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1 October 20, 2015  
 2 (9:06 a.m.)  
 3 CHAIRMAN:  
 4 Q. Good morning, everybody. There are some  
 5 preliminary matters, I believe.  
 6 MS. GLYNN:  
 7 Q. Yes, Newfoundland Power would like to -  
 8 CHAIRMAN:  
 9 Q. Newfoundland Power.  
 10 MR. O'BRIEN:  
 11 Q. Yes, Mr. Chair. It's more of a formalization  
 12 of a request we've already made from Hydro,  
 13 and I understand there's no issue with  
 14 producing this information. It's a request  
 15 for an undertaking to provide Hydro's most  
 16 recent forecast of its 2015 costs, together  
 17 with explanations of significant variances  
 18 between - a couple of things, I guess, between  
 19 the 2015 forecast costs already on the record,  
 20 as well as significant variance explanations  
 21 between Hydro's 2014 test year costs and the  
 22 actuals that are now on the record, and this  
 23 was an informal request of Hydro a number of  
 24 weeks back, and at their request, we put that  
 25 in writing and I understand that's being

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1 provided and we did want to put it on the  
 2 record for now because the finance panel will  
 3 be proceeding, I guess, in a couple of weeks  
 4 time or a few weeks time, and I wanted to make  
 5 sure that we could get that information in  
 6 advance of the finance panel.  
 7 MR. YOUNG:  
 8 Q. I can speak to that, Mr. Chair. Thank you,  
 9 Mr. O'Brien. As Mr. O'Brien had indicated, we  
 10 have been speaking to Newfoundland Power about  
 11 this on an informal basis and they have  
 12 provided that to us in writing, which was  
 13 helpful. We do expect to be able to provide  
 14 that in due course, perhaps this week. That's  
 15 what we're aiming for.  
 16 CHAIRMAN:  
 17 Q. Okay.  
 18 MS. GLYNN:  
 19 Q. We'll note that on the record as an  
 20 undertaking.  
 21 CHAIRMAN:  
 22 Q. I think now, Mr. Young, or Mr. Cass, I don't  
 23 know who's leading this panel off.  
 24 MR. CASS:  
 25 Q. Yes, Mr. Chair, it would be me. We have the

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1 System Operations and Planning panel ready to  
 2 be sworn. For the record, I'll quickly  
 3 identify them. They are Paul Stratton,  
 4 closest to the Board panel, then Bob Moulton,  
 5 Paul Humphries, and Kevin Goulding. As I said,  
 6 they are ready to be sworn.  
 7 MR. PAUL HUMPHRIES (SWORN )  
 8 MR. ROBERT MOULTON (SWORN )  
 9 MR. PAUL STRATTON (SWORN)  
 10 MR. KEVIN GOULDING (SWORN )  
 11 EXAMINATION-IN-CHIEF BY MR. FRED CASS:  
 12 MR. CASS:  
 13 Q. Panel, perhaps I can turn four questions into  
 14 one question by asking each of you, perhaps  
 15 starting with Mr. Stratton and moving across,  
 16 to confirm for the record your position and  
 17 give a synopsis of your work experience,  
 18 please?  
 19 MR. STRATTON:  
 20 A. Good morning, everybody. My name is Paul  
 21 Stratton. I'm Senior Market Analyst with  
 22 Hydro. I work with Mr. Moulton in the System  
 23 Planning Department. I completed  
 24 undergraduate degrees in both Statistics and  
 25 Economics, and I began employment with

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1 Newfoundland and Labrador Hydro in 1989. At  
 2 that time, I took a position as an economist  
 3 working within the load forecasting group, and  
 4 I have been working within the load  
 5 forecasting area for the last 26 years. I  
 6 primarily responsible for completing our  
 7 operating load forecasts which are five year  
 8 monthly of demand energy forecast for the  
 9 island interconnected system, the Labrador  
 10 interconnected system, and these are the  
 11 forecasts that are in front of the Board at  
 12 this hearing. I am also responsible for  
 13 completing the island rural forecast and I'm  
 14 also responsible for completing the long term  
 15 planning forecast for the company. In my  
 16 experience, I'm also tasked with completing or  
 17 preparing oil price forecast. These oil price  
 18 forecasts are provided to our system  
 19 operations group for preparing our Holyrood #6  
 20 fuel price budgets, and I'm also responsible  
 21 for preparing the isolated diesel fuel price  
 22 forecasts that are used in our isolated fuel  
 23 budgets.  
 24 MR. CASS:  
 25 Q. Mr. Moulton, please.

1 MR. MOULTON:  
 2 A. My name is Bob Moulton. I'm the Manager of  
 3 Generation and Rural Planning with Hydro.  
 4 I've worked with Hydro for nearly 30 years. I  
 5 actually started in 1985. I joined PDD, the  
 6 Power Distribution District, which was the  
 7 rural arm of Hydro at the time. I stayed  
 8 there until 1989, and when PDD was folded into  
 9 Hydro, I went to the System Planning and  
 10 Generation and Rural Planning Department, and  
 11 I've worked in that department ever since in  
 12 various roles, and in 2013, I became the  
 13 Manager of the section. I am responsible for  
 14 planning the least cost reliable expansion of  
 15 Hydro's generation and distribution systems.  
 16 I'm a registered professional engineer, and  
 17 education-wise, I received a Bachelor of  
 18 Electrical Engineering in 1985, and a Masters  
 19 of Business Administration in 1995.  
 20 MR. CASS:  
 21 Q. Mr. Humphries.  
 22 MR. HUMPHRIES:  
 23 A. Good morning. My name is Paul Humphries. I  
 24 am the Vice President of System Operations and  
 25 Planning. I'm an electrical engineer. I

1 MR. CASS:  
 2 Q. Mr. Goulding.  
 3 (9:15 a.m.)  
 4 MR. GOULDING:  
 5 A. Good morning, everybody. My name is Kevin  
 6 Goulding. I have to apologize upfront, I'm  
 7 not the loudest of speakers, so I'm hoping  
 8 that I'm coming through there in the back.  
 9 Unlike my colleagues, I guess, I haven't spent  
 10 a whole lot of time with Hydro. This is my -  
 11 I came back to Hydro in 2009. I'm currently  
 12 the System Operations Engineering Manager. I  
 13 graduated from the Electrical Engineering  
 14 Program at MUN. That was 23 years ago now.  
 15 At that time, I assumed a role with Hydro  
 16 under their graduate training program. That  
 17 was a two year rotational type program, so I  
 18 would have spent the two years plus some time  
 19 as a term employee. In 1995, I moved to  
 20 assume a role at Deer Lake Power, which most  
 21 of you know by now, I guess, is owned and  
 22 operated by Corner Brook Pulp and Paper  
 23 Limited. I started in 1995. I had various  
 24 roles there, I guess. I was an engineer there  
 25 from 1995 to 1997. I was plant engineer from

1 graduated in 1982, and I've been with Hydro  
 2 for 33 years. The majority of my background  
 3 is within the system planning area. I worked  
 4 for a number of years in the transmission  
 5 planning area. In 2005, I became the Manager  
 6 of System Planning where I had responsibility  
 7 for transmission generation and rural  
 8 planning, and in 2013, I became the Vice  
 9 President of System Operations and Planning,  
 10 and I think as Mr. Martin indicated in his  
 11 testimony, that is a transitional role where  
 12 the intent is to bridge both the system  
 13 operations and system planning functions from  
 14 our current state, which is an isolated  
 15 system, to our future state, which will be a  
 16 system with two HVdc interconnections to the  
 17 North American grid. That's what I'm at  
 18 currently, and, I guess, another piece of  
 19 background I would like to indicate that over  
 20 the past 30 years, I have had extensive  
 21 involvement, I guess, in all aspects of the  
 22 efforts to develop the Lower Churchill  
 23 particularly on the technical side and the  
 24 HVdc technology and the integration of the  
 25 system.

1 1997 to 1999, plant superintendent from 1999  
 2 to 2001, and then I became plant manager at  
 3 Deer Lake Power from 2001 onwards. I guess,  
 4 in the end there, I was responsible for all  
 5 aspects of the operation, including safety and  
 6 environment, operations and maintenance. So  
 7 in 2009, I came back to Hydro. I first  
 8 assumed the role as System Operations  
 9 Engineering supervisor, and I assumed my  
 10 current role back in April of last year. In  
 11 terms of roles with Hydro now, I supervise a  
 12 team of five operations engineers. We get  
 13 involved, I guess, basically with the  
 14 engineering oversight required for the day to  
 15 day operations of the power system, plus some  
 16 longer term aspects as well, and these would  
 17 include areas such as water management, short  
 18 term and long term. It would also include  
 19 outage planning of generation equipment and  
 20 transmission equipment. We also get involved  
 21 in reliability, performance, and tracking. We  
 22 also investigate any abnormal events in the  
 23 power system. We also get involved with -  
 24 well, recently we're also involved, I guess,  
 25 with the integration of the Lower Churchill

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1 assets in our area as well.  
 2 MR. CASS:  
 3 Q. Mr. Humphries, can you summarize, please, the  
 4 areas of evidence for which this panel is  
 5 responsible?  
 6 MR. HUMPHRIES:  
 7 A. Yes, I will, and as there are four of us here,  
 8 we intend to participate equally, I guess, in  
 9 the discussions. From my perspective, I will  
 10 be dealing with issues regarding divisional  
 11 structure, questions in that area, Muskrat  
 12 Falls integration, high level system planning  
 13 type questions. Mr. Goulding will be dealing  
 14 with Holyrood and other generation costs,  
 15 Holyrood fuel conversion factor, and capacity  
 16 assistance agreements. Questions regarding  
 17 interfaces with industrial customers, they can  
 18 be handled both by Mr. Goulding and Mr.  
 19 Stratton. Mr. Stratton will handle any  
 20 questions relating to load forecasting. Mr.  
 21 Moulton will deal with rural system planning,  
 22 generation planning, any questions regarding  
 23 wind generation, and as well the rural  
 24 subsidy, we will all participate in that if  
 25 there are questions.

