

<p style="text-align: center;">LIST OF UNDERTAKINGS</p> <p>1. Undertaking ..... Pg. 11</p> <p>2. Undertaking ..... Pg. 51</p> <p>3. Undertaking ..... Pg. 54</p>	<p style="text-align: right;">Page 2</p> <p>1 (9:02 a.m.)</p> <p>2 CHAIRMAN:</p> <p>3 Q. Good morning, ladies and gentlemen. I think</p> <p>4 when we finished yesterday we were to extend</p> <p>5 an opportunity to the intervenors to respond</p> <p>6 to any of the information that you provided</p> <p>7 late in the day, Ms. Greene. Before we get to</p> <p>8 that are there any other preliminary matters?</p> <p>9 GREENE, Q.C.:</p> <p>10 Q. Mr. Chairman, I have just one undertaking to</p> <p>11 respond to, and it may be convenient to do</p> <p>12 that before the questions from counsel. And</p> <p>13 that is referred to as Undertaking No. 27 in</p> <p>14 the list of undertakings circulated by the</p> <p>15 Board secretary. And it relates to an</p> <p>16 undertaking provided to Mr. Kennedy and the</p> <p>17 undertaking related to the type of technology</p> <p>18 used on the web server. Mr. Downton, could</p> <p>19 you please advise what that technology is?</p> <p>20 MR. DOWNTON:</p> <p>21 A. It's Microsoft IIS.</p> <p>22 Q. Thank you. That completes the undertakings</p> <p>23 provided by Hydro.</p> <p>24 CHAIRMAN:</p> <p>25 Q. Thank you, Ms. Greene. Newfoundland Power,</p>
<p style="text-align: right;">Page 3</p> <p>1 Mr. Hayes, do you have any questions of the</p> <p>2 panel arising from those matters late</p> <p>3 yesterday?</p> <p>4 MR. HAYES:</p> <p>5 Q. Mr. Chair, I do have a couple of questions and</p> <p>6 these relate to the undertaking that was given</p> <p>7 out yesterday after lunch. It's numbered, I</p> <p>8 believe, U-Hydro 22, and that's the passport</p> <p>9 system cost estimates. And this relates back</p> <p>10 to some of the cross-examination of Mr.</p> <p>11 Alteen. And I believe there are a couple of</p> <p>12 items that need to be clarified between what</p> <p>13 was stated to Mr. Alteen by the panel in</p> <p>14 evidence on the first day of the hearing and a</p> <p>15 couple of the items in the passport estimate</p> <p>16 at U-Hydro 22.</p> <p>17 CHAIRMAN:</p> <p>18 Q. Carry on.</p> <p>19 CROSS-EXAMINATION OF PANEL BY MR. GERARD HAYES.</p> <p>20 MR. HAYES:</p> <p>21 Q. I'd like to direct the question to--or the</p> <p>22 questions to Mr. Downton, perhaps, would be</p> <p>23 the best one to answer it. Mr. Downton, if</p> <p>24 you could go to item No. 8 in U-Hydro 22. Mr.</p> <p>25 O'Reilly might want to put U-Hydro 22 on the</p>	<p style="text-align: right;">Page 4</p> <p>1 screen.</p> <p>2 MR. O'REILLY:</p> <p>3 Q. That's not available.</p> <p>4 MR. HAYES:</p> <p>5 Q. Oh, you don't have it available?</p> <p>6 MR. O'REILLY:</p> <p>7 Q. There was a bit of a technology problem</p> <p>8 between here and the office.</p> <p>9 MR. HAYES:</p> <p>10 Q. I see. Perhaps Mr. Downton could be provided</p> <p>11 with a copy?</p> <p>12 MR. DOWNTON:</p> <p>13 A. Okay.</p> <p>14 Q. You have that, Mr. Downton? If we can look at</p> <p>15 item No. 8 in that breakdown? Can you just</p> <p>16 briefly describe for us exactly what those</p> <p>17 items, the abbreviations all refer to?</p> <p>18 A. Okay. PM stands for project management.</p> <p>19 Q. Um-hm.</p> <p>20 A. ENG stands for engineering; IS and INST stands</p> <p>21 for installation; FAT stands for Factory</p> <p>22 Acceptance Test.</p> <p>23 Q. Factor Acceptance Test?</p> <p>24 A. Yes.</p> <p>25 Q. And what is?</p>

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<p>1 A. Basically when you buy a product of this 2 magnitude, you basically go to a factory and 3 you basically test the product that you're 4 buying. So those would be costs associated 5 with providing resources to the Factory 6 Acceptance Test. 7 Q. Okay. And training? 8 A. And training. 9 Q. And what kind of training is that? 10 A. Basically training there would be focused on 11 where it's a new technology we would be 12 training our technicians who would maintain 13 it, as well as our engineering staff who would 14 be involved in the project, as well. 15 Q. And the project management, what would that 16 involve? 17 A. Yes, the project management would be a project 18 manager assigned to the project who will 19 manage the resources and manage the schedule 20 to ensure that the work gets completed in a 21 consistent, reliable fashion. 22 Q. And that's your project manager? 23 A. Yes. 24 MR. DUNPHY: 25 A. No, I'm sorry. Just for clarification. All</p>	<p>1 those line items are contractor estimates for 2 their personnel, not Hydro personnel. 3 MR. DOWNTON: 4 A. Okay. 5 MR. DUNPHY: 6 A. That line item is entirely for contractor 7 personnel. 8 Q. Okay. Perhaps we can start again. Let's talk 9 about the training again. The training would 10 be? 11 A. The training would be the cost of the service 12 provider to provide training on the systems. 13 Q. I see. And installation the service provider 14 will be doing the installation? 15 A. Yes. 16 Q. I see. Item No. 10, spare parts and mock up. 17 Mr. Downton or Mr. Dunphy, whichever - 18 MR. DOWNTON: 19 A. Well, he did the estimate, so I'll pass it to 20 Gerard to speak to it. 21 Q. Okay. Mr. Dunphy? 22 MR. DUNPHY: 23 A. Yes. 24 Q. Can you tell me about item No. 10 and what 25 that entails?</p>
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<p>1 A. Well, as it states, it's a cost for a set of 2 spare parts, a recommended spare parts, as 3 well as a test bed, I guess you could call it, 4 for the system which would presumably consist 5 of a repeater or two and a controller, I 6 believe is the word we agreed on yesterday. 7 Q. So, that's sort of--well, I guess, well, it's 8 not a simulator, but it's an actual--you 9 actually get to run the equipment through 10 without putting it right in the service, is 11 that what that's about? 12 A. Yes. It's a test environment. 13 Q. Okay. I'd like to go now for a moment to the 14 transcript for July 9th, that's yesterday, at 15 page 221. If you can get that on the screen, 16 Mr.--okay. Now, if we look at the question 17 that starts about line 10. And this is a 18 redirect from Ms. Greene towards the end of 19 the day. She asked for a breakdown. And, Mr. 20 Downton, I believe you gave the breakdown of 21 the internal costs. And if I can just go 22 quickly through it, it was essentially 23 overhead of \$450,000, contingency of 687, 24 escalation 440, AFUDC of 400 for about \$1.9 25 million. And then there was additional</p>	<p>1 balance of \$1.1 million. And Ms. Greene asked 2 at the bottom of page 221 and the answer was 3 provided on page 222 of the transcript, the 4 cost would be used for internal project 5 management installation and training. Is that 6 correct? 7 MR. DOWNTON: 8 A. That's correct. 9 Q. Okay. Now, if I could turn for a moment to 10 the transcript of July 7th. And at page 93 of 11 the transcript, lines 22, the question starts 12 at line 22. And Mr. Alteen's question was 13 with respect to the difference in the 5.7 14 million and the total 8.8 million capital 15 cost. And the answer is on page 94 of the 16 transcript. And I believe that answer was 17 given by Mr. Downton, as well. And Mr. 18 Downton indicated that what was not added into 19 the 5.7 million were project management, 20 internal engineering, overheads escalation and 21 contingencies and so about \$3.2 million. And 22 then following on on page 98 of the 23 transcript--Mr. Downton, you're with me so 24 far? 25 A. Yes.</p>

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<p>1 Q. You're fine with all of that?</p> <p>2 A. Yeah.</p> <p>3 Q. Mr. Dunphy, I believe--no, I think it was Mr.</p> <p>4 Downton, actually, interjected with respect to</p> <p>5 some questioning of Mr. Dunphy by Mr. Alteen</p> <p>6 with respect to the materials that would have</p> <p>7 been included. And, Mr. Downton, at page 99,</p> <p>8 lines 13 to 17 or 14 to 17, really, you</p> <p>9 indicated that there would have been spare</p> <p>10 equipment and test bed for the equipment. Is</p> <p>11 that correct?</p> <p>12 A. Yes.</p> <p>13 Q. Now -</p> <p>14 A. I indicated that when we bought the system, we</p> <p>15 would buy the spare equipment and a test bed.</p> <p>16 Q. Now, if you look back to line--sorry, page</p> <p>17 222, lines 2 and 3, that internal project</p> <p>18 management installation and training, the</p> <p>19 amount for that is possibly a million dollars.</p> <p>20 Seems to match up with the costs indicated in</p> <p>21 U-Hydro 222 (sic.) for similar amounts. And</p> <p>22 I'm just wondering is there any possibility in</p> <p>23 there for double counting with some of that?</p> <p>24 A. No.</p> <p>25 Q. I mean, would you have two test beds, two sets</p>	<p>1 of spare equipment?</p> <p>2 A. No, definitely not.</p> <p>3 Q. Okay. Perhaps you can just explain then the</p> <p>4 difference between what looked to be similar</p> <p>5 items and similar amounts included in the 5.7</p> <p>6 and also included in the Hydro internal costs?</p> <p>7 A. Yes. But I answered the question there with</p> <p>8 regards to spare test bed. I guess I didn't</p> <p>9 have the detailed information in front of me</p> <p>10 and I wasn't aware whether those costs were</p> <p>11 basically in the contractor's price or in our</p> <p>12 pricing. And I guess with the detail here</p> <p>13 it's obvious that the spare and the test beds</p> <p>14 are in the contractor's price, as indicated.</p> <p>15 Q. Okay. So the evidence you gave wasn't quite</p> <p>16 correct on Monday?</p> <p>17 A. Well, I didn't have the detail there to</p> <p>18 substantiate it. I knew that in the general</p> <p>19 \$8.85 million we had money for a test bed and</p> <p>20 for spares.</p> <p>21 Q. Okay. And the other items, the project</p> <p>22 management, engineering, installation,</p> <p>23 training -</p> <p>24 A. Well, basically -</p> <p>25 Q. Is it normal to have matching amounts between</p>
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<p>1 the contractor and the internal costs for</p> <p>2 those items?</p> <p>3 A. Well, basically for -</p> <p>4 MR. DUNPHY:</p> <p>5 A. I can't speak to how normal it is to have</p> <p>6 matching amounts. I can tell you that that</p> <p>7 estimate was provided to us by an external</p> <p>8 source and we did our own estimates for</p> <p>9 engineering and project management and</p> <p>10 internal labour requirements. The fact that</p> <p>11 the two are similar is probably coincidental.</p> <p>12 But they are not--line items are not</p> <p>13 duplicates.</p> <p>14 Q. Okay. Thank you. Just to the transcript of</p> <p>15 July 9th again, a matter of clarification,</p> <p>16 perhaps just in case nobody else picked it up</p> <p>17 I'll address it. At line 18 the escalation</p> <p>18 factor is given at 1.8 percent. That doesn't</p> <p>19 appear to be correct, given the amounts at</p> <p>20 issue here. If you look at six percent at</p> <p>21 450,000, ten percent at 687,000 and 1.8</p> <p>22 percent at 440,000. Is there something there</p> <p>23 that needs to be corrected or am I</p> <p>24 misapprehending something?</p> <p>25 MR. DOWNTON:</p>	<p>1 A. I basically took the numbers from our cash</p> <p>2 flow sheets and that's the--I think if you add</p> <p>3 those up, you'll get a million -</p> <p>4 Q. Oh, yes, the total, I don't think there's any</p> <p>5 issue with the total.</p> <p>6 A. Yeah. You're looking -</p> <p>7 Q. I'm just looking at the factors, the</p> <p>8 percentages.</p> <p>9 MR. DUNPHY:</p> <p>10 A. Yeah. I'm speculating here now, but I believe</p> <p>11 what happened is where it's a two year</p> <p>12 project, it's escalation at 1.8 percent per</p> <p>13 year compounded. I'm crossing my fingers and</p> <p>14 hoping that's true, but I believe that that's</p> <p>15 the case.</p> <p>16 Q. Perhaps you might like to follow-up on that</p> <p>17 and just correct it for the record?</p> <p>18 (UNDERTAKING)</p> <p>19 A. Sure.</p> <p>20 Q. Thank you. Those are my questions, Mr. Chair.</p> <p>21 CHAIRMAN:</p> <p>22 Q. Thank you, Mr. Hayes. Any questions from the</p> <p>23 Industrial Customer?</p> <p>24 RE-CROSS-EXAMINATION OF PANEL BY HUTCHINGS, Q.C.</p> <p>25 HUTCHINGS, Q.C.:</p>

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<p>1 Q. Yes, a couple of items, Mr. Chair. Mr. Hayes</p> <p>2 has already touched upon some concerns. But,</p> <p>3 Mr. Downton, in answer to Mr. Hayes you</p> <p>4 indicated that the answer on July the 7th at</p> <p>5 page 99 of the transcript was not correct at</p> <p>6 lines 14 through 17 in terms of the spare</p> <p>7 equipment and the test bed being included in</p> <p>8 those internal costs. What is the correct</p> <p>9 answer to that question?</p> <p>10 MR. DOWNTON:</p> <p>11 A. The correct answer, as put forward by Mr.</p> <p>12 Dunphy, is that the test bed and the spares</p> <p>13 are included in the contract costs.</p> <p>14 Q. No. What is the correct answer to the</p> <p>15 question of what miscellaneous materials are</p> <p>16 in the internal costs?</p> <p>17 A. In the internal costs would be miscellaneous</p> <p>18 hardware, project management, installation,</p> <p>19 engineering and labour.</p> <p>20 (9:17 a.m.)</p> <p>21 Q. If we go back to page 98 of that transcript,</p> <p>22 the question that Mr. Alteen put you was "What</p> <p>23 kind of materials would be there in terms of</p> <p>24 materials that Hydro would use that the</p> <p>25 contractor wouldn't supply? Just give us some</p>	<p>1 sense of what that might include." And your</p> <p>2 answer was that it would include spare</p> <p>3 equipment and test bed for that equipment. So</p> <p>4 obviously it doesn't include that. So what</p> <p>5 does it include?</p> <p>6 MR. DUNPHY:</p> <p>7 A. Excuse me, if I could answer. I believe, as I</p> <p>8 stated starting at line 5, we usually include</p> <p>9 a small allocation for miscellaneous materials</p> <p>10 to cover consumable and supplies that are</p> <p>11 required during installation.</p> <p>12 Q. And what amount is assigned to that for</p> <p>13 present purposes?</p> <p>14 A. I don't recall exactly. I believe it's in the</p> <p>15 order of around \$100,000, I believe.</p> <p>16 Q. Material supply on B-71 is 25,000 in 2004 and</p> <p>17 105 in 2003, so that's \$130,000.</p> <p>18 A. And that's about--that sounds right.</p> <p>19 Q. And just provide us again, so we have on the</p> <p>20 record, your best description of what that</p> <p>21 \$130,000 is buying?</p> <p>22 A. That would cover miscellaneous materials used</p> <p>23 during construction which were not included in</p> <p>24 the contract or were occasionally overlooked,</p> <p>25 what were utilized, were required to be</p>
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<p>1 purchased during installation. It could</p> <p>2 include things like cables, connectors,</p> <p>3 mounting equipment, that sort of thing.</p> <p>4 Q. Would not things that were overlooked be</p> <p>5 allowed for in your contingency?</p> <p>6 A. Yes, that--contingency is used for that. But</p> <p>7 we -</p> <p>8 Q. So the -</p> <p>9 A. - as a matter of course we do include a small</p> <p>10 amount -</p> <p>11 Q. You put in two items to cover that</p> <p>12 contingency?</p> <p>13 MR. DOWNTON:</p> <p>14 A. No, that's not correct. We basically put an</p> <p>15 estimate in of what we know. Basically we</p> <p>16 will approximate as additional requirements.</p> <p>17 Contingency basically is put in there to cover</p> <p>18 things which are totally unforeseen as a result</p> <p>19 of the project as you go through. We know</p> <p>20 that we're going to incur additional cable and</p> <p>21 racks in a general sense; we've put that</p> <p>22 allotment of money in there. Contingency</p> <p>23 really is there and it's generally not to be</p> <p>24 used unless there are unforeseens which result</p> <p>25 in due course of the project.</p>	<p>1 Q. Okay. The record will show Mr. Dunphy's use</p> <p>2 of the word "unforeseen" in his answer. Now, I</p> <p>3 want to turn to the issue of this Citrix</p> <p>4 server you provided information on at the end</p> <p>5 of the day yesterday. At page 229 of the</p> <p>6 transcript of July the 9th you indicated that</p> <p>7 all of the devices, the end user devices would</p> <p>8 go through the Citrix servers?</p> <p>9 A. That's correct.</p> <p>10 Q. Which of the end user devices actually needs</p> <p>11 the Citrix server?</p> <p>12 A. Based on how Hydro wants to manage its</p> <p>13 infrastructure, all devices.</p> <p>14 Q. The laptops can work without it, isn't that</p> <p>15 correct?</p> <p>16 A. The laptops can work without it.</p> <p>17 Q. The desktops can work without it?</p> <p>18 A. The desktops can work without it.</p> <p>19 Q. The only device that doesn't work without it</p> <p>20 is the thin client device, correct?</p> <p>21 A. That's correct.</p> <p>22 Q. Okay.</p> <p>23 A. However, as I reiterated, the way Hydro wants</p> <p>24 to manage its infrastructure is through the</p> <p>25 total use of Citrix because at the end of the</p>

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<p>1 day that will provide it with reduced</p> <p>2 operating costs in the long term.</p> <p>3 Q. How does that reduce operating costs in the</p> <p>4 long term?</p> <p>5 A. See, one has to appreciate that when you buy a</p> <p>6 desktop or a laptop, that particular price</p> <p>7 typically only represents about 15 to 20</p> <p>8 percent of the total cost of ownership of that</p> <p>9 device to it's asset life cycle. By basically</p> <p>10 putting--by running everything through a</p> <p>11 Citrix technology it basically allows us to do</p> <p>12 centralized management on our--basically our</p> <p>13 applications. And it also allows us to, I</p> <p>14 guess, unify, unify in the sense of bringing</p> <p>15 the laptop, the Citrix and the desktop to a</p> <p>16 common way of being managed and it improves</p> <p>17 overall centralized management of the</p> <p>18 infrastructure.</p> <p>19 Q. What do you mean by "centralized management"</p> <p>20 of your applications?</p> <p>21 A. Basically it means that the applications for</p> <p>22 the most part will be deployed on servers,</p> <p>23 which basically allows us to, if we want to</p> <p>24 redeploy a new--say, if we want to make a fix</p> <p>25 to a particular application, where it's</p>	<p>1 deployed through Citrix servers, basically we</p> <p>2 can go in and make that change once and then</p> <p>3 that will affect the broad range over to who</p> <p>4 are connected into those applications. So</p> <p>5 rather than, say, going in and--that allows us</p> <p>6 to go into once as opposed to having to send</p> <p>7 our client support people to probably 50 or 60</p> <p>8 desktops.</p> <p>9 Q. In that event, why do you need the desktop?</p> <p>10 A. Basically the desktop there, it's a high</p> <p>11 performance tool. The thin client is really</p> <p>12 there for users who typically use, just say,</p> <p>13 access to JD Edwards, e-mail, basically</p> <p>14 Microsoft Office Suite, those are the typical</p> <p>15 type templates. And the desktop is, as well</p> <p>16 call it, is really put there for higher</p> <p>17 performance users like the engineers and those</p> <p>18 who require applications over and above what I</p> <p>19 just mentioned. And then the laptops are</p> <p>20 provided for people who are truly mobile</p> <p>21 users.</p> <p>22 Q. So in terms of centralized management, if you</p> <p>23 have a laptop that has the application on it,</p> <p>24 you're going to have to--if you upgrade,</p> <p>25 you're going to have to visit that device</p>
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<p>1 anyway, aren't you?</p> <p>2 A. Yes. But as far as things you've got to lay</p> <p>3 the software on it. But we also have</p> <p>4 automated roll out tools to basically refresh</p> <p>5 the desktop and the laptop, as well. So</p> <p>6 depending on the application, you may or may</p> <p>7 not have to even visit the laptop or the</p> <p>8 desktop.</p> <p>9 Q. So notwithstanding that the desktop and the</p> <p>10 laptop are perfectly viable stand alone</p> <p>11 devices that can work without the Citrix</p> <p>12 server, at all, you allocate, in your mind, a</p> <p>13 third of the cost of the Citrix server to each</p> <p>14 of the laptops, the thin clients and the</p> <p>15 desktops, is that correct?</p> <p>16 A. I did because that's--when it's installed,</p> <p>17 that's how our infrastructure is going to be</p> <p>18 designed. And same thing right now on my</p> <p>19 desk, I have a laptop because I'm considered</p> <p>20 to be a mobile user, but when I interface with</p> <p>21 the network, I interface as a Citrix client.</p> <p>22 So basically all the interaction I do is not</p> <p>23 with the hard drive on my desktop, but</p> <p>24 basically it's with the file, file servers.</p> <p>25 So basically--and then when I take the laptop</p>	<p>1 and, say, I go home or I go on the road and I</p> <p>2 basically use the applications that are on it.</p> <p>3 When I go back in and I plug that back into</p> <p>4 the network, the data is automatically shifted</p> <p>5 back to the file server and I basically</p> <p>6 interact as a thin client.</p> <p>7 Q. But the reason you have the laptop is because</p> <p>8 you have to have access when you're not</p> <p>9 plugged into the server, correct? You need to</p> <p>10 have a device to do some computing when you're</p> <p>11 not attached to the server?</p> <p>12 A. Yeah. Because if you want to consider me to</p> <p>13 be a mobile user, yes, the same thing as our</p> <p>14 field personnel, yes.</p> <p>15 Q. Exactly. So, the laptop is designed such that</p> <p>16 it can function independently of the server?</p> <p>17 A. Yes.</p> <p>18 Q. And that's why you have it. And hence, you</p> <p>19 wouldn't have it unless it was putting a</p> <p>20 lesser burden on the Citrix server than the</p> <p>21 thin client device that can't work without the</p> <p>22 Citrix server, correct?</p> <p>23 A. It can function separate from the server, but</p> <p>24 for certain applications it has to be attached</p> <p>25 to the server, like -</p>

