probably wouldn't go out and buy a 400

3 kilowatt gas turbine?

4 MR. MARTIN:

5 A. I would agree with that.

6 Q. Yeah, okay. All right. Okay. I think we

7 need to get the answers to the undertakings

8 and then we'll see whether we have to pursue

9 any other questions related to that particular

10 project. Just so you're aware, as I said

11 earlier, Mr. Coxworthy and I have divided

12 these amongst ourselves, so don't assume that

13 because I've skipped over one, there might not

14 be a question on it before we're through.

15 MR. MARTIN:

16 A. We won't be comforted by that at all, I'm

17 sure.

18 Q. Quick question on page B-100. This is

19 purchase of meters and equipment for the TRO

20 system. Is this all related to the

21 distribution side or is some of this on the

22 common system?

23 MR. MARTIN:

24 A. This primarily is on the distribution system

25 for all of our General Service Customers,

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1 Q. Yes. Okay. Or replacement of other

2 equipment?

3 MR. MARTIN:

4 A. Certainly.

5 Q. Yeah, okay. If we could look briefly at page

6 B-103? And this is a project where we have

7 had a revision, and that's the revision that's

8 up there, September 28th, 2004. The revision

9 changed the date on the project justification

10 section indicating that the operational

11 realignments occurred in 2001 as opposed to

12 2003. Can you explain for us how that

13 realignment has been managed since 2001 and

14 what makes it necessary now to expend more

15 capital funds to accommodate that?

16 MR. MARTIN:

17 A. Yes. The realignment, the line worker review

18 and operational realignment resulted in

19 additional line workers being relocated, if

20 you will, to both Baie Verte and Bay d'

21 Espoir. And as part of that realignment they

22 obviously took various pieces of equipment and

23 tools that were required for their work at

24 those locations. What we tried to do

25 initially was have them accommodated at

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1 Domestic Customers and so on.

2 Q. Okay. And are you able to say whether any of

3 this metering or the transformers and so on

4 would relate to services being provided to

5 Industrial Customers?

6 MR. MARTIN:

7 A. I do believe that should we--obviously at the

8 Industrial Customers now we have revenue

9 metering equipment installed. Should a meter

10 at one of those locations be vandalized or

11 damaged or whatever, then a replacement meter

12 I am confident will be bought out of this

13 particular budget package, yes.

14 Q. Okay. So this again is a sort of an annual

15 allotment for items that are going to become

16 necessary during the course of the year based

17 on historical experience?

18 MR. MARTIN:

19 A. That's correct.

20 Q. Okay. And these are generally pieces of

21 equipment that will be add ons for the

22 purposes of metering delivery of electricity

23 at a particular point?

24 MR. MARTIN:

25 A. For new customers, yes.

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1 existing line depots and so on. But the

2 amount of equipment and the type of equipment

3 that they brought to those locations, they

4 include things like chain saws, gas operated

5 rock drills, hot line sticks and so on. And

6 it's really impractical for us to have those

7 employees there without some additional space

8 to be able to store this equipment. You get

9 the fumes of gas and whatever in the office

10 areas, it's really an intolerable environment

11 and we really should be adding, making these

12 additions to give them some reasonable working

13 conditions.

14 Q. Okay. So just so I'm clear on the underlining

15 facts here, the situation that you're

16 describing has in fact been in place since

17 2001?

18 MR. MARTIN:

19 A. 2001, 2002, yes, sure.

20 Q. Okay. And it's now for the Capital Budget

21 year of 2005 that you're suggesting that these

22 alterations need to be made?

23 MR. MARTIN:

24 A. That's correct.

25 Q. Okay. Now, the project is described as

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1 HUTCHINGS, Q.C.:

2 roofing and siding repairs to the line depots?

3 MR. MARTIN:

4 A. Yes.

5 Q. That's accurate, is it?

6 MR. MARTIN:

7 A. Yes.

8 Q. So this is a repair project primarily?

9 MR. MARTIN:

10 A. Some of it is repair, yes.

11 Q. Yes, okay. And what portion of this relates

12 to repair of existing depots and what portion

13 relates to construction of new sheds?

14 MR. MARTIN:

15 A. I don't have a breakdown and I don't know if

16 we responded to that in one of the RFIs. Just

17 bear with me one second, please.

18 Q. I don't believe we got that level of detail.

19 MR. HOLDEN:

20 A. No, we didn't respond to that question in

21 either one of the RFIs. The RFIs were IC-22

22 and IC-75.

23 Q. Right. And that wasn't the question that was

24 put in respect of this particular item. Is

25 that information that you have available?

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1 the Department of Finance we have been advised

2 that it should be. And again, I think this is

3 based upon materiality. But I should defer

4 those questions and those comments to perhaps

5 somebody more knowledgeable in the financial

6 area.

7 Q. Okay. All right. No, I -

8 GREENE, Q.C.:

9 Q. And that would be Mr. Roberts. Mr. Roberts

10 will be a witness at the hearing who will

11 speak to Hydro's capitalization policies.

12 HUTCHINGS, Q.C.:

13 Q. Yes, I intended to pursue it with Mr. Roberts.

14 I'm just trying to get the basic facts in

15 terms of, you know, the confirmation from this

16 witness that what we are talking about is a

17 repair as opposed to a new construction and

18 then we can deal with Mr. Roberts on how that

19 gets characterized afterwards. Okay. So

20 we're clear on this then, there are storage

21 sheds at both Baie Verte and Sop's Arm which

22 is new construction and then you're extending

23 the existing line depot at Bay d'Espoir, is

24 that correct, it's all part of this project?

25 MR. MARTIN:

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1 MR. MARTIN:

2 A. I'm sure we could, with some effort, make it

3 available by going back through our estimate

4 files and coming up with it, yes.

5 (2:30 p.m.)

6 Q. Okay. I mean, I don't want to create an undue

7 burden here. I guess the point that we're

8 getting to is that repairs would normally not

9 be capital items and new construction if

10 justified would be. So if--are you able to

11 isolate what out of this project constitutes

12 new construction, I guess, is the question.

13 And I'll leave it to you as to whether you

14 wish to do the necessary work to come up with

15 an answer for that.

16 MR. MARTIN:

17 A. I do believe we could come up with an answer

18 if the Board thought it helpful in their

19 deliberations. I guess the question you're

20 raising is whether or not the repairing of

21 roofing and siding and so on is a capital

22 expenditure?

23 Q. Um-hm.

24 MR. MARTIN:

25 A. And in our discussions in consultations with

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1 A. That's correct.

2 Q. Okay. And were you able to retire any

3 facilities at LaScie or Springdale as a result

4 of relocating the line workers from those

5 areas?

6 MR. MARTIN:

7 A. The line depot at Springdale is still a very

8 active site for us in that area. We are able

9 to retire and have retired the LaScie depot.

10 As a matter of fact, we are looking at

11 agreement with the volunteer fire department

12 in the Town of LaScie to donate it to them for

13 a communications facility for their volunteer

14 fire department.

15 Q. Okay. Do you know what value that's being

16 carried on at in the books of Hydro at the

17 present time?

18 MR. MARTIN:

19 A. No, I do not.

20 Q. Okay. If we look for a moment then at B-105?

21 And this is the GPS system. I remarked

22 earlier on that the level of explanation for

23 the projects generally had improved quite a

24 bit, but I must say, I was left with a good

25 number of questions with respect to this one.

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1 HUTCHINGS, Q.C.:

2 For what purpose is this global positioning

3 system used at the present time?

4 MR. MARTIN:

5 A. It's basically used to carry out precise

6 surveys, both for legal survey requirements as

7 well as transmission line surveys where a

8 level of accuracy, a high level of accuracy is

9 required for the survey results.

10 Q. And I guess I'm just trying to picture this

11 system. I presume this is a mobile piece of

12 equipment that is taken to the field and used

13 to mark specific locations in a very accurate

14 manner?

15 MR. MARTIN:

16 A. Yes. This is a standard piece of equipment

17 that our survey crews use on a very regular

18 basis in the field.

19 Q. Okay. And the current equipment you say is

20 ten years old and is costing 4000 to service

21 per year. Do you know the service, the

22 intended service life of the new equipment?

23 MR. MARTIN:

24 A. You mean the--yes. You mean the service, how

25 long we actually would anticipate being able

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1 Q. And I take it this is a single piece of

2 equipment, you only have one of these at the

3 present time and you're going to replace that

4 one?

5 MR. MARTIN:

6 A. That's correct. And the crew would use that

7 one piece of equipment.

8 Q. Yes, okay. Has that level of surveying

9 activity been fairly constant within Hydro

10 over the last number of years or would that

11 vary when you're putting in new transmission

12 lines and so on?

13 MR. MARTIN:

14 A. The level of activity would vary from year to

15 year again, depending upon the amount of

16 capital work requiring surveyors. But what we

17 try to do is with most of our operations, if

18 we get into an area where we have peaks, if

19 you will, in the resource requirements, that's

20 where we would look at bringing in either

21 temporary help or contracting work out to

22 shave off those peaks while maintaining the

23 normal level of operations, if you will, with

24 our permanent staff. That's the way we handle

25 it not only for surveying but for a lot of

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1 to use that piece of equipment?

2 Q. Yes.

3 MR. MARTIN:

4 A. I'm not sure what the economic life is, but I

5 would assume we would be able to use a piece

6 of equipment like this for at least ten years.

7 Q. Your project justification says that the

8 project will eliminate the annual repair and

9 rental costs and based on this analysis the

10 cost of the project will be recovered in

11 approximately six years. I take it that's the

12 extent of the economic analysis that's gone

13 into this one?

14 MR. MARTIN:

15 A. That's pretty much it.

16 Q. Yeah, okay. No, that's fine. Does Hydro do

17 all of its surveying in-house or do you

18 contract out surveying services as well?

19 MR. MARTIN:

20 A. We do some surveying in-house and as well as

21 we contract out some survey work.

22 Q. Can you give us an idea of the size of your

23 in-house surveying operation?

24 MR. MARTIN:

25 A. We have three surveyors, basically, on staff.

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1 other activities as well.

2 Q. Is this replacement of the GPS related at all

3 to the further project that appears at B-108

4 relative to legal surveys of your distribution

5 line right of ways?

6 MR. MARTIN:

7 A. Again, I'm going to make an assumption that

8 the piece of equipment we're looking at

9 purchasing here would be used in some of this

10 work. So I think to answer your question,

11 it's yes.

12 Q. Okay. I did have some other questions about

13 the B-108 specifically. Was any consideration

14 given to a legislated solution to this

15 problem? Simply asking Government to pass

16 legislation vesting these right-of-ways in

17 Hydro without having to incur this expense,

18 which seems to be going to go on for a number

19 of years?

20 MR. MARTIN:

21 A. I don't know with certainty, but to my

22 knowledge, there was no attempt made to go for

23 a legislative change to accommodate us in this

24 regard.

25 Q. Are you aware of any particular problems that

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1 HUTCHINGS, Q.C.:

2 would exist if one tried to pursue that

3 solution, other than any normal problem of

4 getting a piece of legislation passed? Your

5 shareholder should have some interest in

6 saving you a few dollars, I would think.

7 GREENE, Q.C.:

8 Q. Mr. Chair, this really is a legal issue and I

9 can speak for Hydro with respect to this. The

10 issue of the lack of rights-of-way for Hydro

11 and of easements arose back earlier in the

12 90s. We did have discussions with Crown Lands

13 and they told us it would be no deviation with

14 respect to any normal practice for Hydro. At

15 that time, we did undertake, because we were

16 having problems with respect to not having

17 appropriate legal title in a number of areas,

18 and Mr. Martin wasn't involved in that at that

19 time. The B-108 comes as a result of really

20 direction from the legal department to the TRO

21 department, as a result of problems we had in

22 discussions with Crown Lands.

23 CHAIRMAN:

24 Q. Thank you, Ms. Greene. I really don't see

25 much point in progressing with these witnesses

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1 Q. Yes, okay. Just before we get to the

2 particulars of those two projects, if we can

3 go back for a moment to Section A at page A-8.