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1 MR. CASS:  
 2 Q. Thank you, and do you adopt Hydro's written  
 3 evidence in those areas?  
 4 MR. HUMPHRIES:  
 5 A. Yes, I do.  
 6 MR. CASS:  
 7 Q. Thank you. That's the Examination-in-Chief,  
 8 Mr. Chair. Thank you.  
 9 CHAIRMAN:  
 10 Q. Okay, I guess we start with Mr. O'Brien, sir.  
 11 CROSS-EXAMINATION BY MR. O'BRIEN:  
 12 MR. O'BRIEN:  
 13 Q. Good morning, gentlemen. Liam O'Brien here on  
 14 behalf of Newfoundland Power. I'll have some  
 15 particular questions for each one of you, but  
 16 as you've indicated, I guess, there's going to  
 17 be certain areas where one individual will  
 18 speak to and other areas, but feel free to  
 19 jump in if you have anything to say. For now,  
 20 I think I'll just start with each one  
 21 individually. Mr. Humphries, you've given us  
 22 an overview. I'm going to start with you. In  
 23 terms of your present position, you mentioned  
 24 it was a transition role. Can you give me a  
 25 little bit more sort of overview as to what

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1 that means?  
 2 MR. HUMPHRIES:  
 3 A. Yeah, I guess, when we look at historically  
 4 system planning and system operations have  
 5 been separate, although they do interface  
 6 regularly on a regular basis, but when we look  
 7 where we are now and moving to the future, the  
 8 way we plan the system and the way we operate  
 9 the system is going to change significantly as  
 10 we move from our current state to the future  
 11 state, and so we brought the two groups  
 12 together with the intent that we would be  
 13 paying particular attention to that, I guess,  
 14 and looking at the developments that were  
 15 going on in the project, and how they would  
 16 impact our operations and planning as we move  
 17 forward, ensuring that we were getting the  
 18 exposure to the people that are in system  
 19 operations and system planning of the changes  
 20 that are going to be coming, that we are  
 21 taking advantage of all of the one time  
 22 opportunities that are going to become  
 23 available over the next couple of years with  
 24 regards to participating in the design, the  
 25 construction, and commissioning and training

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1 that's going to be going on as we move  
 2 forward.  
 3 MR. O'BRIEN:  
 4 Q. In terms of it as a transition role, do you  
 5 foresee where you will be in the future, in  
 6 the near future, will it be a different role  
 7 you'll play?  
 8 MR. HUMPHRIES:  
 9 A. Well, you know, I guess, it comes down from  
 10 the role of whether it all - ultimately it  
 11 will all, system operations and planning will  
 12 all end up back in Hydro, I think, and whether  
 13 that has its own Vice President or it has a  
 14 reporting structure up through the operations,  
 15 I don't know. That's part of what we're  
 16 working through, I guess, with this  
 17 transitional piece and working with Mr. Martin  
 18 and the rest of the company on that to land on  
 19 what the proper structure will be moving  
 20 forward.  
 21 MR. O'BRIEN:  
 22 Q. So when you started your present position,  
 23 that was in April of 2013, is that right?  
 24 MR. HUMPHRIES:  
 25 A. That's right.

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1 MR. O'BRIEN:  
 2 Q. And in terms of how that differs from what you  
 3 were doing just immediately prior to that, can  
 4 you give me just a bit of an overview as to  
 5 how the role changed at that time?  
 6 MR. HUMPHRIES:  
 7 A. Well, I think even, you know, from a planning  
 8 perspective, if we move back probably to 2010  
 9 when we first started to move the Muskrat  
 10 Falls interconnection forward in earnest, I  
 11 would say, from a planning perspective, I  
 12 became heavily involved. Our group became  
 13 heavily involved then looking at the technical  
 14 aspects. We were carrying out those  
 15 functions, I guess, as additional activities  
 16 within the planning area, but it became  
 17 obvious that as we move forward that the level  
 18 of change that was going to have to take place  
 19 was significant, and that we had to dedicate  
 20 more of a dedicated effort, I guess, into the  
 21 integration, so we - and we also realized that  
 22 it just wasn't the system planning piece, it  
 23 was the system operations as well that would  
 24 be going through the changes. So, I guess,  
 25 because of my background and association in

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1 the planning, a fairly strong - while I hadn't  
 2 worked in system operations, I had an  
 3 understanding of system operations and the  
 4 relationships were very closely with Mr.  
 5 Henderson over my full career, and I also had  
 6 knowledge of the project itself, the issues  
 7 related to the integration, it seemed natural  
 8 to pull that together and looking forward for  
 9 me to try to coordinate all that.  
 10 MR. O'BRIEN:  
 11 Q. And you've actually just brought up something  
 12 I wanted to talk to you about, just in terms  
 13 of prior to this particular role, systems  
 14 planning and systems operations being sort of  
 15 separate entities, I guess, or separate  
 16 groups, is that right, is what you'd said  
 17 before. I'm trying to get a sense of the  
 18 operations piece and how you fit in in the  
 19 operations piece, say, in contrast to where  
 20 Mr. Henderson would fit in in terms of the  
 21 operation piece?  
 22 MR. HUMPHRIES:  
 23 A. System planning and system operations were  
 24 separate, but there's no question about it  
 25 that they always worked together and supported

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1 each other. System planning supported system  
 2 operations, and in certain aspects system  
 3 operations supported system planning. From a  
 4 reporting perspective, system operations  
 5 obviously always reported up through the  
 6 operations function and ended up with  
 7 accountability, direct accountability to the  
 8 person that was in Mr. Henderson's current  
 9 role, would have been Mr. Haynes in the  
 10 previous structure. From the system planning  
 11 perspective, in the 30 years I've been with  
 12 system planning, we've been in a lot of areas.  
 13 We reported up through operations, we reported  
 14 up through a corporate planning group, and  
 15 prior to 2013 - from the time actually I took  
 16 on the role as manager in 2005 to 2013, I  
 17 reported to the Vice President of Engineering  
 18 Services, and then it became Mr. MacIsaac's  
 19 role, Vice President of - I can't remember his  
 20 title now.  
 21 MR. O'BRIEN:  
 22 Q. Project Engineering -  
 23 MR. HUMPHRIES:  
 24 A. Project Execution and Technical Services,  
 25 that's correct. So I reported through Mr.

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1 MacIsaac, but I always had that single line to  
 2 Mr. Haynes and the operations group.  
 3 MR. O'BRIEN:  
 4 Q. Yeah.  
 5 MR. HUMPHRIES:  
 6 A. And always had accountability to operations.  
 7 It was a given. You know, I had probably a  
 8 number of different direct report supervisors  
 9 and we reported to a number of different vice  
 10 presidents. That linkage between system  
 11 operations and system planning was always  
 12 there and the accountabilities on the  
 13 operation side were always there no matter who  
 14 we reported to.  
 15 MR. O'BRIEN:  
 16 Q. So your role prior to where you are now in  
 17 terms of a - was more of a planning role than  
 18 an operations role, I take it?  
 19 MR. HUMPHRIES:  
 20 A. Yes, it was planning function, and as I say,  
 21 we supported - with the change from an  
 22 operations perspective, Mr. Henderson in his  
 23 previous role was the Manager of System  
 24 Operations and Integration Support, Mr. Butler  
 25 has moved into that role, and the relationship

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1 between Mr. Butler and Mr. Henderson is no  
 2 different than the relationship that existed  
 3 between Mr. Henderson and Mr. Haynes in the  
 4 previous structure.  
 5 MR. O'BRIEN:  
 6 Q. And so since the Nalcor group or parent entity  
 7 has come into place now, systems planning, I  
 8 guess, up until recently in 2013 would have  
 9 gone up through the Nalcor -  
 10 MR. HUMPHRIES:  
 11 A. No.  
 12 MR. O'BRIEN:  
 13 Q. No, and that's what I was trying to get with  
 14 Mr. MacIsaac's sort of role there.  
 15 MR. HUMPHRIES:  
 16 A. Even though I reported to Mr. MacIsaac, I was  
 17 still a Hydro employee and reported up through  
 18 the Hydro system.  
 19 MR. O'BRIEN:  
 20 Q. I understand that, I understand that, and just  
 21 in terms of your direct report, say, in 2010,  
 22 you reported into Mr. MacIsaac?  
 23 MR. HUMPHRIES:  
 24 A. I reported into Mr. MacIsaac, who was a Nalcor  
 25 vice president, but I was a Hydro employee.