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<p>1 Q. No, I quite understand that, but -</p> <p>2 A. So not all the applications on the laptop are</p> <p>3 necessarily separable from the server.</p> <p>4 Q. But if you can justify having a laptop for</p> <p>5 yourself at all, then that means that you,</p> <p>6 with some of what you're doing, put no burden</p> <p>7 through your laptop onto that Citrix server,</p> <p>8 correct?</p> <p>9 A. Well, if I don't put a burden on a Citrix</p> <p>10 server, I'm going to put it on another server,</p> <p>11 because at the end of the day I have to be</p> <p>12 attached to the server.</p> <p>13 Q. Yes, that's fine for data storage, whatever.</p> <p>14 But your processing unit is in your laptop,</p> <p>15 correct, in the same way that a thin client</p> <p>16 does not have one?</p> <p>17 A. When I'm running as a thin client on my</p> <p>18 laptop, the processing is actually on the</p> <p>19 server.</p> <p>20 Q. When you're running as a thin client?</p> <p>21 A. Yes.</p> <p>22 Q. But when you're not running as a thin client,</p> <p>23 your processor is in the laptop, that's why</p> <p>24 you have the laptop, correct?</p> <p>25 A. Correct.</p>	<p>1 Q. Yes, okay. Now, you told us yesterday, as</p> <p>2 well, that you're purchasing, I believe, 73 of</p> <p>3 the Think Centre S-50 desktops?</p> <p>4 A. Yes.</p> <p>5 Q. You gave us the model at page 10 of the</p> <p>6 transcript at lines 3 through 8, the</p> <p>7 transcript of July 9th. I asked you on page</p> <p>8 14 if it was a standard S-20 Think Centre</p> <p>9 desktop. And it isn't--you say that's your</p> <p>10 understanding, yes. But it isn't an S-20, is</p> <p>11 it?</p> <p>12 A. The desktop, I thought I said it was an S-50.</p> <p>13 Q. Yes, that's what you said on the other page,</p> <p>14 on page 10. And then on page 14 I asked you</p> <p>15 if it was a standard S-20 and you said yes.</p> <p>16 A. Sorry.</p> <p>17 Q. So that should be an S-50?</p> <p>18 A. It should be an S-50.</p> <p>19 Q. Okay. And you're--and that's a standard S-50,</p> <p>20 that's what you told me?</p> <p>21 A. That's basically my understanding, I have an</p> <p>22 S-50.</p> <p>23 Q. Okay. And you're paying \$1600 each for these</p> <p>24 things?</p> <p>25 A. Basically, including, yes, warranty and</p>
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<p>1 delivery.</p> <p>2 Q. Okay. Can you explain to me why when you're</p> <p>3 buying 73 of these things, you're paying \$1600</p> <p>4 for them, when I can go on the IBM web site</p> <p>5 and buy it for 1497?</p> <p>6 A. I guess all I would say to you is I'd have to</p> <p>7 look at exactly what you were buying versus</p> <p>8 what you were buying.</p> <p>9 Q. Well, you told me you were buying a standard</p> <p>10 S-50 Think Centre, no additional bells or</p> <p>11 whistles or memories or anything like that,</p> <p>12 standard item.</p> <p>13 A. All I know is I'm buying a Think Centre S-50</p> <p>14 plus a--let's see, 17 inch monitor, four year</p> <p>15 warranty and delivery for approximately \$1600.</p> <p>16 Q. Standard item, which is--if you want to go</p> <p>17 check, you'll find it on the web site for</p> <p>18 1497. Those are all the questions I have, Mr.</p> <p>19 Chair.</p> <p>20 CHAIRMAN:</p> <p>21 Q. Thank you, Mr. Hutchings. Mr. Kennedy?</p> <p>22 RE-CROSS-EXAMINATION OF PANEL BY MR. MARK KENNEDY</p> <p>23 MR. KENNEDY:</p> <p>24 Q. Just one follow-up question, Chair, thank you.</p> <p>25 Mr. Downton, you just indicated that the</p>	<p>1 server technology you're using for your--to</p> <p>2 support your web site is Microsoft based?</p> <p>3 MR. DOWNTON:</p> <p>4 A. Yes.</p> <p>5 Q. And that's a proprietary system?</p> <p>6 A. Yes.</p> <p>7 Q. Has or did Hydro consider using any other type</p> <p>8 of technology to support its web server?</p> <p>9 A. We've used Apache in an couple of locations,</p> <p>10 but right now we're in the process of</p> <p>11 reevaluating IIS and we have to migrate--</p> <p>12 replace the system, so we will be looking at</p> <p>13 IIS, Apache and other web server technologies.</p> <p>14 Q. Okay. So for your next iteration, if you</p> <p>15 will, of the web server for this planned</p> <p>16 change in your web technology allowing</p> <p>17 employees to have direct control over what's</p> <p>18 on the web site, as I think you described it?</p> <p>19 A. Yes. Basically what we're looking at is</p> <p>20 allowing our corporate communications, who</p> <p>21 will be the owners or who are the owners of</p> <p>22 the corporate web site, we'll provide them</p> <p>23 with standard management tools to manage the</p> <p>24 content.</p> <p>25 Q. And so you're not, at this point, locked into</p>

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<p>1 using Microsoft, then, for that project?</p> <p>2 A. No.</p> <p>3 Q. And you would conduct a business case and a</p> <p>4 total cost of ownership analysis to see</p> <p>5 whether an open source solution is better?</p> <p>6 A. We will look at the different technologies,</p> <p>7 yes.</p> <p>8 Q. Okay. Thank you. That's all the questions I</p> <p>9 have. Thank you, Chair.</p> <p>10 CHAIRMAN:</p> <p>11 Q. Mr. Kennedy, Ms. Greene, do you have anything</p> <p>12 in redirect arising from those questions this</p> <p>13 morning?</p> <p>14 GREENE, Q.C.:</p> <p>15 Q. Actually, there is one issue and it's with</p> <p>16 respect to the cost of the standard S-50, but</p> <p>17 I would like the opportunity to provide the</p> <p>18 information from the web site because my</p> <p>19 understanding is that that does not include</p> <p>20 the monitor and our costs do. So, I would</p> <p>21 like to reserve that right to file it later,</p> <p>22 to do a comparison of Hydro's cost with what</p> <p>23 Mr. Hutchings has referred to as available on</p> <p>24 the IBM web site.</p> <p>25 (9:32 a.m.)</p>	<p>1 CHAIRMAN:</p> <p>2 Q. Okay. Thank you, Ms. Greene. Any questions</p> <p>3 arising or any questions that you have, Mr.--</p> <p>4 or Commissioner Powell?</p> <p>5 CROSS-EXAMINATION OF PANEL BY COMMISSIONER POWELL</p> <p>6 COMMISSIONER POWELL:</p> <p>7 Q. Yeah. Thank you, Chair. I don't have a whole</p> <p>8 lot of questions. I have a lot of data stored</p> <p>9 here that I'll have to filter through later</p> <p>10 on. I just want to follow-up on something</p> <p>11 that Mr. Kennedy was saying yesterday with Mr.</p> <p>12 Haynes, I guess, it's the budget process</p> <p>13 itself. This is the third capital budget that</p> <p>14 I have the opportunity to sit on for Hydro.</p> <p>15 And if my memory serves me correctly, the</p> <p>16 first capital budget started off to be around</p> <p>17 the \$50 million mark and it turned out to be</p> <p>18 in the 40s. And I think last year we had one</p> <p>19 in the 35 and this year is around the 35,</p> <p>20 which runs you somewhere between 110 and 120</p> <p>21 million dollars. And for us mere mortals</p> <p>22 that's a significant amount of money. And at</p> <p>23 first glance a person would ask why would you</p> <p>24 need to spend that amount of money. But when</p> <p>25 you look at the total capital assets of Hydro,</p>
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<p>1 it's around a 1.3, 1.4 billion dollars, it's--</p> <p>2 as a percentage wise it works out to be</p> <p>3 relatively sort of small. And if you do sort</p> <p>4 of an annualized scenario, based on these</p> <p>5 three numbers, that Hydro would be replacing</p> <p>6 itself every 35 to 40 years. Now, from your</p> <p>7 experience in the system, if you took a very</p> <p>8 distant view, does that sound realistic for a</p> <p>9 utility?</p> <p>10 MR. HAYNES:</p> <p>11 A. I think there are two things there.</p> <p>12 Obviously, as equipment ages and as, I guess,</p> <p>13 as I tried to say somewhere in the last few</p> <p>14 days, that basically from the point of view of</p> <p>15 our mandate to serve the electrical needs,</p> <p>16 basically we do strive for reliability and we</p> <p>17 do replace--you know, try to be proactive to</p> <p>18 ensure that reliability is maintained so</p> <p>19 nobody--so we don't have, you know, rotating</p> <p>20 or rationing power, whatever you want to--and</p> <p>21 we don't want to be there. But when you go</p> <p>22 down and look back over the history of</p> <p>23 Newfoundland and Labrador Hydro, when you go</p> <p>24 down through and do the routine things, other</p> <p>25 than Granite Canal, which is a separate issue,</p>	<p>1 I mean, we are doing, you know, reliability</p> <p>2 improvements, we have enhanced the 230KV</p> <p>3 transmission system because of icing, you</p> <p>4 know, we've undertaken replacement of some</p> <p>5 components of Hydro and thermo plant, the</p> <p>6 governors, the exciters and so on. But as you</p> <p>7 go and respond to load growth, then you have</p> <p>8 to do your Granite Canals, which is \$140</p> <p>9 million or purchase contracts or, you know,</p> <p>10 maybe in 20 years or 30 years we will</p> <p>11 completely re-power Holyrood which will cost</p> <p>12 some millions and millions of dollars. So</p> <p>13 there are step changes in there. And you</p> <p>14 know, if we don't keep up with reinvesting in</p> <p>15 our capital assets to make then current, then</p> <p>16 basically reliability will deteriorate, and</p> <p>17 that's one of the reasons. I think that over</p> <p>18 the last number of years I think we have taken</p> <p>19 a hard look at our capital program and that we</p> <p>20 have really put forward the things that are</p> <p>21 essential. I assure you, there are lots of</p> <p>22 other proposed capital projects that did not</p> <p>23 get to the table because they weren't</p> <p>24 economic, because they were not considered to</p> <p>25 be--the timing was not right. They may have</p>

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<p>1 been delayed, deferred, or they may have been</p> <p>2 just uneconomic. A good thought, worth</p> <p>3 pursuing, but when you go down through the</p> <p>4 economics, it just wasn't cost justified and</p> <p>5 didn't add reliability.</p> <p>6 Q. So Mr. Kennedy had us for areas of the</p> <p>7 process, and the ones that had to be done</p> <p>8 because they're broke, you had to fix.</p> <p>9 A. Yes.</p> <p>10 Q. But if you were doing up a budget process and</p> <p>11 you ended up with, say \$10 million, things</p> <p>12 that had to be done.</p> <p>13 A. Yes.</p> <p>14 Q. Is part of your process then looking at the</p> <p>15 items that--the one that I had noted here is</p> <p>16 B-77 is the remote thermo units that,</p> <p>17 according to the data here, they're not broke,</p> <p>18 but they're at the end of their lifestyle. So</p> <p>19 you feel it's prudent to--at this time to</p> <p>20 replace them?</p> <p>21 A. Yes. And those are to use, I think, the--I</p> <p>22 shouldn't say I think. I mean, if we want to</p> <p>23 remote manage the system so that we don't want</p> <p>24 to have to dispatch people to--you know,</p> <p>25 return customers to service, to turn lines on</p>	<p>1 and off, to start and shut down equipment, the</p> <p>2 RTU's are on the--are a critical piece of that</p> <p>3 infrastructure. If the RT was out of service,</p> <p>4 then the energy control centre can't control,</p> <p>5 therefore we have to dispatch people. And if</p> <p>6 it's--you know, to man it, to man the station</p> <p>7 or whatever, and the operating costs would go</p> <p>8 up significantly. As well, we may be spilling</p> <p>9 for an indeterminate period of time, because</p> <p>10 the RTU is not only allowed a control</p> <p>11 information, they also bring back to the</p> <p>12 control centre the status of the equipment,</p> <p>13 whether equipment is being overloaded or has</p> <p>14 tripped, in which case, you know, we try--if</p> <p>15 we do have an interruption, which are</p> <p>16 unavoidable, you try to return the customer to</p> <p>17 service as soon as possible. If the operator</p> <p>18 does not know the line is out, the transformer</p> <p>19 is tripped, the generator is tripped.</p> <p>20 Q. But this is a project it's not if it's going</p> <p>21 to fail, it's when?</p> <p>22 A. Exactly, yes.</p> <p>23 Q. So this is part of your proactive thing?</p> <p>24 A. Yes, we think it's essential to be proactive</p> <p>25 on those.</p>
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<p>1 Q. It fits in this point in time, it fits into</p> <p>2 our cash flow and we'll do it?</p> <p>3 A. Sorry?</p> <p>4 Q. It fits in with our cash flow?</p> <p>5 A. Yes.</p> <p>6 Q. And fits in with a priority item in your</p> <p>7 budget and you put it in?</p> <p>8 A. Yes.</p> <p>9 Q. Okay. So for me, as a regulator, looking at</p> <p>10 that and we decide--we were thinking, well,</p> <p>11 maybe the thirty-five million is too high and</p> <p>12 we wanted to say drop it out for some reason.</p> <p>13 The thing that we would look at is what is the</p> <p>14 risk to Hydro.</p> <p>15 A. That would not want to (unintelligible) in</p> <p>16 terms of your position, but that's what that</p> <p>17 would do.</p> <p>18 Q. Yes, but all these items comes around in terms</p> <p>19 of what is their effect on rates.</p> <p>20 A. Yes.</p> <p>21 Q. And so the question that we would have to look</p> <p>22 at, if we were looking at that, and say okay,</p> <p>23 what's the risk factor re: the dollars and</p> <p>24 senses on rates, because it's going to be</p> <p>25 spent, and assuming that if reason that it's</p>	<p>1 five years time and nothing happened, so one</p> <p>2 of the costs would be, what would be the</p> <p>3 effect on rates, in terms of five years</p> <p>4 depreciation.</p> <p>5 A. Yes,</p> <p>6 Q. But your scenario, if it broke, there's a</p> <p>7 whole bunch of other costs that possibly would</p> <p>8 be incurred.</p> <p>9 A. Yes.</p> <p>10 Q. Forgetting the increase in cost of the actual</p> <p>11 product itself. Now in the system, when you</p> <p>12 did your model and using your judgment, did</p> <p>13 you run any scenarios to say okay, we not put</p> <p>14 that in this year. We'll wait five years</p> <p>15 versus doing it this year, I mean?</p> <p>16 A. No, we haven't, not on that particular</p> <p>17 project, but in some of the other projects, on</p> <p>18 the exciters and governors, we did, you know,</p> <p>19 speculate that if the unit was unavailable, if</p> <p>20 for instance, the exciter at, we mentioned Bay</p> <p>21 D'Espoir or wherever, the governor, whatever</p> <p>22 the case was, if the machine is out of service</p> <p>23 and there is a--you know, we're spilling for a</p> <p>24 day, we have to put a number on that. Now we</p> <p>25 have not projected or tried to guess, which</p>



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<p>1 basically is all it is, the number of times 2 that we're going to spill. We try to avoid 3 spill at all costs, not at all costs, but we 4 try to avoid, we desperately try to avoid 5 spill because it's water that we cannot 6 turbine at any future point in time and it's 7 idle. So that's all that we've done. We've 8 put forward a few--for instance, if the Upper 9 Salmon unit was not available because we did 10 not repair or replace some particular key 11 piece of a component that's a long delivery 12 item, one day's spill was, you know, one 13 hundred or whatever the number was, thousand 14 dollars a day.</p> <p>15 Q. How did this make this year's Capital Budget 16 and there's something else you know that's 17 sort of on the bubble, in terms of their life 18 expectancy, they're not causing you any 19 problem, but you know life expectancy, prudent 20 to say we should replace it. How would this 21 make it versus something that'll show up in 22 next year's budget, same type of description? 23 What kind of analysis do you do to say we're 24 going to do this this year versus - 25 A. We evaluate--we do look at the experience</p>	<p>1 obviously, and in some cases experience is not 2 great and in some cases, the experience is 3 very favourable. But we still look at the 4 spare parts. We look at the vendor support. 5 And if it failed and we had a catastrophic 6 failure, can we repair it in a reasonable time 7 frame, and in some of this equipment that's 8 twenty-five and thirty years old, and 9 particularly electronic stuff that may be ten, 10 fifteen or twenty years old, it's very, very 11 difficult to get any level of comfort that we 12 can return this equipment to service quickly 13 and expediently, and each day in those things, 14 depending on where it is, it may be spill 15 water, it may be the, you know, permanently 16 man the station for two days, two weeks, two 17 months until we actually acquire materials.</p> <p>18 Q. So you don't have any actual data to support 19 that, other than it's one of those projects 20 that, in your professional judgment, based on 21 your experience with the system, you should do 22 it now because the funds are available, you're 23 going to have to spend it at some point in 24 time. This is the one we do now versus 25 another project and doing something else in</p>
Page 35	Page 36
<p>1 two years time.</p> <p>2 A. Not only my judgment. Obviously it's also - 3 Q. Yes, I realize that.</p> <p>4 A. - it's the judgment of the people who are 5 dealing with it day to day.</p> <p>6 Q. From the Budget process itself, thirty-five 7 million dollars seems like a lot of money, but 8 as somebody sitting here from a regulation 9 point of view and trying to look at the 10 reliability, least cost, if Hydro were to 11 present a capital budget say of ten million 12 dollars, given that it's a one point four 13 billion or one point three billion dollar 14 enterprise, would we have to almost look at it 15 the other way, saying you're not being prudent 16 enough, in terms of things that you should be 17 looking for?</p> <p>18 A. I would suggest, yes, because I think unless 19 it was a brand new system, and which case you 20 would expect a couple of years as very, very 21 low O&amp;M costs or breakdown maintenance after 22 you get out all the teething difficulties, 23 that I think we could be accused or it would 24 be reasonable to assume that we are not 25 reinvesting enough money back into the</p>	<p>1 enterprise to ensure its long term viability 2 and reliability.</p> <p>3 Q. There's one project that struck my fancy when 4 I was going through, B22. I was just a little 5 curious because we had a similar project last 6 year, and that's the stacks in Holyrood. The 7 difference between B22 and, I missed the 8 number, I had it written down on the 2003 9 budget, was last year in the 2003 budget was 10 to plan and do the project all in one year. 11 This year, you're proposing seventy thousand 12 dollars in engineering to plan replace the 13 other stack in 2005. And when you look at the 14 project costs, you took the 2003 and took the 15 2004 Capital Budgets, they're identical in as 16 much as the labour estimate that's one point 17 three million dollars, the engineering in 18 total is hundred and seventy, and the project 19 management a hundred and forty, and I had the 20 screen, you'd look at those costs and they're 21 identical. Fair enough, because it would 22 appear to be almost identical stack. But the 23 number that threw me a bit, it's the corporate 24 overhead and cost of funds and contingencies. 25 In 2003, it was estimated that to be three</p>

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<p>1 hundred and twenty-six thousand dollars.</p> <p>2 A. I would suggest that part of it would be</p> <p>3 escalation because it's probably still working</p> <p>4 from the same base number, but I don't have</p> <p>5 that specific information in front of me.</p> <p>6 Q. Escalation in terms of the labour being</p> <p>7 costing you more?</p> <p>8 A. And the labour itself, like the 2005 cost, I</p> <p>9 think, is thirteen fifty-five at the bottom.</p> <p>10 When we do our budgets, we usually put them</p> <p>11 in, the initial input is basically cost of</p> <p>12 dollars and then there's an escalation</p> <p>13 calculation within the detailed spreadsheet</p> <p>14 that generates the bottom line number.</p> <p>15 Q. But you wouldn't have put--so like last year</p> <p>16 when you ran the numbers, and this year, you</p> <p>17 wouldn't have put the increased labour into</p> <p>18 instead of being one point three-five, one</p> <p>19 point four, you would have buried that into</p> <p>20 the corporate overhead and -</p> <p>21 A. The escalation portion would be at the bottom</p> <p>22 line entry normally.</p> <p>23 Q. Could you just, for my curiosity, could you</p> <p>24 give me the breakdown of the four-fifteen and</p> <p>25 B22 and whatever the three twenty-six that was</p>	<p>1 in the Capital Budget?</p> <p>2 A. I'll have to get it, hopefully during break.</p> <p>3 Q. Yes, just to--the other question I was</p> <p>4 interested in, all the discussion we've had</p> <p>5 about the new communications system and the</p> <p>6 upgrading of the computers and I'm wondering</p> <p>7 what extra costs incurred with the</p> <p>8 communication and the computer upgrades that</p> <p>9 relates, because of Hydro's continued</p> <p>10 involvement in the distribution of</p> <p>11 electricity, as opposed to just transmission</p> <p>12 and generation?</p> <p>13 A. At the risk of going out on a limb, because</p> <p>14 the distribution is not under my purview, I</p> <p>15 would suggest that it's very limited. We have</p> <p>16 very little automation from the point of view</p> <p>17 of the computer system in all the distribution</p> <p>18 areas. Obviously we have, you know, office</p> <p>19 services and JD Edwards access in the offices.</p> <p>20 So on the interconnected system, it is a</p> <p>21 component, but on the isolated system, I would</p> <p>22 suggest, from an overall point of view, it's</p> <p>23 low. But I'm really not comfortable answering</p> <p>24 that specific question. It's kind of buried</p> <p>25 there with everything else, in a sense, but</p>
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<p>1 that's all allocated out to that particular</p> <p>2 cost of service.</p> <p>3 (9:47 a.m.)</p> <p>4 Q. Mr. Downton or Mr. Dunphy have any view on</p> <p>5 that?</p> <p>6 MR. DOWNTON:</p> <p>7 A. Basically, I guess, further to what Mr. Haynes</p> <p>8 said, like if I look at the rural office like</p> <p>9 St. Anthony, Wabush, Happy Valley, typical</p> <p>10 services we provide there are access to JD</p> <p>11 Edwards, access to e-mail, some local</p> <p>12 computing resources as well. With regards to</p> <p>13 out in the diesel plants, right now, basically</p> <p>14 it would be limited to probably fax machines.</p> <p>15 So I guess the other associated costs with</p> <p>16 regards to St. Anthony, Happy Valley, Wabush,</p> <p>17 those area offices, would be actual purchase</p> <p>18 of band width say from Aliant to support the</p> <p>19 facility, to support, I guess, connecting</p> <p>20 those facilities back to Hydro Place. So it</p> <p>21 really comes down to, I guess, the actual band</p> <p>22 width and the provisioning of end user</p> <p>23 infrastructure for those particular sites.</p> <p>24 With regards to the EMS, basically there is</p> <p>25 very little distribution control done.</p>	<p>1 Primary focus areas, from what I can remember</p> <p>2 of the arrangement, would be basically some</p> <p>3 control of the Happy Valley terminal station,</p> <p>4 but basically nothing really out in the</p> <p>5 distribution side. On the Northern Peninsula,</p> <p>6 we basically have remote terminal units say at</p> <p>7 Cow Head and again, really it's just at the</p> <p>8 small station that's there at Hawke's Bay.</p> <p>9 It's pretty much related, focused on some of</p> <p>10 the main, what I call terminal</p> <p>11 stations/distribution stations, but we really</p> <p>12 don't go out on the line to do circuit</p> <p>13 switching. We pretty much keep it at a very</p> <p>14 high level with regards to distribution</p> <p>15 control through the energy management system.</p> <p>16 Q. So in your view, Hydro's involvement in the</p> <p>17 distribution does not add an extra significant</p> <p>18 cost to your communication and</p> <p>19 recomputerization of Hydro that people would</p> <p>20 look upon some sort of a duplication fee, the</p> <p>21 existing distributor in the province or at</p> <p>22 least in the island portion of the province?</p> <p>23 MR. HAYNES:</p> <p>24 A. I would suggest that it's not major. I mean,</p> <p>25 particularly in the areas where we're not, you</p>

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<p>1 know, adjacent to, for instance, Newfoundland</p> <p>2 Power. I mean, there are a couple of areas</p> <p>3 obviously where we're fairly close. But I</p> <p>4 would suggest it's very, very minimal.</p> <p>5 Q. You haven't done any analysis to look at that</p> <p>6 in saying we didn't have responsibility,</p> <p>7 therefore it would be -</p> <p>8 A. There were--I mean, there would have been</p> <p>9 discussions obviously with Newfoundland Power</p> <p>10 some years ago and I think that was presented</p> <p>11 to the Board, but basically, I think the</p> <p>12 conclusion was that it was no major savings.</p> <p>13 But I'm not aware of any detail.</p> <p>14 Q. That's my questions, sir. Thank you very</p> <p>15 much.</p> <p>16 CHAIRMAN:</p> <p>17 Q. Thank you, Commissioner Powell. Just a few</p> <p>18 questions. Did you have any questions,</p> <p>19 Commissioner Martin? Fine. I understood you</p> <p>20 to say you didn't.</p> <p>21 CROSS-EXAMINATION BY PRESIDING CHAIR FRED SAUNDERS</p> <p>22 CHAIRMAN:</p> <p>23 Q. When we were talking about your computer</p> <p>24 system generally, and I think it came up in</p> <p>25 relation to other matters during the course of</p>	<p>1 the hearing, you talked about security and the</p> <p>2 need for security. Do you have internal and</p> <p>3 external security advisors or are they all</p> <p>4 internal, in terms of their employ, or are</p> <p>5 they contracted?</p> <p>6 MR. DOWNTON:</p> <p>7 A. Both.</p> <p>8 Q. Both.</p> <p>9 A. We have a security officer basically within</p> <p>10 the IT department, and I guess what we have</p> <p>11 established within the IT department is a</p> <p>12 security committee, because it's a</p> <p>13 multifaceted operation, so they look at the</p> <p>14 different components and we also have</p> <p>15 contracted with Xwave in the past to do</p> <p>16 security reviews and currently we are</p> <p>17 basically engaging, I think the proper name is</p> <p>18 Electronic Warfare Associates Canada. They're</p> <p>19 basically an external vendor who provides</p> <p>20 services such as consulting and intrusion</p> <p>21 detection. So we basically, we also have</p> <p>22 access to others outside of Hydro, through</p> <p>23 various reports that we get. So we basically</p> <p>24 look at all of these different facets to</p> <p>25 determine what is an appropriate level of</p>
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<p>1 security.</p> <p>2 Q. So far, Mr. Downton, you've talked about</p> <p>3 security in relation to your records, IT</p> <p>4 system. What about security in relation to</p> <p>5 other assets of Hydro?</p> <p>6 A. Physical assets?</p> <p>7 Q. Yes.</p> <p>8 A. Basically the physical assets is the</p> <p>9 responsibility of Mr. Don Barrett, who</p> <p>10 basically is our risk and insurance--maybe</p> <p>11 Jim, you can speak to that.</p> <p>12 MR. HAYNES:</p> <p>13 A. Yes. Don participates with a group from the</p> <p>14 Canadian Electrical Association, which</p> <p>15 basically is, I recall the acronym used to</p> <p>16 describe it right, I don't recall that</p> <p>17 acronym, but basically, there is a fair</p> <p>18 ongoing dialogue between Canadian utilities on</p> <p>19 overall security issues, particularly since</p> <p>20 September 11th, and it's certainly taken a</p> <p>21 higher focus, and it is being followed by Don</p> <p>22 and we are looking at various things and, you</p> <p>23 know, change procedures and policies, in some</p> <p>24 cases, to respond to some of those</p> <p>25 discussions.</p>	<p>1 MR. DOWNTON:</p> <p>2 A. And I guess, further to that, our security</p> <p>3 officer, Janet Calver, Janet is a member as</p> <p>4 well of the Canadian Electrical Association's</p> <p>5 Critical Infrastructure Protection and the</p> <p>6 focus there is electronic security or, I</p> <p>7 guess, cyber security, and so we share</p> <p>8 information across the various utilities</p> <p>9 involved there and involved in various pilot</p> <p>10 projects to look at--supplies monitoring for</p> <p>11 security reasons, intrusion detection. So we</p> <p>12 basically share information pretty much on a--</p> <p>13 it seems like almost on a daily basis, I get</p> <p>14 alerts from other CEA utilities who basically</p> <p>15 are seeing worms, viruses, threats identified</p> <p>16 either through US or outside, indicating that</p> <p>17 we should be on alert, exposures through</p> <p>18 various pieces of software that are installed</p> <p>19 that we may or may not have installed in our</p> <p>20 systems. So we will go and check to see. So</p> <p>21 basically, it is a considerable undertaking to</p> <p>22 keep current with and proactive, from a</p> <p>23 security perspective. On a weekly basis, we</p> <p>24 basically see between five and six hundred</p> <p>25 hackers, trying to penetrate the network.</p>