4 Toward the bottom of the page here, there is a

5 project listed which is described as "Replace

6 Light Duty Mobile Equipment, less than

7 \$50,000" and notwithstanding that description,

8 the budget allotment is \$260,000. Can you

9 explain for us why that amount of \$260,000

10 hasn't made it's way into Section B?

11 MR. MARTIN:

12 A. Again, I think the way this thing has been

13 organized is that the individual items within

14 that category of Light Duty Mobile Equipment,

15 that includes items such as ATVs, ski-dos,

16 and so on, all of which have a value of less

17 than \$50,000, and if I'm not mistaken, this is

18 the way we've always summarized this and

19 presented it to the Board.

20 GREENE, Q.C.:

21 Q. Yes, and I was going to interject here again.

22 The way of doing this, which is the second

23 time Mr. Hutchings has raised it, has been the

24 process agreed upon with the Board and the

25 Industrial Customers and have gone through our

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1 along that line of questioning, Mr. Hutchings.

2 HUTCHINGS, Q.C.:

3 Q. No, I understand that, Mr. Chair. I mean,

4 there's no real other way to raise this, other

5 than to suggest that there might have been

6 alternatives and, you know, Hydro can respond

7 appropriately and Ms. Greene has certainly

8 begun that response now. In terms of--Mr.

9 Martin, just let me ask you this. Can you add

10 anything with respect to Hydro's thinking on

11 why this particular project should be regarded

12 as capital as opposed to an operating item?

13 MR. MARTIN:

14 A. No, again, I think that's something that we

15 would have to refer to Mr. Roberts in the

16 finance department.

17 Q. Okay. I'm happy to do that. All right. I

18 want to skip ahead now, if we can, Mr. Martin,

19 to the vehicle projects, B-147 and 149, and I

20 understand that the management of vehicles

21 generally for Hydro falls to your division,

22 whether or not your division is actually using

23 the vehicles. Is that fair?

24 MR. MARTIN:

25 A. Yes, that's correct.

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1 capital budget since at least our 2001 GRA, in

2 fact the year before. This way of presenting

3 it has been the agreed practice with the

4 Board. If each individual item is less than

5 \$50,000, there'll all summed up with a total

6 amount, but each individual piece is less than

7 50. So that has been the practice as we have

8 done since we started doing capital budgets

9 and has been reviewed each and every year

10 prior to this.

11 CHAIRMAN:

12 Q. I can still appreciate where Mr. Hutchings is

13 coming from, so I'll still allow, you know,

14 some questioning along those lines. I would

15 like to get some information on the record

16 with regard to it.

17 HUTCHINGS, Q.C.:

18 Q. Yes, and I think, Mr. Chair, you harken back

19 to my earlier questions about things like

20 instrument transformers where if there are

21 six, then they're over the \$50,000 limit and

22 if there's five, they're under the \$50,000

23 limit. So I'm not sure the practice is

24 consistent and just to illustrate a point so

25 that we can get as much clarity as we can with

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1 HUTCHINGS, Q.C.:  
 2 respect to -  
 3 GREENE, Q.C.:  
 4 Q. And I guess, the last point I'll make is one  
 5 of the issues that Hydro has with the process  
 6 is that the rules of the game keep changing.  
 7 I would like to make it noted for the record  
 8 that we have done is consistent every single  
 9 year and has been approved by the Board in the  
 10 past. If the rules are going to change, we  
 11 would like advance notice of it, and as I  
 12 said, this practice has been made known to the  
 13 Industrial Customers at every previous  
 14 hearing. It's very difficult to prepare when  
 15 the rules of the game change as you're playing  
 16 the game.  
 17 (2:45 p.m.)  
 18 CHAIRMAN:  
 19 Q. I can appreciate that, Ms. Greene. But in any  
 20 event, I'd just like to get some of this  
 21 information on the record, and I do appreciate  
 22 and note the comment you made.  
 23 HUTCHINGS, Q.C.:  
 24 Q. I understand where Hydro is coming from, and I  
 25 guess part of this exercise is to highlight

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1 MR. MARTIN:  
 2 A. Yes, certainly.  
 3 Q. I'd appreciate if we could have an undertaking  
 4 to have that question answered. (UNDERTAKING)  
 5 This has always been regarded as a separate  
 6 account, if you will, from the vehicles as  
 7 such that we deal with in Section B? Is that  
 8 correct?  
 9 MR. MARTIN:  
 10 A. Yes, as I understand it, as Ms. Greene just  
 11 described, this is the way it's always been  
 12 presented to the Board, with the agreement of  
 13 the Board.  
 14 Q. In respect to the vehicles, you've outlined  
 15 replacement criteria and so on and we have a  
 16 fair bit of detail on that. Are there  
 17 replacement criteria in place in respect of  
 18 the Light Duty Mobile Equipment?  
 19 MR. MARTIN:  
 20 A. There are some very general criteria, I  
 21 believe, available, yes. Again, what we need  
 22 the Board to understand is that the criteria  
 23 is not necessarily that which is used to  
 24 select which vehicles, snowmobiles or ATVs are  
 25 replaced. All they act as is a guide or a

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1 where possibly it's useful to think about  
 2 changing the rules.  
 3 GREENE, Q.C.:  
 4 Q. And I would also point out, there is another  
 5 process underway, the Capital Budget Process  
 6 Review, where this type of exercise of review  
 7 for improvements hopefully in the process  
 8 moving forward, is also underway as a separate  
 9 exercise.  
 10 CHAIRMAN:  
 11 Q. Yes, thank you.  
 12 HUTCHINGS, Q.C.:  
 13 Q. That's perfectly legitimate. Thank you, Mr.  
 14 Chair. Am I correct, Mr. Martin, that this  
 15 project at page A-8 is generally dealing with  
 16 off-road equipment?  
 17 MR. MARTIN:  
 18 A. Yes, that's correct.  
 19 Q. Do you have any notion of the number of units  
 20 that would be contemplated to be acquired in  
 21 2005 under this heading?  
 22 MR. MARTIN:  
 23 A. No, I don't have that information with me.  
 24 Q. Okay. I take it that's something you could  
 25 find for us?

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1 trigger that once a certain car, for example,  
 2 gets X number of kilometres on it, it is then  
 3 closely scrutinized, I guess, with regard to  
 4 its maintenance history, any ongoing  
 5 operational problems, the condition of the  
 6 vehicle and so on. The guidelines, as  
 7 developed here, are just meant as a trigger or  
 8 a guideline. They're not strict criteria that  
 9 if a car falls in the range of five to seven  
 10 years, for argument sake, it's replaced.  
 11 Q. No, no, I understand that. So can you tell us  
 12 what the criteria are in respect of the Light  
 13 Duty Mobile Equipment?  
 14 MR. MARTIN:  
 15 A. No, I cannot.  
 16 Q. But that is available, is it?  
 17 MR. MARTIN:  
 18 A. I believe we do have some general guidelines  
 19 that we use.  
 20 Q. I'd appreciate it if you could get those for  
 21 us as well. (UNDERTAKING) Are there any  
 22 additions to the mobile equipment fleet  
 23 associated with this \$260,000 or is this all  
 24 replacement?

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1 MR. MARTIN:  
 2 A. No, I think if you'll refer back to my  
 3 presentation this morning, we're actually  
 4 looking for, I think a \$60,000 reduction in  
 5 this year's budget in this particular category  
 6 as a result of our fleet review.  
 7 Q. Yes, I understand. I mean, had the fleet  
 8 review not occurred, this might be \$320,000 -  
 9 MR. MARTIN:  
 10 A. That's right.  
 11 Q. - instead of 260.  
 12 MR. MARTIN:  
 13 A. That's correct.  
 14 Q. Yes. But I think the question still stands as  
 15 to whether or not any of this 260 represents  
 16 additions to the fleet, you know, putting  
 17 vehicles in places where they weren't before,  
 18 as opposed to simply replacing vehicles that  
 19 are worn out?  
 20 MR. MARTIN:  
 21 A. I can't answer that. My intuition is that if  
 22 we are reducing the fleet of light vehicles  
 23 like this, the intention would be that any  
 24 vehicles that are eliminated as a result of  
 25 this review, if we needed them somewhere else,

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1 HUTCHINGS, Q.C.:  
 2 Q. Not light duty vehicles, no, light duty--not  
 3 light vehicles, light duty mobile equipment.  
 4 Get all the names proper before we're  
 5 finished. Okay. Turning now to the vehicles  
 6 as such, you did give us a little information  
 7 in your direct evidence this morning about the  
 8 results of the vehicle review. We had asked  
 9 for, in IC-46, any copies of any studies that  
 10 were available with respect to that, and the  
 11 answer was that there were no formal reports  
 12 prepared for Hydro's fleet review. I guess I  
 13 find it puzzling that this type of review  
 14 could occur and no paper be generated as a  
 15 result of it. Is there no written document  
 16 that was generated by the fleet review that we  
 17 could refer to for how it was undertaken and  
 18 what the results of it were?  
 19 MR. MARTIN:  
 20 A. When we responded that there was no formal  
 21 report prepared, we were thinking certainly in  
 22 the context of somebody goes off with a  
 23 mandate to complete a study. There is a study  
 24 and there is a report issued, such as what was  
 25 issued for the Roddickton--I'm sorry, the

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1 we'd certainly be using those before we'd be  
 2 budgeting for new equipment.  
 3 Q. Yes, that makes sense, but perhaps you could  
 4 check that for me and let me know if there are  
 5 any new allocations of light duty vehicles  
 6 associated with that particular budget item?  
 7 (UNDERTAKING)  
 8 GREENE, Q.C.:  
 9 Q. Excuse me, Mr. Hutchings. The budget item, I  
 10 guess I'm confused. Are we still talking  
 11 about light duty mobile equipment or are we  
 12 back to vehicles?  
 13 HUTCHINGS, Q.C.:  
 14 Q. No, that was light duty mobile equipment we  
 15 were talking about.  
 16 GREENE, Q.C.:  
 17 Q. Okay.  
 18 CHAIRMAN:  
 19 Q. You're referencing the A-8 project for  
 20 260,000, right?  
 21 HUTCHINGS, Q.C.:  
 22 Q. Yes, that's right.  
 23 GREENE, Q.C.:  
 24 Q. So it's light duty equipment and not light  
 25 duty vehicles, okay.

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1 interconnection of Rencontre East, the Wood  
 2 Pole Management Study and so on. There was  
 3 obviously no formal report such as that. What  
 4 happened in this particular instance, as I  
 5 mentioned this morning, we put the manager of  
 6 transportation, we directed him with a mandate  
 7 to review, in its entirety, Hydro's fleet of  
 8 on-road vehicles, with the input from three  
 9 other managers representing TRO and the  
 10 production division. They did that over the  
 11 course of 2003 and part of 2004. They brought  
 12 forward a series of recommendations to Hydro's  
 13 management. Hydro's management eventually  
 14 approved those recommendations and we are  
 15 moving forward now with the implementation of  
 16 those recommendations.  
 17 Q. I would have thought there would, at the  
 18 least, have been a memo from this manager to  
 19 his boss saying "yes, I've done the fleet  
 20 review and here's what I've concluded." Is  
 21 there such a document?  
 22 MR. MARTIN:  
 23 A. There are probably memos. I honestly can't  
 24 think of--I wouldn't consider a memo to be a  
 25 study or a report, but I'm sure there's all

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1 MR. MARTIN:  
 2 kinds of papers in files and so on that go  
 3 through the details of what was done, how it  
 4 was done, the deliberations they went through,  
 5 the decisions they've made and the  
 6 recommendations and so on that they would have  
 7 brought and presented to management. I'm sure  
 8 that exists.  
 9 Q. I mean, if we can have a piece of paper with  
 10 these conclusions and recommendations on it,  
 11 at least, and some exposition of the thinking  
 12 that went into that, you know, on what  
 13 principles did Hydro evaluate its requirement  
 14 for vehicles in the course of this review? I  
 15 mean, you could perhaps tell us that, but I  
 16 mean, I would have thought there'd have been a  
 17 piece of paper that would summarize that  
 18 fairly well.  
 19 MR. MARTIN:  
 20 A. The only thing that comes to my mind that  
 21 might help, and again, we need to be very  
 22 careful about how this is used, is there was a  
 23 Powerpoint presentation made to executive  
 24 management on the fleet review, but again, I  
 25 think if we're going to do something like