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1 MR. O'BRIEN:  
 2 Q. You were a Hydro employee, I understand that,  
 3 okay, and you remain a Hydro employee in the  
 4 new position now?  
 5 MR. HUMPHRIES:  
 6 A. That's correct.  
 7 MR. O'BRIEN:  
 8 Q. And maybe I can ask you just about that  
 9 briefly. Mr. Martin, when he testified,  
 10 indicated that there were sort of two lines of  
 11 reporting for you in your present position,  
 12 that you would for the operations piece report  
 13 through to Mr. Henderson, whereas for your  
 14 planning piece, report through Mr. Martin, am  
 15 I getting that right?  
 16 MR. HUMPHRIES:  
 17 A. And I don't - I think it's really on the  
 18 operations and planning, the planning that's  
 19 directly related to Hydro, I still report  
 20 through Mr. Henderson on that as well. What I  
 21 would interface and report to Mr. Martin on is  
 22 this integration piece and the forward looking  
 23 piece.  
 24 MR. O'BRIEN:  
 25 Q. All right, so there's a sort of longer term

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1 approach where you'd report through to Mr.  
 2 Martin the longer term planning and  
 3 integration, whereas anything with the day to  
 4 day operations of Hydro and any systems  
 5 plannings for Hydro short term, you'd report  
 6 through to Mr. Henderson, is that right?  
 7 MR. HUMPHRIES:  
 8 A. That's correct, yes.  
 9 MR. O'BRIEN:  
 10 Q. Perhaps we can - I just want to have a look at  
 11 your job description, if we could, Mr.  
 12 Humphries. Can we bring up PUB-NLH-229,  
 13 Attachment 1, page 8. That's your job  
 14 description there, Mr. Humphries, is it?  
 15 MR. HUMPHRIES:  
 16 A. Yes, it is.  
 17 MR. O'BRIEN:  
 18 Q. And a couple of things I wanted to review with  
 19 you and you've mentioned some of them, I  
 20 think, in your direct. Under the key  
 21 responsibility areas, the first bullet there  
 22 provides ongoing functional leadership and  
 23 direction in relation to the company system  
 24 operations and system planning activities, and  
 25 ensures that these groups seek and create all

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1 available synergies to ensure that they work  
 2 together as effectively and as efficiently as  
 3 possible as an integrated team. So that's  
 4 more of a Hydro focused as opposed to - sort  
 5 of a short term Hydro focus, is it?  
 6 MR. HUMPHRIES:  
 7 A. It can be both.  
 8 MR. O'BRIEN:  
 9 Q. Can be both, yeah.  
 10 MR. HUMPHRIES:  
 11 A. It is, you know, definitely it is an immediate  
 12 focus. In the future role, we're still  
 13 working through an ultimate structure, but  
 14 it's possible that a portion of the planning  
 15 function could end up in an operations role  
 16 moving forward. We are looking at options and  
 17 alternatives there, so there would conceivably  
 18 be synergies moving forward as well in the  
 19 future role.  
 20 MR. O'BRIEN:  
 21 Q. In terms of - and I'll ask you about that in a  
 22 second, the synergies, but in terms of the  
 23 operations piece, what aspect of operations  
 24 are you accountable for?  
 25 MR. HUMPHRIES:

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1 A. Well, it's the operation of the energy control  
 2 centre.  
 3 MR. O'BRIEN:  
 4 Q. Of the energy control centre, okay. What does  
 5 that entail?  
 6 MR. HUMPHRIES:  
 7 A. Well, that entails the provincial control  
 8 system, the operation of - the day to day  
 9 operation of that control centre. There are  
 10 11 operators and a team of people that work on  
 11 a 24/7 basis monitoring and controlling the  
 12 system, as well as there's an engineering and  
 13 support function associated with that group,  
 14 which Mr. Goulding is a part of and manages.  
 15 MR. O'BRIEN:  
 16 Q. Okay, and is there anyone just immediately  
 17 below you who would be responsible for the  
 18 energy control centre who looks after that?  
 19 MR. HUMPHRIES:  
 20 A. Well, ultimately Mr. Bob Butler reports to me.  
 21 He's the Manager of System Operations and  
 22 Integration Support, and then the  
 23 responsibility for the control centre falls  
 24 under that role.  
 25 (9:30 a.m.)

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1 MR. O'BRIEN:  
 2 Q. So the control centre, that's the centre  
 3 responsible for dispatch?  
 4 MR. HUMPHRIES:  
 5 A. That's correct.  
 6 MR. O'BRIEN:  
 7 Q. And available resources, that sort of thing,  
 8 okay, and Mr. Butler is not testifying, I  
 9 understand, but perhaps you can give me an  
 10 overview sort of generation and how that's  
 11 dispatched on the island interconnected  
 12 system, sort of what you go through in terms  
 13 of that process?  
 14 MR. HUMPHRIES:  
 15 A. Actually, maybe Mr. Goulding would be better  
 16 to go through the details of that.  
 17 MR. O'BRIEN:  
 18 Q. Sure.  
 19 MR. GOULDING:  
 20 A. I guess, it starts, like, we meet on a weekly  
 21 basis. We have what we call water management  
 22 meeting, and the aim of this meeting is in the  
 23 end we provide a guideline to our ECC  
 24 operators that essentially in the end our goal  
 25 is to operate the system as efficiently and

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1 reliable as possible. So in the weekly  
 2 guideline, we provide a schedule of unit  
 3 operations for the ECC operators, and in terms  
 4 of efficiency, our end goal is to minimize  
 5 Holyrood generation and thereby save on fuel  
 6 costs. So this generation schedule makes its  
 7 way out to the ECC area, and the operators act  
 8 accordingly to put units in service and take  
 9 them out of service to meet that schedule.  
 10 MR. O'BRIEN:  
 11 Q. And so those operators, I guess, have  
 12 responsibility then for following those  
 13 guidelines on a weekly basis and deciding  
 14 which units to turn off and which units to  
 15 turn on, is that how that works?  
 16 MR. GOULDING:  
 17 A. Yes, that's essentially how it happens and  
 18 they need to react to within situations as  
 19 well. We lay out, I guess, a weekly plan, but  
 20 as we know, when operating a power system  
 21 things happen, so they need to be able to  
 22 react there as well.  
 23 MR. O'BRIEN:  
 24 Q. And if they need to be able to react, who gets  
 25 involved in terms of modifying that weekly

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1 sort of schedule or weekly guideline?  
 2 MR. GOULDING:  
 3 A. We would normally modify the weekly guidelines  
 4 mainly from a water management perspective.  
 5 If we find that our water levels are getting  
 6 high in certain areas or low in others, we  
 7 will adjust. In terms of the reliable  
 8 operation of the power system, if we need to  
 9 start up standby units or another Holyrood  
 10 unit required, then the ECC, along with their  
 11 - there's an ECC supervisor as well that would  
 12 get involved in those actions.  
 13 MR. O'BRIEN:  
 14 Q. And who's that supervisor?  
 15 MR. GOULDING:  
 16 A. His name is Jason Tobin.  
 17 MR. O'BRIEN:  
 18 Q. Okay, all right, and you say you mainly run on  
 19 a water management perspective. In terms of  
 20 these weekly guidelines, do you deal with  
 21 things like outages and that kind of thing as  
 22 part of those guidelines that's built in?  
 23 MR. GOULDING:  
 24 A. Yes, we would certainly incorporate outages to  
 25 the extent that they're known. We also have

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1 an outlook, I guess, on what our load  
 2 forecasts are and what's required in terms of  
 3 generation reserves, and we would also have an  
 4 eye out, I guess, for what our water levels  
 5 are. We try to minimize spill, we try to keep  
 6 our reservoirs balanced to the extent that  
 7 it's possible.  
 8 MR. O'BRIEN:  
 9 Q. So as part of this process, I guess, there's  
 10 decisions made when to run gas turbines and  
 11 that sort of thing as well?  
 12 MR. GOULDING:  
 13 A. That's correct.  
 14 MR. O'BRIEN:  
 15 Q. Okay, and like a weekly guideline, do you have  
 16 monthly guidelines, do you have an annual  
 17 guideline, how does that work?  
 18 MR. GOULDING:  
 19 A. I think the largest step would be weekly, but  
 20 certainly we do maintain a generation outage  
 21 schedule that's an annual schedule, and in  
 22 that as well we optimize our unit outages to  
 23 the same end, I guess, to make sure we  
 24 maximize the efficiency of the system, plus  
 25 operate in a reliable manner as well.

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1 MR. O'BRIEN:  
 2 Q. And the weekly guidelines, are these extensive  
 3 booklets or is it something that you put -  
 4 MR. GOULDING:  
 5 A. It's probably - when it's printed, it's  
 6 probably a two or three pager.  
 7 MR. O'BRIEN:  
 8 Q. I wonder if I could ask you to produce one for  
 9 a month in 2015, so that we can have a look at  
 10 it.  
 11 MR. GOULDING:  
 12 A. Sure.  
 13 MS. GLYNN:  
 14 Q. Noted as an undertaking.  
 15 MR. O'BRIEN:  
 16 Q. If I could go back, Mr. Humphries, to your job  
 17 description.  
 18 MR. HUMPHRIES:  
 19 A. Sure.  
 20 MR. O'BRIEN:  
 21 Q. And that first bullet that we were looking at  
 22 there, and it mentions the word "synergies",  
 23 and I think you sort of touched on this  
 24 earlier and I want to see if you would agree  
 25 with me that I understood that when you're

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1 talking about creating available synergies,  
 2 you're talking about opportunities for the  
 3 teams to work together, is that right?  
 4 MR. HUMPHRIES:  
 5 A. That's correct.  
 6 MR. O'BRIEN:  
 7 Q. Okay, so that's part of your role looking for  
 8 opportunities for operations and systems  
 9 planning to work together going forward?  
 10 MR. HUMPHRIES:  
 11 A. Exactly.  
 12 MR. O'BRIEN:  
 13 Q. In that transitional position?  
 14 MR. HUMPHRIES:  
 15 A. That's correct.  
 16 MR. O'BRIEN:  
 17 Q. In terms of the next bullet then, if we look  
 18 at that, "To ensure strong positive interfaces  
 19 and interaction between and among all Nalcor  
 20 lines of business and divisions, in  
 21 particular, Newfoundland Hydro, CF(L)Co,  
 22 project execution and technical services and  
 23 the Muskrat Falls and Labrador island link,  
 24 Maritime link project team, Gull Island  
 25 project team, investment evaluation in energy

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1 marketing", that seems to be kind of a broad  
 2 role or aspect of your role. Can you give me  
 3 sort of an overview as to what interfaces and  
 4 integration means and what you do in that  
 5 aspect of your role?  
 6 MR. HUMPHRIES:  
 7 A. I guess, that's sort of multifaceted. If we  
 8 look at in our current state on a daily basis,  
 9 I guess, project execution and technical  
 10 services are out there executing capital work  
 11 as we move forward. It has impacts on  
 12 schedule and generation and outage schedules,  
 13 it has impact from a planning perspective on  
 14 if - when we look at removing particular  
 15 pieces of equipment from service, for example,  
 16 what the impact on the - the overall impact on  
 17 the system is, so it's important that these  
 18 groups all work together and ensure that we've  
 19 identified all the puts and takes, I guess, in  
 20 a day to day operation of carrying out  
 21 operations, carrying out maintenance work,  
 22 carrying out capital work, and to ensure that  
 23 that's all integrated. These groups need to  
 24 be continually interfacing and communicating.  
 25 So that's a current piece.