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<p>1 Q. On a weekly basis?</p> <p>2 A. On a -</p> <p>3 Q. On a weekly basis, you said five to six</p> <p>4 hundred attempts?</p> <p>5 A. That's right, yes. Basically attempts in the</p> <p>6 sense that not inadvertent hits on the site,</p> <p>7 but basically attempts to penetrate, through</p> <p>8 various means, into the network.</p> <p>9 Q. Because you work in many areas so closely with</p> <p>10 Newfoundland Power, is there any--or is there</p> <p>11 a day-to-day interaction, if you like, between</p> <p>12 your security people and theirs, in terms of</p> <p>13 either your records and electronic records and</p> <p>14 so on or on the asset side?</p> <p>15 A. Myself and Peter, Peter Collins is my</p> <p>16 counterpart at Newfoundland Power, we</p> <p>17 basically have met on several occasions, and I</p> <p>18 guess our managers have gotten together as</p> <p>19 well. Basically, they share information from</p> <p>20 automated tools for roll-out to Citrix servers</p> <p>21 to security issues. So I basically leave it</p> <p>22 to the managers to interact and other people</p> <p>23 to interact with them on an as-required basis.</p> <p>24 We also expect that where Newfoundland Power</p> <p>25 are also part of the Canadian Electrical</p>	<p>1 Association, they probably get a lot of the</p> <p>2 same alerts from CEA that we do as well.</p> <p>3 Q. Can any of your Industrial Customers or any of</p> <p>4 your customers, industrial or otherwise,</p> <p>5 access any part of your IT system for</p> <p>6 purposes, let's for example say, first of all,</p> <p>7 using Newfoundland Power as an example, I'm a</p> <p>8 customer of Newfoundland Power and I can</p> <p>9 access my electricity usage on a monthly basis</p> <p>10 and find out how it compares with last year</p> <p>11 and so on, and I can do that from my home</p> <p>12 computer. Now is there any way in which that</p> <p>13 kind of a service is available to any of your</p> <p>14 customers, industrial or others?</p> <p>15 A. I'll take the chance on speaking to that.</p> <p>16 Really, it's Sam's area. We basically have</p> <p>17 added capability for our residential customers</p> <p>18 to access certain customer specific</p> <p>19 information, the details of which I don't</p> <p>20 know. But they can go in, as far as I know,</p> <p>21 go in and look at their bills and their usage.</p> <p>22 MR. HAYNES:</p> <p>23 A. My understanding is there would be a similar</p> <p>24 capability to our residential customers. On</p> <p>25 the Industrial Customers, the whole billing</p>
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<p>1 system, if you will, is different and that is</p> <p>2 not available, as far as I understand, to the</p> <p>3 Industrial Customers, but their bills</p> <p>4 obviously are much larger and they probably</p> <p>5 keep a more active look, if you will, than</p> <p>6 most of us as residential consumers.</p> <p>7 Q. How do you communicate with your Industrial</p> <p>8 Customers on a daily basis? Is that done--is</p> <p>9 there a direct line, for example, with Abitibi</p> <p>10 in Stephenville or any of the other Industrial</p> <p>11 Customers? You know, where it's so crucial</p> <p>12 that they would have to know what's going on</p> <p>13 on the supply side and be able to plan for</p> <p>14 their production, you know, what's the line of</p> <p>15 communication?</p> <p>16 A. There are several lines of communication, but</p> <p>17 the most common, basically, is through the</p> <p>18 Energy Control Centre, to our operations</p> <p>19 people, where they dialogue with their, for</p> <p>20 lack of a better word, I'll say their</p> <p>21 operators. I'm not sure what they're called,</p> <p>22 their electrical people at the plant. And</p> <p>23 basically, if there's any system changes, if</p> <p>24 there's any risk of interruption because of</p> <p>25 lighting going through or if we are taking</p>	<p>1 lines out of service which may put them in a</p> <p>2 more fragile situation, if we do have some</p> <p>3 unexpected event, basically that coordination</p> <p>4 is done on a daily basis and there are</p> <p>5 contacts. If there's any outage, any</p> <p>6 interruption or any possibility, basically</p> <p>7 they're contacted immediately and there's a</p> <p>8 dialogue between the control centres, if you</p> <p>9 will, of us and the--not only Newfoundland</p> <p>10 Power, but also all the Industrial Customers.</p> <p>11 That's been happening for quite a long time</p> <p>12 and then there are other meetings between--you</p> <p>13 know, we, for instance, meet generally with</p> <p>14 Newfoundland Power. I think right now we're</p> <p>15 on every second month or maybe every quarter,</p> <p>16 we meet and have a meeting at the executive</p> <p>17 level, myself and the vice-president,</p> <p>18 typically the vice-president of TRO. I attend</p> <p>19 often, not necessarily all the times. And we</p> <p>20 also meet with NARL and there are also joint</p> <p>21 utility meeting with all the users. So</p> <p>22 there's a fairly good line of communications,</p> <p>23 from my perspective, with Newfoundland Power</p> <p>24 and all the Industrial Customers.</p> <p>25 Q. While you're on that subject, I wanted to</p>

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<p>1 raise the matter that Mr. Kennedy discussed 2 with you yesterday, and that is the capability 3 say of the proposed VHF system that you have 4 in this Budget, in terms of it being able to 5 accommodate, if you like, Newfoundland Power's 6 needs down the road. I'm looking down the 7 road to a time when they're going to be 8 renewing their system like you're proposing to 9 do today. In the design of your system, have 10 you contemplated that possibility?</p> <p>11 A. We had said in our Business Case that the 12 system would be expandable to incorporate 13 Newfoundland Power's needs at some future 14 point in time.</p> <p>15 Q. When you say 'expandable' and I remember 16 reading that, at what costs would that 17 expansion -</p> <p>18 A. Well, you would have to go back and look at 19 our footprint, if you will, of our coverage 20 area versus Newfoundland Power. In my 21 understanding, there's probably about a 22 twenty-five to thirty percent overlap. So 23 obviously there should be towers and repeaters 24 that can be used. However, there's another 25 service area obviously where they are that we</p>	<p>1 have no presence. So there will be additional 2 capital required and when we go to an RFP, you 3 know, it will be my understanding that we will 4 go out with a specification that says if we 5 have seven hundred radios now, then obviously 6 we--and X number of repeaters, we would have 7 to put that in obviously as our initial 8 requirement that it would have to be 9 expandable to cover whatever that ultimate 10 number is, and that would require some 11 dialogue with Newfoundland Power.</p> <p>12 Q. Now you've had some dialogue with Newfoundland 13 Power, according to what you said yesterday?</p> <p>14 A. Yes, we have.</p> <p>15 Q. Has that dialogue, as you call it, progressed 16 to the point where you have discussed what the 17 costs may be of joint use of a system such as 18 the one you're proposing or an amalgamation of 19 two systems that are in place?</p> <p>20 (10:02 a.m.)</p> <p>21 A. My understanding, right now, and Eric can 22 obviously correct me if I'm wrong, is that we 23 did look at a preliminary number to 24 incorporate Newfoundland Power today and it's 25 in the order of three to four million dollars</p>
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<p>1 of additional capital to cover their coverage 2 area, and so on. However, I can't speak for 3 Newfoundland Power, but from the dialogue and 4 the meetings that were had is that they 5 basically do not see the necessity to replace 6 their system at this point in time. And 7 presumably, when they do, that that dialogue 8 will start. There is the caveat of course of 9 Industry Canada.</p> <p>10 Q. Yes, I understand that.</p> <p>11 A. Obviously have to have them on side.</p> <p>12 Q. How old is Newfoundland Power's system? Or 13 maybe I can put the question another way. 14 When have--you know, in your discussions with 15 Newfoundland Power, have you determined when 16 it is likely that they will be in a position 17 to look at replacing their system, the way in 18 which you're proposing to do with yours?</p> <p>19 A. I believe it's five to ten years from now. I 20 stand to be corrected by Mr. Dunphy.</p> <p>21 Q. So that's as close as it can be drawn is five 22 to ten years?</p> <p>23 A. Mr. Dunphy, if that's -</p> <p>24 MR. DUNPHY:</p> <p>25 A. I believe Mr. Downton mentioned that there had</p>	<p>1 been some discussions between Mr. Reeves, 2 perhaps, in Newfoundland Power?</p> <p>3 MR. DOWNTON:</p> <p>4 A. That has not been confirmed, but that was my 5 understanding, you'd be looking at a minimum 6 of five years.</p> <p>7 Q. A minimum of five years?</p> <p>8 A. Yes.</p> <p>9 Q. I made a note here in one of Mr. Hutchings' 10 questions, when he got into talking about 11 desktops, laptops and thin clients and so on. 12 How is the assessment made, within your 13 organization, as to what equipment of that 14 nature is supplied to each of your employees, 15 management and so on? How is that determined? 16 Is that--do you rely on any expertise to come 17 in and advise on that or do you do it within 18 your own group?</p> <p>19 MR. HAYNES:</p> <p>20 A. If I could just--I need to pass it over to 21 Eric for any detail, but from the point of 22 view of the laptop versus a desktop, 23 basically, I mean, there has been a fair 24 proliferation of laptops, but we have a fair 25 number of mobile staff, and there are a number</p>

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<p>1 of people who take work home as well, so  2 that's a convenience obviously. On the thin  3 clients, our objective is that in so far as we  4 can, that anybody who can go to a thin client  5 for doing the day-to-day work should be using  6 a thin client, because it's a cheaper or a  7 less overall cost of ownership and many of the  8 people in Hydro Place whose routine work  9 include just JD Edwards or just doing, you  10 know, word processing or whatever, if they can  11 use it, that's where we want to go, and we're  12 just deploying this now and we have a few  13 stations in service, which I understand are  14 quite successful and people are quite happy.  15 So we would like to promote that and push that  16 as far as we reasonably can. On the desktop  17 versus the laptop and so on, basically it's a  18 justification made by the different people  19 that they have a use for it and that they need  20 it mobile.</p> <p>21 Q. So you say justification made by the various  22 people that they require a desktop or a  23 laptop?</p> <p>24 A. IS&amp;T department encourage and will try to  25 obviously--they don't justify, I guess, what's</p>	<p>1 required, you know, for each specific  2 individual. Regional manager, the VP  3 responsible obviously can have input in that  4 there and should have input in that there.  5 It's not a "I'd like to have a Cadillac  6 desktop or a Cadillac laptop" and it's done.  7 It's not done like that. Basically, it's on a  8 needs basis, but there is some dialogue.</p> <p>9 MR. DOWNTON:</p> <p>10 A. The way we've worked through it is that we  11 basically start the vice-president level and  12 meet with the vice-president and the managers  13 and basically lay out, from our perspective,  14 where we should be going, and then that will  15 work down through the managers and basically  16 they have been very supportive of cost  17 reduction and basically putting infrastructure  18 out there that will meet their needs.  19 However, at the end of the day, it's the  20 business' responsibility to define their  21 requirements. If they need certain pieces of  22 software to do their business, then they  23 basically we will provide a computing platform  24 that will meet those requirements and that's  25 basically the way that we have handled it and</p>
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<p>1 our goal, working with the business, is to  2 further reduce printing technologies and also  3 to reduce the number of pieces of software  4 that we have and to work towards overall  5 minimizing our total cost of ownership for our  6 infrastructure, and that's where our focus is,  7 because as I mentioned, when you buy the end  8 user piece of equipment, that's only twenty  9 percent of your cost. What you're really  10 trying to do is to leverage the eighty percent  11 that is really your indirect cost over the  12 life cycle of that particular piece of  13 equipment and that's where our focus is, is to  14 minimize and reduce that eighty percent over  15 the three, four or five years for whatever  16 particular piece of end user equipment you're  17 using.</p> <p>18 Q. I remember a few years ago, Newfoundland Power  19 came in here and we got into a discussion  20 during the hearing on computers, laptops,  21 desktops and so on, and the term 'cascading'  22 was introduced, and I'm sure you're familiar  23 with that. And to give you an example, here  24 in this organization, I'm at the end of the  25 cascade where I sit and when I'm finished with</p>	<p>1 a computer or a printer, it goes through the  2 door. That's because my requirements are very  3 basic and simple, and I really only need a  4 computer to type up documents and letters and  5 orders and so on, and I usually do that  6 myself, and so that's all I need. It's a very  7 simple and basic requirement. But there are  8 other people in the organization here that do  9 more, what I'll call, sophisticated things  10 with the computer. So they require something  11 that's faster and so on. How does that work  12 in your organization or do you have such a  13 system in place?</p> <p>14 A. We have not used cascading. Basically  15 cascading does not reduce your total cost of  16 ownership because you continually touch that  17 particular unit. As a for instance, when we--  18 the intent and the way that we do it, is that  19 when we roll out a desktop, if you're going to  20 get a new desktop this year, you would get  21 whatever is the release of the operating  22 system that's current and will basically last  23 you through the lifetime of that desktop. So,  24 if that desktop is going to last you for four  25 year, then that operating system and those</p>

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<p>1 applications that you get, especially your</p> <p>2 office productivity applications, are rolled</p> <p>3 out in such a fashion that they will not have</p> <p>4 to be touched on a go forward basis. And the</p> <p>5 only time that they will be refreshed is when</p> <p>6 you get a new laptop in four years time.</p> <p>7 Every time you go back and touch that laptop,</p> <p>8 those are direct costs or indirect costs or</p> <p>9 involvement in total cost of ownership of that</p> <p>10 product. And basically, our discussions with</p> <p>11 others and research that's available through</p> <p>12 various areas indicates that cascading is not</p> <p>13 cost effective in reducing your overall total</p> <p>14 cost of ownership for end user boxes.</p> <p>15 Q. Regardless of the amount of usage that a</p> <p>16 person would have, what you're saying is that</p> <p>17 everybody in the organization has the same</p> <p>18 requirement?</p> <p>19 A. No. Basically, what we've done, we've</p> <p>20 segregated our requirements into at least</p> <p>21 three profiles. We basically have a thin</p> <p>22 client who basically has a very small</p> <p>23 computer profile. Then we have what we</p> <p>24 consider to be more of a, say, power user type</p> <p>25 profile which basically would have, say, an</p>	<p>1 engineering, or other applications or, say,</p> <p>2 drafting department. And then you have</p> <p>3 another profile which is, say, someone who is</p> <p>4 mobile.</p> <p>5 Q. But all the people in the various profiles,</p> <p>6 you class them the same. And when the</p> <p>7 refreshment process is done, it's done for all</p> <p>8 of them.</p> <p>9 A. When refreshment process, as far as the</p> <p>10 desktop and the operating system is done for</p> <p>11 all of them, but not all the applications are</p> <p>12 put on all the systems.</p> <p>13 Q. I understand that.</p> <p>14 A. So, if you have specific requirement, say, for</p> <p>15 this engineering package and Mr. Powell has an</p> <p>16 application for something else, well you'll</p> <p>17 only get that one and he'll only get that one.</p> <p>18 But both of you will have the same operating</p> <p>19 system, the same office productivity tools</p> <p>20 because that's what both of you use. I'm not</p> <p>21 sure if that helps clarify.</p> <p>22 COMMISSIONER POWELL:</p> <p>23 Q. It could be rather flattering from some</p> <p>24 employees to be referred to as Thins.</p> <p>25 A. Yes, we've had that discussion. Yes, Mr.</p>
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<p>1 Wells thought it was quite funny too when we</p> <p>2 had that initial discussion.</p> <p>3 CHAIRMAN:</p> <p>4 Q. Custom Systems Electronics, local firm, isn't</p> <p>5 it?</p> <p>6 A. Yes. I guess Custom System Electronic is a</p> <p>7 local firm that we've dealt with before. They</p> <p>8 were also the consultant for the government of</p> <p>9 the province of Nova Scotia in the deployment</p> <p>10 of their province wide trunked mobile radio</p> <p>11 system.</p> <p>12 Q. I see. I was going to ask you what their</p> <p>13 experience was in this area.</p> <p>14 A. Yes, so basically, Norm has worked in that</p> <p>15 area, I think, for at least four to five years</p> <p>16 just with the province of Nova Scotia and many</p> <p>17 other years through various consulting firms,</p> <p>18 he been involved with for mobile radio. He's</p> <p>19 also, from what I understand, is working with</p> <p>20 the Department of Justice in regarding their</p> <p>21 requirement for the RCMP/RNC and I think he's</p> <p>22 worked with other users even in the City of</p> <p>23 St. John's to assess their mobile radio</p> <p>24 requirements as well.</p> <p>25 Q. When you went looking for someone to advise</p>	<p>1 you in this area, did you interview others</p> <p>2 because Custom Systems Electronics?</p> <p>3 A. I guess over the last number of years, we've</p> <p>4 used others out of Nova Scotia and out of</p> <p>5 Ontario and basically what we found with the</p> <p>6 experience that Norm has and our knowledge or</p> <p>7 Norm that basically he would provide the</p> <p>8 experience and the background which is very</p> <p>9 current.</p> <p>10 Q. You mentioned that he had done some work in</p> <p>11 Nova Scotia on a similar system. I'm</p> <p>12 wondering, Ms. Greene, if it would be possible</p> <p>13 to get some kind of a resume of the company,</p> <p>14 the principles to follow, to give the board</p> <p>15 some idea as to the level of expertise, I</p> <p>16 guess that we're dealing with here because</p> <p>17 there's nothing in the file that I could find.</p> <p>18 GREENE, Q.C.:</p> <p>19 Q. No, there was nothing attached. There was a</p> <p>20 simple report from Mr. Cook. Yes, we'll</p> <p>21 provide that, Mr. Chair (UNDERTAKING).</p> <p>22 CHAIRMAN:</p> <p>23 Q. Okay. Can you describe the--you talked about</p> <p>24 two systems, this was yesterday and it was in</p> <p>25 relation, or at the time that Mr. Kennedy was</p>

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<p>1 questioning you. You talked about a standard</p> <p>2 system and a proprietary system. I just</p> <p>3 wanted to get on the record what the</p> <p>4 difference is, as you see it, between those</p> <p>5 two systems and if you could use a few brief</p> <p>6 words to describe each one.</p> <p>7 A. I'll let Mr. Dunphy answer that one.</p> <p>8 Q. Okay.</p> <p>9 MR. DUNPHY:</p> <p>10 A. Well, as well see it, a proprietary is one</p> <p>11 that's manufactured solely by one manufacturer</p> <p>12 and not available from any other source. And</p> <p>13 an example would be the ATI system that we</p> <p>14 currently have whereby ABI (phonetic) was the</p> <p>15 sole source of all the parts for the system.</p> <p>16 Standards base system is a system that where</p> <p>17 the standard is available to the industry and</p> <p>18 more than one manufacturer supports the</p> <p>19 equipment.</p> <p>20 Q. Okay. Those are all the questions that I have</p> <p>21 at this time of these witnesses. Mr. Hayes,</p> <p>22 do you have any questions arising from any of</p> <p>23 the Board questions?</p> <p>24 MR. HAYES:</p> <p>25 Q. No questions arising, Mr. Chair.</p>	<p>1 CHAIRMAN:</p> <p>2 Q. Okay. Mr. Hutchings or Ms. Henley Andrews?</p> <p>3 MS. HENLEY ANDREWS:</p> <p>4 Q. I don't, Mr. Chairman.</p> <p>5 MR. HUTCHINGS:</p> <p>6 Q. No.</p> <p>7 CHAIRMAN:</p> <p>8 Q. Mr. Kennedy?</p> <p>9 MR. KENNEDY:</p> <p>10 Q. None, Chair, no.</p> <p>11 CHAIRMAN:</p> <p>12 Q. So, that I guess, leads us back to you, Ms.</p> <p>13 Greene.</p> <p>14 GREENE, Q.C.:</p> <p>15 Q. And I have no questions arising from the</p> <p>16 questions of the Commissioners.</p> <p>17 CHAIRMAN:</p> <p>18 Q. Very well. Then are we done with the panel?</p> <p>19 GREENE, Q.C.:</p> <p>20 Q. The only question in my mind is with respect</p> <p>21 to, as I mentioned earlier, the information</p> <p>22 eluded to by Mr. Hutchings in his cross-</p> <p>23 examination on whether there's a true apples</p> <p>24 to apples comparison. And I'm not sure if</p> <p>25 that will be available at this point in time.</p>
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<p>1 It might be useful if I was able to put it in</p> <p>2 through the panel and get Mr. Downton to speak</p> <p>3 to it. And I'm not sure if my resource person</p> <p>4 actually has it ready.</p> <p>5 CHAIRMAN:</p> <p>6 Q. Well, why don't we break now and give you an</p> <p>7 opportunity to explore that.</p> <p>8 GREENE, Q.C.:</p> <p>9 Q. And it may be that it's not ready to be filed</p> <p>10 now and we'll have to file it later. And if</p> <p>11 necessary, recall the witness, I guess.</p> <p>12 CHAIRMAN:</p> <p>13 Q. Okay. So, then when we resume, you'll be able</p> <p>14 to let us know about that matter. Then you'll</p> <p>15 be calling Mr. Roberts.</p> <p>16 GREENE, Q.C.:</p> <p>17 Q. Mr. Roberts, John Roberts who is the vice</p> <p>18 president of finance and chief financial</p> <p>19 officer. He's the next witness to be called</p> <p>20 by Hydro.</p> <p>21 CHAIRMAN:</p> <p>22 Q. So, we'll break for 15 minutes. Thank you.</p> <p>23 (BREAK - 10:17 A.M.)</p> <p>24 (RESUMED AT 10:37 A.M.)</p> <p>25 CHAIRMAN:</p>	<p>1 Q. I see the panel is still in place, so you must</p> <p>2 have something further, Ms. Greene?</p> <p>3 GREENE, Q.C.:</p> <p>4 Q. Yes, Mr. Chair. We're in a position to</p> <p>5 respond to two; one relates to the question</p> <p>6 from Commissioner Powell on the breakdown of</p> <p>7 the cost for Project B-22 in comparison to the</p> <p>8 similar project last year; and the other one</p> <p>9 is with respect to the cost of the standard</p> <p>10 S50 and what I would propose with respect to</p> <p>11 the second question, if this is acceptable, is</p> <p>12 to review it orally with Mr. Downton and</p> <p>13 undertake to file the copies of the website</p> <p>14 pages from IBM. We didn't have time during</p> <p>15 the break to actually get the copies, but Mr.</p> <p>16 Downton has reviewed them and he has the</p> <p>17 information to be able to verbally respond,</p> <p>18 and we will file the Canadian website pages</p> <p>19 with the pricing on them as soon as--I'm not</p> <p>20 even sure if we can do it because we only have</p> <p>21 another 15 minute break, but I would undertake</p> <p>22 to file the copies of the website pages that</p> <p>23 he is relying on. (UNDERTAKING)</p> <p>24 CHAIRMAN:</p> <p>25 Q. Okay.</p>