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1 where they were done and we're certainly  
 2 willing to explain how the process was done,  
 3 who did it, and we have provided a witness to  
 4 that. But there's not a piece of paper I can  
 5 produce that fully explains it.  
 6 CHAIRMAN:  
 7 Q. No, I think the witness' answer is certainly  
 8 clear enough to the question that's been  
 9 posed, in terms of whether this exists or not,  
 10 Mr. Hutchings.  
 11 HUTCHINGS, Q.C.:  
 12 Q. I mean -  
 13 CHAIRMAN:  
 14 Q. You may have comments later as to why it  
 15 should or shouldn't, but -  
 16 HUTCHINGS, Q.C.:  
 17 Q. I'm really just trying to expedite the  
 18 process. I mean, it seems to me that if we  
 19 had even the piece of paper with the  
 20 highlighted points of recommendation and so  
 21 on, it would be easier to tackle this whole  
 22 issue because, I mean, vehicles have been a  
 23 bit of sticky point through previous hearings.  
 24 So I mean, we'll--I guess we'll just have to  
 25 proceed with the questions without the benefit

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1 that, we really need to go through it and  
 2 understand the context of what is in that  
 3 particular presentation. That does contain  
 4 the recommendations of the committee.  
 5 Q. I -  
 6 GREENE, Q.C.:  
 7 Q. And again, Mr. Chair, in responding to the  
 8 information request, there was no report done.  
 9 The manager of transportation reports to Ian,  
 10 and in this particular case, there would have  
 11 been meetings. There were not minutes kept of  
 12 these sorts of meetings. We do have, as Mr.  
 13 Martin indicated, a presentation similar  
 14 somewhat to the Wood Pole where there are  
 15 points or bullets that you speak to. You  
 16 cannot get a sense of the--from looking at  
 17 that alone, so that's why Mr. Martin, in his  
 18 direct evidence, explained the results of the  
 19 review and he's certainly prepared to answer  
 20 any questions as to how it was done. He  
 21 indicated who did it. He can give you the  
 22 principles as to how it was done, but we  
 23 really don't have one piece of paper that--and  
 24 we often do that when you undertake different  
 25 parts of review. We have filed formal reports

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1 of that paper and see where it takes us.  
 2 Mr. Martin, what specifically was the  
 3 direction given to the manager of  
 4 transportation services in respect of the  
 5 fleet review?  
 6 MR. MARTIN:  
 7 A. The manager of transportation, as I stated  
 8 this morning in my direct testimony, was  
 9 charged to review Hydro's on-road fleet of  
 10 vehicles to ensure that Hydro's vehicle and  
 11 mobile equipment fleet was the minimum  
 12 required. So basically what he was charged to  
 13 do, in consort with three of this compatriots  
 14 who use these vehicles and their staff who use  
 15 these vehicles on a regular daily basis, was  
 16 to go off, look at all the vehicles we had,  
 17 both on-road and in his mobile fleet, and  
 18 determine where they could minimize or  
 19 eliminate or transfer or pool this type of  
 20 equipment so that we could still meet our  
 21 mandate of providing reliable service to our  
 22 customers, but reducing the fleet to the  
 23 minimum possible. That was the mandate given  
 24 to our manager of transportation.  
 25 Q. Was there any direction to approach this from

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1 HUTCHINGS, Q.C.:

2 the point of view of zero-based budgeting, to

3 say what the needs are and then build the

4 fleet from there or was the starting point the

5 existing fleet?

6 MR. MARTIN:

7 A. I don't think the starting point was the

8 existing fleet, nor would I say we went back

9 and went through a zero-based budgeting

10 exercise. What the managers would have done,

11 the four of them, was look at their current

12 operation, look at where they needed specific

13 types of vehicles to match the requirements of

14 the crews that worked in those areas and so

15 on, and from that, and knowing what we

16 currently have in the fleet and what we could

17 transfer around between areas and so on, come

18 up with what they thought was the most

19 appropriate, efficient fleet, so that we could

20 maintain service. That's the exercise they

21 went through. It certainly wasn't a zero-

22 based budgeting exercise, no.

23 Q. Was there a direction to consider or was there

24 consideration of the ability to downsize

25 vehicles and use a smaller vehicle where a

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1 MR. HOLDEN:

2 A. Half size.

3 MR. MARTIN:

4 A. Half -

5 Q. A compact pick up or whatever, yes.

6 MR. MARTIN:

7 A. Compact.

8 Q. All right. So the particular review that

9 you're talking about now, when actually did

10 that take place?

11 MR. MARTIN:

12 A. Which review are you referring to?

13 Q. The last one.

14 MR. MARTIN:

15 A. The last one occurred basically over 2003 and

16 early 2004.

17 Q. Okay. And the previous one was when?

18 MR. MARTIN:

19 A. It was just previous to that, again perhaps

20 beginning over 2002.

21 (3:00 p.m.)

22 Q. Were the replacement criteria reviewed in the

23 course of this process?

24 MR. MARTIN:

25 A. I can't say specifically they were reviewed in

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1 larger one was presently in place?

2 MR. MARTIN:

3 A. That had already been done as part of a

4 previous review, looking at the size of

5 vehicles. As a matter of fact, as part of

6 this particular review you're referring to, we

7 eliminated, I believe it was, 11 cherry

8 pickers and a boom truck as part of the

9 exercise and replaced them with 12 what we

10 call multi-functional pieces of equipment.

11 These are material handlers that they can do

12 the two--the job simultaneously of a cherry

13 picker and a boom truck. So there were things

14 like that where we looked at trying to

15 consolidate, reduce the number of vehicles and

16 save costs and dollars wherever we could, yes.

17 Q. You mentioned a previous review. When had

18 that taken place?

19 MR. MARTIN:

20 A. That was just previous to this one, where we

21 looked at the size of equipment, cars and so

22 on, pick ups. As an example, we did reduce

23 the size of pick ups for our line supervisors

24 and so on from a full-size pick up to a--what

25 do they call them now?

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1 this particular process. This was, again, an

2 exercise to look at trying to minimize the

3 number of vehicles. The last time that I know

4 the criteria was reviewed was 1998, and that

5 was done in consultation with other utilities,

6 including Nova Scotia Power, New Brunswick

7 Power, Manitoba Hydro and Newfoundland Power.

8 That criteria had been in place for several

9 years before that. The results of the review

10 resulted in absolutely no change. I asked our

11 manager of transportation services just a

12 couple of days in anticipation of the hearing

13 whether or not he foresaw any other changes

14 with regards to the criteria. He said he did

15 not. And again, I think it's important to

16 understand what the criteria is used for. It

17 doesn't necessarily say that if a vehicle fits

18 into that category or into that criteria, we

19 are going to replace it. What it does is it

20 just triggers an action to further review that

21 particular vehicle and again, looking at the

22 condition, the maintenance costs over the last

23 little while and so on, and then make a

24 knowledgeable determination as to whether or

25 not that vehicle should be replaced. We have



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1 MR. MARTIN:  
 2 vehicles out there now that are perhaps over  
 3 seven years old and not replaced. I'm sure  
 4 we've replaced vehicles less than five years  
 5 old because of maintenance costs, conditions  
 6 or so on. So again, the criteria is just to  
 7 act as a trigger for further additional  
 8 review.  
 9 Q. We put a question to you, IC-47, in respect of  
 10 the historical information about the category  
 11 for numbers of vehicles and locations for the  
 12 last five years. On page six of six, we have  
 13 the 2003 information, and the total Hydro  
 14 vehicles shown there is 273. Do I take it  
 15 from that that the 273 represents the total  
 16 number of vehicles in the Hydro system at the  
 17 end of 2003?  
 18 MR. MARTIN:  
 19 A. Yes, that's correct.  
 20 Q. Okay. And do you know what that number would  
 21 be today?  
 22 MR. MARTIN:  
 23 A. Today?  
 24 Q. Yes.  
 25 MR. MARTIN:

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1 gave us this morning as well?  
 2 MR. MARTIN:  
 3 A. It should be in that time frame. Again, I  
 4 should mention with regards to the heavy  
 5 equipment--no, I'll say yes, you're right. In  
 6 the same time frame, around the same time  
 7 frame.  
 8 Q. And the numbers that you're giving us are as a  
 9 result of the review that started in 2003 and  
 10 finished in 2004?  
 11 MR. MARTIN:  
 12 A. That's right.  
 13 Q. Okay. And if you're talking 23 units over  
 14 that roughly what, three-year period, 2004 to  
 15 2006?  
 16 MR. MARTIN:  
 17 A. The actual reduction started in 2004.  
 18 Q. Yes.  
 19 MR. MARTIN:  
 20 A. And we should see them down to those numbers I  
 21 quoted by the end of 2006.  
 22 Q. Okay. So that's over a three-year period?  
 23 MR. MARTIN:  
 24 A. That's over a three-year period.  
 25 Q. Yes.

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1 A. No, I'm sorry, I don't. I don't keep a daily  
 2 account of Hydro's vehicles.  
 3 Q. No. Do you know if the number has increased  
 4 or decreased since the end of 2003?  
 5 MR. MARTIN:  
 6 A. The number would have decreased. We are on  
 7 target now that by the end of 2004, the  
 8 vehicle count should be down from 273 to  
 9 something around 260. Further decreasing in  
 10 2005 as a result of the review to something  
 11 down towards 250, reflecting the decrease of  
 12 23 vehicles from this morning's direct  
 13 testimony.  
 14 Q. Okay. So your testimony this morning was a  
 15 reduction of 23 units of the on-road vehicles,  
 16 and that is from when to when? When does--  
 17 over what period of time does that reduction  
 18 occur?  
 19 MR. MARTIN:  
 20 A. You should see that by the end of 2006.  
 21 Q. By the end of 2006?  
 22 MR. MARTIN:  
 23 A. Yes.  
 24 Q. And is that the same time frame for the off-  
 25 road and mobile equipment numbers that you

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1 MR. MARTIN:  
 2 A. Well, the review wasn't basically accepted and  
 3 approved by management until earlier this  
 4 year.  
 5 Q. Yes.  
 6 MR. MARTIN:  
 7 A. Right. So it's over part of 2004, 2005, 2006.  
 8 Q. Okay. So that averages out a reduction of  
 9 seven to eight units per year?  
 10 MR. MARTIN:  
 11 A. That sounds correct.  
 12 Q. As a result of this review?  
 13 MR. MARTIN:  
 14 A. That sounds correct.  
 15 Q. But if I look back to page five of six of IC-  
 16 47, there's a reduction of nine units from  
 17 2002 to 2003 before the review ever started at  
 18 all. Is there an explanation for that?  
 19 MR. MARTIN:  
 20 A. Oh, certainly. If you look at line one of the  
 21 2002 vehicles, for example, there were seven  
 22 vehicles there involved in a major capital  
 23 project for the Avalon upgrade, transmission  
 24 line upgrade. So those vehicles, when the  
 25 project was completed, would have been

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1 MR. MARTIN:  
 2 reassigned or used to replace other vehicles  
 3 that required replacement.  
 4 Q. Yes. And equally, there was one vehicle  
 5 assigned to the East Coast Microwave project,  
 6 and that project ended, correct?  
 7 MR. MARTIN:  
 8 A. Yes.  
 9 Q. And there were six vehicles assigned to the  
 10 Granite Canal project?  
 11 MR. MARTIN:  
 12 A. Yes.  
 13 Q. And that project ended.  
 14 MR. MARTIN:  
 15 A. Right.  
 16 Q. So that's actually a total of 14 vehicles  
 17 assigned to capital projects that didn't carry  
 18 over to 2003, but the reduction is only nine  
 19 vehicles. So -  
 20 MR. MARTIN:  
 21 A. Well, again, there were no doubt other  
 22 vehicles in that category or in those  
 23 categories that had to be retired and we used  
 24 those vehicles then to replace them rather  
 25 than buy new ones.