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1 MR. O'BRIEN:  
 2 Q. Is that part of your accountability then to  
 3 make sure that those groups are interfacing  
 4 and integrating?  
 5 MR. HUMPHRIES:  
 6 A. Well, I make sure that the system planning and  
 7 system operations groups are interfacing with  
 8 these other outside groups, yes.  
 9 MR. O'BRIEN:  
 10 Q. All right. How much of your time is taken up  
 11 with that sort of aspect of your role, would  
 12 you figure?  
 13 MR. HUMPHRIES:  
 14 A. Well, it's hard to say to put it in a  
 15 perspective of - there's hardly probably a day  
 16 goes by that there's not some type of  
 17 interface issue that either comes to my  
 18 attention or I'll ask a question, have we  
 19 covered this off on a certain point.  
 20 MR. O'BRIEN:  
 21 Q. And in terms of the operation part in terms of  
 22 the EEC, how much of your role is taken up  
 23 with that?  
 24 MR. HUMPHRIES:  
 25 A. Well, not - I don't think it's a whole lot.

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1 I'm providing a directional support to Mr.  
 2 Butler, but from the day to day operations,  
 3 Mr. Butler is running that show, so to speak,  
 4 and he interfaces with Mr. Henderson very  
 5 closely and that group on that. I get  
 6 involved, but at the end of the day Mr. Butler  
 7 will go to Mr. Henderson before or at the same  
 8 time he comes to me.  
 9 MR. O'BRIEN:  
 10 Q. Does Mr. Butler report directly to you?  
 11 MR. HUMPHRIES:  
 12 A. Yes, he does.  
 13 MR. O'BRIEN:  
 14 Q. And he doesn't report directly to Mr.  
 15 Henderson?  
 16 MR. HUMPHRIES:  
 17 A. No, he doesn't.  
 18 MR. O'BRIEN:  
 19 Q. So in terms of the EEC, he's responsible for  
 20 running that show, so to speak, but it's  
 21 subject to your oversight, which is subject to  
 22 Mr. Henderson's oversight, is that how that  
 23 goes?  
 24 MR. HUMPHRIES:  
 25 A. Exactly, and he has - I think Mr. Henderson

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1 indicated when he was on the stand, you know,  
 2 he has a direct line of communications with  
 3 Mr. Butler.  
 4 MR. O'BRIEN:  
 5 Q. Sure.  
 6 MR. HUMPHRIES:  
 7 A. And that's - historically, that's no different  
 8 than it's always been, that that role had a  
 9 direct link to the operations, the person  
 10 responsible for the operations.  
 11 MR. O'BRIEN:  
 12 Q. Would it be more likely for Mr. Butler to go  
 13 to Mr. Henderson than to go to you on issues  
 14 with the control centre?  
 15 MR. HUMPHRIES:  
 16 A. He would go to Mr. Henderson first most times,  
 17 yes. He would involve me, but he would go to  
 18 Mr. Henderson first.  
 19 MR. O'BRIEN:  
 20 Q. In terms of if we could go back to your -  
 21 actually, if we could go to the next bullet  
 22 there. The next bullet talks about, "leading  
 23 the design and structure of the provincial  
 24 electrical system". That seems to be more of  
 25 a future type role, I guess, in terms of an

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1 integration type role. Would you see that as  
 2 your focus being integration with Muskrat  
 3 Falls?  
 4 MR. HUMPHRIES:  
 5 A. Yes, that's correct.  
 6 MR. O'BRIEN:  
 7 Q. That's the larger part of your long term  
 8 focus, I guess?  
 9 MR. HUMPHRIES:  
 10 A. Yes.  
 11 MR. O'BRIEN:  
 12 Q. And will you be spending more time on that, do  
 13 you think, in the coming years?  
 14 MR. HUMPHRIES:  
 15 A. I would think so, and I would hope I am, yes.  
 16 MR. O'BRIEN:  
 17 Q. Given the role that you're in now as  
 18 transitional, you would expect that?  
 19 MR. HUMPHRIES:  
 20 A. That's correct.  
 21 MR. O'BRIEN:  
 22 Q. Okay, and that would, I guess, take us into  
 23 the next bullet which talks about commercial  
 24 structures and agreements and that type of  
 25 thing, that all sort of ties into integration?



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1 MR. HUMPHRIES:  
 2 A. It does.  
 3 MR. O'BRIEN:  
 4 Q. Okay, and you would expect - now in terms of  
 5 how much of your role is spent on integration  
 6 focus, can you give me an idea percentage-wise  
 7 how much you're focused on that now?  
 8 MR. HUMPHRIES:  
 9 A. Well, I think we should back back a little  
 10 bit. When this job description was generated  
 11 back in 2013, you know, there was a vision, I  
 12 guess, that I would be involved in a lot of  
 13 these things a lot more than I currently have  
 14 been since 2014/2015, and a lot of that is the  
 15 nature of what we've gone through in 2014, and  
 16 I have spent a lot of time in the past 18  
 17 months addressing issues related to the  
 18 January 2014 outages, and so this work is  
 19 still moving on, and from the perspective of  
 20 the bullet, I guess, on the commercial side of  
 21 things through the transition to operations  
 22 organization, which Mr. Martin spoke about as  
 23 well, through 2014 we've added onto that and  
 24 we now have what we call an RFCI group, which  
 25 is Ready for Commercial Integration. That's

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1 set up. It has its own lead responsible and  
 2 actually reports up through the CFO, and  
 3 that's part of the nature, I think, as we got  
 4 through 2013 and 2014, that I was not going to  
 5 have the time to focus on those things. So  
 6 that role has changed somewhat moving forward,  
 7 and now there's an organization put in place  
 8 to move that through, and that reports up  
 9 through the transition to operations steering  
 10 committee, of which I'm a member, but - so I'm  
 11 more focused on the technical side things,  
 12 technical integration of the components of the  
 13 project now.  
 14 MR. O'BRIEN:  
 15 Q. And you're starting to get more into that  
 16 focus now, which is what the original plan  
 17 was, I guess, for you in 2013, is that right?  
 18 (9:45 a.m.)  
 19 MR. HUMPHRIES:  
 20 A. That's right. Reporting to me, there is a  
 21 ready for integration group that is looking at  
 22 the integration issues, the technical  
 23 integration. They're co-located over with the  
 24 project team, but they do report up through me  
 25 and these are individuals that - it's a mix of

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1 seasoned and new young bright individuals that  
 2 are over there learning, and they have the  
 3 background in the system to understand the  
 4 implications of what the changes would mean,  
 5 and report that back to the rest of us who are  
 6 going to inherit this in 2018, to ensure that  
 7 we have a broad knowledge of what's going on.  
 8 So that team is - but it reports to me.  
 9 MR. O'BRIEN:  
 10 Q. So that's the ready for integration team, is  
 11 that right?  
 12 MR. HUMPHRIES:  
 13 A. That's correct, yes.  
 14 MR. O'BRIEN:  
 15 Q. And how many members are on that team?  
 16 MR. HUMPHRIES:  
 17 A. We can actually - if we want to pull up the  
 18 RFI response to that.  
 19 MR. O'BRIEN:  
 20 Q. Sure.  
 21 MR. HUMPHRIES:  
 22 A. Just one second now. I think it's PUB-409.  
 23 Yes, PUB-409. If you could page down, there's  
 24 an organizational chart there.  
 25 MR. O'BRIEN:

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1 Q. Okay.  
 2 MR. HUMPHRIES:  
 3 A. So there's my organization as it stands right  
 4 now. I have - we'll start at the left and  
 5 move across, I guess. We have a Manager of  
 6 Generation and Rural Planning, Mr. Moulton and  
 7 his team.  
 8 MR. O'BRIEN:  
 9 Q. Okay.  
 10 MR. HUMPHRIES:  
 11 A. Manager of System Operations and Integration  
 12 Support, that's Mr. Butler.  
 13 MR. O'BRIEN:  
 14 Q. Okay.  
 15 MR. HUMPHRIES:  
 16 A. Manager of Ready for Integration, this is the  
 17 group we're talking about, so there's a system  
 18 operations engineer there, integration,  
 19 there's a design coordinator, and that's a  
 20 person that's an administrative type person  
 21 that is actually coordinating interfaces and  
 22 requests for information between the project  
 23 teams and the various Hydro entities. There  
 24 are actually two HVdc systems engineers and  
 25 these are project employees, but they are