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<p>1 GREENE, Q.C.:</p> <p>2 Q. The first question is to Mr. Haynes and it</p> <p>3 relates to Commissioner Powell's question with</p> <p>4 respect to Project B-22. And there was a</p> <p>5 question related to the similar project last</p> <p>6 year to explain the difference in the</p> <p>7 corporate overheads, the last line there in</p> <p>8 the project cost in comparison to last year.</p> <p>9 Did you have the opportunity to do that over</p> <p>10 the break, Mr. Haynes?</p> <p>11 MR. HAYNES:</p> <p>12 A. Yes, the difference, the overhead and</p> <p>13 contingency in both of those projects were the</p> <p>14 same at 110 for overhead and 167 for</p> <p>15 contingency. The difference was only in the</p> <p>16 escalation section which in last year's budget</p> <p>17 was \$49,000.00 and the current proposal is 138</p> <p>18 which is, as I had suggested. So the basic</p> <p>19 spreadsheet was done in the same, you know,</p> <p>20 2001 or whatever it was dollars and the</p> <p>21 escalation was just adjusted to -</p> <p>22 COMMISSIONER POWELL:</p> <p>23 Q. So that increase was -</p> <p>24 A. With our standard escalation factors.</p> <p>25 Q. Okay, assuming inflation 203 versus 205.</p>	<p>1 A. 1.8 percent I believe was there, but whatever</p> <p>2 the standard number is.</p> <p>3 CHAIRMAN:</p> <p>4 Q. That escalation is on all of the elements?</p> <p>5 A. Yes, I believe it is.</p> <p>6 Q. I assume it is.</p> <p>7 A. Yeah, I believe so.</p> <p>8 GREENE, Q.C.:</p> <p>9 Q. The next question did relate to the costing</p> <p>10 available on the IBM website for standard S50.</p> <p>11 Mr. Downton, have you had the opportunity to</p> <p>12 review the website for IBM, the Canadian</p> <p>13 website as of today?</p> <p>14 MR. DOWNTON:</p> <p>15 A. Yes.</p> <p>16 Q. And what is the--first of all, how many</p> <p>17 different models or, I'll call them models, of</p> <p>18 S50? Is there only one such S50?</p> <p>19 A. No, there are, one, two, three, four--I'd say</p> <p>20 12 different models of S50.</p> <p>21 Q. And that relates to the capacity of the unit,</p> <p>22 those are the different types?</p> <p>23 A. Yes, it does.</p> <p>24 Q. For the lowest capacity one on the Canadian</p> <p>25 website, could you say what the capacity is</p>
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<p>1 and please indicate the cost?</p> <p>2 A. Basically the lowest capacity unit is a Think</p> <p>3 Centre S50 and basically it's a 2.6 gigahertz,</p> <p>4 Intel 40 gigabytes, CD Rom, 256 megabytes of</p> <p>5 memory.</p> <p>6 Q. And what is the cost in Canadian dollars on</p> <p>7 today's -</p> <p>8 A. The cost in Canadian is \$1,479.00.</p> <p>9 Q. Does that cost include the cost of the</p> <p>10 monitor?</p> <p>11 A. No, it doesn't.</p> <p>12 Q. Is there a separate item on the website for</p> <p>13 the cost of the monitor?</p> <p>14 A. Yes.</p> <p>15 Q. And the cost of the monitor is?</p> <p>16 A. \$249.00.</p> <p>17 Q. Does that cost include the cost of shipping to</p> <p>18 the purchaser?</p> <p>19 A. No, it doesn't.</p> <p>20 Q. Does that cost include the extended warranty</p> <p>21 available to Hydro?</p> <p>22 A. No, it doesn't.</p> <p>23 Q. Have you had the opportunity to determine the</p> <p>24 all-up cost of that quote, including what</p> <p>25 would be comparable to the Hydro cost you</p>	<p>1 quoted?</p> <p>2 A. \$1,956.00.</p> <p>3 Q. Thank you, Mr. Downton. We will provide</p> <p>4 copies of those website pages, including the</p> <p>5 costing of the different units, as well as the</p> <p>6 cost for monitors. Thank you, that concludes</p> <p>7 my questions arising at this point.</p> <p>8 CHAIRMAN:</p> <p>9 Q. Okay, any questions resulting? Mr. Hutchings.</p> <p>10 HUTCHINGS, Q.C.:</p> <p>11 Q. There are, Mr. Chair, I'm just wondering</p> <p>12 whether it is best to see the material prior</p> <p>13 because there seems to be some additional cost</p> <p>14 in addition to the monitor to make up the</p> <p>15 \$1956.00. Maybe Mr. Downton is in a position</p> <p>16 to address those now, if you want me to go</p> <p>17 ahead.</p> <p>18 CHAIRMAN:</p> <p>19 Q. Oh yes, we an attempt it.</p> <p>20 HUTCHINGS, Q.C.:</p> <p>21 Q. Sure.</p> <p>22 CHAIRMAN:</p> <p>23 Q. If he can't, then he'll have to let us know</p> <p>24 that.</p> <p>25 HUTCHINGS, Q.C.:</p>

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<p>1 Q. So, Mr. Downton, in addition to replacing the</p> <p>2 desk copy unit itself, you plan to replace 73</p> <p>3 monitors, is that correct?</p> <p>4 A. That is correct, it's all part of one unit.</p> <p>5 Q. Do you have any material to indicate that the</p> <p>6 appropriate refresh period for a monitor is</p> <p>7 four years?</p> <p>8 A. Typically the monitor and the desktop are</p> <p>9 considered to be one unit.</p> <p>10 Q. You're saying that you should be basing--using</p> <p>11 a similar service life for both monitors and</p> <p>12 the computing unit itself?</p> <p>13 A. That's what we do, we refresh both at the same</p> <p>14 time.</p> <p>15 Q. What's the difference then between the price</p> <p>16 of \$1,956, if you take out the monitor, what's</p> <p>17 the additional cost of the other items?</p> <p>18 A. Basically there's a four-year warranty which I</p> <p>19 believe is \$99.00; and then there's a delivery</p> <p>20 cost of--I'm not sure what the delivery cost</p> <p>21 would be for this particular unit, but Hydro's</p> <p>22 delivery cost would be, say \$14.95.</p> <p>23 Q. Your delivery cost is \$14.95?</p> <p>24 A. Yes.</p> <p>25 Q. Okay.</p>	<p>1 A. Plus also a cost that's not included that</p> <p>2 Hydro gets because of its bulk buying is that</p> <p>3 we get our system image free, so when it comes</p> <p>4 from the factory, it's already pre-imaged with</p> <p>5 the software that we need on it.</p> <p>6 Q. I'm trying to add up the numbers that you've</p> <p>7 given me. The 1479 plus the 249, plus the 99</p> <p>8 brings me to 1827, is that correct?</p> <p>9 A. I haven't done my math because I don't have a</p> <p>10 calculator.</p> <p>11 Q. I leave \$129.00 unaccounted for from the 1956</p> <p>12 that you said was the all-up cost.</p> <p>13 A. 1479 plus 249, plus 99, plus 1495 and</p> <p>14 basically what we're comparing there is 2. 6</p> <p>15 kigahertz unit and basically for what, from my</p> <p>16 understanding for what Hydro has is a 2. 8</p> <p>17 kigahertz unit which actually the cost for</p> <p>18 that unit is 1579. I was quoting the number</p> <p>19 that I think you had referenced, so the base</p> <p>20 unit is 1579, not 1479.</p> <p>21 Q. So your answer yesterday that you were</p> <p>22 considering the standard S50 unit is not</p> <p>23 entirely correct?</p> <p>24 A. It's a standard S50 unit as basically</p> <p>25 identified here. Basically there's 12</p>
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<p>1 different S50 units and we're picking one of</p> <p>2 the standard units.</p> <p>3 Q. Standard one is 2.66 kigahertz, right?</p> <p>4 A. Basically there's 12 units here and we picked</p> <p>5 one of the standard units. The standard</p> <p>6 offered by IBM.</p> <p>7 Q. I think we've pursued that sufficiently, Mr.</p> <p>8 Chair. Thank you.</p> <p>9 CHAIRMAN:</p> <p>10 Q. Are you finished now, Mr. Hutchings?</p> <p>11 HUTCHINGS, Q.C.:</p> <p>12 Q. I am, thank you, sir.</p> <p>13 CHAIRMAN:</p> <p>14 Q. We overlooked you, Mr. Hayes. Did you have</p> <p>15 anything arising?</p> <p>16 MR. HAYES:</p> <p>17 Q. No, thank you, Mr. Chair.</p> <p>18 CHAIRMAN:</p> <p>19 Q. Mr. Kennedy?</p> <p>20 MR. KENNEDY:</p> <p>21 Q. Nothing arising, Mr. Chair.</p> <p>22 CHAIRMAN:</p> <p>23 Q. Okay, then Ms. Greene, I guess we're ready to</p> <p>24 let this panel go?</p> <p>25 GREENE, Q.C.:</p>	<p>1 Q. Yes, Mr. Chair we are. We only have a couple</p> <p>2 of undertakings that I believe we can address</p> <p>3 through written documentation, plus we will</p> <p>4 file, as I mentioned, the website pages</p> <p>5 referred to and we will indicate the cost to</p> <p>6 confirm with the transcript of what those</p> <p>7 additional costs are.</p> <p>8 CHAIRMAN:</p> <p>9 Q. They looked so comfortable there, I wanted to</p> <p>10 be sure that you were finished with them.</p> <p>11 Thank you gentlemen. I appreciate your help</p> <p>12 in this matter. Okay, Ms. Greene.</p> <p>13 MR. JOHN ROBERTS (SWORN) EXAMINATION-IN-CHIEF BY MAUREEN</p> <p>14 GREENE, Q.C.</p> <p>15 Q. Mr. Roberts, what is your current position</p> <p>16 with Hydro and what are the responsibilities</p> <p>17 of that position?</p> <p>18 A. I am the vice-president of finance and chief</p> <p>19 financial officer of Newfoundland and Labrador</p> <p>20 Hydro and its related companies. I have</p> <p>21 responsibility for the controllership function</p> <p>22 which would include financial reporting and</p> <p>23 budgeting and general accounting. I have</p> <p>24 responsibility for the treasury activities</p> <p>25 which would primarily include cash management</p>

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<p>1 and long-term debt issues. I have</p> <p>2 responsibility for rates and customer</p> <p>3 services, including financial planning and I</p> <p>4 have responsibility for the risk and insurance</p> <p>5 management.</p> <p>6 Q. Mr. Roberts, how long have you been with</p> <p>7 Hydro?</p> <p>8 A. I have been with Hydro nineteen and one half</p> <p>9 years.</p> <p>10 Q. And I believe you assumed your current</p> <p>11 position in January of this year. What</p> <p>12 position did you hold prior to that?</p> <p>13 A. I originally joined Hydro in December 1983 as</p> <p>14 the accounting manager in the corporate</p> <p>15 controller's department; and in 1985, I was</p> <p>16 appointed corporate controller for the Hydro</p> <p>17 group and I remained in that position until</p> <p>18 January 1st of this year when I became vice-</p> <p>19 president of finance.</p> <p>20 Q. Mr. Roberts, evidence was pre-filed by Hydro</p> <p>21 on May 16th called "Finance Evidence". Was</p> <p>22 this prepared under your direction?</p> <p>23 (10:52 a.m.)</p> <p>24 A. Yes, it was.</p> <p>25 Q. Do you accept this evidence as yours for the</p>	<p>1 purposes of this hearing?</p> <p>2 A. Yes, I do.</p> <p>3 Q. A revised Section F to the application was</p> <p>4 filed on July 4th, 2003. Was this revised</p> <p>5 Section F being the update of the 2003 Capital</p> <p>6 Budget expenditures prepared under your</p> <p>7 direction?</p> <p>8 A. Yes, it was.</p> <p>9 Q. And do you accept this as your evidence for</p> <p>10 the purposes of the hearing?</p> <p>11 A. Yes, I do.</p> <p>12 Q. Could you please give a brief outline of the</p> <p>13 Capital Budget process that was followed by</p> <p>14 Hydro in the preparation of this 2004 Capital</p> <p>15 Budget?</p> <p>16 A. Pages 2 to 4 of my evidence outlines the</p> <p>17 process that's followed and in addition to</p> <p>18 that, in a response to the Industrial</p> <p>19 Customers in IC-1 outlines key dates that were</p> <p>20 followed during the preparation of the 2004</p> <p>21 Capital Budget process. In a very summarized</p> <p>22 fashion, it basically starts with the issuance</p> <p>23 of some instructions in late December and in</p> <p>24 early January is when the budget process</p> <p>25 starts in earnest by the field personnel in</p>
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<p>1 identifying the potential Capital Budget</p> <p>2 items. This is followed on with reviews</p> <p>3 within the various areas by the supervisory</p> <p>4 staff and the various managers and directors,</p> <p>5 leading into a review by the various vice-</p> <p>6 presidents and then finally into a review by</p> <p>7 management committee which is normally in</p> <p>8 April of May of each year. Following that</p> <p>9 review, the information is then used for the</p> <p>10 preparation of the budget for our Hydro Board</p> <p>11 of Directors, and after that approval, it's</p> <p>12 used in the preparation of the Capital Budget</p> <p>13 Application for a presentation to the Public</p> <p>14 Utilities Board.</p> <p>15 Q. And was that process that you outlined applied</p> <p>16 to the 2004 Capital Budget?</p> <p>17 A. Yes, it was. What would happen is that the</p> <p>18 2003 and 2004 Capital Budget were done</p> <p>19 simultaneously and there were additional</p> <p>20 review dates encompassed for purposes of the</p> <p>21 2004 Capital Budget.</p> <p>22 Q. So the 2004 Budget was reviewed and updated</p> <p>23 after its initial preparation?</p> <p>24 A. Yes, it was.</p> <p>25 Q. What is the role that your particular position</p>	<p>1 plays, the vice-president of finance with</p> <p>2 respect to a Capital Budget in the preparation</p> <p>3 phase?</p> <p>4 A. My role commences, as I mentioned earlier,</p> <p>5 with the issuance of instructions and a</p> <p>6 timetable underneath my signature in late</p> <p>7 December. Following that, staff in the</p> <p>8 finance department provide guidance and</p> <p>9 support to other areas of the corporation in</p> <p>10 the preparation of the Capital Budget</p> <p>11 Proposals, as well, I would be involved in</p> <p>12 reviewing proposals for the various sections</p> <p>13 underneath my area of control, be it in rates</p> <p>14 and customer services, be it in treasury, for</p> <p>15 any proposals that they may have. I also</p> <p>16 would act as a member of management committee</p> <p>17 in reviewing the various proposals and in that</p> <p>18 case, all proposals are reviewed by all</p> <p>19 members of the management committee. I'm also</p> <p>20 involved in the preparation of the Capital</p> <p>21 Budget to Hydro's Board of Directors and the</p> <p>22 subsequent preparation of the Capital Budget</p> <p>23 Application for the Public Utilities Board.</p> <p>24 Q. Once a budget, an Annual Capital Budget is</p> <p>25 approved, what is the role of the vice-</p>

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<p>1 president of finance and chief financial 2 officer?</p> <p>3 A. My responsibility is to ensure that there's a 4 proper operating reporting system in place to 5 provide the necessary information on the 6 Capital Budgets that are now termed in what we 7 refer to as the Capital Job Cost, to ensure 8 that the information is there to assist the 9 supervisors, directors and managers to manage 10 these projects; and also involved in the 11 reporting to with the vice-presidents to the 12 management committee, also the Hydro Board of 13 Directors and on a quarterly basis to the 14 Public Utilities Board, as well as on the 15 annual reporting on the results of the year's 16 capital program to the Public Utilities Board.</p> <p>17 Q. Hydro is seeking approval of approximately 18 34.2 million dollars, capital expenditures for 19 2004. How does that size of capital budget 20 compare to previous capital budgets submitted 21 by Hydro?</p> <p>22 A. Our actual average capital expenditures for 23 the last six years were approximately 38.3 24 million.</p> <p>25 Q. And within that range the highest capital</p>	<p>1 budget would have been in excess of 50 million 2 dollars, is that correct?</p> <p>3 A. I believe that to be correct.</p> <p>4 Q. Has Hydro developed or does Hydro use any 5 guidelines in determining the amount of 6 capital expenditures that should be budgeted 7 for any year?</p> <p>8 A. Hydro uses the guidelines that it refers to as 9 its net cash from operations, and in that, the 10 two prime items that represent the cash flow 11 from our operations is net income and 12 depreciation. That's been the guidelines that 13 have been established and a rule of thumb 14 recognizing that it is only a guideline and 15 that at certain times it will be deviated from 16 that. In the last couple of years, we have 17 endeavoured to try and maintain our capital 18 program in the range of just the annual amount 19 for depreciation, which has been approximately 20 about 32 to 33 million dollars.</p> <p>21 Q. And why has Hydro developed the use of that, 22 as I think you call it "the rule of thumb" or 23 "guideline" for the amount of the budget?</p> <p>24 A. Hydro feels this is a manageable level to deal 25 with from a financing perspective and also</p>
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<p>1 takes into account the work to be done to 2 maintain the reliability of the system, and to 3 ensure completion of the projects on a timely 4 basis.</p> <p>5 Q. How will the proposed 2004 capital 6 expenditures be financed?</p> <p>7 A. With the level of program for 2004, the 8 program will be financed from a combination of 9 internally generated funds and the issuance of 10 some short-term promissory notes.</p> <p>11 Q. Thank you, Mr. Roberts. That concludes the 12 direct examination of Mr. Roberts.</p> <p>13 CHAIRMAN:</p> <p>14 Q. Thank you, Ms. Greene. Mr. Hayes?</p> <p>15 MR. HAYES:</p> <p>16 Q. We have no questions for Mr. Roberts, Mr. 17 Chair.</p> <p>18 CHAIRMAN:</p> <p>19 Q. No questions. Industrial Customers?</p> <p>20 HENLEY ANDREWS, Q.C.:</p> <p>21 Q. Thank you, Mr. Chairman.</p> <p>22 CHAIRMAN:</p> <p>23 Q. Ms. Henley Andrews.</p> <p>24 MR. ROBERTS, CROSS-EXAMINATION BY JANET HENLEY ANDREWS, 25 Q.C.</p>	<p>1 Q. Mr. Roberts, you were appointed into your 2 current position, you said in January of this 3 year?</p> <p>4 A. Yes, I was.</p> <p>5 Q. And what did you say your position was 6 directly before that?</p> <p>7 A. I was the corporate controller for the Hydro 8 Group of Companies.</p> <p>9 Q. And in your position as corporate controller, 10 did you have any involvement with the 11 preparation of the 2004 budget prior to 12 January?</p> <p>13 A. Yes, I did.</p> <p>14 Q. And what was that involvement?</p> <p>15 A. My department, underneath my direction, 16 prepared the budget instructions and timetable 17 that were subsequently issued underneath the 18 signature of the vice-president of finance. 19 Staff within the controller's department 20 provided assistance and guidance to various 21 areas that are producing Capital Budget 22 Proposals. We also prepared the summarized 23 documents for review by the management 24 committee, Board of Directors, as well as the 25 Public Utilities Board.</p>

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<p>1 Q. So how do you carry out that role? What</p> <p>2 exactly do you do in that role?</p> <p>3 A. In my previous role, I assisted in answering</p> <p>4 queries relative to the interpretation of the</p> <p>5 guidelines, in assessing the impact of changes</p> <p>6 in timetables, looking at the impact on the</p> <p>7 overall deadlines that are established. I was</p> <p>8 involved in the actual preparation of very</p> <p>9 limited proposals. I also reviewed all</p> <p>10 proposals and acted in an advisory role to the</p> <p>11 management committee during their review of</p> <p>12 the various proposals.</p> <p>13 Q. So when you review a proposal, what do you do?</p> <p>14 A. My review was limited for whether or not it</p> <p>15 was completed, somebody could understand it</p> <p>16 and was there items in there that would come</p> <p>17 to my attention that I may raise questions on</p> <p>18 to say was this considered, those types of a</p> <p>19 review scenario. I would also be looking at</p> <p>20 from the point of view of whether or not some</p> <p>21 of these items would be a capital or an</p> <p>22 operating nature because the development of</p> <p>23 the individual proposals, once they're</p> <p>24 finalized and end up coming forward, may</p> <p>25 contain some items that may be of an operating</p>	<p>1 nature, rather than capital, so my staff, as</p> <p>2 well as myself, would do a reviews on some of</p> <p>3 these proposals to ensure -</p> <p>4 Q. Is it fair to say that your role in your</p> <p>5 previous position was more of a role of an</p> <p>6 accounting nature than of an analysis of the</p> <p>7 prudence of the project?</p> <p>8 A. Yes, it would be more in the accounting and</p> <p>9 the administrative side of the process.</p> <p>10 Q. And in your current role, is that still the</p> <p>11 same?</p> <p>12 A. I think that role would now be expanded.</p> <p>13 Q. And what is the expanded role?</p> <p>14 A. To provide as much input and advice and form</p> <p>15 part of management in reviewing these</p> <p>16 proposals as to whether or not management is</p> <p>17 prepared to authorize and approve their</p> <p>18 acceptance for a particular year.</p> <p>19 Q. And how do you do that?</p> <p>20 A. By additional in-depth analysis and review,</p> <p>21 discussions with vice-presidents, discussion</p> <p>22 with senior managers, attendance at the</p> <p>23 various management committee meetings to</p> <p>24 review those as part of the management</p> <p>25 committee group.</p>
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<p>1 Q. And what in-depth analysis did you do with</p> <p>2 respect to these projects for 2004?</p> <p>3 A. If I required additional information, then I</p> <p>4 would request it of the individual that would</p> <p>5 be involved.</p> <p>6 Q. Who does the financial and cost analysis of</p> <p>7 the various projects?</p> <p>8 A. The cost analysis and preparation of the</p> <p>9 information is all done by the various</p> <p>10 divisions and the people within those various</p> <p>11 divisions.</p> <p>12 Q. So finance doesn't have a role in looking at</p> <p>13 the cost comparisons?</p> <p>14 A. Finance does a review role. There is "a</p> <p>15 standardized methodology" of preparing the</p> <p>16 things and there's a developed spreadsheet</p> <p>17 that's done to assist the various persons that</p> <p>18 are preparing the capital budgets and the role</p> <p>19 of finance is to accumulate all this</p> <p>20 information. Sometimes you can spot an</p> <p>21 obvious error and if so, to have those</p> <p>22 corrected, but the actual preparation of the</p> <p>23 individual capital budget responsibilities are</p> <p>24 the responsibilities of the areas.</p> <p>25 Q. So when you're doing that type of a review</p>	<p>1 with respect to spreadsheets, those types of</p> <p>2 things, is it fair to say that you're looking</p> <p>3 at more of the process that was employed than</p> <p>4 the actual content of assumptions, for</p> <p>5 example?</p> <p>6 A. You're looking at a process and consistency</p> <p>7 that, you know, if a project is spending, say</p> <p>8 more than one year that, you know, there is</p> <p>9 items taken in for escalation, is there a</p> <p>10 contingency there. For instance, if it</p> <p>11 happens to be a direct purchase, then we know</p> <p>12 there should be no allowance for funds used</p> <p>13 during construction charged to that particular</p> <p>14 proposal, so it's a pure accounting review</p> <p>15 that's being carried on.</p> <p>16 Q. Does the chief financial officer have any</p> <p>17 responsibility with respect to Hydro's</p> <p>18 legislative mandate?</p> <p>19 A. I'm not sure how I can answer that for you.</p> <p>20 Legislation is in place through various means</p> <p>21 and legal counsel would provide the guidance</p> <p>22 and advice that would be required as and when</p> <p>23 it arose.</p> <p>24 Q. Well with respect to the power policy of the</p> <p>25 province that's set out in the Electrical</p>