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1 needed inspectors out on distribution lines,  
 2 transmission lines or other upgrades around  
 3 the system that these vehicles were pooled in  
 4 St. John's and assigned to those projects.  
 5 Q. Looking back historically from the information  
 6 we have, the most vehicles you ever had in St.  
 7 John's before this was 14, and that was in  
 8 2000. Is there any other explanation as to  
 9 why there's all these additional vehicles in  
 10 St. John's in 2003?  
 11 MR. MARTIN:  
 12 A. I can't think of anything else. I mean, I'm  
 13 fairly comfortable in saying that was the  
 14 reason. A lot of the project vehicles that  
 15 were assigned to specific large projects, like  
 16 the Avalon upgrade or the Granite Canal  
 17 project, when those projects were wound down,  
 18 the vehicles were brought back and pooled in  
 19 the fleet in St. John's here for use when our  
 20 inspectors and so on required a vehicle to go  
 21 out on a smaller project that wouldn't  
 22 necessarily require six or seven vehicles, as  
 23 reported in this table.  
 24 Q. Was there not already an adequate supply of  
 25 vehicles in St. John's over the past previous

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1 Q. But if you retire them, then they disappear  
 2 from the total of vehicles anyway. So whether  
 3 or not it's those particular 14 vehicles,  
 4 there should be 14 vehicles less in 2003 than  
 5 in 2002 because the capital projects have gone  
 6 away.  
 7 MR. MARTIN:  
 8 A. Unless, again, they were transferred to  
 9 another project or for some other reason that  
 10 came up during that particular period,  
 11 certainly.  
 12 Q. Yes, that's a question I had because from  
 13 2002, on page five, to 2003 on page six,  
 14 there's an increase of the number of vehicles  
 15 in St. John's from 12 to 21. What gave rise  
 16 to the requirement for nine 2000 series  
 17 vehicles in St. John's within that time frame?  
 18 MR. MARTIN:  
 19 A. I'm not certain of the answer to that, but I  
 20 can see where some of those project vehicles  
 21 would have been brought back and pooled in St.  
 22 John's for use perhaps on other projects  
 23 around the island that were ongoing. I mean,  
 24 they just weren't assigned to specific  
 25 projects, but there were projects where we

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1 four years?  
 2 MR. MARTIN:  
 3 A. I'm sorry, I don't understand your question.  
 4 Q. Well, from 1999 through to 2002, the St.  
 5 John's operation has managed to get along with  
 6 12 or 11, 12, 13 or 14 of these vehicles. If  
 7 that pool wasn't adequate, and that would seem  
 8 to be the implication if they suddenly needed  
 9 21 in 2003, why wasn't something done before?  
 10 MR. MARTIN:  
 11 A. Again, I can only assume that the projects  
 12 ongoing at that time, I guess you could assume  
 13 that on the Avalon upgrade, the pools could  
 14 have been pooled in St. John's instead of  
 15 assigned to the project, and they weren't. I  
 16 think this is just a way of how these tables  
 17 are put together, and to be quite frank with  
 18 you -  
 19 Q. I mean, the Avalon upgrade -  
 20 MR. MARTIN:  
 21 A. - the specifics about the pool requirements in  
 22 St. John's in 1999, I'm not all that familiar  
 23 with, to be honest with you.  
 24 Q. But the Avalon upgrade project was concluded  
 25 in 2002, correct?

1 MR. MARTIN:  
 2 A. That's correct.  
 3 Q. The 21 vehicles in St. John's were not there  
 4 for the Avalon upgrade project, none of them?  
 5 MR. MARTIN:  
 6 A. No.  
 7 Q. No, okay. If you intend to take a break this  
 8 afternoon, this might be a convenient time,  
 9 Mr. Chair.  
 10 CHAIRMAN:  
 11 Q. Very good, Mr. Hutchings. We'll take a 15-  
 12 minute break, but before we do break, I want  
 13 to extend an apology to Ms. Greene. When we  
 14 started the afternoon session in inquiring  
 15 whether we had any preliminary matters, I  
 16 addressed the parties as gentlemen. So I do  
 17 want to apologize. It was an unintentional  
 18 oversight on my part.  
 19 GREENE, Q.C.:  
 20 Q. After law school and working at Hydro, I'm  
 21 used to that type of thing. I didn't even  
 22 notice.  
 23 (BREAK - 3:11 p.m. )  
 24 (RESUME - 3:30 p.m. )

1 CHAIRMAN:

1 Q. Mr. Hutchings.  
 2 HUTCHINGS, Q.C.:  
 3 Q. Thank you, Mr. Chairman. Just a couple of  
 4 other questions, Mr. Martin, on the vehicle's  
 5 issue and then I'll pass it over to Mr.  
 6 Coxworthy. In making your further  
 7 determination for replacement when you applied  
 8 the replacement criteria, do you take into  
 9 account the individual maintenance history of  
 10 a particular vehicle?  
 11 MR. MARTIN:  
 12 A. Yes, we do.  
 13 Q. Okay, how do you do that when, as you've told  
 14 us, you don't track the costs of maintenance  
 15 even by category, let alone the individual  
 16 unit?  
 17 MR. MARTIN:  
 18 A. What we meant by that is that that information  
 19 is not automatically corrected in the report  
 20 form for reach individual vehicle on a monthly  
 21 or annual basis. But when a vehicle does come  
 22 up and meets one of these criterias and  
 23 triggers its further review, if you will, we  
 24 can go into our systems and manually extract  
 25 the information for that particular vehicle,

1 looking at its maintenance costs over the last  
 2 couple of years, and through that process,  
 3 make a determination as to whether or not we  
 4 should look at replacing it.  
 5 Q. But you haven't seen the need or any benefit  
 6 to tracking your maintenance costs by vehicle  
 7 category or by individual units generally?  
 8 MR. MARTIN:  
 9 A. Not--no, we haven't. We have anticipated a  
 10 pilot project with PHH who provide our credit  
 11 car for fleet vehicles and looking at perhaps  
 12 a small pilot to do something like that, I  
 13 understand that it is fairly expensive to be  
 14 able to get into their data bases and extract  
 15 this information, but it may be something that  
 16 we'll look at in the future.  
 17 Q. You do most of your vehicle maintenance  
 18 inhouse?  
 19 MR. MARTIN:  
 20 A. No, we do--normally on-road vehicles we  
 21 maintain inhouse, they're all maintained  
 22 externally.  
 23 Q. In each year we usually see two projects for  
 24 the replacement of vehicles, one of which I  
 25 think usually arises out of the fact that

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1 there's generally a carry over from one year  
 2 to the next in the sense that this year, for  
 3 instance, we have a replaced vehicles 2004  
 4 project and a replace vehicles 2005 project,  
 5 and the 2004 project is basically for the 2005  
 6 money that's left over from vehicles that were  
 7 ordered in 2004, is that basically the  
 8 situation?  
 9 MR. MARTIN:  
 10 A. That's generally the way it works, yes.  
 11 Q. Yes, okay. Now, I notice in B-147, the  
 12 replace vehicles 2004, there has been a  
 13 reduction in the amount to be spent in 2005 in  
 14 respect of those vehicles, looking back to  
 15 last year's capital budget it was anticipated  
 16 that there'd be 912,000 and that's now down to  
 17 300,000. I take it that it arises from the  
 18 fact that some vehicles are not being  
 19 replaced?  
 20 MR. MARTIN:  
 21 A. Could you give me that reference where you're  
 22 finding all of those numbers please?  
 23 Q. Okay, on B-147, materials supply for 2005 is  
 24 300,000?

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1 HUTCHINGS, Q.C.:  
 2 Q. Okay, it is there.  
 3 GREENE, Q.C.:  
 4 Q. To see what was said last year.  
 5 HUTCHINGS, Q.C.:  
 6 Q. It's page B-83 from last year. There we are,  
 7 2005, 912,000.  
 8 MR. MARTIN:  
 9 A. Okay. And your question again is?  
 10 Q. What caused the reduction? I mean, it looks  
 11 as through now we're only going to be spending  
 12 300,000 in 2005 in respect of what we can call  
 13 2004 vehicles? Is there an explanation for  
 14 why that's down from the 912 we expected last  
 15 year to be spending this year?  
 16 MR. MARTIN:  
 17 A. See, if I'm not mistaken, if I'm reading this  
 18 correctly, it's because we are going to be  
 19 spending more dollars--the total expenditures  
 20 expected in 2004 is a million and eighty-one  
 21 thousand, same as what's shown on your screen.  
 22 Q. Right.  
 23 MR. MARTIN:  
 24 A. Right. Yes, that is reflective of the  
 25 \$500,000 that we said would be saved in the

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1 MR. MARTIN:  
 2 A. That's correct.  
 3 Q. Okay, I don't know if you have it available to  
 4 you, but last year's project at page B-83,  
 5 showed materials supply in 2005 for the same  
 6 item of 912,000?  
 7 MR. MARTIN:  
 8 A. No, I don't have that available. I'm just  
 9 referring now to Section F for a moment, if I  
 10 could please.  
 11 Q. Yes, you could probably find it there as well.  
 12 CHAIRMAN:  
 13 Q. I just lost you, Mr. Hutchings. You said the  
 14 same item was 912,000?  
 15 HUTCHINGS, Q.C.:  
 16 Q. The 912 is the number that came out of the  
 17 2004 capital budget in respect of expenditures  
 18 expected to be made in 2005, okay?  
 19 CHAIRMAN:  
 20 Q. Okay.  
 21 HUTCHINGS, Q.C.:  
 22 Q. And -  
 23 GREENE, Q.C.:  
 24 Q. Mr. O'Rielly has the ability to bring that up  
 25 on the screen, which he is doing now.

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1 2005 capital budget as a result of our fleet  
 2 review.  
 3 Q. Okay, so the--there were \$500,000 worth of  
 4 vehicles that were planned to be purchased  
 5 under the 2004 capital budget item and paid  
 6 for in 2005 that have disappeared from the  
 7 system, is that right?  
 8 MR. MARTIN:  
 9 A. In total, yes, that's right. That was what I  
 10 entered into direct testimony this morning.  
 11 Q. So the ones that were planned to be bought and  
 12 paid for in 2004, those are basically all  
 13 going ahead as planned, the million and  
 14 eighty-one?  
 15 MR. MARTIN:  
 16 A. That's what we are forecasting on page F-7 of  
 17 Section F of the Application, yes.  
 18 Q. Right, okay. And can you explain for me why  
 19 in respect of this year's project, as B-147,  
 20 you have material supply in 2005 as 300,000  
 21 and the contingency of 140,000? That's close  
 22 to a fifty percent contingency.  
 23 MR. MARTIN:  
 24 A. I can only suggest to you again that that is a  
 25 contingency based upon the full budget, if you

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1 will, for both years, 2004 and 2005. We  
 2 typically look at a ten percent contingency,  
 3 which is this particular case would be  
 4 140,000. There may be a requirement to buy  
 5 additional vehicles this year that we have not  
 6 foreseen yet. But right now our forecast is  
 7 based upon the thousand and eighty-one,  
 8 expected total to the end of the year.

9 Q. But in your 2005 project, you already got a  
 10 96.6 thousand dollar contingency in respect of  
 11 2005 vehicles, so that would be a total  
 12 contingency of close to \$240,000?

13 MR. MARTIN:  
 14 A. Again, that 96--that is not 96,000, first of  
 15 all in contingency, that is the total for  
 16 overheads and so on, escalation.

17 Q. Okay, the contingency is 77,000, yeah.

18 MR. MARTIN:  
 19 A. But again, it would be 87,000, roughly ten  
 20 percent of that particular budget number.

21 MR. HOLDEN:  
 22 A. If I might attempt a clarification.

23 MR. MARTIN:  
 24 A. If you could, by all means.

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1 Section F, the 2004 amount of a million  
 2 eighty-one is expected to come in right on  
 3 budget?

4 MR. MARTIN:  
 5 A. That is our forecast right now, as we speak,  
 6 yes.

7 Q. Yes, okay, so all we need to deal with in 2005  
 8 is a contingency in respect of this additional  
 9 \$300,000 isn't it? Do we need this additional  
 10 \$110,000 in the budget is my question.