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1 learning, I guess, the HVdc systems as they  
 2 come into operation and design, and these two  
 3 individuals will be key people to come back  
 4 into our operation.  
 5 MR. O'BRIEN:  
 6 Q. So they're in Nalcor right now as Nalcor  
 7 employees?  
 8 MR. HUMPHRIES:  
 9 A. They're in Nalcor right now, and, you know,  
 10 it's - I guess, some of the discussion - I'll  
 11 just take you aside a little bit here now.  
 12 MR. O'BRIEN:  
 13 Q. Sure.  
 14 MR. HUMPHRIES:  
 15 A. Some of the discussion we've got into recently  
 16 on secondments and those types of things there  
 17 was a view, I guess, that we got some pretty  
 18 knowledgeable and experienced people within  
 19 system operations and it would be nice to take  
 20 them out and put them over in the project, and  
 21 it would help things along vastly over there,  
 22 but that just couldn't work because of the  
 23 fact that we had a requirement to continue to  
 24 manage and operate the system. So then we  
 25 ended up posting these positions, or the

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1 project ended up posting these positions.  
 2 Some of our younger people actually applied  
 3 for them, went over and went into the role,  
 4 and very quickly realized, you know, they're  
 5 bright, but bright only gets you so far, we  
 6 needed the knowledge base as well. So we  
 7 integrated those back - in 2010, we integrated  
 8 those roles back into the planning function to  
 9 begin with so that they came on board, worked  
 10 with the planning people, got experience in  
 11 the system, and then we moved it up, they  
 12 become part of the integration team, so  
 13 they're over there. They're still project  
 14 employees. At some point, they will transition  
 15 back into the operation, but the functions  
 16 that they are providing are providing direct  
 17 support to the project and getting things  
 18 done, but it's critical that they have the  
 19 knowledge of the system as well, so this is -  
 20 we started probably back in 2010/2011, and  
 21 it's worked really well, we're developing  
 22 people.  
 23 MR. O'BRIEN:  
 24 Q. And when you say project, just to be clear for  
 25 me, are these project specific employees or is

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1 it - what project are you talking about?  
 2 MR. HUMPHRIES:  
 3 A. The Lower Churchill.  
 4 MR. O'BRIEN:  
 5 Q. The Lower Churchill project.  
 6 MR. HUMPHRIES:  
 7 A. Lower Churchill project, yes.  
 8 MR. O'BRIEN:  
 9 Q. Okay, and so these are the ones that are  
 10 identified as Nalcor employees, they're not  
 11 actually employed by the Lower Churchill  
 12 project, though, are they?  
 13 MR. HUMPHRIES:  
 14 A. They're Nalcor Lower Churchill, yes.  
 15 MR. O'BRIEN:  
 16 Q. Okay, and there's two of those HVdc systems  
 17 engineers?  
 18 MR. HUMPHRIES:  
 19 A. Yes.  
 20 MR. O'BRIEN:  
 21 Q. And plan in the future is to bring those back  
 22 into the Hydro fold, is it?  
 23 MR. HUMPHRIES:  
 24 A. Yeah, you know, and from a report - they work  
 25 as an integrated part of that ready for

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1 integration team. They report up through that  
 2 Manager of Ready for Integration, and from  
 3 their perspective, they don't see any  
 4 difference in them and the rest of the group.  
 5 MR. O'BRIEN:  
 6 Q. And in terms of that ready for integration  
 7 piece, they're focused on Hydro's role in  
 8 integration or are they focused on a broader  
 9 piece?  
 10 MR. HUMPHRIES:  
 11 A. Well, it's predominantly Hydro's. I mean, you  
 12 know, the fact that the system has to come in  
 13 and work in the Hydro system, so it's  
 14 predominately Hydro, yes.  
 15 MR. O'BRIEN:  
 16 Q. And they would report in through you, I guess,  
 17 at this point?  
 18 MR. HUMPHRIES:  
 19 A. They report up through that manager who  
 20 reports to me, yes.  
 21 MR. O'BRIEN:  
 22 Q. And in terms of - let me just take you back a  
 23 little bit to one of your comments earlier  
 24 about, I guess, where you found yourself in  
 25 the last couple of years versus where you

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1 expected yourself to be in terms of the role,  
 2 and frankly, I guess, what I'm talking about  
 3 is what you would have focus on in 2014/2015  
 4 as a result of some reliability issues in the  
 5 2013/2014 outages. Can you take me through  
 6 sort of where your focus was at that time as a  
 7 result of all of this?  
 8 MR. HUMPHRIES:  
 9 A. Well, I guess, you know, coming into the  
 10 January - or coming out of the January 2014  
 11 events, you know, there was some realizations  
 12 and lessons learned there. We had to move  
 13 forward quickly with the generation addition,  
 14 so we had a focus from a planning perspective  
 15 of getting that application completed and  
 16 filed with the Public Utilities Board. Then  
 17 we went through the inquiry process. I guess,  
 18 there was a fair bit of analysis on the whole  
 19 system planning function, a multitude of  
 20 requests for information that took up a lot of  
 21 my time in - not preparing the answers myself,  
 22 reviewing them and preparing for and having  
 23 discussions with Liberty and others as we were  
 24 moving through the review process. That  
 25 consumed a fair bit of my 2014, there's no

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1 doubt about that.  
 2 MR. O'BRIEN:  
 3 Q. And prior to that in terms of systems planning  
 4 and reliabilities' issues, were you - did that  
 5 take up a lot of your time from a planning  
 6 perspective?  
 7 MR. HUMPHRIES:  
 8 A. Well, yeah, let's back back, I guess. This  
 9 role only started in April, 2013.  
 10 MR. O'BRIEN:  
 11 Q. Right, so take me through sort of -  
 12 MR. HUMPHRIES:  
 13 A. So, yeah, prior to April 13, my full focus was  
 14 planning.  
 15 MR. O'BRIEN:  
 16 Q. Full focus, okay.  
 17 MR. HUMPHRIES:  
 18 A. The planning function, yes.  
 19 MR. O'BRIEN:  
 20 Q. And when you came into the role in April of  
 21 2013, was there any change in terms of your  
 22 focus on planning?  
 23 MR. HUMPHRIES:  
 24 A. No.  
 25 MR. O'BRIEN:

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1 Q. And you mentioned that there was some  
 2 realizations and lessons learned as a result  
 3 of the outage inquiry. Can you give me an  
 4 idea as to what you mean by that, just from a  
 5 basic perspective?  
 6 MR. HUMPHRIES:  
 7 A. Well, I think, you know, coming through and as  
 8 a result of that, you know, we have modified  
 9 our generation planning criteria in the  
 10 interim between now and 2018 and the  
 11 interconnection of Muskrat Falls. You know,  
 12 that's based on insight we've gained from the  
 13 events that took place in 2014, and we've  
 14 worked through that with Liberty, and we've  
 15 accepted and made changes to our criteria and  
 16 we believe that they were appropriate.  
 17 MR. O'BRIEN:  
 18 Q. Okay, and was it your - as a result of all  
 19 this, did you see that there were some  
 20 reliability issues that had to be addressed  
 21 from a planning perspective?  
 22 MR. HUMPHRIES:  
 23 A. Yeah, I guess, you know - and for the most  
 24 part it was the whole generation adequacy  
 25 piece, you know, and when we looked at then

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1 the issues of - when we looked at what  
 2 happened in early 2014 with the generation  
 3 shortfall, and then we got into the issue of  
 4 the generation availabilities, I don't think  
 5 anyone really thought that so many things  
 6 could happen at the same time back prior to  
 7 that, you know, given the fact that we'd been  
 8 through the winter before with a fair bit of  
 9 generation on the service and there were no  
 10 issues. So then when the concerns or the  
 11 discussion, I guess, on the load forecast and  
 12 the question of using an extreme forecast in  
 13 combination with the assumptions around the  
 14 availability of our generation, you know, when  
 15 we went through that analysis, it did show  
 16 that, you know, we were close, on the margin,  
 17 a lot closer than we thought we'd be.  
 18 MR. O'BRIEN:  
 19 Q. A lot closer than you thought you were at the  
 20 time?  
 21 MR. HUMPHRIES:  
 22 A. Yeah.  
 23 MR. O'BRIEN:  
 24 Q. Okay, and like you say, you've taken steps  
 25 going forward now to address those generation

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1 planning issues?  
 2 MR. HUMPHRIES:  
 3 A. Yes.  
 4 MR. O'BRIEN:  
 5 Q. And I will ask you a little bit about that  
 6 later on. One of the other things I wanted -  
 7 as we're on your job description, and this is  
 8 something - if we could look at the summary of  
 9 the job function. If we go back there, yes,  
 10 the last paragraph of that, it's the exact  
 11 same wording I found in Mr. Henderson's job  
 12 description, but the last paragraph, "As a  
 13 member of the Nalcor leadership team, the VP  
 14 Systems Operations and Planning also  
 15 participates in the development and execution  
 16 of strategic plans initiatives and decisions  
 17 in support of the mandate and goals of both  
 18 Nalcor and its various business units", can  
 19 you just give me a brief overview of sort of  
 20 how you see yourself and how you fit into that  
 21 Nalcor leadership team?  
 22 MR. HUMPHRIES:  
 23 A. Both Mr. Henderson and I are members of the  
 24 Nalcor leadership team, I guess, and we do  
 25 bring the Hydro focus to that table, but, you