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<p>1 Power Control Act, compliance with that, is</p> <p>2 that something that's within your</p> <p>3 responsibility?</p> <p>4 A. I guess in a round-about way, as a member of</p> <p>5 the management committee, I have that</p> <p>6 responsibility or at least I share in that</p> <p>7 responsibility of ensuring that it's there.</p> <p>8 Q. And are you familiar with the provisions of</p> <p>9 the Electrical Power Control Act?</p> <p>10 A. I have read it on numerous occasions, if</p> <p>11 you're referring to Section 3.</p> <p>12 Q. Would you agree that the role includes</p> <p>13 satisfying the Public Utilities Board that</p> <p>14 Hydro is achieving the objectives set out in</p> <p>15 the power policy?</p> <p>16 A. Yes.</p> <p>17 Q. And if we look at that, I'm only just going to</p> <p>18 refer to the submission of the Industrial</p> <p>19 Customers, our pre-hearing submission because</p> <p>20 on page 6 and Section 3(b) requires that the</p> <p>21 provision of electricity be the result in the</p> <p>22 most efficient production, transmission and</p> <p>23 distribution of power?</p> <p>24 A. Yes.</p> <p>25 Q. And also has to result in power being</p>	<p>1 delivered to consumers in the province at the</p> <p>2 lowest possible cost, consistent with reliable</p> <p>3 service, is that correct?</p> <p>4 A. That's correct.</p> <p>5 Q. is that one of the criteria that has been</p> <p>6 adopted by Hydro with respect to its capital</p> <p>7 budgeting process?</p> <p>8 A. I believe Hydro is always endeavouring to try</p> <p>9 and provide power at the least possible cost,</p> <p>10 consistent with the mandate as set out.</p> <p>11 Q. But that's not my question. My question is,</p> <p>12 has Hydro adopted in the capital budgeting</p> <p>13 process as a criteria that the projects must</p> <p>14 be focused on the lowest possible cost</p> <p>15 consistent with reliable service?</p> <p>16 A. As an absolute adoption?</p> <p>17 Q. Yes.</p> <p>18 A. I would say no, but I would suggest to you</p> <p>19 that it may not be a written and adoption of</p> <p>20 that, but that is the way that Hydro reviews</p> <p>21 its capital budget and prepares it.</p> <p>22 (11:07 a.m.)</p> <p>23 Q. Well let's, first of all, go through the</p> <p>24 budgeting process that you've been talking</p> <p>25 about for the 2004 Capital Budget. Is it fair</p>
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<p>1 to say that the budget process was expedited</p> <p>2 for this year's budget?</p> <p>3 A. No, I wouldn't say it was expedited.</p> <p>4 Q. Well why were the 2003 and 2004 Capital</p> <p>5 Budgets done simultaneously?</p> <p>6 A. Because there is no other way in which that</p> <p>7 you can do 2004 and to be able to file the</p> <p>8 General Rate Application that we required.</p> <p>9 Q. So it was affected by the General Rate</p> <p>10 Application?</p> <p>11 A. That's correct.</p> <p>12 Q. And the normal process was outlined in the</p> <p>13 2003 Capital Budget by Mr. Osmond and I'm</p> <p>14 referring now to page 4 of October 28th of</p> <p>15 2002.</p> <p>16 CHAIRMAN:</p> <p>17 Q. What document is that, Ms. Henley Andrews?</p> <p>18 HENLEY ANDREWS, Q.C.:</p> <p>19 Q. Pardon me?</p> <p>20 CHAIRMAN:</p> <p>21 Q. What document is that?</p> <p>22 MS. HENLEY ANDREWS, Q.C.:</p> <p>23 Q. It is the transcript from the 2003 Capital</p> <p>24 Budget hearing. And he said that "the</p> <p>25 process, the actual capital budget process</p>	<p>1 starts in January and even prior to that, the</p> <p>2 load forecast, long-term load forecast, it</p> <p>3 starts in December to determine what</p> <p>4 generation projects we have." So normally it</p> <p>5 would start in January, is that correct?</p> <p>6 A. Yes, the budget instructions are issued in</p> <p>7 December and within those budget instructions</p> <p>8 would outline key dates for commencement of</p> <p>9 certain activities and completion of certain</p> <p>10 activities.</p> <p>11 Q. But in the case of the 2004 Capital Budget, it</p> <p>12 was actually started quite early in 2003,</p> <p>13 would you agree?</p> <p>14 A. It was started at the same time as the 2003</p> <p>15 commenced. The issuance of the instructions</p> <p>16 outlined that we would be filing a General</p> <p>17 Rate Application for 2004 and employees were</p> <p>18 asked to develop both the 2003 and the 2004 at</p> <p>19 the same time.</p> <p>20 Q. Now when you refer to instructions being</p> <p>21 issued to the department, what type--what is</p> <p>22 contained in those instructions?</p> <p>23 A. Basically it would contain escalation rates</p> <p>24 that would be provided by economic analysis,</p> <p>25 it would provide information on the allowance</p>

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<p>1 of funds used during construction rate, it may</p> <p>2 entail co-ordination of all computer-related</p> <p>3 equipment must go through the IS&amp;T department,</p> <p>4 those types of instructions. It would also</p> <p>5 contain telephone numbers and names of</p> <p>6 individuals to contact for additional help and</p> <p>7 guidance.</p> <p>8 Q. Does it contain any directions or instructions</p> <p>9 with respect to what Hydro's objectives are</p> <p>10 for the amount of that year's capital budget?</p> <p>11 A. Within those specific instructions it is not;</p> <p>12 however, through communications among the</p> <p>13 members of the management committee and their</p> <p>14 senior directors, it's been a common practice</p> <p>15 for the last couple of years that the</p> <p>16 guidelines are to try to endeavour to maintain</p> <p>17 the capital programs to the level that I</p> <p>18 outlined, which is basically net income plus</p> <p>19 depreciation in the range of between 30 to 50</p> <p>20 million dollars.</p> <p>21 Q. Now, if you take a look at IC-3, we asked has</p> <p>22 Hydro adopted any guidelines or policies with</p> <p>23 respect to the magnitude of the capital budget</p> <p>24 and if so, what are the guidelines? And the</p> <p>25 answer refers to those guidelines as being</p>	<p>1 outlined on page 4 of the finance evidence.</p> <p>2 A. That's correct.</p> <p>3 Q. And if we go to page 4 of the finance</p> <p>4 evidence, at the top of the page the answer is</p> <p>5 that the guideline that has been used for</p> <p>6 several years is that the capital program</p> <p>7 should not normally exceed cash flow from</p> <p>8 operations that consist primarily of net</p> <p>9 incomes, depreciation and some other non cash</p> <p>10 items. And that the target for the last</p> <p>11 couple of years has been to keep our capital</p> <p>12 expenditures to the level of depreciation</p> <p>13 which is approximately 34 million dollars.</p> <p>14 So, is that the only guideline with respect to</p> <p>15 magnitude?</p> <p>16 A. That's the only overall high level of</p> <p>17 magnitude that's been issued.</p> <p>18 Q. And this target which is referenced as having</p> <p>19 been there for the last couple of years, how</p> <p>20 does that originate?</p> <p>21 A. To the best of my knowledge, going back in</p> <p>22 time, the issues always been what should be a</p> <p>23 level of capital program for any particular</p> <p>24 year and what was decided was that a rule of</p> <p>25 thumb to use would be as outline here, that it</p>
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<p>1 would be net income primarily plus</p> <p>2 depreciation, that gives you an order of</p> <p>3 magnitude of 30 - 50 million dollars. That</p> <p>4 was felt to be a reasonable guideline to</p> <p>5 follow in reviewing your capital program,</p> <p>6 recognizing that it was only a guideline and</p> <p>7 there will be exceptions to any guideline, but</p> <p>8 at least this was a place to start.</p> <p>9 Q. And how did--from what source did Hydro</p> <p>10 determine that this was a good place to start?</p> <p>11 A. It was, to the best of my recollection, an</p> <p>12 internal decision that was made by management</p> <p>13 committee that on an annual basis this would</p> <p>14 be the guideline that we would consider in</p> <p>15 reviewing annual capital program.s</p> <p>16 Q. Did you have any input into that guideline?</p> <p>17 A. I was asked for my input as to what I felt</p> <p>18 should be at least a reasonable target to deal</p> <p>19 with. What you see is what I had recommended.</p> <p>20 Q. Did you do any research on what other</p> <p>21 organization -</p> <p>22 A. No, I did not.</p> <p>23 Q. I think you said no, you didn't?</p> <p>24 A. I did not.</p> <p>25 Q. When the management committee, well let's say</p>	<p>1 first when you, as chief financial officer,</p> <p>2 are evaluating budget proposals, what attempts</p> <p>3 are made to reduce the capital budget below</p> <p>4 the level of depreciation?</p> <p>5 A. I guess there are various reviews prior to</p> <p>6 getting to the management committee. When the</p> <p>7 management committee reviews the capital</p> <p>8 budget, it's looking at what the current</p> <p>9 guideline would be for the current year</p> <p>10 because we do have an order of magnitude of</p> <p>11 what the depreciation and net income would be</p> <p>12 for that year. And then it's on a proposal by</p> <p>13 proposal basis looking at what's proposed for</p> <p>14 the coming up year as well as what's on the</p> <p>15 horizon for the next four years. So, it's not</p> <p>16 that you start off with a target of you're</p> <p>17 going to have 33 million and 33 million is cut</p> <p>18 and dry. There has to be an element of</p> <p>19 judgment applied to this that there are some</p> <p>20 projects that may, in fact, cause the capital</p> <p>21 budget program to be well in excess of what</p> <p>22 our guideline will be, but those items are</p> <p>23 reviewed and the decision is yes, we will</p> <p>24 allow the guideline to be exceeded.</p> <p>25 Q. But my question was, what attempts do you make</p>

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<p>1 to reduce the capital budget below the level</p> <p>2 of depreciation?</p> <p>3 A. And as I say, the attempts are made on a</p> <p>4 review of proposal by proposal basis at the</p> <p>5 management committee level, deciding whether</p> <p>6 or not the management committee feels there's</p> <p>7 sufficient justification for each proposal.</p> <p>8 And it's only when that complete review is</p> <p>9 done do you know at the end of the day whether</p> <p>10 or not you were able to obtain the guideline</p> <p>11 that you had hoped to accomplish when you</p> <p>12 first started.</p> <p>13 Q. And that guideline is being hopefully -</p> <p>14 A. For the last couple of years, it's been</p> <p>15 approximately 33 million dollars for</p> <p>16 depreciation.</p> <p>17 Q. What is the financial effect to Hydro of</p> <p>18 spending less than depreciation on its capital</p> <p>19 budget for any given year?</p> <p>20 A. Well, the initial impact that if you're not</p> <p>21 spending 33 million dollars, then it impacts</p> <p>22 the amount of promissory notes in the amount</p> <p>23 of income that may be within a particular</p> <p>24 year.</p> <p>25 Q. Does it also impact rate base?</p>	<p>1 A. It will impact rate base, but not rates until</p> <p>2 such time as you have a general rate</p> <p>3 application because in between periods, they</p> <p>4 don't form part of the rates.</p> <p>5 Q. So, what's the effect on revenue requirement</p> <p>6 of having a budget that's less than the amount</p> <p>7 of the depreciation for that year? In general</p> <p>8 terms, what is the effect of, on revenue</p> <p>9 requirement, of having a capital budget that</p> <p>10 is less than depreciation?</p> <p>11 A. Well, the capital budget being less than</p> <p>12 depreciation is only an element of how it's</p> <p>13 been financed, be it from internally generated</p> <p>14 funds or from issuance of promissory notes.</p> <p>15 Q. And rate base?</p> <p>16 A. Rate base only from the point of view of</p> <p>17 adjustments to future rates.</p> <p>18 Q. So, what you're basically saying is that from</p> <p>19 a consumer's perspective, whether they're an</p> <p>20 Industrial Customer or whether they're</p> <p>21 Newfoundland Power, the implication of less</p> <p>22 than depreciation is a reduced rate base and</p> <p>23 therefore a reduced amount of profit payable</p> <p>24 to Hydro.</p> <p>25 A. Possibly, but -</p>
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<p>1 Q. As well as the interest and those other costs.</p> <p>2 A. You can't balance without looking at the</p> <p>3 requirement to provide reliable power to our</p> <p>4 customers. So, it's not a clear cut case that</p> <p>5 you can turn around and say, well, the capital</p> <p>6 program is just going to be 20 million a year</p> <p>7 or 15 million dollars a year. It has to be</p> <p>8 based on the circumstances of the particular</p> <p>9 year and what's involved in the various</p> <p>10 capital proposals to maintain the reliability</p> <p>11 of the system.</p> <p>12 Q. But from a theoretical, a strict theoretical</p> <p>13 perspective, if Hydro can manage its business</p> <p>14 including the reliability aspect so that the</p> <p>15 capital budget is less than the depreciation</p> <p>16 in any given year, interest costs,</p> <p>17 depreciation costs and the number of dollars</p> <p>18 in return on rate base will all be lower than</p> <p>19 if the capital budget is at the depreciation,</p> <p>20 correct?</p> <p>21 A. If it is lower than depreciation?</p> <p>22 Q. Yes.</p> <p>23 A. Well then, rate base actually decreases.</p> <p>24 Q. Yes.</p> <p>25 A. Until such time as rates are reset, then it</p>	<p>1 has no impact.</p> <p>2 Q. Although it could affect, from an earnings</p> <p>3 perspective, it could affect what Hydro's</p> <p>4 ultimate rate of return actually amounts to be</p> <p>5 on rate base.</p> <p>6 A. It may impact it.</p> <p>7 Q. Now, on the converse side, spending more on</p> <p>8 capital than on depreciation grows the rate</p> <p>9 base, correct?</p> <p>10 A. Correct.</p> <p>11 Q. And that will not only increase the financing</p> <p>12 and the depreciation costs, but it will also</p> <p>13 increase the number of dollars in profits</p> <p>14 available to Hydro?</p> <p>15 A. It will increase the return on equity, yes,</p> <p>16 return on rate base, I should say.</p> <p>17 Q. Now, if we go to IC-12, the Industrial</p> <p>18 Customers asked the question with respect to</p> <p>19 the projects on the Island for which the costs</p> <p>20 are common, to provide a schedule showing the</p> <p>21 expected cost impacts on Newfoundland Power</p> <p>22 before rural deficit allocation and on the</p> <p>23 Island industrial customers of the proposed</p> <p>24 2004 Capital Budget over the 5 years including</p> <p>25 2004. And the answer that's given actually</p>



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<p>1 includes only four years, correct?</p> <p>2 A. That's correct, data for 2008 is not</p> <p>3 available.</p> <p>4 Q. So, the 2004 Capital Budget alone, if it were</p> <p>5 approved as it's filed, would cost the Island</p> <p>6 Industrial Customers \$43,000.00 in 2004?</p> <p>7 A. That's what it's saying.</p> <p>8 Q. And that's because not all of capital projects</p> <p>9 will be completed in order to have the</p> <p>10 depreciation there for the full year, right.</p> <p>11 A. That's correct because there's various timing</p> <p>12 of in-service dates for the assets.</p> <p>13 (11:22 a.m.)</p> <p>14 Q. So, the effect for the Industrial Customers in</p> <p>15 2005 is \$156,000.00?</p> <p>16 A. Yes.</p> <p>17 Q. And for 2006, \$211,000.00.</p> <p>18 A. Um-hm.</p> <p>19 Q. Correct?</p> <p>20 A. Yes.</p> <p>21 Q. And for 2007, \$205,000.00?</p> <p>22 A. Yes.</p> <p>23 Q. And if you add these together, that's roughly</p> <p>24 \$615,000.00 over four years?</p> <p>25 A. I'll accept your answer.</p>	<p>1 Q. Now, if we got to IC14, that deals with the</p> <p>2 addition to the capital assets and the value</p> <p>3 for rate base purposes accounting for the</p> <p>4 difference between the 2002 actual, 2003</p> <p>5 forecast and the 2003 forecast and 2004</p> <p>6 forecast from the table on page five of your</p> <p>7 evidence.</p> <p>8 A. That's correct.</p> <p>9 Q. If you go to the second page, page 2 of IC14,</p> <p>10 the rate base growth net which is--you would</p> <p>11 be subtracting line, the second last line from</p> <p>12 the third last line, correct? In other words,</p> <p>13 the proposed 2004 capital budget will result</p> <p>14 in in-service assets of \$25,688,000.00?</p> <p>15 A. That's correct.</p> <p>16 Q. And you have to subtract off what Hydro</p> <p>17 expects to realize from the disposal assets?</p> <p>18 A. That's the original cost of the assets that</p> <p>19 are being replaced and/or disposed in 2004.</p> <p>20 Q. So, the 25,688 less the 2 million--798--is</p> <p>21 roughly 23 million dollars of new capital.</p> <p>22 A. That's the net increase in plant and service</p> <p>23 in 2004.</p> <p>24 Q. Okay. And if you do the same exercise with</p> <p>25 respect to 2003 plus Granite Canal, they</p>
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<p>1 contribute together roughly \$166,000,000.00 to</p> <p>2 the rate base?</p> <p>3 A. Approximately.</p> <p>4 Q. Now, according to IC37, the 2005 capital</p> <p>5 budget is expected to be \$45,000,000. 00</p> <p>6 roughly.</p> <p>7 A. That's what the current five-year plan is</p> <p>8 reflecting. It's not an approved or accepted</p> <p>9 budget, it's just an order of magnitude at</p> <p>10 this point.</p> <p>11 Q. And that \$45,000,000.00, when we look at the</p> <p>12 rate base as it existed in 2002 and the</p> <p>13 additions as a result of both of the 2003 and</p> <p>14 2004 capital budgets, is that \$45,000,000. 00</p> <p>15 with depreciation costs, do you think?</p> <p>16 A. For 2005?</p> <p>17 Q. Yes.</p> <p>18 A. I can't tell you; I don't have that answer.</p> <p>19 My only comment to assist you is that on IC37,</p> <p>20 I think you have to be cognizant of--these are</p> <p>21 budgets and in that budget, you may have</p> <p>22 multi-year projects where you may spend</p> <p>23 \$45,000,000.00 within a particular year, but</p> <p>24 it will not be in service. Whereas back here</p> <p>25 in the early one you're referring to actual</p>	<p>1 in-service assets, very similar to the mobile</p> <p>2 radio system.</p> <p>3 Q. Now, if a piece of equipment fails, let's take</p> <p>4 a piece as an example, let's take an exciter.</p> <p>5 If an exciter fails in the course of 2004,</p> <p>6 it's going to cost money to repair it, right?</p> <p>7 A. Yes.</p> <p>8 Q. And depending on the nature of the failure,</p> <p>9 there may be a need to utilize Holyrood, for</p> <p>10 example, and therefore increase the amount of</p> <p>11 fuel that's used, right?</p> <p>12 A. Yes, if generation is still required, then</p> <p>13 Holyrood will supplement what's required.</p> <p>14 Q. Now, in the absence of a rate hearing, where</p> <p>15 does the money come from for that repair and</p> <p>16 those extra costs?</p> <p>17 A. Well, in the case of the repair, it will come</p> <p>18 from Hydro's profit that allowed for that</p> <p>19 year.</p> <p>20 Q. Yes.</p> <p>21 A. In a case of the fuel, the rate stabilization</p> <p>22 plan will come into play and any excess costs</p> <p>23 or any changes as a result of normalizing the</p> <p>24 generation are reflected in the rate</p> <p>25 stabilization plant.</p>

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<p>1 Q. So, basically some of the costs comes out of</p> <p>2 Hydro's profit or operating budget, out of its</p> <p>3 total revenue, correct?</p> <p>4 A. If we're not able to save the amount of the</p> <p>5 repair cost by reducing other costs, then it</p> <p>6 will come off of Hydro's profit for that</p> <p>7 particular year.</p> <p>8 Q. And some comes from the customer.</p> <p>9 A. And the customer, through the rate</p> <p>10 stabilization plan, would be impacted in that</p> <p>11 respect to additional field costs.</p> <p>12 Q. Now, in IC49, we asked, with respect to</p> <p>13 proposed generation projects for 2004, provide</p> <p>14 a list of the proposed construction and</p> <p>15 property addition projects in order of</p> <p>16 priority for most essential to least</p> <p>17 essential. And the answer is that Hydro</p> <p>18 didn't rank the capital projects proposed and</p> <p>19 considers all of them to be of a priority</p> <p>20 nature. If Hydro doesn't rank the projects,</p> <p>21 then if the management committee receives</p> <p>22 projects totalling \$45,000,000.00 in a year</p> <p>23 when you're trying to meet \$34,000,000.00, how</p> <p>24 do you determine which ones to reject?</p> <p>25 A. You're on a project by project basis looking</p>	<p>1 at the criteria that we have. The broad</p> <p>2 criteria being safety, compliance and</p> <p>3 environment regulations maintained, improved</p> <p>4 liability and availability of service or to</p> <p>5 reduce cost. At the end of the day, you may</p> <p>6 not be able to reduce that capital program</p> <p>7 before \$45,000,000.00. The guideline is</p> <p>8 exactly that, it is a guideline and rule of</p> <p>9 thumb to be used, but it's on a project to</p> <p>10 project basis that's reviewed and is it</p> <p>11 absolutely essential and does it meet our</p> <p>12 broad criteria and I just outlined. And if</p> <p>13 they do meet that and there is no possible way</p> <p>14 to defer these projects to do something in</p> <p>15 place of, then that's what's approved and</p> <p>16 submitted for approval.</p> <p>17 Q. What did you say the criteria area? Safety,</p> <p>18 reliability and -</p> <p>19 A. Safety, environmental regulations, to maintain</p> <p>20 or improve reliability and availability and to</p> <p>21 reduce costs or improve efficiencies.</p> <p>22 Q. Now, if you're dealing with computers, as an</p> <p>23 example, and let's focus on administrative</p> <p>24 assistants for the moment, secretaries in the</p> <p>25 office, clerical staff, the model of computer</p>
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<p>1 that they have on their desk has nothing to do</p> <p>2 with either safety reliability of environment,</p> <p>3 isn't that right?</p> <p>4 A. Safety, I would question; environmental</p> <p>5 certainly wouldn't; reliability or</p> <p>6 availability may be impacted.</p> <p>7 Q. Why do you question safety?</p> <p>8 A. If you're using a 286 model machine or if</p> <p>9 you're using a 486 computer, I don't think</p> <p>10 safety would be impacted. From a safety</p> <p>11 perspective, it may not be so much the</p> <p>12 computer as the configuration of the</p> <p>13 workstation, it's the safety issue with</p> <p>14 employees.</p> <p>15 Q. Is there any kind of capital project which is</p> <p>16 more important than others?</p> <p>17 A. Well, every proposal is reviewed on its own</p> <p>18 merits and a decision made based on that. Of</p> <p>19 utmost importance is to protect human life.</p> <p>20 And there's no doubt that if there is a safety</p> <p>21 issue to the life of our employees, then that</p> <p>22 has to be dealt with.</p> <p>23 Q. Okay. And what about, after human life, what</p> <p>24 would be the most importance type of capital</p> <p>25 project?</p>	<p>1 A. Well, you're trying to rank things. I don't</p> <p>2 think you can turn around and say here's one,</p> <p>3 two, three or four, they will all be treated</p> <p>4 equally. From the point of view of safety,</p> <p>5 there is no question, you have to protect</p> <p>6 human life. But if we have a law to follow,</p> <p>7 then we also have a regulation or a law that</p> <p>8 has to be implied and whatever the cost is of</p> <p>9 doing that, has to be done, it's not an</p> <p>10 option.</p> <p>11 Q. But after safety -</p> <p>12 A. Then you end up coming through with</p> <p>13 reliability and availability of service, but</p> <p>14 the element of judgment will always have to be</p> <p>15 implied. It's not a black and white</p> <p>16 situation. It's an element of judgment using</p> <p>17 the professional information that Hydro has</p> <p>18 with its resources from its technical people,</p> <p>19 is what you have to make that decision on a</p> <p>20 the end of the day.</p> <p>21 Q. What kinds of capital projects are least</p> <p>22 important?</p> <p>23 A. I'm just trying to think of an example for</p> <p>24 you. For instance, I guess, if we were</p> <p>25 looking at maybe replacement of office</p>