11 MR. MARTIN:  
 12 A. Yes, again, I think we do. I mean, there  
 13 could be vehicles here that we have to  
 14 purchase in 2004 that would not be bought and  
 15 paid for until 2005, and that's what the  
 16 contingency covers, is unforeseen events that  
 17 may overtake us during that particular budget  
 18 period. So the answer to that, in my mind, is  
 19 yes, we do need \$140,000. It's a cash flow  
 20 variance.

21 Q. Okay. One other inconsistency that perhaps  
 22 you can explain for me and maybe we can go  
 23 back to page B-83 that we had up previously  
 24 from the 2004 budget. Yes, that's it, right  
 25 at the bottom of the page you have a sentence

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1 MR. HOLDEN:  
 2 A. I think that \$140,000 there in the column on  
 3 page 147 in the 2005 year, that 140 there is  
 4 the accumulated contingency on the whole  
 5 project cost of fifteen thirty-one.

6 MR. MARTIN:  
 7 A. Right.

8 MR. HOLDEN:  
 9 A. And following what happened here is that we  
 10 estimated these vehicles on a two-year cash  
 11 flow and the way the interest is calculated  
 12 and tallied up, it's tallied up in the second  
 13 year of the cash flow sheet, so it shows up in  
 14 the second year here, but it's really, the  
 15 contingency and the escalation and IDC  
 16 (phonetic) and everything on the whole fifteen  
 17 thirty-one, is that correct?

18 MR. MARTIN:  
 19 A. That's correct.

20 Q. Okay, if we look at page B-148, the table  
 21 there in the middle of the page shows that the  
 22 140 is in fact all contingency, so it doesn't  
 23 deal with overheads or allowance for funds  
 24 used during construction or any of those  
 25 items, but if I understand correctly from

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1 that reads, "Category 1000 and 2000 vehicles  
 2 being replaced will have an average age of 7  
 3 years and 165,000 kilometers; category 3000  
 4 will have an average age of 7 years and 220  
 5 kilometers; and category 4000 will have an  
 6 average age of 10 years and 200, 000  
 7 kilometers." If we go back now to page B- 147  
 8 of this year's proposal, these are the same  
 9 vehicles that we're talking about, correct, in  
 10 both years, these are 2004 vehicles?

11 MR. MARTIN:  
 12 A. These are 2004 vehicles, yes.

13 Q. Yes, okay, because the sentence at the bottom  
 14 of this page says the average age of 1000 and  
 15 2000 vehicles will be 6 years, as opposed to  
 16 seven; the kilometers would be 150 instead of  
 17 165 and the category 3 vehicles are said to be  
 18 11 years, as opposed to 7 and 100, 000  
 19 kilometers as opposed to 220,000. Can you  
 20 explain which of these sets of information is  
 21 correct?

22 MR. MARTIN:  
 23 A. Could you take us back to B-87 please, from  
 24 last year?  
 25 Q. It's B-83.

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1 A. Sorry, B-83. Could you go to the top of the  
 2 page? Mr. O’Rielly, could you take us to the  
 3 bottom of the page? To be quite frank, the  
 4 answer to that is not obvious to me.  
 5 Q. Well, perhaps I’ll leave that with you and if  
 6 you have an explanation, you can provide it to  
 7 us. (UNDERTAKING) Those are all the questions  
 8 that I have, Mr. Chair. Mr. Coxworthy has  
 9 some questions on other projects here.  
 10 CHAIRMAN:  
 11 Q. Thank you, Mr. Hutchings. Mr. Coxworthy?  
 12 MR. COXWORTHY:  
 13 Q. Thank you, Mr. Chair.  
 14 GREENE, Q.C.:  
 15 Q. Mr. Chair, I was just going to say when you’re  
 16 sitting back here, if you go back to B-83, I  
 17 can, the question is obvious and we can fire  
 18 out an undertaking or I can answer it now,  
 19 it’s obvious from the page.  
 20 CHAIRMAN:  
 21 Q. Okay, well perhaps we’ll just run back for a  
 22 minute and you can address that, Ms. Greene.  
 23 GREENE, Q.C.:  
 24 Q. If you go to the top of the page, you’ll see  
 25 there are requirements for 33 light vehicles

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1 MR. COXWORTHY:  
 2 Q. Thank you, Mr. Chair. Good afternoon, Mr.  
 3 Martin, Mr. Holden. I wanted to turn back to  
 4 a project, B-28, the Wood Pole Replacement  
 5 Management Program from this morning. And I  
 6 want to start it off with some questions about  
 7 Hydro’s current wood pole inspection and  
 8 maintenance practice so we can understand  
 9 better how, what’s being proposed is going to  
 10 differ from current practice. As I understand  
 11 the current practice is twenty percent of  
 12 every line is inspected every year, so all 43  
 13 lines have 20 percent of their length  
 14 inspected every year?  
 15 MR. MARTIN:  
 16 A. No, that’s not correct.  
 17 Q. If you could -  
 18 MR. MARTIN:  
 19 A. That was our historical practice. A couple of  
 20 years ago, the Board may remember we went to a  
 21 new maintenance philosophy, if you will,  
 22 called reliability centered maintenance. And  
 23 based upon the results of that investigation,  
 24 we had changed our maintenance tactics with  
 25 regards to transmission lines. On our steel

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1 GREENE, Q.C.:  
 2 and 11 medium and heavy-duty trucks, which  
 3 were going to take place over 2004 and 5. So  
 4 the information at the bottom of the page  
 5 would have been for the two-year period for  
 6 the replacement of the total number of  
 7 vehicles. When you go to page B-146, they’re  
 8 only talking about the vehicles for 2004 that  
 9 are going to be done, so it would be a  
 10 different two-year period. So the vehicles  
 11 are actually different in the two different  
 12 sheets because it’s a different time frame.  
 13 But we will confirm that, but I’m pretty sure  
 14 that’s the answer, there’s a natural different  
 15 periods of cars over the different time frames  
 16 involved.  
 17 CHAIRMAN:  
 18 Q. All right then, thank you. But there’s going  
 19 to be the undertaking to provide -  
 20 GREENE, Q.C.:  
 21 Q. We will still confirm this.  
 22 CHAIRMAN:  
 23 Q. - a formal response. Thank you. Mr.  
 24 Coxworthy?  
 25 (3:45 p.m.)

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1 pole lines now, we basically inspect, instead  
 2 of every five years, every ten years. And we  
 3 have again--this particular program we’re  
 4 proposing falls in line with that RCN  
 5 philosophy and our new maintenance practice  
 6 right now, as we speak, is to test, treat,  
 7 inspect as we are proposing to carry forward  
 8 into 2005’s capital budget.  
 9 Q. So you’ve moved to a ten year instead of a  
 10 five-year interval for inspecting all of your  
 11 poles? That’s the current practice?  
 12 MR. MARTIN:  
 13 A. That’s all things being equal. Again, as I  
 14 mentioned this morning, it’s variable based  
 15 upon what we find during the inspections and  
 16 so on.  
 17 Q. And those inspections that you’re doing  
 18 currently, they involve sounding and visual  
 19 inspection?  
 20 MR. MARTIN:  
 21 A. They would include sounding, visual  
 22 inspection, non-destructive testing with the  
 23 test sets I showed this morning, yes, we  
 24 would, yes.  
 25 Q. So the core sampling to determine the

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1 preservative retention, that's currently being  
 2 done for all of the poles?  
 3 MR. MARTIN:  
 4 A. It's currently being done for the poles that  
 5 we've inspected this year, yes.  
 6 Q. And the poles that you've inspected this year,  
 7 if it's not based on twenty percent of each  
 8 and every line, how do you determine what you  
 9 inspect in any given year, under the current  
 10 practice?  
 11 MR. MARTIN:  
 12 A. As I mentioned this morning, what we're doing  
 13 is we're picking the oldest poles that we have  
 14 on the system primarily so we can get the  
 15 treatment in place before they deteriorate any  
 16 further.  
 17 Q. When you say the "oldest poles", I would  
 18 understand that on any particular line you can  
 19 say that all or certainly most of the poles  
 20 are of a certain age because they would  
 21 correspond with the age that the line was  
 22 initially installed?  
 23 MR. MARTIN:  
 24 A. In most cases that would be true. On some of  
 25 our lines we have done major rebuilds over the

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1 now to carry forward in the long term. I  
 2 think your point is why are we now looking to  
 3 capitalize this particular venture, where in  
 4 the past, some of it has been an operating  
 5 expense. And the answer to that is and this  
 6 is why we've brought it before the Board as  
 7 part of this capital application, is that we  
 8 see this now, this new process, this new  
 9 program as a life extension program. We are  
 10 looking at extending the life of these assets  
 11 in our estimation by a minimum of ten years.  
 12 Under the rules of engagement, if you will,  
 13 with regards to the financial end of the  
 14 business, such an extension, life extension,  
 15 falls under the category of capital and it is  
 16 in that context that we are bringing it  
 17 forward now for the Board's approval, looking  
 18 at the long-term capitalization of this  
 19 program under the heading of "Life Extension".  
 20 Q. If we could, just for a moment, go back to the  
 21 past practice when it was a five-year interval  
 22 for inspection of all poles, had there been  
 23 any study done at that time as to whether that  
 24 maintenance practice would result in extension  
 25 of transmission line life?

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1 MR. MARTIN:  
 2 years, but generally, you're correct.  
 3 Q. Under the current practice, obviously if a  
 4 pole--I presume obviously if a pole is  
 5 discovered that it does have a sufficiently  
 6 serious defect, a replacement is effected?  
 7 MR. MARTIN:  
 8 A. If it's serious? Yes, it's what we would call  
 9 a danger pole and it is replaced immediately.  
 10 Q. So in terms of what's being done now, as  
 11 opposed to what's being proposed, what is the  
 12 significant differences between the current  
 13 practice and what's being proposed as future  
 14 practice as a capitalized expenditure for this  
 15 project?  
 16 MR. MARTIN:  
 17 A. Again, this particular program, as I  
 18 mentioned, is in its infancy, we've been doing  
 19 part of it on various parts of the system,  
 20 again, more than anything, to collect data.  
 21 Obviously the first priority is to protect the  
 22 asset itself, but we're doing this now over  
 23 the last year and again this year to again,  
 24 collect more data and be more comfortable with  
 25 what we're doing. And is what we're proposing

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1 MR. MARTIN:  
 2 A. I can't say specifically that they wasn't, I  
 3 would, in my opinion, it would not have been,  
 4 under that program -  
 5 Q. And based on what, when you say in your  
 6 opinion, based on -  
 7 MR. MARTIN:  
 8 A. Well under that program what we were doing,  
 9 basically, is sounding and boring, just  
 10 looking for rock and the level or extent of  
 11 rock. And certainly that activity would not  
 12 extend the life of the line, it's basically  
 13 the treatment of the line, as well as the  
 14 replacement of components that will extend the  
 15 life of that line significantly.  
 16 Q. Let's take each of those separately. First of  
 17 all, the replacement of individual components,  
 18 presumably that occurred even under the five-  
 19 year interval inspection program if a pole was  
 20 detected by that inspection program that  
 21 required replacement?  
 22 MR. MARTIN:  
 23 A. Yes, and that was capitalized.  
 24 Q. The other then significant difference you  
 25 raised is the treatment, the preventative

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1 preservative treatment, as I understand it  
 2 from the information, the critical period  
 3 that's been identified is at 20 or 25 years of  
 4 age for that treatment?  
 5 MR. MARTIN:  
 6 A. We would prefer to have caught poles at 20 to  
 7 25 years of age, yes. And this program allows  
 8 up to do that for the poles that are still of  
 9 that vintage. Obviously the front end of the  
 10 program is to try and catch the older poles  
 11 and get them treated before they deteriorate  
 12 any further.  
 13 Q. So on a go-forward basis, for poles 20, 25  
 14 years and older, the intention is to apply the  
 15 preservative to all the poles that are of that  
 16 age or will there be a determination based on  
 17 core testing as to whether even a 25 year old  
 18 pole or a 30 year pole needs an application of  
 19 the preservative treatment?  
 20 MR. MARTIN:  
 21 A. No, in the presentation this morning, I  
 22 mentioned that any poles over 20 years old  
 23 will be treated.  
 24 Q. That's the first time that they're inspected?