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1 know, there may be issues that do come up in  
 2 the overall Nalcor picture, the larger piece,  
 3 that may have an implication on Hydro, or that  
 4 based on Hydro's experience, we can offer  
 5 advice or recommendations on how to proceed,  
 6 so it's a give and take type -  
 7 MR. O'BRIEN:  
 8 Q. Is it more of a consulting sort of role, or is  
 9 there - how would you see that?  
 10 MR. HUMPHRIES:  
 11 A. I wouldn't really call it a consulting role.  
 12 MR. O'BRIEN:  
 13 Q. I'm just trying to get a sense of the flavour  
 14 of how you see it.  
 15 MR. HUMPHRIES:  
 16 A. We are equal participants at the Nalcor  
 17 leadership table, in my view, and we express  
 18 our own views and the views of Hydro and how  
 19 that - you know, other things may impact that.  
 20 MR. O'BRIEN:  
 21 Q. Okay. Maybe I'll move to Mr. Moulton and just  
 22 give you a break for a minute, Mr. Humphries,  
 23 and get a little bit more background from Mr.  
 24 Moulton. So you've given us some information,  
 25 Mr. Moulton, in terms of your background and

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1 just if you could repeat for me your present  
 2 role as Manager of Generation and Rural  
 3 Planning, is that right?  
 4 MR. MOULTON:  
 5 A. That's correct.  
 6 MR. O'BRIEN:  
 7 Q. And how long have you been in that particular  
 8 role?  
 9 MR. MOULTON:  
 10 A. Since April of 2013.  
 11 (10:00 a.m.)  
 12 MR. O'BRIEN:  
 13 Q. April of 2013, and what was the role you were  
 14 in prior to that?  
 15 MR. MOULTON:  
 16 A. I was a senior planning engineer.  
 17 MR. O'BRIEN:  
 18 Q. Okay, and you're an Hydro employee?  
 19 MR. MOULTON:  
 20 A. That's correct.  
 21 MR. O'BRIEN:  
 22 Q. Okay, now the position that you're in right  
 23 now, just give me an overview of the  
 24 difference between that and what you had  
 25 before in terms of senior planning engineer?

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1 Is it a different - completely different role  
 2 or is it a step up with more responsibilities,  
 3 how does that work?  
 4 MR. MOULTON:  
 5 A. Well, I would take it more as a step up.  
 6 MR. O'BRIEN:  
 7 Q. Okay.  
 8 MR. MOULTON:  
 9 A. Well, before, as I said, I didn't actually  
 10 have official supervisory roles, but, of  
 11 course, in the position as a senior planning  
 12 engineer, you know, besides guiding the work  
 13 of that section of the department, I'm also  
 14 mentoring younger engineers.  
 15 MR. O'BRIEN:  
 16 Q. Sure.  
 17 MR. MOULTON:  
 18 A. And things like that, but I didn't have direct  
 19 supervisory role, which now I actually do.  
 20 MR. O'BRIEN:  
 21 Q. And what are you key responsibility areas, I  
 22 guess, right now?  
 23 MR. MOULTON:  
 24 A. My key responsibility areas, one is market  
 25 analysis with the forecasting, which Mr.

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1 Stratton is the supervisor of.  
 2 MR. O'BRIEN:  
 3 Q. Okay.  
 4 MR. MOULTON:  
 5 A. You know, responsible to make sure that the  
 6 forecasting for the island rural systems,  
 7 that's done.  
 8 MR. O'BRIEN:  
 9 Q. Right.  
 10 MR. MOULTON:  
 11 A. I'm also responsible for the interconnected  
 12 generation for the island, for the province,  
 13 you know, making sure that anything that's  
 14 connected with load in that area is completed.  
 15 Also similar functions with the rural and  
 16 isolated areas, again responsible for least  
 17 cost reliable additions for increases in load  
 18 in the isolated generation areas, and  
 19 responsible the same thing in the distribution  
 20 planning for the isolated areas and Hydro's  
 21 rural areas.  
 22 MR. O'BRIEN:  
 23 Q. So would you say that the large part of your  
 24 role is with respect to generation planning?  
 25 MR. MOULTON:

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1 A. That's correct.  
 2 MR. O'BRIEN:  
 3 Q. Okay, and you report directly to Mr.  
 4 Humphries, do you?  
 5 MR. MOULTON:  
 6 A. That's correct.  
 7 MR. O'BRIEN:  
 8 Q. And perhaps we could bring up PUB-409, and  
 9 you're here on that chart, Manager Generation  
 10 and Rural Planning?  
 11 MR. MOULTON:  
 12 A. Yes.  
 13 MR. O'BRIEN:  
 14 Q. And so those are all your direct reports?  
 15 MR. MOULTON:  
 16 A. Yes.  
 17 MR. O'BRIEN:  
 18 Q. Mostly engineers and a couple of analysts, is  
 19 that right?  
 20 MR. O'BRIEN:  
 21 Q. That's correct.  
 22 MR. O'BRIEN:  
 23 Q. Mr. Stratton is down here, senior market  
 24 analyst, is that right?  
 25 MR. MOULTON:

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1 A. That's correct.  
 2 MR. O'BRIEN:  
 3 Q. In terms of Nalcor and the Nalcor entity, do  
 4 you provide any duties or responsibilities or  
 5 do you put in any time for Nalcor, bill time  
 6 to Nalcor, or any other of the units?  
 7 MR. MOULTON:  
 8 A. I very seldom bill any time to Nalcor. Kind  
 9 of look at the role, well, from the Isolated  
 10 and Rural, that's pretty well strictly Hydro.  
 11 MR. O'BRIEN:  
 12 Q. Strictly Hydro, okay.  
 13 MR. MOULTON:  
 14 A. And from the generation planning, usually look  
 15 at the interface with Nalcor as we're, you  
 16 know, representing I'll say Hydro's interests  
 17 or Hydro's role with Nalcor. So I consider  
 18 that a Hydro function.  
 19 MR. O'BRIEN:  
 20 Q. Okay. But I mean, in terms of your particular  
 21 role isn't any sort of a Nalcor overlap at all  
 22 with your role? No?  
 23 MR. MOULTON:  
 24 A. No.  
 25 MR. O'BRIEN:

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1 Q. And Mr. Stratton, so we've got a bit of  
 2 information from you as well. You're a senior  
 3 market analyst and you've been in that  
 4 position since when?  
 5 MR. STRATTON:  
 6 A. I would have undertaken that role in the 2000s  
 7 area.  
 8 MR. O'BRIEN:  
 9 Q. Okay. You've been in that role for a fair -  
 10 MR. STRATTON:  
 11 A. For some time.  
 12 MR. O'BRIEN:  
 13 Q. A fair time, okay. And you're responsible for  
 14 load forecasts, is it?  
 15 MR. STRATTON:  
 16 A. My key responsibility would be for load  
 17 forecasts.  
 18 MR. O'BRIEN:  
 19 Q. Okay.  
 20 MR. STRATTON:  
 21 A. Both operating forecasts, which are used for  
 22 budgeting, and operational, day-to-day -- or  
 23 not day-to-day, but monthly and short term  
 24 operational. And secondly would be my -- for  
 25 preparing a long-term forecast for planning.

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1 MR. O'BRIEN:  
 2 Q. For planning. And the operation portion of  
 3 it, how would you perform that role? What's  
 4 your duties in that regard?  
 5 MR.STRATTON:  
 6 A. Well, depending on the systems. For the  
 7 Island Interconnected system, our operating  
 8 forecast is a five-year monthly energy and  
 9 demand forecast. And the Island  
 10 Interconnected system, that would entail  
 11 compiling customer forecasts that are received  
 12 from your company, Newfoundland Power -  
 13 MR. O'BRIEN:  
 14 Q. From customers, yeah.  
 15 MR.STRATTON:  
 16 A. - and from our Industrial Customers. So,  
 17 beyond that, we do a Hydro Rural operating  
 18 forecast and that would be a forecast that's  
 19 prepared in house for both our Rural  
 20 Interconnected systems in Island and in  
 21 Labrador and as well for our Isolated systems.  
 22 MR. O'BRIEN:  
 23 Q. And you perform that role in terms of putting  
 24 that together?  
 25 MR.STRATTON:

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1 A. I perform -- well, I have a market analyst who  
 2 works under me.  
 3 MR. O'BRIEN:  
 4 Q. Okay.  
 5 MR.STRATTON:  
 6 A. She would be preparing more of the Isolated  
 7 and the Rural Interconnected system forecast.  
 8 MR. O'BRIEN:  
 9 Q. Okay.  
 10 MR.STRATTON:  
 11 A. And she would report up to me. But I'm the  
 12 primary responsibility for preparing those  
 13 forecasts.  
 14 MR. O'BRIEN:  
 15 Q. And those are for the purposes of budgetary --  
 16 I guess, what would you use those forecasts  
 17 for?  
 18 MR.STRATTON:  
 19 A. Well, I would distribute my forecasts to rates  
 20 and regulatory for preparing the -- for sales  
 21 revenue, and I would send my forecasts to  
 22 Kevin Goulding's group for doing their system  
 23 operations plan.  
 24 MR. O'BRIEN:  
 25 Q. For the systems ops plan, okay.