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<p>1 furniture and whether or not we were able to</p> <p>2 continue to maintain what we have at a</p> <p>3 reasonable cost, with the cost of repairs not</p> <p>4 going to exceed replacement, you may decide</p> <p>5 that, yeah, let's go for another year and see</p> <p>6 what happens, recognizing that that's a</p> <p>7 judgment call and it may end up proving to be</p> <p>8 the wrong decision.</p> <p>9 Q. That could also apply to vehicles, couldn't</p> <p>10 it?</p> <p>11 A. Vehicles, there's a guideline and a policy</p> <p>12 there based on usage and the repairs and</p> <p>13 criteria is what's used to replace them.</p> <p>14 Q. And it would equally apply with computers too,</p> <p>15 wouldn't it, on a whole?</p> <p>16 A. I think Mr. Downton is the one who addressed</p> <p>17 that earlier this morning.</p> <p>18 Q. Well, I'm asking you in your position as a</p> <p>19 person on a management committee evaluating</p> <p>20 the capital budget what criteria you would</p> <p>21 apply or what things you would consider would</p> <p>22 be the least important in a capital budget.</p> <p>23 A. I guess on area of the computers, as an</p> <p>24 example, that's the criteria that's been</p> <p>25 developed that's deemed to be the most</p>	<p>1 effective and efficient and that's what's been</p> <p>2 recommended to management and that's what</p> <p>3 management has adopted.</p> <p>4 Q. But if in a particular year, you're in a</p> <p>5 crunch, a guideline that's been adopted</p> <p>6 doesn't have to followed every year, does it?</p> <p>7 A. That's correct.</p> <p>8 (11:37 a.m.)</p> <p>9 Q. Sometimes you can defer a cost, if you're in a</p> <p>10 cash crunch, correct?</p> <p>11 A. I don't think with proper planning that Hydro</p> <p>12 would ever get into a cash crunch.</p> <p>13 Q. Or with any cost constraints, you might have</p> <p>14 to make choices, correct?</p> <p>15 A. That's correct.</p> <p>16 Q. If in IC-4, the answer to the question whether</p> <p>17 Hydro has consulted with other electrical</p> <p>18 generation utilities in Canada or the US to</p> <p>19 determine guidelines and policies that they</p> <p>20 might have with respect to the size of their</p> <p>21 capital budgets, the answer was that Hydro has</p> <p>22 not consulted with other utilities to</p> <p>23 determine guidelines and policies that they</p> <p>24 might have with respect to their capital</p> <p>25 budget?</p>
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<p>1 A. That's correct.</p> <p>2 Q. And you agree with that answer?</p> <p>3 A. Yes.</p> <p>4 Q. Do you know what policies other Canadian</p> <p>5 electric utilities have or are subject to</p> <p>6 respecting their capital budgets?</p> <p>7 A. No, I don't.</p> <p>8 Q. To your knowledge, has Hydro ever considered</p> <p>9 looking at standards with respect to capital</p> <p>10 budgets?</p> <p>11 A. Hydro hasn't looked at standards. It has</p> <p>12 participated with the Public Utilities Board</p> <p>13 in the minimum filing requirements. It is, in</p> <p>14 its belief, following the guidelines that have</p> <p>15 been established from PU-7 that was issued</p> <p>16 last year, and any further direction that's</p> <p>17 provided by the Board to Hydro, that's what we</p> <p>18 are adhering to.</p> <p>19 Q. Hydro is a member of the Canadian Electrical</p> <p>20 Association, isn't it?</p> <p>21 A. Yes, we are.</p> <p>22 Q. And are you familiar with the Canadian</p> <p>23 Electrical Association?</p> <p>24 A. To some extent.</p> <p>25 Q. What's the purpose of Hydro's membership in</p>	<p>1 that organization?</p> <p>2 A. Most of the membership within the operation</p> <p>3 side of things, rather than in the finance,</p> <p>4 and it's--over the years, CEA has developed</p> <p>5 more along the lines of a mechanism to do</p> <p>6 research and development for various areas,</p> <p>7 rather than, as I refer to it, a normal</p> <p>8 session of having the opportunity to bounce</p> <p>9 ideas back and forth between various</p> <p>10 utilities. So its mandate has changed</p> <p>11 considerably from when I first joined Hydro.</p> <p>12 Q. The Canadian Electricity Association does give</p> <p>13 Hydro access to other utilities and access to</p> <p>14 information on their practices though, doesn't</p> <p>15 it?</p> <p>16 A. I can't speak for that. We certainly have</p> <p>17 contacts at all the utilities through either</p> <p>18 generation or through finance, so you know,</p> <p>19 and that's not necessarily would have to be</p> <p>20 through the Canadian Electrical Association.</p> <p>21 There's nothing to prevent Hydro from calling</p> <p>22 somebody at Manitoba Hydro or Nova Scotia</p> <p>23 Power and finding out a right person to talk</p> <p>24 to, to ask the particular question to.</p> <p>25 Q. You've been sitting here listening to the</p>

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<p>1 evidence this week, haven't you?</p> <p>2 A. Yes, I have.</p> <p>3 Q. And you recall the evidence from the</p> <p>4 generation panel that Hydro's IT department</p> <p>5 has adopted Gartner's Best Practice</p> <p>6 recommendation with respect to replacement of</p> <p>7 desktop units?</p> <p>8 A. Yes.</p> <p>9 Q. Was that at the direction of the management</p> <p>10 committee?</p> <p>11 A. That information was fed from the IS&amp;T</p> <p>12 department to management committee.</p> <p>13 Q. Has Hydro adopted that best practice?</p> <p>14 A. I guess if you're looking for a formal written</p> <p>15 communication, the answer would be no, but in</p> <p>16 the annual review of the various Capital</p> <p>17 Budget proposals, the justification that's put</p> <p>18 together on these replacements are based on</p> <p>19 that criteria, and management committee, in</p> <p>20 approving that, have at least approved that</p> <p>21 replacement criteria.</p> <p>22 Q. Has Hydro's management committee or Board of</p> <p>23 Directors given any direction with respect to</p> <p>24 adoption of a best practices criteria</p> <p>25 throughout Hydro's organization?</p>	<p>1 A. From the Board of Directors, I would have to</p> <p>2 say, with my limited involvement with the</p> <p>3 Board to date, I wouldn't be able to answer</p> <p>4 that.</p> <p>5 Q. So if they have, you're not aware of it?</p> <p>6 A. If they have, I'm not aware of it. If you're</p> <p>7 looking at, in the case of as we just talked</p> <p>8 about on the computers, I'm certainly aware of</p> <p>9 that one.</p> <p>10 Q. Has Hydro adopted a best practices program for</p> <p>11 its capital budgeting process?</p> <p>12 A. I guess you'd have to define what you mean by</p> <p>13 best practices. Hydro has a -</p> <p>14 Q. Well, let me -</p> <p>15 A. - methodology established for the preparation</p> <p>16 and completion of capital budget processes.</p> <p>17 It adheres to what is required from a</p> <p>18 regulatory perspective, and it reviews, using</p> <p>19 its own broad evaluation criteria and</p> <p>20 guidelines, each individual capital budget</p> <p>21 proposal. So if that's what you would prefer</p> <p>22 to call best business practices, that's what</p> <p>23 we're doing. Whether or not that's the same</p> <p>24 as what Nova Scotia Power is doing or New</p> <p>25 Brunswick Power is doing, I can't attest to</p>
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<p>1 that. What we are doing, certainly in our</p> <p>2 mind, is what we feel is adequate and meets</p> <p>3 our needs.</p> <p>4 Q. Well, what I'm trying to talk about, and I</p> <p>5 just need to clarify my question to you, is</p> <p>6 that the information on the IT aspect was that</p> <p>7 Gartner makes recommendations based upon a</p> <p>8 survey of a large number of companies and</p> <p>9 their practices. So in terms of Hydro's</p> <p>10 capital budgeting process, is it fair to say</p> <p>11 that Hydro has not investigated what those</p> <p>12 best practices might be?</p> <p>13 A. For other areas?</p> <p>14 Q. Yes.</p> <p>15 A. Overall, no, but it may be in very selected</p> <p>16 areas that, for instance, production may look</p> <p>17 at what's the best business practice in</p> <p>18 dealing with exciters. But it wouldn't be on</p> <p>19 a global review of best business practices.</p> <p>20 It would be within the various divisions and</p> <p>21 depending on the capital proposal as to</p> <p>22 whether or not this would be the best business</p> <p>23 practice of, say as I used the example of, and</p> <p>24 it may be a poor one, of exciter replacements.</p> <p>25 It could happen with battery banks. It could</p>	<p>1 happen with anything that additional</p> <p>2 information on best practices and what's being</p> <p>3 done and the trend being done by other</p> <p>4 utilities may form the basis for what's coming</p> <p>5 forward to management.</p> <p>6 Q. How do you know if your practices, with</p> <p>7 respect to your capital budgeting process, is</p> <p>8 reasonable, if you don't know what other</p> <p>9 practices are?</p> <p>10 A. That judgment call is based on the judgment of</p> <p>11 the individuals that are putting together the</p> <p>12 individual proposal. Best business practice</p> <p>13 may not have full implementation for within</p> <p>14 Hydro. It may only assist us in what we</p> <p>15 consider to be the best business practice for</p> <p>16 Hydro.</p> <p>17 Q. So you can apply it or not, depending on</p> <p>18 whether it suits?</p> <p>19 A. Well, I think whether or not it has</p> <p>20 suitability. Every industry will be</p> <p>21 different.</p> <p>22 Q. Those are my questions. Thank you.</p> <p>23 CHAIRMAN:</p> <p>24 Q. Okay. Thank you, Ms. Henley Andrews. Mr.</p> <p>25 Kennedy?</p>

<p style="text-align: right;">Page 113</p> <p>1 MR. KENNEDY:</p> <p>2 Q. All my questions were covered, Chair. Thank</p> <p>3 you very much.</p> <p>4 CHAIRMAN:</p> <p>5 Q. Thank you, Mr. Kennedy. Ms. Greene, on</p> <p>6 redirect?</p> <p>7 GREENE, Q.C.:</p> <p>8 Q. I have no redirect, Mr. Chair.</p> <p>9 CHAIRMAN:</p> <p>10 Q. No redirect?</p> <p>11 GREENE, Q.C.:</p> <p>12 Q. No.</p> <p>13 CHAIRMAN:</p> <p>14 Q. Do you have any questions?</p> <p>15 COMMISSIONER POWELL:</p> <p>16 Q. No, other than congratulate Mr. Roberts on his</p> <p>17 appointment.</p> <p>18 A. Thank you.</p> <p>19 Q. I'm sure we'll see more of you as we go</p> <p>20 forward.</p> <p>21 A. Thank you very much.</p> <p>22 CHAIRMAN:</p> <p>23 Q. Mr. Martin?</p> <p>24 COMMISSIONER MARTIN, Q.C.:</p> <p>25 Q. I have no questions.</p>	<p style="text-align: right;">Page 114</p> <p>1 CHAIRMAN:</p> <p>2 Q. Any other witnesses to call before we break</p> <p>3 for the day or where are we?</p> <p>4 GREENE, Q.C.:</p> <p>5 Q. My understanding, Mr. Chair, was that we would</p> <p>6 now go to accommodate Mr. Barreca, so it may</p> <p>7 be a suitable time to have our break. I'm</p> <p>8 not--or we--I'll leave that to you.</p> <p>9 CHAIRMAN:</p> <p>10 Q. Do you intend to call more witnesses?</p> <p>11 GREENE, Q.C.:</p> <p>12 Q. Oh yes, we have the transmission and rural</p> <p>13 operations panel.</p> <p>14 CHAIRMAN:</p> <p>15 Q. Yes.</p> <p>16 GREENE, Q.C.:</p> <p>17 Q. And among counsel, we had agreed that we would</p> <p>18 interrupt Hydro's evidence to allow for Mr.</p> <p>19 Barreca to testify and then that we would call</p> <p>20 our TRO panel. I would assume that'll</p> <p>21 probably be tomorrow.</p> <p>22 CHAIRMAN:</p> <p>23 Q. So when we resume, we'll hear from Mr.</p> <p>24 Barreca.</p> <p>25 HUTCHINGS, Q.C.:</p>
<p style="text-align: right;">Page 115</p> <p>1 Q. That's the intention, Mr. Chairman, yes.</p> <p>2 CHAIRMAN:</p> <p>3 Q. Thank you, Mr. Hutchings. Thank you, Mr.</p> <p>4 Roberts.</p> <p>5 A. Thank you.</p> <p>6 Q. We'll adjourn for fifteen. Thank you.</p> <p>7 (BREAK - 11:48 a.m.)</p> <p>8 (RESUME - 12:08 p.m.)</p> <p>9 CHAIRMAN:</p> <p>10 Q. Mr. Barreca, how are you?</p> <p>11 A. Fine, thank you.</p> <p>12 Q. Welcome to Newfoundland.</p> <p>13 A. Thank you. Lovely -</p> <p>14 Q. First time here?</p> <p>15 A. Yes, sir.</p> <p>16 Q. So you've experienced four seasons so far.</p> <p>17 MR. STEPHEN L. BARRECA (SWORN) EXAMINATION-IN-CHIEF BY</p> <p>18 JOSEPH HUTCHINGS, Q.C.</p> <p>19 CHAIRMAN:</p> <p>20 Q. Thank you.</p> <p>21 HUTCHINGS, Q.C.:</p> <p>22 Q. Would you state your full name, for the</p> <p>23 record, please?</p> <p>24 A. Stephen L. Barreca.</p> <p>25 Q. And where do you live at the present time,</p>	<p style="text-align: right;">Page 116</p> <p>1 sir?</p> <p>2 A. Birmingham, Alabama.</p> <p>3 Q. In the pre-filed evidence that is before the</p> <p>4 Board, we have a curriculum vitae for you and</p> <p>5 some indication of training. Can you just</p> <p>6 briefly outline your professional training and</p> <p>7 qualifications?</p> <p>8 A. Yes, sir. I began my career as an outside</p> <p>9 plant engineer with what is now Bell South</p> <p>10 Corporation. Prior to that, I had gotten a</p> <p>11 Bachelor's Degree in Electrical Engineering.</p> <p>12 At Bell South, I worked as an outside plant</p> <p>13 engineer doing, and had, you know, appropriate</p> <p>14 training while I was there, was responsible</p> <p>15 for construction projects, reviewing and</p> <p>16 researching of, getting approval for them,</p> <p>17 including new projects for new growth,</p> <p>18 replacement projects where you'd go in,</p> <p>19 analyze the trouble tickets, figure out where</p> <p>20 you had problems and make a decision or</p> <p>21 recommendation as to do we replace everything,</p> <p>22 do we replace just the network elements that</p> <p>23 are causing us the troubles, if they could be</p> <p>24 isolated, that kind of work, typical work that</p> <p>25 an engineer would do.</p>

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<p>1 In 1983, I transferred to Birmingham,  2 Alabama, in their regulatory department.  3 There I had responsibilities for assessing  4 technological change, assessing the impact on  5 the depreciation lives of our equipment, well,  6 financial and depreciation lives. I was  7 responsible for putting together rate cases  8 and depreciation studies that were filed with  9 the Federal Government, as well as various  10 State public service commissions. I had  11 extensive training in that area as well. I've  12 made presentation--in that responsibility, I  13 also made presentations to the Federal  14 Communication Commission, as well as public  15 service commissions, on things such as our  16 capital budget, such as our depreciation  17 forecast, technological change, the pace at  18 which Bell South and other companies in the  19 industry was implementing those factors, and  20 what impact depreciation, change and  21 obsolescence would have on various business  22 implications to the corporation. I also had  23 methods and mechanization responsibilities.  24 Methods responsibilities in that I was  25 responsible for the methodologies and the</p>	<p>1 theory and the practice that we used in that  2 organization in regards to depreciation,  3 economic life analysis, technology  4 forecasting, and then in mechanization, my  5 mechanization responsibilities, I was  6 responsible for the mechanized system for the  7 department, and that included the PCs, the  8 networking of the PCs, whether we used thin  9 client devices or not. I had sole  10 responsibility for that.  11 In 1990, the corporation decided that  12 they wanted to move the technology analysis  13 and economic life development from the  14 regulatory group over into their network  15 strategic planning organization, and I  16 volunteered to head up that group. I was an  17 engineer by nature and I was tired of the  18 regulatory stuff, so I transferred--I took  19 over that group or formed that group in their  20 long term network strategic planning  21 organization. I thought I was getting out of  22 the regulatory environment, but actually I  23 jumped in with both feet in taking that  24 responsibility, because as you know, there was  25 so much technological change in the early 90s</p>
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<p>1 that impacted depreciation, property tax, the  2 value of your property, financial decisions,  3 business decisions, capital budget decisions.  4 So having responsibility for the economic  5 lives of our equipment, what the technologies  6 were doing, the pace at which they're coming,  7 the pace at which our competitors can deploy  8 those technologies, all of those things had  9 very huge regulatory ramifications. So while  10 I thought I was getting back to engineering  11 and out of regulatory, I stepped right into  12 it. And in that capacity, I was the company's  13 network witness for rate cases and other  14 hearings with the public service commissioners  15 regarding any aspects of anything that would  16 impact our rates or impact our depreciation,  17 and so, in that capacity, I would sit before  18 boards like this and explain to them the  19 changes that had taken place in the  20 technology, answer questions regarding their  21 capital budgets, depreciation issues, that  22 kind of stuff. I also played a role in the  23 development of the capital budget and in the  24 internal approval process of the capital  25 budget. Often I was called upon to determine</p>	<p>1 long-term capital expenditures as a result of  2 the various technological changes that were  3 taking place. So I played a role in that. I  4 also acted as a consultant to other  5 departments in issues related to all the  6 things I've mentioned, in addition, issues  7 related to the economic analysis of various  8 alternatives, you know, various capital  9 initiatives in that regard.  10 In '97, after serving twenty years with  11 Bell South, I quit them, when to work for a  12 company in Austin, Texas, called Technology  13 Futures Inc. They're world-renown for their  14 expertise in forecasting technological change,  15 primarily in the telecommunication industry,  16 but they do do a tremendous amount of work in  17 all industries, including electric. Worked  18 there for a while, and then I decided I was  19 going to start my own company, and I did. I  20 started my own company in late 1998, and the  21 focus of my company is still to assess  22 technological change, its impact on various  23 aspects of a business, including the  24 depreciation and value of a business. I do  25 valuation work, assessing the value of a</p>

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<p>1 company's property. I try to specialize more</p> <p>2 in the high-tech side, since that's been my</p> <p>3 focus for so many years, but I've been</p> <p>4 involved in non-high-tech valuations, as well</p> <p>5 as valuations of communication companies,</p> <p>6 communication industries, electric power</p> <p>7 facilities, et cetera. And all throughout my</p> <p>8 career, I've maintained a course of continuing</p> <p>9 education, attending seminars, speaking at</p> <p>10 seminars, writing and publishing papers,</p> <p>11 taking training courses. I teach training</p> <p>12 courses as well.</p> <p>13 Q. Just for the record, I think we probably have</p> <p>14 a general notion, but could you describe for</p> <p>15 us generally the business of Bell South and</p> <p>16 the size of that organization?</p> <p>17 A. Yes. Bell South is a--well, Bell South</p> <p>18 Corporation is a holding company, but having</p> <p>19 said that, in recent years, they've started</p> <p>20 reintegrating a lot of their subsidiary</p> <p>21 companies into the holding company, so I'm not</p> <p>22 sure if they're a holding company any more.</p> <p>23 But their primary line of business is</p> <p>24 telecommunications, common carrier</p> <p>25 communications. They are a wireless company.</p>	<p>1 At one time, they were the largest wireless</p> <p>2 company in the world. I'm trying to think of</p> <p>3 what other endeavours they may be into,</p> <p>4 primarily communication related.</p> <p>5 Q. What geographical area would that company</p> <p>6 operate in?</p> <p>7 A. They cover nine states in the southeastern</p> <p>8 portion of the United States, is where they</p> <p>9 have or is the primary local carrier. But</p> <p>10 they do also have facilities throughout the</p> <p>11 United States. Now, you know, with</p> <p>12 deregulation, they have expanded into probably</p> <p>13 just about every state in some form or</p> <p>14 fashion.</p> <p>15 Q. Can you give us a ballpark notion of the asset</p> <p>16 value of that company?</p> <p>17 A. I believe it's around 45 billion, plus or</p> <p>18 minus ten percent say, maybe a little more.</p> <p>19 Q. Okay.</p> <p>20 A. When I was there, our capital budget was about</p> <p>21 three billion dollars a year, and we had over</p> <p>22 twenty million customers.</p> <p>23 Q. Okay. Those are US dollars, are they?</p> <p>24 A. Yes.</p> <p>25 Q. Okay. The curriculum vitae that is attached</p>
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<p>1 to your evidence has a list of various</p> <p>2 training courses and courses also where you</p> <p>3 were the instructor or presenter. That's a</p> <p>4 current list, is it?</p> <p>5 A. Yes, sir.</p> <p>6 Q. Okay. And also attached is a list of</p> <p>7 testimony. You've mentioned some of the</p> <p>8 evidence that you've given before other</p> <p>9 boards. Is this an accurate list of your</p> <p>10 experience as an expert witness?</p> <p>11 A. It's probably not all encompassing. I'm not a</p> <p>12 very good administrator and occasionally I</p> <p>13 remember things that aren't on the list.</p> <p>14 Q. Okay. But everything that's here was done?</p> <p>15 A. Yes.</p> <p>16 Q. And there may be others as well?</p> <p>17 A. Yes, sir.</p> <p>18 Q. Okay. Thank you. Now the revised evidence</p> <p>19 has been filed in your name, revised as of</p> <p>20 June 23, 2003. I ask you, for the record, do</p> <p>21 you adopt this evidence and the replies to the</p> <p>22 Requests for Informations of Newfoundland and</p> <p>23 Labrador Hydro, NLH-1 through 12, that have</p> <p>24 been filed with the Board?</p> <p>25 A. Yes, I do.</p>	<p>1 Q. Okay. Now I'd like to take you, sir, to page</p> <p>2 2 of your revised evidence, under the heading</p> <p>3 "Summary of Findings." You indicate there,</p> <p>4 starting at line 12, that the project</p> <p>5 documentation did not provide sufficient</p> <p>6 detail to support an independent evaluation.</p> <p>7 You comment on the nature of the descriptions</p> <p>8 of the projects, lack of economic analysis and</p> <p>9 the absence of consideration of viable</p> <p>10 alternatives. This evidence, having been</p> <p>11 filed on the 23rd of June, and you've since</p> <p>12 sat through this hearing and reviewed any</p> <p>13 additional information that has been filed.</p> <p>14 Has anything come to your attention that would</p> <p>15 alter or affect, in any way, the summary of</p> <p>16 the findings that you've presented at page 2?</p> <p>17 A. I believe that the additional information that</p> <p>18 I have learned since filing this evidence</p> <p>19 confirms or supports my findings here.</p> <p>20 Q. So your conclusions as stated in your Summary</p> <p>21 of Findings remain valid?</p> <p>22 A. Yes, sir, they do. As you well know, when I</p> <p>23 was contacted to get involved in this, I was</p> <p>24 asked to look at this from an outsider and</p> <p>25 comment in regards to whether or not I thought</p>

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<p>1 that an independent person could look at this  2 and make a determination as to whether or not  3 it's economically prudent or not, and in  4 reviewing the documents, I found that often  5 there was insufficient detail for an outsider  6 looking in to be able to know exactly what  7 they were doing and what the economic  8 justification was. The projects were often  9 justified with subjective arguments, with  10 little economic analysis, and then when I--in  11 those cases where they had economic analysis,  12 I often had serious concerns regarding the  13 economic analysis. So the bottom line was  14 that I felt that you could not make a informed  15 judgment as to the economic prudence of the  16 projects. As an example, they lacked what I  17 term structure and discipline. They lacked  18 structure in that you see many different types  19 of initiatives having different types of  20 needs, some having security needs which are  21 essential to safety in the operation of the  22 grid and others that are discretionary  23 spending that would not necessarily be done,  24 but they may improve the efficiency of the  25 operation. Those things would be combined</p>	<p>1 together in one project without details  2 regarding what's being spent on what. So  3 you'd have no choice but to approve the whole  4 project, whereas you might not have thought,  5 if it was detailed out, you might have been  6 able to tell "do we really need this  7 discretionary spending? Do we want to spend  8 this extra million dollars?" That's what I  9 mean by a lack of structure and discipline,  10 and I cite project B79, which is the  11 operational data and voice, as one such  12 project.  13 Q. And you're referring now to the discussion at  14 the top of page 3 of your evidence?  15 A. Yes, sir, I flipped the page.  16 Q. Okay. Just so the Board can be aware, can you  17 describe, with reference to project B79, the  18 difficulty that you have identified in your  19 evidence?  20 A. Yes, sir.  21 Q. Should we have B79 on the screen for that  22 purpose?  23 A. I think he had it up there.  24 Q. Okay.  25 A. Okay. Let me approach this in a two-phase</p>
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<p>1 process. Let me first go through this as if I  2 was a layperson who didn't know, didn't have  3 any in-depth knowledge about telecommunication  4 networks. So as an outside layperson looking  5 at this, we see that it's replacing their  6 SCADA system with a supposedly a better and  7 more efficient one. And knowing that SCADA is  8 critical to the operation and control and  9 maintenance of the power system, there are  10 security issues involved, security reliability  11 and continuity of service issues involved in  12 this. So in looking at it, you see that there  13 is a significant trouble history down at the  14 bottom of the page. You might also note that,  15 at the bottom of the first paragraph, we  16 talked about the new architecture being able  17 to support operational data, which would be  18 their SCADA system, as well as administrative  19 and voice traffic. Some of that voice traffic  20 may be associated with the ADA system, but the  21 administrative data is not. So that would be  22 a little bit of a concern. And then when you  23 look, go right to the project justification,  24 again, as a layperson looking in, you'd see  25 that in the second paragraph the operational,</p>	<p>1 administrative voice traffic currently run on  2 separate communications equipment and  3 standards. This upgrade would combine these  4 services into one. Well, that's very  5 commendable. So you know, that's a plus for  6 this project. That we're going to be able to  7 take what was in two networks and combine it  8 into one, surely that has savings associated  9 with it.  10 (12:27 p.m.)  11 Then we'd look at the next paragraph.  12 This upgraded communications network will  13 support all applications and devices that have  14 a standard protocol IP centric. Well, it  15 seems like the world is going Internet, so an  16 Internet protocol is probably a way to go. So  17 I have one IP network that does all of this  18 stuff. And then I go to the next paragraph  19 and indeed, that's exactly what it says,  20 integrating all applications and devices,  21 including SCADA, into a single communication  22 platform will streamline operational  23 activities, improve overall management and  24 control of the wide area network. So as a  25 layperson in, you would say well, you know,</p>