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1 mentioned in the presentation this morning  
 2 that there seems to have been a criteria of  
 3 these have been identified as the poles that  
 4 needed to be addressed most urgently, but what  
 5 criteria in particular has been applied to  
 6 determine if those 4000 poles should be the  
 7 first--should be looked at in the first year?  
 8 MR. MARTIN:  
 9 A. Most particularly their age.  
 10 Q. And they've been identified by line, is that  
 11 correct? Are particular lines being  
 12 inspected?  
 13 MR. MARTIN:  
 14 A. Yes, they would have been identified by lines.  
 15 Q. Do you know what those lines are?  
 16 MR. MARTIN:  
 17 A. I can't tell you them offhand, no.  
 18 Q. Would you be able to tell me how many lines?  
 19 MR. MARTIN:  
 20 A. No, I couldn't. I mean, I could guess, but  
 21 again, I'd only be guessing.  
 22 Q. Could we get an undertaking perhaps to  
 23 identify the lines that are going to be  
 24 replaced in the first year of those 4000  
 25 poles? (UNDERTAKING)

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1 MR. MARTIN:  
 2 A. That's right.  
 3 Q. So then going then back to poles at this time  
 4 that are under 20 years of age, what  
 5 difference is there going to be in terms of  
 6 the inspection and maintenance practice in  
 7 respect of poles that are under 20 years of  
 8 age, then was the case when you were doing the  
 9 five-year interval inspections? What  
 10 difference will there be, if any?  
 11 MR. MARTIN:  
 12 A. There won't be a whole lot of difference. The  
 13 way this program is timed and I tried to show  
 14 the bar charts this morning to show when we  
 15 were going to get to the, I'll call them the  
 16 newer poles, a lot of the poles out there now  
 17 that are 15, 16, 17 years old, by the time we  
 18 get to them in our inspection cycle, they will  
 19 be 20--19, 20, 21 and 22 years old and we will  
 20 be treating them all.  
 21 Q. So that partly leads into my next question  
 22 which is the 4000 poles that are going to be  
 23 inspected in year one of this program, which  
 24 would be capital budget year 2005, what--how  
 25 were those 4000 poles chosen? I know that you

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1 MR. MARTIN:  
 2 A. If you think that's important, by all means,  
 3 and the Board would like it, we certainly  
 4 would.  
 5 CHAIRMAN:  
 6 Q. Ms. Greene?  
 7 GREENE, Q.C.:  
 8 Q. Certainly if it's helpful we will provide the  
 9 lines that are to be done and the ages and  
 10 clarify that they are all our older lines.  
 11 CHAIRMAN:  
 12 Q. Thank you.  
 13 MR. COXWORTHY:  
 14 Q. All of the older lines, and there are 43  
 15 transmission lines. With that number in mind,  
 16 are you able to give me any idea of how many  
 17 of those lines are over 20 years of age, over  
 18 30 years of age?  
 19 MR. MARTIN:  
 20 A. Yes, I thought I made that quite clear in the  
 21 presentation this morning. One third of our  
 22 wood poles are over 30 years old; another  
 23 third are between 20 and 30 years old; and the  
 24 other third are less than 20 years old.  
 25 Q. So that corresponds to--we could use the same



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1 statistics for lines, obviously. Poles means  
 2 lines?  
 3 MR. MARTIN:  
 4 A. Yes, and again, the pie chart this morning,  
 5 the two pie charts basically match up with  
 6 each other. The lines and the poles  
 7 correspond to those fractions.  
 8 Q. Looking at your presentation this morning and  
 9 I'm looking at page 16, I do believe it's been  
 10 entered in as an exhibit. Ten percent of the  
 11 poles are to be cored for preservative  
 12 retention analysis, will that be all of the  
 13 poles or only those that are over 20 years of  
 14 age?  
 15 MR. MARTIN:  
 16 A. They are only the ones that are going to be  
 17 over 20 years of age.  
 18 Q. They are the only ones that will be cored?  
 19 MR. MARTIN:  
 20 A. Absolutely.  
 21 Q. If I could ask you then to turn to Section G,  
 22 Appendix 2 of the 2005 Capital Budget  
 23 Submission, and there appears at that page--  
 24 I'm sorry, at page 27 of that appendix, sorry,  
 25 we seem to be in Appendix 1, I think.

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1 for deciding which poles should be inspected  
 2 first?  
 3 MR. MARTIN:  
 4 A. I don't know if I'd refer to it as a model.  
 5 What we did basically in trying to identify  
 6 the poles that should be done first, was we  
 7 consulted with our transmission planning  
 8 department within Newfoundland and Labrador  
 9 Hydro with regards to what they felt of the  
 10 wood pole lines on our system were the most  
 11 critical to the reliability of the system.  
 12 And then we also went back to our transmission  
 13 maintenance people in the field, the field  
 14 people who are actually out there on a daily  
 15 basis looking at these lines, for their input  
 16 as to what they thought might better benefit,  
 17 if you will, from this new program with  
 18 regards to which poles should be inspected  
 19 first, and based upon that and the age of the  
 20 poles, our engineering people have made a  
 21 determination as to what the program should  
 22 be. As I mentioned this morning, the program  
 23 is variable. If we find--new information may  
 24 become available on a daily, weekly, monthly,  
 25 annual basis and we will adjust the program

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1 MR. COXWORTHY:  
 2 Appendix 2, page 27. There's a table that  
 3 appears at that page, Table 3.4 that  
 4 summarizes some of the information from the  
 5 2004--I'm sorry, 2000 pole inspection program?  
 6 MR. MARTIN:  
 7 A. That's correct.  
 8 Q. And if one looks at the lines that were  
 9 inspected at that time, at the top the figure  
 10 that--the age of the poles for each of those  
 11 lines is indicated there, 29, 31 years, 32  
 12 years, 27 years, so--but for the last line,  
 13 TL234, they were all certainly roughly in the  
 14 same age category, I'd suggest to you. But  
 15 when one looks at the pattern of rejection and  
 16 I am bearing in mind here that different  
 17 numbers of poles were inspected in respect of  
 18 these lines, but even taking that into  
 19 account, what we see is I would suggest to you  
 20 a fairly great variance in numbers of poles  
 21 being rejected--not withstanding the fact that  
 22 we're talking about poles that are  
 23 approximately the same age. Saying that, has  
 24 there been any consideration given to factors  
 25 other than simply age in determining a model

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1 accordingly. We're not going to go out and  
 2 fix this thing at day one and carry on  
 3 blindly. I mean, that's part of the beauty of  
 4 this program is it's going to be variable in  
 5 nature and will be tailor made to suit the  
 6 results of the ongoing program as things  
 7 develop and data is collected.  
 8 Q. You've indicated that quite apart from looking  
 9 at the age of the poles, you've also sought  
 10 input from different divisions within your  
 11 organization which would have, I think you  
 12 call a historical knowledge in one of your  
 13 responses to our RFIs about these lines. So  
 14 what other criteria that you're aware of did  
 15 people within Hydro look at, consider, when  
 16 they made a recommendation to you, apart from  
 17 the question of age, what other factors were  
 18 they bearing in mind in telling you that these  
 19 are the lines that we should be replacing  
 20 first or inspecting first, I'm sorry, in 2005?  
 21 Are you aware of what other criteria they  
 22 looked at?  
 23 MR. MARTIN:  
 24 A. Yes, their general input on the maintenance  
 25 side, their general input as to their feelings

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1 with regards to the condition of the poles out  
 2 there now. Is there a 25 year old line that,  
 3 from their experience, is worse than a 30 year  
 4 old line and if so, we should really get to  
 5 that one first. So again, it would be their  
 6 collective experience on the condition of  
 7 those lines for the field people. The  
 8 planning people are different. The planning  
 9 people would not have much knowledge at all of  
 10 the condition of those poles and those  
 11 transmission lines out there. The basis for  
 12 going to them was from a system perspective,  
 13 looking at the overall reliability of the  
 14 system and their feedback would no doubt lead  
 15 us to believe that perhaps some radio lines,  
 16 where it's the only line feeding a customer  
 17 group, might be considered to be more  
 18 important than saying another line with two  
 19 parallel circuits. So that's the type of  
 20 input that we receive from those groups and  
 21 then that married up with the age of the  
 22 poles, our engineering department and the  
 23 expects in this field, as far as I'm  
 24 concerned, made a determination of what the  
 25 initial program should be. Again, it's the

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1 comfortable in saying that there would not be  
 2 any 20 year old pole lines included in the  
 3 first year's program. You have to realize  
 4 what we're trying to fight here is the  
 5 depletion of these preservatives. It takes  
 6 years for these preservatives to deplete and  
 7 as I tried to show in the presentation this  
 8 morning, typically it takes at least 20 years  
 9 before the depletion level in those poles gets  
 10 to the point where you're at the threshold and  
 11 now you have to start worrying about things  
 12 like rot and insect damage and so on. So that  
 13 is the overriding criteria in this whole  
 14 program.  
 15 Q. Turning back again to the table 3.4 at page  
 16 27, Appendix 2, and I'd like to focus on two  
 17 of the lines there, TL224 and TL233. And if  
 18 one, bearing in mind again the different  
 19 numbers of poles were inspected in respect of  
 20 each of those, if one then looks at the number  
 21 that were rejected, it seems to be a fairly  
 22 dramatic difference between TL233 which  
 23 actually is a younger line, than TL224 and in  
 24 the case of TL233, the more seriously affected  
 25 line, in terms of rejected poles, it appears

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1 MR. MARTIN:  
 2 initial program, as things develop and data is  
 3 collected, reports come back from the field  
 4 and so on, the program may be adjusted, but  
 5 the impetus right now is to try and get as  
 6 many of the old poles treated as quickly as we  
 7 can so we can extend the life of those assets  
 8 and squeeze every year out of them that we  
 9 possibly can before they have to be replaced  
 10 at significant capital cost.  
 11 Q. You gave an example and it may just have been  
 12 an example of perhaps a recommendation coming  
 13 forward that a line that was only 20 or 25  
 14 years old might be in worse condition based on  
 15 historical experience, than one that was 30 or  
 16 35 years old. Do you know in fact with  
 17 respect to any of the 4000 poles that are  
 18 being looked at in 2005, whether any of those  
 19 would fall into that category of ones that  
 20 aren't there based on an age based criteria,  
 21 but are in that 4000 for some other reason  
 22 because other problems had been identified  
 23 that aren't age based?  
 24 MR. MARTIN:  
 25 A. No, again, I'm surmising this, but I am

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1 that most of the damage was attributed to ant  
 2 damage and the overall report recommending  
 3 this program does identify insect damage and  
 4 damage from fungi as being two of the primary  
 5 considerations in terms of what causes damage.  
 6 Has there been any consideration of whether  
 7 location of the transmission lines, in terms  
 8 of the terrain or otherwise, being a factor  
 9 quite apart from age, which renders them more  
 10 susceptible to that type of decay?  
 11 MR. MARTIN:  
 12 A. That is certainly one of the things that has  
 13 been discussed. For example, if we get into  
 14 an area that's highly susceptible to icing, if  
 15 you will, where vertical cracks in the pole  
 16 could be filled with water and ice and we get  
 17 what we call shell separation at the outer  
 18 perimeter of the pole, again, those things  
 19 will become more clearer to us as we move  
 20 forward in the program and get the results of  
 21 the inspections under our belt. And through  
 22 the analysis of these inspections and the data  
 23 we get back from the field, which is, again,  
 24 as I said this morning, catalogued in an  
 25 integrated database, those are the types of