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1 MR.STRATTON:  
 2 A. And like I say, my forecasting role is with  
 3 medium term and longer term.  
 4 MR. O'BRIEN:  
 5 Q. Oh, is it, okay.  
 6 MR.STRATTON:  
 7 A. There's also the operating or day-to-day,  
 8 seven-day, hourly forecast, but that  
 9 forecasting role resides within the  
 10 operations, Kevin Goulding's group.  
 11 MR. O'BRIEN:  
 12 Q. Within Mr. Goulding's -  
 13 MR.STRATTON:  
 14 A. Yes.  
 15 MR. O'BRIEN:  
 16 Q. Okay. So that -- and perhaps, Mr. Goulding,  
 17 maybe you can tell me, so is that -- that's  
 18 something that's part of your weekly  
 19 guidelines?  
 20 MR. GOULDING:  
 21 A. Yes, it is. We have a load forecasting  
 22 application that will forecast load a week out  
 23 and it gives us an hourly analysis of what we  
 24 expect the load to be from an Island  
 25 perspective and from an Avalon perspective as

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1 well.  
 2 MR. O'BRIEN:  
 3 Q. All right. So in terms of, Mr. Goulding, on  
 4 this particular chart here we have, 409, where  
 5 is your position on that chart?  
 6 MR. GOULDING:  
 7 A. I'm the system operations engineering manager.  
 8 That's the employee, I guess, 261-01.  
 9 MR. O'BRIEN:  
 10 Q. 261-01, that's what I thought, okay. So do  
 11 you have a market analyst or anything under  
 12 your role there?  
 13 MR. GOULDING:  
 14 A. No.  
 15 MR. O'BRIEN:  
 16 Q. So how would you perform the seven-day  
 17 forecast say or an hourly forecast?  
 18 MR. GOULDING:  
 19 A. Well, like I say, we have a load forecasting  
 20 application. It's a PPO software.  
 21 MR. O'BRIEN:  
 22 Q. Okay.  
 23 MR. GOULDING:  
 24 A. That actually takes the inputs, such as the  
 25 ambient temperature, the wind speed, day of

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1 week and what the load, we'll say, the day  
 2 previous or a week previous and it forecast  
 3 load in that manner.  
 4 MR. O'BRIEN:  
 5 Q. And so it doesn't take into account the  
 6 monthly forecasts or the annual forecasts that  
 7 say Mr. Stratton's -  
 8 MR. GOULDING:  
 9 A. No.  
 10 MR. O'BRIEN:  
 11 Q. - Mr. Stratton would produce, no.  
 12 MR. GOULDING:  
 13 A. No.  
 14 MR. O'BRIEN:  
 15 Q. This is a day-to-day thing based on previous  
 16 days, that kind of thing?  
 17 MR. GOULDING:  
 18 A. Yes.  
 19 MR. O'BRIEN:  
 20 Q. All right. Okay. And Mr. Goulding, you  
 21 report directly to -- is that Mr. Butler you  
 22 would report to?  
 23 MR. GOULDING:  
 24 A. Yes, that's correct.  
 25 MR. O'BRIEN:

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1 Q. Yeah, okay. And you have a number of direct  
 2 reports into you as well?  
 3 MR. GOULDING:  
 4 A. Yes.  
 5 MR. O'BRIEN:  
 6 Q. Do you provide to either -- Mr. Stratton or  
 7 Mr. Goulding, do either one of you provide any  
 8 services to Nalcor directly where you would  
 9 bill time to Nalcor?  
 10 MR. STRATTON:  
 11 A. I don't.  
 12 MR. GOULDING:  
 13 A. There wouldn't be -- well, similar to Bob, to  
 14 Mr. Moulton, there's not a lot of overlap  
 15 between myself and Nalcor. Like we -- I  
 16 think, you know, like if some cases, like we  
 17 also oversee billing metering function, so  
 18 when there was a Twinco entity, I certainly  
 19 would have gotten involved there from time to  
 20 time.  
 21 MR. O'BRIEN:  
 22 Q. Okay. Mr. Goulding, in terms of -- I want to  
 23 take you back to some of the comments you had  
 24 earlier in terms of outage scheduling. Can  
 25 you give me a bit more overview as to how that

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1 gets done? I understand there's an annual  
 2 process, but there's also monthly, maybe  
 3 weekly process. Can you just give me an  
 4 overview as to how that gets done?  
 5 MR. GOULDING:  
 6 A. Sure. Well, every year before the annual  
 7 maintenance season begins, we have an engineer  
 8 in our area. He's actually the system  
 9 operations engineer of planning, so he would  
 10 reach out to all the stakeholders, so the  
 11 stakeholders being, you know, the asset owners  
 12 in the areas of generation and transmission  
 13 equipment as well. So he would reach out and  
 14 basically ask that they provide their outage  
 15 plans for the year and we would basically take  
 16 those plans and input them into a spreadsheet  
 17 and basically schedule the outages  
 18 accordingly. So, that's the longer term  
 19 aspect of it.  
 20 Plus we also have a generation outage  
 21 application as well. So once these outages  
 22 are in the longer term plan, we'll reach out  
 23 to the asset owners again when we're getting,  
 24 you know, somewhat near the time and I say  
 25 near the time, like it could be a week or a

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1 month, and then we input these outages into  
 2 our generation outage scheduling application  
 3 as well and then they would receive the final  
 4 approval at that point.  
 5 MR. O'BRIEN:  
 6 Q. So when you say you reach out to stakeholders,  
 7 so that's on an annual basis, one of -- it's  
 8 the -- is that the senior systems operations  
 9 engineer?  
 10 MR. GOULDING:  
 11 A. No.  
 12 MR. O'BRIEN:  
 13 Q. Who would that be?  
 14 MR. GOULDING:  
 15 A. That would actually be the system operations  
 16 engineer that's on the bottom there.  
 17 MR. O'BRIEN:  
 18 Q. Oh, I see, okay, 275-12.  
 19 MR. GOULDING:  
 20 A. Yes, yeah.  
 21 MR. O'BRIEN:  
 22 Q. So that individual would reach out to all of  
 23 the asset owners to find out what -- I guess  
 24 what maintenance needed to be done, that sort  
 25 of thing, for each of the assets?

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1 MR. GOULDING:  
 2 A. That's correct.  
 3 MR. O'BRIEN:  
 4 Q. Okay. And how would you prioritize that in  
 5 terms of what work needs to be done and when  
 6 it needs to be done? How does that work?  
 7 MR. GOULDING:  
 8 A. I guess it all fits in terms of the asset  
 9 owners, they would essentially prioritize what  
 10 work needs to be done and when, and then we  
 11 would take their outage plans and size it up  
 12 from an overall power system perspective to  
 13 make sure it works, you know, from a  
 14 reliability standpoint and to make sure that  
 15 we're still optimizing all our assets as well.  
 16 MR. O'BRIEN:  
 17 Q. And do you update that plan regularly or how  
 18 does that work?  
 19 MR. GOULDING:  
 20 A. The annual plan is updated on a monthly basis.  
 21 MR. O'BRIEN:  
 22 Q. On a monthly basis, okay. And that's -  
 23 MR. GOULDING:  
 24 A. And that's also -- we also send our annual  
 25 plan out to external stakeholders as well, so

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1 Newfoundland Power would receive it, as well  
 2 as the Industrial customers. So they're  
 3 aware, I guess, of -  
 4 MR. O'BRIEN:  
 5 Q. Upfront as to what the annual plan will be, I  
 6 guess, is it?  
 7 MR. GOULDING:  
 8 A. Yeah. And they're also aware of what outages  
 9 may impact on them as well.  
 10 MR. O'BRIEN:  
 11 Q. Okay, yeah. And in terms of how the system is  
 12 run in the interim, say if there's an outage  
 13 or a planned outage, how do you prioritize  
 14 sort of whether you use gas turbines, which  
 15 turbines to use, that kind of thing, is that  
 16 all built into their plan?  
 17 MR. GOULDING:  
 18 A. It would be. Right now, like we'll plan our  
 19 outages and we're still mindful of the N minus  
 20 one, so we ensure that even under a planned  
 21 outage scenario that the next outage, whether  
 22 it be peaks of generation equipment or  
 23 terminal equipment is not going to result in a  
 24 customer outage.  
 25 MR. O'BRIEN:

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1 Q. Okay. And that's something that is  
 2 distributed with the EEC, I guess, so they  
 3 understand where -- how to -- when there's  
 4 going to be certain outages, certain work  
 5 done, they under -- there's a dispatch plan in  
 6 place then, I guess, at that time, is there?  
 7 MR. GOULDING:  
 8 A. Yes, that's correct.  
 9 MR. O'BRIEN:  
 10 Q. On a monthly basis, and that's built into your  
 11 guidelines?  
 12 (10:15 a.m.)  
 13 MR. GOULDING:  
 14 A. Monthly, yeah, and as we get closer, certainly  
 15 we think in weekly and daily time steps as  
 16 well.  
 17 MR. O'BRIEN:  
 18 Q. Okay. I'm going to switch gears a little bit  
 19 and move back to you, Mr. Humphries, if we  
 20 could.  
 21 MR. HUMPHRIES:  
 22 A. Sure.  
 23 MR. O'BRIEN:  
 24 Q. And I did want to talk to you about just in  
 25 terms of the matrix within Hydro and Nalcor,

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1 this organizational structure. We've had a  
 2 lot of evidence on that to date and I'd like  
 3 to get an overview, I guess, in terms of where  
 4 you feel you fall in terms of the matrix. One  
 5 of the things I wanted to talk to you about, I  
 6 wonder if we could pull up PUB-NLH-328?  
 7 And I talked to Mr. Henderson about this.  
 8 Just in terms of Hydro's monthly meetings and  
 9 Nalcor's monthly meetings and, I guess, the  
 10 difference between the two, but if we move  
 11 down a little bit, there's Newfoundland and  
 12 Labrador Hydro, there's a list there that  
 13 talks about, I guess, the leadership team of  
 14 Hydro. Now I understand there's a number of  
 15 individuals that have changed on the team  
 16 based on what Mr. Henderson had testified to,  
 17 but is that in general with those changes,  
 18 that what you would consider to be the  
 19 leadership team of Hydro?  
 20 MR. HUMPHRIES:  
 21 A. Yes, it is.  
 22 MR. O'BRIEN:  
 23 Q. Okay. And you're part of that team?  
 24 MR. HUMPHRIES:  
 25 A. Yes, I am.