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<p>1 this is a--you know, all that is great and 2 wonderful. It seems to be, you know, we have 3 security issues involved. You're very likely 4 to approve this project, although you may have 5 some concerns, as a layperson looking in, that 6 this project also includes non-essential 7 functions, which would be the administrative 8 voice and data, you know, combining their in- 9 house Intranet network in with this security 10 of the SCADA concerns. You know, you see a 11 little bit of combining non-essential with 12 essential functionality, and that might cause 13 a layperson a little bit of heartburn. Now if 14 you're looking at this project costing \$2.1 15 million over the next two years, if that point 16 one was the added cost of having an IP centric 17 network and that they were going to have to 18 spend \$2 million anyway just for the SCADA 19 system, well then, in all likelihood, I'd be 20 inclined to recommend that we approve this 21 project. But that's as a layperson looking 22 in.</p> <p>23 Now let's look at it from a person who's 24 a little bit more informed about Internet 25 protocol and IP networks, someone with my</p>	<p>1 background. I would look at this, one of the 2 first things that stood out to me is that you 3 can't do it. You can't combine security 4 circuits that have low latency, quick response 5 times with an IP network. You can't put the 6 SCADA circuits onto the Intranet, their 7 internal Intranet, integrating it altogether, 8 and the reason you can't do that--let me 9 correct myself. Yes, you can do it, but it'd 10 be extremely expensive. And the reason you 11 wouldn't do it is because you can't guarantee 12 a quality of service with Internet protocol. 13 You can't guarantee that if I need a hundred 14 millisecond response time, I can't guarantee 15 that with the Internet. I have a T1 linked to 16 the Internet at my office and I get on the 17 Internet and I'll experience a three-second 18 delay is nothing, sometimes a thirty-second 19 delay, because it's got nothing to do with my 20 network. It has to do with the inefficiencies 21 of an IP protocol to handle large volumes of 22 data traffic.</p> <p>23 Q. Mr. Barreca, if I can interrupt you for a 24 moment, a couple of terms you use there, one 25 was low latency and then you spoke about a T1.</p>
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<p>1 Could you just explain for us what you're 2 referring to there?</p> <p>3 A. I'm sorry. Latency is delays that are caused 4 in a network, typically just inherent in the 5 network or the distances involved. You get 6 delays at various different stages. That's 7 usually what we talk about with latency. A T1 8 is a marketing term that was developed to 9 describe a DS1, which is the network term for 10 a 1.5 megabyte standard digital channel in a 11 telephone network, and I believe -</p> <p>12 Q. Okay, so that's standard one voice channel? 13 Is that what we're talking about?</p> <p>14 A. No. It can be configured as one high speed 15 channel or 1.5 megabyte channel, or it can be 16 subdivided into what they call fractional T1, 17 where you're talking about 24 standard voice 18 channels or 64 kilobyte digital channels, 19 which we call a DS0. So it can either be 24 20 DS0s, it could be configured that way so you 21 can actually have 24 voice lines, 24 separate 22 data lines, or it can be all combined into one 23 and you have 1.5 megabytes of throughput that 24 you could use for whatever.</p> <p>25 Q. Okay. So when you say the T1, that's</p>	<p>1 basically the standard line that most of us 2 would have coming into our computers?</p> <p>3 A. No.</p> <p>4 Q. No?</p> <p>5 A. No. AT1 is special. That's a high-speed, 6 that's very high speed link. An office 7 complex may have--your office may have a T1 8 coming in, but typically an individual 9 doesn't.</p> <p>10 Q. Okay. So just getting back to the issue of 11 low latency then, a low latency means a higher 12 quality line with fewer delays? Is that -</p> <p>13 A. Yes, low latency would be less delays built 14 into the line, but what's most critical is 15 response time, and that deals with the quality 16 of service issue, in that IP protocol doesn't 17 have a mechanism built into it for dealing 18 with prioritizing the different channels from 19 various different customers or sources. In a 20 mission critical application, where you know, 21 you're required to trip a circuit breaker 22 within a matter of seconds or milliseconds, 23 you wouldn't typically want to put that on an 24 IP network because when those routers get 25 congested, the way they handled congestion is</p>

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<p>1 to just throw away the data. That's how they</p> <p>2 handle it. It's very, very simple, simplistic</p> <p>3 process for dealing with congestion. If I'm</p> <p>4 getting too much information, I drop the</p> <p>5 packets, the packets of data, and that's how</p> <p>6 IP protocol handles those type of problems.</p> <p>7 Q. That's obviously not a solution for a SCADA</p> <p>8 network?</p> <p>9 A. Right.</p> <p>10 Q. Yes, okay.</p> <p>11 A. Right. Now you can do it, and I won't get</p> <p>12 into it unless you want me to, but it is</p> <p>13 possible to do, but you essentially have to</p> <p>14 build a different core network and overlay the</p> <p>15 IP on top of it and then you can guarantee a</p> <p>16 quality of service and possibly do that. That</p> <p>17 is extremely expensive. So if they're doing</p> <p>18 something like that, then this project would</p> <p>19 be--you'd be spending a lot of money and my</p> <p>20 next question would then be, well why do I</p> <p>21 need to put it on an IP network. Why not just</p> <p>22 lease facilities from the common carrier and</p> <p>23 deal with this, or build a non-IP network</p> <p>24 where I don't have the latency problems or put</p> <p>25 it on its own IP network where it has no</p>	<p>1 competition for traffic with anybody else?</p> <p>2 But that doesn't--but that's not what it says</p> <p>3 it's doing. It says it's building an</p> <p>4 integrated network, okay. So the point that</p> <p>5 I'm trying to make is that when you look at</p> <p>6 this from an informed position, you see all</p> <p>7 kinds of problems and we don't know how</p> <p>8 they're dealing with these problems. Okay,</p> <p>9 now we have since learned that whatever</p> <p>10 network they're building here is going to be</p> <p>11 independent of everything else and in response</p> <p>12 to your questions, Mr. Hutchings, the panel</p> <p>13 earlier pointed that out, that this has</p> <p>14 nothing to do with their internal Intranet.</p> <p>15 That may be the case as to what they're going</p> <p>16 to do, but that's certainly inconsistent with</p> <p>17 what they said they're going to do, referring</p> <p>18 to the fourth paragraph on page E-80 where it</p> <p>19 says "we're integrating all applications and</p> <p>20 devices, including SCADA, onto a single</p> <p>21 communication platform." So that's in</p> <p>22 contradiction to what they said they're going</p> <p>23 to do, which doesn't surprise me, because I</p> <p>24 don't believe they could have done this to</p> <p>25 begin with.</p>
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<p>1 Q. So from what you've heard since the hearing</p> <p>2 began, do you have a different picture of what</p> <p>3 this project at B79 is apparently, as compared</p> <p>4 to what it was when you first read it?</p> <p>5 A. I don't definitively know what they're going</p> <p>6 to do, but I got a little bit of sense of that</p> <p>7 in listening to the panel's testimony in the</p> <p>8 last couple of days.</p> <p>9 Q. Okay. Perhaps we can move then. Further</p> <p>10 along in your evidence, you deal with the</p> <p>11 project at B60.</p> <p>12 A. Before we move along -</p> <p>13 Q. Sure.</p> <p>14 A. - I wanted to address the trouble tickets.</p> <p>15 Q. Oh yes, right.</p> <p>16 (12:38 p.m.)</p> <p>17 A. Because that is a major justification for the</p> <p>18 project. The concern I have regarding the</p> <p>19 trouble tickets is that regardless of the</p> <p>20 magnitude or the volume of troubles that we</p> <p>21 have, okay, this type of summary does not</p> <p>22 justify replacing everything. You could</p> <p>23 multiply these numbers times ten and I'll</p> <p>24 still stand by that, that does not justify</p> <p>25 replacing everything. You need to analyze</p>	<p>1 trouble tickets, and I did this as an</p> <p>2 engineer. You need to analyze them and see if</p> <p>3 there's a pattern there. All of these</p> <p>4 troubles could be from one network element or</p> <p>5 maybe it's from three network elements, and if</p> <p>6 that be the case, then certainly perhaps we</p> <p>7 could go out and replace those three network</p> <p>8 elements and solve our problem. More in-depth</p> <p>9 analysis of the trouble tickets is needed to</p> <p>10 justify the project. When I worked as an</p> <p>11 engineer replacing equipment out in the field,</p> <p>12 based on trouble history, if I'd have went</p> <p>13 into my boss and said I want to replace all</p> <p>14 this equipment, here's the extensive trouble</p> <p>15 history, he'd throw me out of his office. I'd</p> <p>16 have to break it out and show him that I need</p> <p>17 to replace this equipment at this location</p> <p>18 because look at the trouble history at this</p> <p>19 location attributable to that. I don't know</p> <p>20 if Hydro's ever experienced, but we certainly</p> <p>21 have, where a technician goes into a remote</p> <p>22 terminal unit and fixes one thing, but happens</p> <p>23 to jar a plug-in card or something else and</p> <p>24 puts a whole segment of the network out of</p> <p>25 service, and you might get a hundred trouble</p>

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<p>1 tickets right from that one incident. Well,</p> <p>2 that's not a justification for replacing</p> <p>3 anything. So you have to analyze it in depth</p> <p>4 to know to take the right course of action.</p> <p>5 That's all I had.</p> <p>6 Q. Okay. All right. So that, I think, deals</p> <p>7 with your concerns as outlined on page 3 of</p> <p>8 your evidence, relative to B79?</p> <p>9 A. Yes, sir.</p> <p>10 Q. Okay. So the other project that you</p> <p>11 specifically addressed there is B60, the</p> <p>12 applications enhancements.</p> <p>13 A. Yes, sir. In B60, I chose that one. I was</p> <p>14 dealing with it, again with the structure and</p> <p>15 discipline issue of the projects, of the</p> <p>16 budget projects. Here I was talking about</p> <p>17 lumping routine projects with non-routine</p> <p>18 projects. Routine being projects that you</p> <p>19 might have to do for growth, unforeseen</p> <p>20 events, normal replacement of equipment, with</p> <p>21 new capital expenditures that are more</p> <p>22 discretionary in nature. So I wasn't dealing</p> <p>23 with the security issue, but rather with just</p> <p>24 routine versus discretionary. Let me get to</p> <p>25 that page. And in this project, it consisted</p>	<p>1 of three sub-projects: the first being</p> <p>2 unforeseen modification, enhancements and</p> <p>3 additions to software to address changes</p> <p>4 resulting from customers, stakeholders,</p> <p>5 regulators or I guess generally to improve</p> <p>6 efficiencies; the second project, the</p> <p>7 continuing design, build and implementation</p> <p>8 enhancements to Hydro's inter/intranet; and</p> <p>9 the third being a new application, an</p> <p>10 enterprise-wide project management system.</p> <p>11 The first seems to be a project, an</p> <p>12 initiative whereby Hydro is setting some funds</p> <p>13 aside for unforeseen events. And you know, in</p> <p>14 the budgeting process, you need to do that.</p> <p>15 When I had responsibility and was involved in</p> <p>16 budgets, we usually had to follow that up with</p> <p>17 some type of historical track record. This is</p> <p>18 what we typically spend, you know, year on</p> <p>19 average. Over the last five years, we</p> <p>20 typically spent, you know, \$100,000 on these</p> <p>21 types of unforeseen events. So you have some</p> <p>22 historical basis to say okay, you're proposing</p> <p>23 \$100,000 this year. On average, you've been</p> <p>24 spending 100, we'll accept that. We don't</p> <p>25 even know, at this point, how much of the</p>
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<p>1 total capital budget is being attributed to</p> <p>2 these unforeseen events.</p> <p>3 And then the second item, the continuing</p> <p>4 design, build and implementation of</p> <p>5 enhancements to their internal network, to me</p> <p>6 that's all discretionary. At least the way</p> <p>7 it's described here, that would be</p> <p>8 discretionary funds. So you'd want to see</p> <p>9 some type of economic justification for</p> <p>10 whatever enhancements they're proposing.</p> <p>11 And the third is certainly a</p> <p>12 discretionary project, enterprise project</p> <p>13 management software. I don't--my personal</p> <p>14 experience would be please stay away from an</p> <p>15 enterprise project management software</p> <p>16 application. They never work, and many</p> <p>17 companies have tried, but it may work for</p> <p>18 Hydro. So my personal experiences are not</p> <p>19 good with project management software,</p> <p>20 especially at the enterprise level. But</p> <p>21 nonetheless, it is a discretionary project</p> <p>22 that a cost benefit analysis should be</p> <p>23 presented for.</p> <p>24 So my concerns with this one are that</p> <p>25 we've combined a routine project that you need</p>	<p>1 to do, which would be item No. 1. Number two,</p> <p>2 I really don't know what that entails, maybe</p> <p>3 it's all routine stuff, maybe it's all new</p> <p>4 enhancements, we don't know. And then third,</p> <p>5 with the project management application, which</p> <p>6 is all discretionary. So you know, again, we</p> <p>7 see a routine type expenditure carrying some</p> <p>8 discretionary expenditures. So you've kind of</p> <p>9 taken the--you're taking the responsibility or</p> <p>10 the capability away from the Board to be able</p> <p>11 to look at a discretionary project and say "I</p> <p>12 don't want this" or "I think it's excessive,"</p> <p>13 without adversely impacting other items that</p> <p>14 are required. Item one is required. So if</p> <p>15 you were to kill this project because you</p> <p>16 don't think they need an enterprise wide</p> <p>17 project management application, you couldn't</p> <p>18 do it without killing the discretionary</p> <p>19 portion, the non-discretionary portion as</p> <p>20 well, and that's what I mean by lack of</p> <p>21 structure and lack of discipline in the</p> <p>22 budgetary process or in the budget projects</p> <p>23 themselves.</p> <p>24 Q. That, I guess, leads into the discussion in</p> <p>25 your pre-filed evidence, pages 5 through 8, of</p>

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<p>1 suggested classification and reference to</p> <p>2 other jurisdictions and how these types of</p> <p>3 issues have been addressed?</p> <p>4 A. Yes.</p> <p>5 Q. Okay. I think that's probably well expressed</p> <p>6 in your pre-filed evidence. Is there anything</p> <p>7 to add to that at this point?</p> <p>8 A. The only thing I would add is that there are a</p> <p>9 number of different ways that the Board may</p> <p>10 want to consider classifying expenditures.</p> <p>11 This is a suggestion that Manitoba used that I</p> <p>12 think would work, as well as there are</p> <p>13 numerous other ways you might want to do it,</p> <p>14 but I think having the classification is going</p> <p>15 to give or just going to yield tremendous</p> <p>16 benefit, I think, to the Board in its review</p> <p>17 process, because it will force, to the extent</p> <p>18 possible, the differentiation between</p> <p>19 essential expenditures, discretionary ones,</p> <p>20 expenditures to accommodate legal and</p> <p>21 regulatory compliance issues, so that you can</p> <p>22 look at those things independently, and then</p> <p>23 the additional benefit that comes with that is</p> <p>24 that there's different types of justifications</p> <p>25 to use for different type of expenditures.</p>	<p>1 Expenditures for growth, for example, should</p> <p>2 not require a large amount of economic</p> <p>3 analysis. A simple track record of historical</p> <p>4 growth and capital expenditures versus Hydro's</p> <p>5 projected growth and capital expenditures</p> <p>6 would probably be all that's needed for</p> <p>7 justifying growth projects. The same thing</p> <p>8 can be said for routine type projects. But</p> <p>9 then on the discretionary projects, then I</p> <p>10 believe it would be more prudent to want to</p> <p>11 see more economic, objective economic analysis</p> <p>12 for discretionary projects.</p> <p>13 Q. Thank you. I'd like to move now to some of</p> <p>14 the specific budget projects that are spoken</p> <p>15 about in your evidence, and this section</p> <p>16 starts at page 12. The first issue arises in</p> <p>17 connection with the VHF mobile radio system,</p> <p>18 and I believe you had brought to my attention</p> <p>19 an error that--an apparently factual error</p> <p>20 that shows up on page 12?</p> <p>21 A. Yes, sir. In the first paragraph under the</p> <p>22 VHF heading, down in the last sentence, I said</p> <p>23 "consistent with the primary directive to own</p> <p>24 all facilities, the project moves all repeater</p> <p>25 sites not in Hydro's facilities." That should</p>
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<p>1 say "all repeater sites where technically</p> <p>2 feasible," which I believe was ten sites.</p> <p>3 Q. I believe there are five, according to some of</p> <p>4 the later material, that couldn't be moved or</p> <p>5 there were no alternatives?</p> <p>6 A. Apparently.</p> <p>7 Q. Yes, okay. All right. With respect to the</p> <p>8 VHF mobile radio system itself, what did you</p> <p>9 understand the project to be when you</p> <p>10 addressed it in your evidence, beginning at</p> <p>11 page 12?</p> <p>12 A. Excuse me, could you say that again?</p> <p>13 Q. What did you understand the project that was</p> <p>14 being proposed by Hydro to be when you</p> <p>15 addressed it at page 12 of your evidence,</p> <p>16 based upon the B71 information that you had?</p> <p>17 A. Okay. I assumed that it was a replacement of</p> <p>18 their mobile radio system and I assumed, from</p> <p>19 the description, that this was a radio system</p> <p>20 that was used by the field forces in</p> <p>21 performing their, you know, daily operations,</p> <p>22 maintenance repair type functionality.</p> <p>23 Q. Was there anything in the material that you</p> <p>24 had available to you initially to indicate</p> <p>25 that there was some type of non-switched</p>	<p>1 architecture going to be used for this system?</p> <p>2 A. No. In reading the various descriptions of</p> <p>3 the alternatives that were considered, which I</p> <p>4 think primarily most of that came from their</p> <p>5 Business Case and the technical report from</p> <p>6 their consultant, I believe that they were</p> <p>7 replacing the current system with a switched</p> <p>8 system, with a central switched system.</p> <p>9 Q. Okay. And what do you now understand to be</p> <p>10 the intention of Hydro, on the basis of your</p> <p>11 attendance here at this hearing, with respect</p> <p>12 to the replacement of that system?</p> <p>13 A. Well, it certainly appears that they're going</p> <p>14 to replace it with a non-switched</p> <p>15 architecture, non-centrally switched, I should</p> <p>16 say. You have a switching function that's</p> <p>17 going to be carried out, only it's going to be</p> <p>18 carried out by the controllers and the</p> <p>19 routers.</p> <p>20 Q. Did you give attention to the proposed</p> <p>21 alternatives that Hydro raised in its Business</p> <p>22 case to the project that they had described</p> <p>23 there?</p> <p>24 (12:52 a.m.)</p> <p>25 A. Yes, I did, and I found that all of the</p>

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<p>1 alternatives considered basically replaced the  2 entire system in an of itself. There was no  3 alternative that looked at maintaining the  4 status quo or "status quo alternative" which  5 is pretty standard practice that you would  6 consider keeping the system, fixing what's  7 broke, maybe replacing what's broke and not  8 functioning up to standards, and see what the  9 cost benefit and risk analysis might yield.  10 And I found that in this project, that wasn't  11 done, that all of the alternatives basically  12 replaced everything. And I recommended that  13 an alternative be considered consistent with  14 their alternative that they describe, but  15 didn't implement, and I believe that was on  16 page 7 of the Business Case where they talk  17 about in the middle of the page there,  18 "replacement of switch in 2004 alternative".  19 And it says that one possible solution of the  20 problem is to replace the current switch and  21 the site controllers only and leave the rest  22 of the system intact. This would be more  23 consistent with a status quo alternative.  24 They identified a lot of troubles at the  25 switch and assuming that their analysis</p>	<p>1 indicated that the switch is in trouble and in  2 their testimony I believe they talked about  3 having high levels of intermittent troubles at  4 the switch. That's an indication of perhaps  5 it needs to be replaced. So you replace the  6 switch in site controllers, okay, again  7 analyze those trouble tickets to see if you  8 have any major repeater problems, if there's a  9 repeater site or two or three that is causing  10 a lot of problems, go ahead and replace those  11 too. And then replace the remainder of the  12 equipment gradually over time and on as-needed  13 basis. Quite often, especially electronic  14 equipment can live two or three times its  15 average life cycle. That's not uncommon with  16 electronic equipment if you leave it alone.  17 You start moving it around and then maybe  18 you'll shorten its life up a lot, but if you  19 leave it alone and it's working fine, it will  20 usually keep on working fine because there are  21 no moving parts. At the end of the first  22 paragraph they said that when the switch  23 option was proposed, the corporation are aware  24 that the repeaters had been manufacturer  25 discontinued, and that's certainly a source of</p>
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<p>1 concern because if you lose the repeater, you  2 lose that particular site and that's certainly  3 something to be concerned about, but we have  4 since learned in testimony that they can  5 replace those repeaters with different models  6 where spare parts and that, you know, with a  7 different model that is not manufacturer  8 discontinued and where spare parts are  9 available. They also then talk about this  10 project not being considered because of the  11 age of the equipment, and it says based on  12 this in the 2006 support for the repeat  13 equipment will no longer be available. Well,  14 let's wait until 2006, if the trouble tickets  15 don't indicate that that repeater is bad or  16 maybe we'll wait beyond that if come 2006,  17 we're still not experiencing trouble with that  18 repeater. And then we talk about lack of  19 functionality as being another reason this  20 alternative is not considered. And that's on  21 page 8 at the top and they identify the lack  22 of functionality as including privacy,  23 individual calling, remote unit registration  24 and ease of expansion. Well, I might point  25 out that the consultant's report in</p>	<p>1 consultation with Hydro and in review of the  2 survey that they conducted, the consultant  3 concluded that privacy is not needed by Hydro.  4 Individual calling apparently they don't have  5 that now, it may be desirable but it's not  6 critical to the operation's folks to be able  7 to do their job in the field. Remote unit  8 registration, I'm not sure why they would need  9 that. Remote unit registration is usually  10 only required if you're going to sell the  11 services commercially. In other words, you  12 want everybody who picks up a handset to have  13 a unique identification number that  14 automatically registers with the system, their  15 Passport system accommodates that. As a  16 matter of fact, it's one of the most  17 significant benefits of the Passport system is  18 to have that unique identification and  19 automatic registration capability. They don't  20 currently have that and don't necessarily need  21 that, certainly don't need it for the  22 operation's folks to do their job out in the  23 field which is what this system supports. And  24 then the third thing was ease of expansion.  25 Ease is a relative term and what I do know</p>

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<p>1 from reading the consultant's technical report  2 is that the current system is expandable, that  3 they can add the additional six sites to the  4 current system. So the lack of functionality  5 justification for not considering this  6 alternative is weak, in my opinion. And then  7 they talk about the inability to use the  8 existing corporate structure. That may or may  9 not be the case for the system that's in the  10 ground today, but if you go and replace the  11 switch and the controllers, you can then  12 integrate and take advantage of their  13 microwave system. So I don't know that this  14 is applicable to this alternative. It may be  15 applicable to the system that's there, but  16 this alternative replaces the switch and site  17 controllers, so it should be able to interface  18 with a DS0 circuit coming from their microwave  19 system or coming directly from the local  20 telephone company, I don't see where that  21 would make a difference. So it should be  22 doable.</p> <p>23 So the bottom line here is that what  24 should be the first alternative considered is  25 not considered at all. It's rejected and I</p>	<p>1 think it's rejected based on weak information.  2 Now, perhaps Hydro has done exactly this study  3 in-house, but it's certainly not reflected  4 here in this document which is the document we  5 have to use to approve the budget.</p> <p>6 Q. This option that you've just been discussing  7 in reference to the Business Case, page 7, how  8 does that relate to your alternative four, as  9 it was referred to at page 15 of your  10 evidence?</p> <p>11 A. It's very similar to my alternative four.</p> <p>12 Q. Okay. And there's also a reference now in  13 Supplementary Evidence filed on July 4th to  14 your alternative four. How does the  15 alternative that's described as alternative  16 four in that Supplementary Evidence relate to  17 what's actually your alternative four?</p> <p>18 A. It does not. That alternative replaces the  19 system in its entirety, only it phases it in,  20 as opposed to my alternative four. Phases in  21 bits and pieces of it, selected pieces of it.</p> <p>22 Q. One issue that it does address is the question  23 of six new repeaters. What would be the  24 appropriate approach consistent with your  25 alternative four to the handling of those six</p>
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<p>1 new repeaters?</p> <p>2 A. Well, the handling of expanding coverage  3 should be handled consistently across all of  4 the alternatives. You may, if it's very  5 expensive to expand coverage, then you may  6 want to do some additional economic analysis  7 just looking at expanding the coverage. Do I  8 do all six sites now--new sites now, or do I  9 do these two because I don't have any type of  10 communications, satellite or otherwise in  11 these areas. I have to put the linemen up on  12 top of the mountain to relay the call. Well,  13 if that's the case, then maybe we go ahead and  14 do those. Maybe all six of them that way and  15 maybe we should do all six of them, but  16 however we decide is the most prudent way to  17 handle those six, we should handle them  18 consistently in all of the alternatives.</p> <p>19 Q. Okay. So that's basically an in and an out,  20 whichever scene you put together for an  21 alternative system, is that right?</p> <p>22 A. Well it's quite likely that that scenario--  23 it's quite likely that the additional six  24 sites will not impact the economic analysis of  25 the various different alternatives, assuming</p>	<p>1 you would do it consistently across all. And  2 if that's the case, there's no reason to put  3 it in, the economic analysis. You would do a  4 separate economic analysis to justify the  5 capital expenditure to add the new sites,  6 okay, and then do the economic analysis of how  7 I'm going to replace this system based on a  8 thorough analysis of the troubles and other  9 factors that you know surrounding the current  10 system.</p> <p>11 Q. And would that apply equally to what you've  12 called alternative five?</p> <p>13 A. Alternative five, yes, everything I said would  14 apply to that one as well, but alternative  15 five, I threw that one in there because of my  16 concern that there was an unduly high emphasis  17 on corporate ownership or private ownership of  18 communication facilities. And let me just say  19 right off, I don't know if that's a good thing  20 or a bad thing, but what I do know is that  21 it's not economically justified objectively  22 anywhere in the budget, the private ownership  23 issue. And so, what I was trying to point out  24 with alternative five was that we could look  25 at at least one aspect of what it costs, what</p>