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1 things we're going to be able to look at and  
 2 analyze from a logical perspective and adjust  
 3 the program as we move forward.  
 4 Q. But given the number of pole inspections that  
 5 have been done now and there's not just the  
 6 2000, there's been the 1985, there's been the  
 7 '98, there's been the 2000 and there has been  
 8 others, isn't there enough sample size to  
 9 extrapolate from that, without having to look  
 10 at each and every pole to come up with the  
 11 data to make decisions about are there other  
 12 factors other than age that we should be  
 13 considering in prioritizing which transmission  
 14 lines we should be inspecting first?  
 15 MR. MARTIN:

16 A. Forgive me, I thought I just went through  
 17 that. It's more than age. We looked at the  
 18 knowledge that the line people in the field  
 19 had gathered over the years, we've used that  
 20 in looking at the determination of the  
 21 priority level, we talked to our planning  
 22 people. I see your point that we've done some  
 23 testing and we've done some analysis, we  
 24 haven't done anywhere near enough. That's the  
 25 intent of this program. This program is going

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1 necessary to look at each and every pole to  
 2 have the data necessary to make that  
 3 assessment?  
 4 MR. MARTIN:

5 A. No, no, we're launching on this program  
 6 primarily because of some information that  
 7 we've discovered from a program that was  
 8 carried out in 1985, some limited program that  
 9 we did in 1998 as a result of the Avalon  
 10 Upgrade project, and basically the historical  
 11 data that's out there and the collective  
 12 knowledge of the utilities with regards to  
 13 wood poles and we are recommending that we  
 14 move forward on this project based upon that  
 15 information. All of these poles are going to  
 16 be inspected. It's only a matter of how we  
 17 line them up, priority wise, to inspect them.  
 18 And again the primary thing in this whole  
 19 project is not the inspection; it is the  
 20 treatment. If we are going to extend the life  
 21 of these assets, it's going to be done in two  
 22 ways. One is effective, early treatment and  
 23 the second is analysis that says we don't have  
 24 to replace the poles just because the  
 25 inspection rejects it, looking at where it is

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1 MR. MARTIN:  
 2 to be a twenty-year program that we constantly  
 3 test, sample, analyze and on a go-forward  
 4 basis adjust the program as necessary to  
 5 ensure that we get the best bang for the buck  
 6 out of these poles. You keep going back to  
 7 the age and right now, yes, you're right, the  
 8 age is the primary criteria. Are we looking  
 9 at other things that could affect that?  
 10 Absolutely and when we get comfortable through  
 11 the analysis that there are other things that  
 12 should be taken into consideration to adjust  
 13 the program, we will adjust it.  
 14 Q. I certainly don't want to sound flippant, but  
 15 it almost sounds as if you're saying that we  
 16 need to look at all of the poles to get the  
 17 data to tell us whether we need to have a  
 18 program to inspect all the poles, as opposed  
 19 to having a more selective or targeted  
 20 approach which looking at the data you already  
 21 have would indicate to you that, look, no, on  
 22 a cost-effective basis we can focus on lines  
 23 that are a certain age or on certain locations  
 24 where we know they're susceptible to fungi,  
 25 rot or insects. Are you saying that it's

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1 in the line, how it is loaded and so on as  
 2 well as the results of the inspection, we may  
 3 be able to defer replacement of that pole. We  
 4 may be able to fix the pole, we may be able to  
 5 put in other mechanisms such as guying or stub  
 6 poles or whatever to extend the life. But I  
 7 don't think we need to get caught up that this  
 8 is a fixed program now. We've identified all  
 9 the lines, all the poles and we're going off  
 10 blindly just doing this. We have a program in  
 11 mind we intend to launch next year with the  
 12 approval of the Board obviously and we will  
 13 report to the Board on an annual with regards  
 14 to the results of that. And we will adjust  
 15 the program on a weekly basis, if necessary,  
 16 depending upon the information that we receive  
 17 as part of this program.  
 18 Q. Mr. Chair, if we could move on then to Project  
 19 B-32 which is the replacement of insulators on  
 20 the Hind's Lake to Howley Line. With  
 21 reference to the response to the request for  
 22 information of the Industrial Customers, IC-  
 23 70, my understanding from that response is  
 24 that there's been no failure on this  
 25 particular line that can be attributable to a

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1 failure of the COB insulators.  
 2 MR. HOLDEN:  
 3 A. To the COB insulators, yes, that's correct.  
 4 Q. How likely is a COB failure to cause the line  
 5 to fail in the coming year, two to three  
 6 years? Has there been any assessment on that?  
 7 MR. HOLDEN:  
 8 A. That's a very difficult question to answer.  
 9 We do know that with our history with COB  
 10 insulators, the failures are random in nature  
 11 and relatively unpredictable. And what we're  
 12 trying to do is remove the COB insulators from  
 13 our system in a stage program working from the  
 14 most critical parts of the system out to the  
 15 least critical. It's very difficult to  
 16 identify and predict when a COB insulator will  
 17 fail. But for TL243, this is connected to the  
 18 Hind's Lake generation system. And, in our  
 19 opinion, this is a critical line and is our  
 20 concern to do this next year.  
 21 Q. According to the operating experience section  
 22 at page B-32, there have been inspections over  
 23 the last four years which have detected  
 24 problems with the COB insulators and there's  
 25 been no failure within that time period of the

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1 MR. HOLDEN:  
 2 A. The loss of an insulator string would result  
 3 in a flashover, yes, that's correct.  
 4 Q. And that is the scenario where the COB  
 5 insulator failure could cause failure to the  
 6 entire line?  
 7 MR. HOLDEN:  
 8 A. What would happen there, if we have a  
 9 flashover of an insulator, it would be a fault  
 10 on the line and the line would trip and you'd  
 11 isolate the Hind's Lake system from the bulk  
 12 electrical system. When you subtract 45 or 75  
 13 megawatts from the system, you run the risk of  
 14 getting into an unstable situation on the  
 15 system. You invoke our under-frequency load  
 16 setting scheme and very likely will result in  
 17 the loss of service to the customers. So,  
 18 it's a stability issue when you're talking  
 19 about TL243.  
 20 Q. And what is meant by loss of an insulator  
 21 string? Is it the loss of more than one COB  
 22 insulator?  
 23 MR. HOLDEN:  
 24 A. If I can explain it a little bit, the  
 25 insulator strings are a series of

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1 MR. COXWORTHY:  
 2 line as a whole attributable to problems with  
 3 the COB insulators. Can you quantify for the  
 4 Board, in any way, the risk of a COB insulator  
 5 cause failure to this line in the coming year  
 6 for 2005, given that there hasn't been for the  
 7 past four years or at all in the history of  
 8 this line, I guess I would understand the  
 9 evidence to be?  
 10 MR. HOLDEN:  
 11 A. No, we can't quantify it specifically for line  
 12 243 what the probability of a failure will be.  
 13 We can only say that based on our experience  
 14 with COB insulators and their nature of how  
 15 they fail and the inspection results that we  
 16 get from the line, so far, we know that  
 17 there's an ever increasing probability that  
 18 the COB insulators will fail. And as each  
 19 year goes by, that probability gets greater.  
 20 Q. Loss of an insulator string would result in  
 21 flashover, this is in IC-70. I think put  
 22 forward as a scenario where COB insulator  
 23 failure could cause failure of the line, is  
 24 that correct? It's the last sentence in IC-  
 25 70.

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1 interconnected disk, everybody understands  
 2 that. And what happens is that if you got a  
 3 loss of a whole string, you get a loss of so  
 4 many disks, a certain number of disks in the  
 5 string that would cause the line to flashover  
 6 from the conductor to ground. And then that's  
 7 what we mean by a loss of an insulator string.  
 8 And the insulator basically flashed over, the  
 9 line shorted the ground, fault occurred,  
 10 breaker tripped, interrupted the circuit.  
 11 Q. How often, I presume it hadn't happened on  
 12 this line at all because there has not been a  
 13 failure on this line due to COB insulator  
 14 failure, but on any other line, where Hydro  
 15 has had experience with the COB insulators,  
 16 how often has this sort of occurrence  
 17 manifested itself, loss of an insulator string  
 18 causing flashover? Has it ever occurred?  
 19 MR. HOLDEN:  
 20 A. Oh yes, it's occurred, but I can't quote  
 21 specific instances or quantities or events.  
 22 Q. It has occurred on other Hydro lines that has  
 23 COB insulators?  
 24 MR. HOLDEN:  
 25 A. It has occurred on other Hydro lines with COB

1 insulators, yes.

2 Q. Was it attributable to COB insulator failure,  
3 the flashover?

4 MR. HOLDEN:

5 A. Flashovers could be attributed to any number  
6 of things. It could be attributed to  
7 flashover or failure of a COB insulator or it  
8 could also be attributed to salt contamination  
9 or any one of a number of other hazards that  
10 cause the insulator to flashover,  
11 environmental pollution, salt contamination  
12 and actual physical failure of the string,  
13 hunters shooting insulators off. There's any  
14 number of reasons that insulators could  
15 flashover. In this case here, we're talking  
16 about the unreliability of the particular  
17 insulators manufactured Canadian Ohio Brass,  
18 that's what we're talking about here.

19 Q. To your knowledge, Mr. Holden, has there been  
20 any occasion on any Hydro line where there's  
21 been a loss of an insulator string resulting  
22 in flashover which was attributable to failure  
23 of the COB insulators?

1 MR. HOLDEN:

2 A. I can't answer that question specifically.  
3 (4:15 p.m.)

4 Q. To your knowledge, you don't know.

5 MR. HOLDEN:

6 A. I don't know the answer to that question.

7 MR. MARTIN:

8 A. If I could possibly help with some additional  
9 information that the Board may not be aware  
10 of. These particular insulators manufactured  
11 by Canadian Ohio Brass has manifested  
12 themselves in an industry wide problem  
13 throughout electric utilities at least  
14 throughout North America and maybe beyond.  
15 This problem has been known and identified for  
16 a number of years now and Hydro, along with  
17 most other utilities, I would offer to say all  
18 utilities, have undertaken various programs to  
19 replace these insulators. They all have to be  
20 replaced. They will become defective. There  
21 are two issues with regards to the insulators.  
22 One is the one Mr. Holden is referring to with  
23 regards to flashover, so you got the concern  
24 with regards to the electrical qualities, if  
25 you will, of the insulator string. They also

1 have failed and we've seen fail mechanically.  
2 So, you could theoretically and we've seen it  
3 in practice with the insulator actually fails  
4 and the conductor separates for the insulator  
5 itself. These insulators now, we have about  
6 30,000 of them left on our system, we intend  
7 to replace every single one of them. They  
8 have to be replaced; they will all eventually  
9 fail. They are known throughout the industry  
10 to be a problem. We have been replacing these  
11 through our capital program for a number of  
12 years now and we continue to bring these  
13 forward to the Board. This particular line is  
14 connected to a 75 megawatt plant. Last year,  
15 as part of our inspection program, we found 60  
16 percent of our structures that we inspected  
17 had failed insulator disks. This is a  
18 significant number. It's only a matter of  
19 time and we think it appropriate that now we  
20 get rid of these insulators on TL243. Very  
21 likely next year for 2006 and beyond, we would  
22 be bringing forward more capital budget  
23 proposals to replace these industry wide known  
24 defective insulators. It is our intention now  
25 to have them out of our system completely by

1 the end of 2008. I just hope that adds some  
2 additional information, Mr. Coxworthy, that  
3 you might find of interest.