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<p>1 private ownership cost us and the VHS (sic.)  2 project provided a good opportunity because we  3 can look at replacing the system as is, at its  4 current sites, and then replacing the system,  5 moving all sites that are technically feasible  6 to Hydro-owned site and look at the total cost  7 of that, and then you would see by comparing  8 that alternative with--by comparing  9 alternative four and five, for example, you  10 would then know what is the cost of private  11 ownership, at least in respect to the VHS  12 system. So now you're getting some objective  13 idea of what it's going to cost you to do that  14 and if it's going to save you money, then by  15 all means do it if the capital outlay is not  16 prohibitive. But we don't know that from the  17 documentation.</p> <p>18 Q. That was my question. From the initial  19 documentation that you had, could you even  20 start to do any sort of economic analysis of  21 ownership versus leasing?</p> <p>22 A. No, you cannot.</p> <p>23 Q. All right. That, I think, deals with the  24 various alternatives that you discuss with  25 respect to the VHF radio system. The next</p>	<p>1 project that you deal with, starting at the  2 bottom of page 15 of your evidence is the End-  3 User and Service Evergreen Program. And this  4 is a project, I believe, at B-66. You  5 indicate in your pre-filed evidence at page  6 16, that the concern here was a very high  7 capital expenditure. Have you had that  8 concern alleviated at all by reason of having  9 listened to the evidence that has been led  10 with respect to that project this week?</p> <p>11 A. No, sir, I have not. The objectives outlined  12 for the project are commendable objectives and  13 are probably the objectives of every major  14 corporation in the world today. However, the  15 costs are not documented. We don't know what  16 the cost--where the money is being spend,  17 other than just general terms. And in the  18 questioning of the panel witnesses, the only  19 thing we have identified is that irregardless  20 of how much a thin client device or a PC  21 device costs, the total estimated budget  22 amount for the end-user devices was  23 \$700,000.00 that was Mr. Downton's figure,  24 that the total end-user devices was \$700.00.  25 I had assumed that that was the bulk of this</p>
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<p>1 expenditure was the end-user devices, and now  2 we see that it's, you know, it's 2.1 million  3 unaccounted for that's going to be spent  4 elsewhere. I notice project mentions servers,  5 but servers are not that expensive. An access  6 server is the server closer to the user. An  7 access server is \$5,000.00, \$10,000.00 would  8 typically be an expensive one. That's a lot  9 of servers, so I don't know where the money is  10 being spent. It may be it's being spent in a  11 very prudent way, but my charge was, could I  12 approve this project? You know, did I think  13 that there was sufficient information here and  14 my answer would be no, I can't approve this  15 because I don't know where the bulk of the  16 money is being spent.</p> <p>17 (1:08 a.m.)</p> <p>18 Q. The project does reference and we've had some  19 discussion in evidence of the life expectancy  20 of those desktops and laptops. We've also had  21 some discussion now about the monitors. Are  22 you in position to indicate the relative  23 service lives to be expected from monitors  24 versus desktops or the actual computing  25 devices?</p>	<p>1 A. Well, yes. Monitors typically are about a six  2 year average life for monitors. Typically a  3 person will go through two PCs for a monitor,  4 you know, for one monitor. That's not  5 necessarily the case. There's probably a lot  6 of variance in that number, but I think it's,  7 you know, four year life cycle on PCs is  8 generally appropriate. Six year life cycle on  9 monitors is generally appropriate. The  10 average life of a PC, the average period of  11 time that a business has a PC and keeps it is  12 nine years. A lot of people are surprised by  13 that, but that is the statistical average that  14 businesses keep PCs, nine years. Now, we use  15 a--in my own business, we use--I say my  16 business, in my work as a appraiser assessing  17 value of high tech equipment, we effectively  18 use a four year life and that is based on a  19 calculation of functional obsolescence that  20 assumes that most companies by a PC, buy a  21 high end PC, give it to a high end user and  22 two years later, they'll pass that down to the  23 secretary. I believe, Mr. Chair, you said,  24 you're at the bottom of the food chain.</p> <p>25 CHAIRMAN:</p>

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<p>1 Q. Yes, I'm down beyond the secretary.</p> <p>2 A. So, after the secretary is finished beating it</p> <p>3 up, she passes it down to the honourable Chair</p> <p>4 and so on average, the physical life is nine</p> <p>5 year, but for valuation purposes, it loses its</p> <p>6 life much quicker. Not all companies do that.</p> <p>7 I believe it's called cascading is what it's</p> <p>8 been referred to, not all companies do that,</p> <p>9 but a lot do.</p> <p>10 Q. And what has your experience been with the</p> <p>11 economic effect of cascading?</p> <p>12 A. Well, it certainly is a cost effective means.</p> <p>13 You postpone a capital expenditure. You</p> <p>14 shouldn't do it if it's going to impede</p> <p>15 productivity. In my business, I'm probably</p> <p>16 the--I'm at the top of the food chain and not</p> <p>17 because I own the business, but because my</p> <p>18 processing needs exceed all my employees'.</p> <p>19 And when I'm done with my PC, I pass it down</p> <p>20 to the next person in line. Actually the next</p> <p>21 person in line who gets it from me is the one</p> <p>22 who does a lot of programming and software</p> <p>23 development work.</p> <p>24 Q. I don't think we need to address specifically</p> <p>25 the other projects that you've addressed in</p>	<p>1 your evidence. They'll stand on their own.</p> <p>2 Your conclusion is stated at page 20,</p> <p>3 beginning at line 18 and so on. And you refer</p> <p>4 again to the lack of documentation to support</p> <p>5 evaluation, subjective justification,</p> <p>6 structure discipline, economic analysis and so</p> <p>7 on. Is it possible, in your view, at this</p> <p>8 point, based upon the filings that you've</p> <p>9 examined and the testimony that you've heard,</p> <p>10 to determine if the projects outlined in this</p> <p>11 capital budget are the least cost alternative</p> <p>12 to provide reliable service to Hydro's</p> <p>13 customers?</p> <p>14 A. The short answer is no. You cannot determine</p> <p>15 from the budget documents that the least cost</p> <p>16 alternative or the least cost objective is</p> <p>17 adhered to. We can't tell you, you know, and</p> <p>18 if you were to read the first project I talked</p> <p>19 about was the operational data project with</p> <p>20 just a little bit of informed judgment in</p> <p>21 looking at, you would have to assume that what</p> <p>22 they say they're going to do, you would</p> <p>23 certainly assume that that is not the least</p> <p>24 cost alternative. Knowing what I know, I can</p> <p>25 look at that and if they were going to go what</p>
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<p>1 they said in that budget, I could assume with</p> <p>2 a high degree of certainty that that was not</p> <p>3 the least cost alternative. But having said</p> <p>4 that, we now know that that is not what</p> <p>5 they're going to do because they describe</p> <p>6 doing something totally different that may be</p> <p>7 closer to the least cost alternative.</p> <p>8 Q. Is it possible to determine on the basis of</p> <p>9 what you've seen and heard to date that this</p> <p>10 is, in fact, the least cost alternative.</p> <p>11 A. No.</p> <p>12 Q. So, in terms of the conclusions that are</p> <p>13 stated at page 20 to 21 of your evidence, had</p> <p>14 these conclusions been affected at all by what</p> <p>15 you have seen and heard since June 23, 2002</p> <p>16 when this evidence was finalized and</p> <p>17 particularly with respect to the testimony</p> <p>18 that you've heard since you attended the</p> <p>19 entire hearing?</p> <p>20 A. No, I still support these conclusions and</p> <p>21 findings.</p> <p>22 Q. Thank you. Those are all my questions for Mr.</p> <p>23 Barreca, Mr. Chair.</p> <p>24 CHAIRMAN:</p> <p>25 Q. Thank you, Mr. Hutchings. Ms. Greene, are you</p>	<p>1 ready to proceed with your cross-examination?</p> <p>2 GREENE, Q.C.:</p> <p>3 Q. Mr. Chair, I will not be finished by 1:30. In</p> <p>4 fact, there was some evidence today that I</p> <p>5 need to discuss with my team as it was new</p> <p>6 evidence and I also need to check references</p> <p>7 to transcript for the purpose of the cross-</p> <p>8 examination, but I'm quite willing to start if</p> <p>9 that's--I'm quite willing to break as I know I</p> <p>10 will not be finished by 1:30 or near finished</p> <p>11 by 1:30.</p> <p>12 CHAIRMAN:</p> <p>13 Q. Well, in the interest of time, I think</p> <p>14 probably if you were to proceed now until</p> <p>15 1:30.</p> <p>16 CROSS-EXAMINATION BY MAUREEN GREENE, Q.C.</p> <p>17 GREENE, Q.C.:</p> <p>18 Q. Good afternoon, Mr. Barreca.</p> <p>19 A. Good afternoon.</p> <p>20 Q. I'd like to start first with the Appendix 1 to</p> <p>21 your revised evidence. Actually, I understand</p> <p>22 from page 5, lines 12 to 14 of your evidence,</p> <p>23 if we could start there first, please, Mr.</p> <p>24 O'Reilly, page 5 of the revised evidence,</p> <p>25 beginning there on line 12, you state that at</p>



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<p>1 a cursory survey of the capital review</p> <p>2 policies of regulatory boards in Canada, and</p> <p>3 then you draw a conclusion that we'll come</p> <p>4 back to, but do I understand from that that</p> <p>5 you undertook that survey for the purposes of</p> <p>6 this hearing?</p> <p>7 A. The survey was actually conducted by someone</p> <p>8 else in cooperation with myself and it was my</p> <p>9 understanding that it was done in support of</p> <p>10 the budget process, at least from the</p> <p>11 perspective of the intervenors.</p> <p>12 Q. That it was done as a result of your</p> <p>13 involvement and retention by the Industrial</p> <p>14 Customers for this hearing, was it?</p> <p>15 A. I think so.</p> <p>16 Q. The results of this survey then, are they</p> <p>17 outlined in our Appendix 1?</p> <p>18 A. Yes.</p> <p>19 Q. And, Mr. O'Reilly, if we could go to Appendix</p> <p>20 1 now, please. Appendix 1 does not have page</p> <p>21 numbers, it's actually the table which is page</p> <p>22 2 of Appendix 1. In Appendix 1 how many</p> <p>23 jurisdictions are referred to, Mr. Barreca?</p> <p>24 A. Four.</p> <p>25 Q. And what are we to take from that with respect</p>	<p>1 to the other jurisdictions in Canada that are</p> <p>2 not listed in Appendix 1?</p> <p>3 A. What are we to take from that?</p> <p>4 Q. Yes.</p> <p>5 A. That either they had no role, no</p> <p>6 responsibility in regards to approving the</p> <p>7 capital budget or in their review of the</p> <p>8 capita budget responsibilities, they did not</p> <p>9 have an classification.</p> <p>10 Q. I'll come to that. Of the four mentioned</p> <p>11 there, they do not all have classification</p> <p>12 systems, so your evidence is that the other</p> <p>13 jurisdictions, where there are regulatory</p> <p>14 bodies, they do not get involved or are not</p> <p>15 required to review and approve capital budgets</p> <p>16 or an electrical utility?</p> <p>17 A. I do not know how many of which I don't know</p> <p>18 how many do not have a responsibility in the</p> <p>19 review of the budget, nor do I know how many</p> <p>20 have a role and do not have any budget</p> <p>21 classifications.</p> <p>22 Q. So, your survey show that only the four boards</p> <p>23 or the four jurisdictions listed here are</p> <p>24 involved with respect to the capital budget</p> <p>25 review, is that correct?</p>
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<p>1 A. Yes.</p> <p>2 Q. Looking at the first one, Manitoba Public</p> <p>3 Utilities Board, do I understand from the</p> <p>4 brief information that's contained there that</p> <p>5 annual capital budget reviews are not required</p> <p>6 at least for Central Gas?</p> <p>7 A. In the case of Manitoba, I do not believe that</p> <p>8 they are, I believe you're right, they are not</p> <p>9 required to do a review, but when they did do</p> <p>10 a review of Central Gas, they laid out a</p> <p>11 classification scheme that we thought would</p> <p>12 be--I thought it was a reasonable one and</p> <p>13 would help improve the process here in</p> <p>14 Newfoundland.</p> <p>15 Q. That's with respect to Central Gas which is a</p> <p>16 gas utility, do you know if that</p> <p>17 classification system is applied to the</p> <p>18 electrical utility, Manitoba Hydro?</p> <p>19 A. No, I do not know.</p> <p>20 Q. You mentioned that it is reviewed only as part</p> <p>21 of a general rate application. Do you know</p> <p>22 when Manitoba Hydro was last before the Board</p> <p>23 under general rate application?</p> <p>24 A. No ma'am, I do not know.</p> <p>25 Q. So, you have no evidence to give to the Board</p>	<p>1 with respect to the criteria used by the</p> <p>2 regulator in Manitoba with respect to anything</p> <p>3 to do with capital budgets for the electrical</p> <p>4 utility in the province?</p> <p>5 A. No, not for the electric utility.</p> <p>6 Q. And you don't even know if the same criteria</p> <p>7 is applied to the electrical utility?</p> <p>8 A. I don't know that for a fact, no.</p> <p>9 Q. The next jurisdiction you refer to on your</p> <p>10 survey is the CRTC with respect to</p> <p>11 telecommunications companies. I wonder if you</p> <p>12 could explain your note that is on the bottom</p> <p>13 of that page.</p> <p>14 (1:23 p.m.)</p> <p>15 A. What the notes says is that when they changed</p> <p>16 regulation from rate base regulation to price</p> <p>17 cap regulation, the Board felt that it was no</p> <p>18 longer, or the Commission felt that it was no</p> <p>19 longer necessary to review the capital program</p> <p>20 because of the nature of price cap</p> <p>21 regulations.</p> <p>22 Q. And if you go back up to the main part of your</p> <p>23 appendix in the third column over, do I</p> <p>24 understand correctly from that, that when they</p> <p>25 did do the review of capital again, it was</p>

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<p>1 during a rate application and not on an annual</p> <p>2 basis?</p> <p>3 A. Yes.</p> <p>4 Q. The next jurisdiction that you refer to is</p> <p>5 B.C. In the third column of the survey, you</p> <p>6 state that capital expenditures are reviewed</p> <p>7 again only during a general rate application,</p> <p>8 I'll call it or a revenue requirement</p> <p>9 application. Is that correct?</p> <p>10 A. Yes.</p> <p>11 Q. And do you know when B.C. Hydro had it's last</p> <p>12 general rate application?</p> <p>13 A. No, I don't.</p> <p>14 Q. Would it surprise you if I told you it was in</p> <p>15 excess of ten years?</p> <p>16 A. No.</p> <p>17 Q. Into the note column for B.C., I see no</p> <p>18 indication that when they did last look at</p> <p>19 B.C. Hydro's capital program, they had a</p> <p>20 classification system.</p> <p>21 A. I'm sorry?</p> <p>22 Q. The note column there -</p> <p>23 A. Yes.</p> <p>24 Q. - doesn't indicate that B.C. Utilities</p> <p>25 Commission, when it last looked at B.C.</p>	<p>1 Hydro's capital budget employed a</p> <p>2 classification system which you did have</p> <p>3 mentioned above, Manitoba for Central Gas and</p> <p>4 for CRTC for Maritime Tel and I assume the</p> <p>5 absence of the classification system was that</p> <p>6 when they did last look at it more than ten</p> <p>7 years ago, there was no classification system</p> <p>8 used.</p> <p>9 A. That's correct. They imposed a, not a</p> <p>10 constraint, but a desire to constrain the</p> <p>11 capital budget.</p> <p>12 Q. Turning to the next page, we see Nova Scotia,</p> <p>13 could you please explain your note under the</p> <p>14 third column there, the first note?</p> <p>15 A. The Board may issue information request to the</p> <p>16 utility concerning their capital budget.</p> <p>17 Q. Right, and before that though, can you just</p> <p>18 explain what you meant by this third column</p> <p>19 where Mr. O'Reilly has indicated the little</p> <p>20 hand.</p> <p>21 A. I'm sorry, what's your question.</p> <p>22 Q. The question, could you explain what that</p> <p>23 means?</p> <p>24 A. It means that Nova Scotia submits an annual</p> <p>25 capital expenditure program to the utility</p>
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<p>1 board for review.</p> <p>2 Q. And it is if--the expenditure stated there is</p> <p>3 \$25,000.00. And then the next column deals</p> <p>4 with the process that is followed in Nova</p> <p>5 Scotia to deal with that, is that correct?</p> <p>6 A. Yes, that's the notes column, yes.</p> <p>7 Q. Is there a public hearing held with respect to</p> <p>8 that annual review in Nova Scotia?</p> <p>9 A. I'm not sure.</p> <p>10 Q. What does your note then mean, "Board may</p> <p>11 issue information request, intervenors do not</p> <p>12 generally participate"?</p> <p>13 A. Well, that would--the second part of that,</p> <p>14 intervenors do not generally participate,</p> <p>15 would indicate that possibly they don't have a</p> <p>16 hearing like this, but I don't know that first</p> <p>17 hand.</p> <p>18 Q. But you wouldn't be surprised if I told you</p> <p>19 there is no annual public hearing process in</p> <p>20 Nova Scotia then?</p> <p>21 A. It would not surprise me.</p> <p>22 Q. The second not there doesn't refer to any type</p> <p>23 of classification system adopted by the Nova</p> <p>24 Scotia Board for review of Nova Scotia Power's</p> <p>25 capital budget, is that correct?</p>	<p>1 A. That's correct.</p> <p>2 Q. And just to complete Nova Scotia, could you</p> <p>3 explain your second note in third column</p> <p>4 there?</p> <p>5 A. Capital budgets in excess of a million dollars</p> <p>6 are separately reviewed.</p> <p>7 Q. So, to summarize that Appendix 1, there were</p> <p>8 two jurisdictions that you lifted that did</p> <p>9 have a classification system and I want to</p> <p>10 ensure that I've understood your evidence</p> <p>11 correct. One at Manitoba and you are not sure</p> <p>12 whether that classification system is applied</p> <p>13 to Manitoba Hydro, is the correct?</p> <p>14 A. That's correct.</p> <p>15 Q. And you are not sure when Manitoba Hydro last</p> <p>16 had its general rate application where that</p> <p>17 criteria would have been applied, if at all,</p> <p>18 is that correct?</p> <p>19 A. That's correct.</p> <p>20 Q. So, then the next one was the CRTC which now,</p> <p>21 because the price cap regulation, do not</p> <p>22 review capital budgets. And in any event,</p> <p>23 they didn't do it on an annual basis, is that</p> <p>24 correct?</p> <p>25 A. Yes.</p>

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<p>1 Q. I'd like now then to turn back to your 2 evidence, page 5 and I'd like you to read the 3 statement that begins on Line 12 into the 4 record, please.</p> <p>5 A. A cursory survey of capital review projects 6 and other regulatory bodies in Canada shows 7 that most utilize some form of projects 8 classification.</p> <p>9 Q. And I'd also now like you to look at the 10 response to NLH 11.</p> <p>11 A. Excuse me?</p> <p>12 Q. The response that you provided in response to 13 our information request number 11, it will 14 come up on the screen. So, I understand from 15 the answer to that question as well as the 16 information, the evidence you have just 17 provided, that the only thing you relied on 18 for that statement was what's outline in 19 Appendix 1, is that correct??</p> <p>20 A. I'm still reading the statement, sorry.</p> <p>21 Q. My point is you didn't provide any other 22 additional information to support the sentence 23 on page 5.</p> <p>24 A. Yes.</p> <p>25 Q. So, the only information or evidence that you</p>	<p>1 are relying on for that conclusion on page 5, 2 line 12 is your Appendix 1. Now, you can see 3 why I'm having some difficulty with your 4 statement that most regulatory bodies utilize 5 a form of project classification after the 6 evidence we just reviewed.</p> <p>7 A. Yes, that's a mis-statement because clearly 8 it's 50/50 as far as a budget classification. 9 When I had discussions with the person who was 10 doing the leg work, we were thinking three out 11 of four, but in your questioning about the-- 12 was it British Columbia or Nova Scotia and 13 they don't truly have what would be considered 14 a classification, they just required a 15 constraint be implemented that was conveyed to 16 me as a classification and that's not correct. 17 So, it's half.</p> <p>18 Q. And even with respect to that half -</p> <p>19 A. Yes, ma'am.</p> <p>20 Q. - what are you using to say that half of the 21 regulatory bodies require a classification 22 system.</p> <p>23 A. Well, half of the four that we had identified.</p> <p>24 Q. So, it's only the two here that you're relying 25 on and we've reviewed what those two are.</p>
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<p>1 A. Yes.</p> <p>2 Q. To establish a regulatory practice in Canada.</p> <p>3 A. What's your last question?</p> <p>4 Q. You are using this information to establish a 5 regulatory practice with respect to project 6 classification approaches by regulatory 7 boards?</p> <p>8 A. No, ma'am, I'm not using this to establish any 9 recommendation to this board. The -</p> <p>10 Q. But your statement that most -</p> <p>11 A. Let me finish please.</p> <p>12 Q. Certainly.</p> <p>13 A. We provided this as a reference that this is 14 what we found. Whether--clearly we only 15 identified four boards in Canada as having an 16 involvement or at least that we could find up 17 until this point or having even a remote 18 involvement in the review of the capital 19 budget, so clearly most of the regulatory 20 bodies in Canada are not involved in review 21 and approval of the capital budget. So, I'm 22 not basing my recommendation to the panel that 23 they consider classifications on the 24 historical activity of the utility boards in 25 Canada because most do not get involved in a</p>	<p>1 regulatory, most do not get involved in the 2 approval of the capital budget. If you got 3 approval, if you have responsibility for 4 approving that budget, then you have certain 5 things that you have to look at. It would be 6 far better to have no oversight or review of 7 the capital budget leaving all the 8 responsibility with Hydro, than to shift the 9 responsibility from Hydro to the Board without 10 the Board having sufficient information to 11 make informed judgments. So, my decisions and 12 my recommendations as far as classifications 13 are based on my own budgetary experience and 14 not on historical experience in Canada.</p> <p>15 Q. That might be a helpful time to break. I do 16 wish to pursue it, but I notice the time, Mr. 17 Chair.</p> <p>18 CHAIRMAN:</p> <p>19 Q. Okay, well, we'll break for the day and we'll 20 resume at 9:00 a.m. in the morning. Thank 21 you.</p> <p>22 GREENE, Q.C.:</p> <p>23 Q. Excuse me, I just wonder--we had mentioned the 24 other day about assessing whether we would 25 need to sit late on Friday.</p>

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1 CHAIRMAN:

2 Q. Yes, we had wind of that this morning and I  
3 think the Commissioners are prepared to  
4 probably sit for a longer period tomorrow, if  
5 it's necessary and if, indeed we believe that  
6 we may finish.

7 GREENE, Q.C.:

8 Q. And that's why I don't know if it would be  
9 helpful to -

10 CHAIRMAN:

11 Q. Well, maybe we can take stock of that mid  
12 morning tomorrow and see where we are and how  
13 far along we are with Mr. Barreca. As I  
14 understand it, you only have one panel left to  
15 call.

16 GREENE, Q.C.:

17 Q. And my understanding for that one panel,  
18 having discussed it before with the other  
19 counsel, is I anticipate that that panel would  
20 be short in terms of time.

21 CHAIRMAN:

22 Q. Yes.

23 GREENE, Q.C.:

24 Q. So, it might be possible that we would finish  
25 as -

1 CHAIRMAN:

2 Q. And we'll do what we can to expedite that  
3 tomorrow. If it looks like we can finish, we  
4 will try and do that. Okay. Thank you.  
5 Upon conclusion at 1:35 p.m.

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1 CERTIFICATE

2 I, Judy Moss, do hereby certify that the foregoing  
3 is a true and correct transcript in the matter of  
4 Newfoundland and Labrador Hydro, 2004 Capital Budget  
5 Application, heard before the Board of Commissioners of  
6 Public Utilities, Prince Charles Building, St. John's,  
7 Newfoundland and Labrador on the 10th day of July, A.D.,  
8 2003 and was transcribed by me to the best of my ability  
9 by means of a sound apparatus.  
10 Dated at St. John's, Newfoundland and Labrador  
11 this 10th day of July, 2003  
12 Judy Moss  
13 Discoveries Unlimited Inc.