4 Q. Thank you, Mr. Martin. I guess it may not be  
5 so much a question of whether they should be  
6 replaced. I think that's not the issue. It's  
7 a question of the urgency with which they need  
8 to be replaced. This has been a program over  
9 a period of years as you, yourself, have  
10 pointed out. And the question that I'm asking  
11 both yourself, Mr. Martin, and Mr. Holden, is  
12 what risk of failure which has, in Hydro's  
13 experience, manifested itself in other  
14 circumstances because it hasn't manifested  
15 itself on this line, but in other  
16 circumstances involving COB insulators which  
17 we'd suggest that there is a foreseeable risk  
18 that next year, 2005, if you don't replace the  
19 COB insulators in that year, that there's  
20 going to be a failure. Is there anything in  
21 the historical data including the 60 percent  
22 defect rate that you found on inspection last  
23 year, that would suggest to you that based on  
24 any prior experience or any prior experience  
25 in any other jurisdiction that you're aware

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1 of, that this is a system on the threshold of  
 2 failure?  
 3 MR. MARTIN:  
 4 Q. I think I can best answer that by saying that  
 5 in the judgment of the expertise and the  
 6 operating experience that we have at  
 7 Newfoundland and Labrador Hydro with regards  
 8 to insulators and insulator failures, knowing  
 9 that this is an industry wide problem that's  
 10 been affecting other utilities throughout  
 11 North America, that all other utilities have  
 12 taken steps to replace these deficient  
 13 insulators over time, looking at the failure  
 14 rate of 60 percent of the structures we  
 15 inspected last year had defective insulators  
 16 on them, the fact that this is connected to a  
 17 75 megawatt plant that provides base energy to  
 18 all of our customers including the Industrial  
 19 Customers, knowing that these insulators do  
 20 have to be replaced at some time, in our best  
 21 judgment, next year is the year to do it.  
 22 Q. Mr. Chair, I'd like to move on then to Project  
 23 B-77, the fall arrest equipment. I'm not sure  
 24 that we'll finish it this afternoon, but I'm  
 25 certainly prepared to get it started.

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1 A. I don't see where you're reading CSA.  
 2 Q. No, it's not in your project justification.  
 3 I'm suggesting it's in the regulation. The  
 4 regulation basically just refers you on to the  
 5 CSA code.  
 6 MR. HOLDEN:  
 7 A. I'm not familiar with the details of the  
 8 regulation, but if that's what the regulation  
 9 says.  
 10 Q. So, when you say you're not familiar with the  
 11 regulation, are you not familiar then with the  
 12 details of the CSA code in relation to fall  
 13 arrest equipment.  
 14 MR. HOLDEN:  
 15 A. I'm familiar with the general requirements of  
 16 the regulations in the sense that, what the  
 17 intent is, clause by clause of the regulations  
 18 or the reference codes, I'm not familiar with  
 19 that, but the people who have developed the  
 20 estimates and analyzed what's required here,  
 21 they are certainly familiar with these  
 22 details.  
 23 Q. The operating experience that Hydro has had to  
 24 date is that temporary arrest and restraint  
 25 equipment has been used. Do you know whether

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1 MR. COXWORTHY:  
 2 The provincial legislation that's  
 3 referred to as, in the project justification  
 4 as requiring, is this the Occupational Health  
 5 and Safety Regulations to your knowledge, Mr.  
 6 Holden and Mr. Martin.  
 7 MR. HOLDEN:  
 8 A. Yes, to my knowledge, that's the Occupational  
 9 Health and Safety Regulations.  
 10 Q. And my understanding is the Regulations in  
 11 effect, say in the circumstances you described  
 12 there, that the CSA Code is to be applied. Is  
 13 that your understanding as well?  
 14 MR. HOLDEN:  
 15 A. I'm sorry -  
 16 Q. That in, basically, what the regulation says,  
 17 the Occupational Health and Safety Regulation  
 18 says, that in circumstances such as those  
 19 described in the project justification which  
 20 is an elevated service which is three metres  
 21 above the next lower level where workers will  
 22 be accessing, that the CSA code with respect  
 23 to fall arrest equipment is to be applied.  
 24 Would you agree?  
 25 MR. HOLDEN:

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1 the use of that temporary arrest and restraint  
 2 equipment, in fact, is prohibited under the  
 3 provincial legislation for the CSA code in all  
 4 the locations that you're looking to install  
 5 new equipment?  
 6 MR. HOLDEN:  
 7 A. No, I don't.  
 8 Q. Do all 310 locations that are referred to at  
 9 page B-77 as being areas where some level of  
 10 installation is going to be proceeded with  
 11 under this program, do they all represent  
 12 areas where workers with access and elevated  
 13 surface which is three metres above the next  
 14 lower level.  
 15 MR. HOLDEN:  
 16 A. Yes, they all represent areas where workers  
 17 have to access higher than the level.  
 18 Q. All those 310 locations, apart from the  
 19 vertical field storage tanks in respect of  
 20 which there's been a fairly detailed  
 21 explanation as to why a more permanent or a  
 22 permanent installation of fall arrest  
 23 equipment is appropriate, apart from those,  
 24 how many of the 310 locations will have  
 25 permanent installations of fall arrest

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1 equipment?  
 2 MR. HOLDEN:  
 3 A. We don't know that at this stage. What we're  
 4 doing now is doing the preliminary engineering  
 5 and working our way through the regulations  
 6 and just exactly what the regulations mean.  
 7 And a good number of these sites will have  
 8 permanent installations and more of them will  
 9 have portable devices that the work crews can  
 10 take with them and install when they go to  
 11 work, and the regulations are being worked on.  
 12 They're being discussed with the regulator,  
 13 from the point of view of what's required and  
 14 what will meet the requirement for the  
 15 regulations, and as we work through them, we  
 16 can see in the end a number of sites that will  
 17 have permanent installations and a number of  
 18 other places that would be accessed through  
 19 the use of portable equipment and maybe some  
 20 other sites that would have a prescribed plan  
 21 that we would impose when we got there. And  
 22 it depends on the level of risk and the  
 23 frequency of access.  
 24 Q. Focusing in on the proposed 2005 capital  
 25 expenditure for this project, if on an ongoing

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1 MR. HOLDEN:  
 2 A. That information would be available in the  
 3 engineering files as to what sites are  
 4 determined to be the riskiest ones or the ones  
 5 with most frequent access. As the engineering  
 6 people develop the estimates for this  
 7 proposal, they would have had that detailed  
 8 information assembled.  
 9 Q. One of the concerns that the Industrial  
 10 Customers Group have in looking at this  
 11 program overall, which is over \$900,000 over  
 12 the life of the program for 310 locations is  
 13 that you're looking an average price per  
 14 installation of over \$3,000 and you're looking  
 15 at a range of costs per location per IC-74,  
 16 the response to request for information IC-74  
 17 of anywhere from 1,000 to \$5,000, and that  
 18 range of costs for all 310 locations is one  
 19 that based on the information that's been  
 20 provided so far, apart from the fuel tanks  
 21 which we're prepared to accept that that is a  
 22 special circumstance, but other than that,  
 23 it's difficult to understand why that cost,  
 24 that level of cost has to be expended on all  
 25 310 locations, based on the information that's

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1 MR. COXWORTHY:  
 2 basis, as you say, you'll be working through  
 3 the regulations and determining what different  
 4 locations may require to be in compliance with  
 5 the regulations, can you give us any more  
 6 particulars as to how that amount is going to  
 7 be expended in 2005? How many locations are  
 8 going to have installations, permanent  
 9 installations performed in 2005 to conform  
 10 with the regulation?  
 11 MR. HOLDEN:  
 12 A. I can't answer that specifically to the exact  
 13 number of sites that we would work on in 2005.  
 14 Q. Do you know that any will be? Will any  
 15 permanent installations be installed in 2005?  
 16 MR. HOLDEN:  
 17 A. Oh yes, there certainly will be permanent  
 18 installations in 2005. There'll be permanent  
 19 installations installed and as I said, it will  
 20 be worked on with respect to the risks and the  
 21 frequency of access.  
 22 Q. If you're uncertain as to or it's not to your  
 23 knowledge how many sites are going to have  
 24 these locations, then how can we determine  
 25 that? Is that information available?

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1 been provided. And you're not able, in fact,  
 2 to tell us why that level of expenditure has  
 3 to be incurred in respect of each location?  
 4 Is that correct?  
 5 MR. MARTIN:  
 6 A. Again, if I could perhaps jump in here.  
 7 MR. HOLDEN:  
 8 A. Go ahead.  
 9 MR. MARTIN:  
 10 A. And I don't mean to try and preempt Mr. Holden  
 11 by any means, but basically what we're asking  
 12 the Board for this year is approval for the  
 13 \$206,000 that we would anticipate spending in  
 14 2005. We know there are enough locations out  
 15 there now within the 310 that will require  
 16 some level of fall arrest travel restraint  
 17 system, whether it be a permanent installation  
 18 on horizontal or vertical fuel storage tanks,  
 19 the tops of power transformers, if you will,  
 20 and all of our terminal stations that we have  
 21 to get up and work on, control buildings and  
 22 other buildings around the system. I guess  
 23 what we're saying is, and what Mr. Holden was  
 24 explaining is that we have looked at these.  
 25 We've got them prioritized based upon the risk

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1 involved, the height of the building, the  
 2 frequency of access, and what we would intend  
 3 to do is, as part of this program, throughout  
 4 the remainder of this year and 2005, work on  
 5 the details of this, again working on the  
 6 priority sites, spend up to the \$206,000 to  
 7 address those sites that we know we have to  
 8 address to be compliant with the legislation,  
 9 and then in future years, bring back to the  
 10 Board whatever adjustments we felt were  
 11 necessary to the outer years, 2006 and beyond,  
 12 and what expenditures will be required at that  
 13 time. We're not asking for approval of the  
 14 one million dollars. The one million dollars  
 15 is an order of magnitude estimate, if you  
 16 will, put together for future years to address  
 17 what we think the program might cost us. We  
 18 do know, and we are very comfortable that we  
 19 need to spend at least \$206,000 next year to  
 20 address the priority sites, again to be  
 21 compliant with legislation and provide the  
 22 level of safety required of our employees  
 23 under that legislation.  
 24 Q. Thank you. Mr. Chair, I do have some follow-  
 25 up questions. I do note the time. I'd

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1 MR. COXWORTHY:  
 2 Q. No, I don't think that would be the case.  
 3 CHAIRMAN:  
 4 Q. Well then, I think we'll adjourn for the day  
 5 and we'll reconvene at 9:30 tomorrow morning.  
 6 MR. COXWORTHY:  
 7 Q. Thank you, Mr. Chair.  
 8 GREENE, Q.C.:  
 9 Q. Mr. Chair, I wonder if in light of what looks  
 10 like we will not finish in three days, if  
 11 we're not finished the first panel until a day  
 12 and a half is past, if there will be any  
 13 consideration to the sitting hours or -  
 14 CHAIRMAN:  
 15 Q. There certainly will be, Ms. Greene. We'll  
 16 have more comment on that, I guess, or some  
 17 more discussion tomorrow morning with regard  
 18 to that. Okay, 9:30 tomorrow morning. Thank  
 19 you.  
 20 (4:31 p.m.)

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1 MR. COXWORTHY:  
 2 certainly be prepared to continue, but thought  
 3 I would indicate to the Chair that I did have  
 4 more questions on this project before  
 5 proceeding.  
 6 GREENE, Q.C.:  
 7 Q. Mr. Chair, it might be helpful if the  
 8 Industrial Customers could indicate how much  
 9 longer they would be with this panel. It  
 10 would give us an idea of planning for  
 11 tomorrow.  
 12 CHAIRMAN:  
 13 Q. Are you able to -  
 14 MR. COXWORTHY:  
 15 Q. I believe I can do that, Mr. Chair.  
 16 CHAIRMAN:  
 17 Q. Sure.  
 18 MR. COXWORTHY:  
 19 Q. I certainly would think we would finish  
 20 sometime in the morning with this panel, and I  
 21 wouldn't think it would be the whole morning.  
 22 CHAIRMAN:  
 23 Q. You're not going to finish--yourself, you're  
 24 not going to finish with this panel in the  
 25 next 10 or 15 minutes?

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1 CERTIFICATE  
 2 I, Judy Moss Lauzon, hereby certify that the  
 3 foregoing is a true and correct transcript in the  
 4 matter of Newfoundland and Labrador Hydro's 2005  
 5 Capital Budget Application, heard on the 6th day of  
 6 October, A.D., 2004 before the Board of  
 7 Commissioners of Public Utilities, Prince Charles  
 8 Building, St. John's, Newfoundland and Labrador and  
 9 was transcribed by me to the best of my ability by  
 10 means of a sound apparatus.  
 11 Dated at St. John's, Newfoundland and Labrador  
 12 this 6th day of October, A.D., 2004  
 13 Judy Moss Lauzon