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1 MR. O'BRIEN:  
 2 Q. All right. And in terms of Hydro meetings, I  
 3 take it systems operations and planning issues  
 4 would be discussed regularly at these types of  
 5 meetings, would they?  
 6 MR. HUMPHRIES:  
 7 A. Yes, they would.  
 8 MR. O'BRIEN:  
 9 Q. Okay. And if we scroll up at the Nalcor  
 10 level, your name is -- you're on that  
 11 particular leadership team as well. Is that  
 12 right?  
 13 MR. HUMPHRIES:  
 14 A. Yes, I am.  
 15 MR. O'BRIEN:  
 16 Q. And would systems operations and planning take  
 17 up a lot of time in terms of discussion at  
 18 Nalcor leadership level?  
 19 MR. HUMPHRIES:  
 20 A. Well, they -- Hydro takes up a portion of the  
 21 Nalcor leadership team discussion and if there  
 22 are system operation issues in that particular  
 23 month, yeah, it would involve system  
 24 operations, but it would be part of the rolled  
 25 up report to -- the rolled up Hydro report to

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1 the Nalcor leadership.  
 2 MR. O'BRIEN:  
 3 Q. To the Nalcor, okay. It wouldn't necessarily  
 4 make up a separate discussion piece unless it  
 5 was -  
 6 MR. HUMPHRIES:  
 7 A. If there was a pertinent issue.  
 8 MR. O'BRIEN:  
 9 Q. If there was a pertinent issue, okay.  
 10 MR. HUMPHRIES:  
 11 A. That's correct.  
 12 MR. O'BRIEN:  
 13 Q. In terms of direction then at the Nalcor  
 14 level, do you receive any direction in terms  
 15 of Hydro's systems operation and planning from  
 16 the Nalcor leadership team?  
 17 MR. HUMPHRIES:  
 18 A. From Hydro's -  
 19 MR. O'BRIEN:  
 20 Q. Yeah, from Hydro's perspective, would you -  
 21 MR. HUMPHRIES:  
 22 A. No, generally not.  
 23 MR. O'BRIEN:  
 24 Q. Okay. So in terms of, from Hydro's  
 25 perspective then, in terms of systems

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1 operations and planning, would you have the  
 2 final call on planning or would that be Mr.  
 3 Henderson's?  
 4 MR. HUMPHRIES:  
 5 A. Well, generally from a planning perspective, I  
 6 have always in my role, I guess, brought  
 7 forward the recommendations, but you know, Mr.  
 8 Henderson and I work very closely in this role  
 9 and me, in my transitional role, I guess.  
 10 From a Hydro perspective, there's not much  
 11 that goes forward that Mr. Henderson and I do  
 12 not have a thorough discussion on before.  
 13 MR. O'BRIEN:  
 14 Q. Oh, I can understand that, I guess, in terms  
 15 of you both being VPs in the same entity. I'm  
 16 wondering just in terms of accountability and  
 17 single point of accountability, whether or not  
 18 planning issues for Hydro would fall -  
 19 MR. HUMPHRIES:  
 20 A. Planning issues, I would consider I'm the  
 21 single point accountable, yes.  
 22 MR. O'BRIEN:  
 23 Q. Would you?  
 24 MR. HUMPHRIES:  
 25 A. Yes.

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1 MR. O'BRIEN:  
 2 Q. Okay. And the reason I ask that is I got the  
 3 understanding that planning issues really  
 4 overlap with Nalcor in terms of the  
 5 integration piece, so I would have expected  
 6 you to have the final accountability for  
 7 planning issues. Even though there are short  
 8 term planning issues, I guess, with Hydro, but  
 9 this particular transition role, I would  
 10 expect that you would have had final say on  
 11 planning issues.  
 12 MR. HUMPHRIES:  
 13 A. From a planning, strictly planning issue, yes,  
 14 I think that's correct.  
 15 MR. O'BRIEN:  
 16 Q. But from the day-to-day operations of Hydro,  
 17 Mr. Henderson would have the single point of  
 18 accountability?  
 19 MR. HUMPHRIES:  
 20 A. That's right.  
 21 MR. O'BRIEN:  
 22 Q. Okay. And when we say that you have the  
 23 accountability for planning, what exactly are  
 24 we talking about here? We're talking about  
 25 generation planning?

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1 MR. HUMPHRIES:  
 2 A. No, we're talking about generation,  
 3 transmission and the rural or distribution  
 4 planning.  
 5 MR. O'BRIEN:  
 6 Q. And is that, as of April 2013, you would have  
 7 been in that role and had that accountability?  
 8 MR. HUMPHRIES:  
 9 A. Yes, and I really had it from a planning  
 10 perspective before April 2013. You know, in  
 11 the role prior to April 2013, I was the  
 12 manager of system planning. If you notice, at  
 13 the organizational chart there now, there is  
 14 no manager of -  
 15 MR. O'BRIEN:  
 16 Q. Yes, there is none. I noticed that.  
 17 MR. HUMPHRIES:  
 18 A. There is no manager, and that was done  
 19 purposely because we're not sure as we move  
 20 forward from the planning function how the  
 21 accountabilities and reporting structures will  
 22 roll up and there may be a separation between  
 23 generation and transmission possibly. So we  
 24 didn't fill the manager of system planning  
 25 role. We put a manager in the generation and

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1 rural side and a manager in the transmission  
 2 side and they report up through me. So  
 3 effectively, from the overall manager role of  
 4 pulling all the system planning pieces  
 5 together, I'm still performing that, yes.  
 6 MR. O'BRIEN:  
 7 Q. Okay. And in terms of your accountability  
 8 yourself on planning, you would be accountable  
 9 to Mr. Martin?  
 10 MR. HUMPHRIES:  
 11 A. I am accountable to Mr. Martin, yes.  
 12 MR. O'BRIEN:  
 13 Q. So on planning issues, generation,  
 14 transmission, rural distribution, that sort of  
 15 thing, you would -- your accountability would  
 16 be directly to Mr. Martin?  
 17 MR. HUMPHRIES:  
 18 A. Yes, other than, you know, the direct Hydro  
 19 pieces, I think, you know, they will always --  
 20 I'm accountable, but will always have an  
 21 involvement with the operations side of thing,  
 22 Mr. Henderson, no different than it would -  
 23 MR. O'BRIEN:  
 24 Q. And I got that impression.  
 25 MR. HUMPHRIES:

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1 A. Prior to 2013, I was accountable to Mr.  
 2 MacIsaac.  
 3 MR. O'BRIEN:  
 4 Q. Exactly.  
 5 MR. HUMPHRIES:  
 6 A. Right, but it's still on predominantly the  
 7 things related to Hydro and Hydro's ability to  
 8 be able to fulfil its mandate, I probably  
 9 spoke more to Mr. Haynes on that than I ever  
 10 did to Mr. MacIsaac, there's no question about  
 11 that.  
 12 MR. O'BRIEN:  
 13 Q. Okay. And let me ask you about -- we've also  
 14 had some discussion about -- as an example, I  
 15 guess, in terms of decision making within  
 16 Hydro and within this matrix of Hydro and  
 17 Nalcor and the other entities, one of the  
 18 areas we discussed was the TL 267 Project.  
 19 Are you familiar with that project?  
 20 MR. HUMPHRIES:  
 21 A. Yes, I am.  
 22 MR. O'BRIEN:  
 23 Q. Okay. I wonder if we could bring up  
 24 Information No. 6? So this is just a copy of  
 25 Appendix B of Newfoundland and Labrador

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1 Hydro's 2016-2020 Capital Plan which was  
 2 recently filed and it indicates in that  
 3 document that the project management  
 4 engineering and construction management  
 5 services for that project would be provided by  
 6 the Lower Churchill Management Corporation.  
 7 Is that right?  
 8 MR. HUMPHRIES:  
 9 A. That's correct.  
 10 MR. O'BRIEN:  
 11 Q. Okay. And where does that project fit in, in  
 12 your perspective, in terms of systems  
 13 planning?  
 14 MR. HUMPHRIES:  
 15 A. Well, systems planning would have identified  
 16 the requirement for that project. They would  
 17 have completed the project application that  
 18 went before the Public Utilities Board and  
 19 probably from the perspective of the review  
 20 process that went through the request for  
 21 information, we probably would have -- system  
 22 planning would probably have addressed the  
 23 majority of those. Once that project received  
 24 approval, then it was transferred to the  
 25 project execution group to execute.

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1 MR. O'BRIEN:  
 2 Q. Okay. And in terms of the application process  
 3 itself then, if systems operations and  
 4 planning would have put together that  
 5 application to seek approval, would you have  
 6 been the group to have looked at initially who  
 7 was going to complete the project or would you  
 8 have left that later on for project execution  
 9 group to look at?  
 10 MR. HUMPHRIES:  
 11 A. That was the project execution piece.  
 12 MR. O'BRIEN:  
 13 Q. Would you have any discussion about whether or  
 14 not Lower Churchill Management Corporation  
 15 would have been the right -- the employees  
 16 there would have been the right group to do  
 17 that?  
 18 MR. HUMPHRIES:  
 19 A. Yeah, and I think to Mr. Henderson's point, I  
 20 was involved in some of those discussions. I  
 21 don't think I was involved in all of them,  
 22 from the perspective that, you know, and from  
 23 the ability of the people that were over there  
 24 and the knowledge, there was no question from  
 25 my perspective that the right people to be

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1 able to follow through on a design that would  
 2 be compatible with the system were there.  
 3 MR. O'BRIEN:  
 4 Q. Were there, okay. And in terms of your  
 5 recollections of discussion, is that the  
 6 extent of the discussions that you recall,  
 7 that these would have been the right people to  
 8 do that project?  
 9 MR. HUMPHRIES:  
 10 A. Yes.  
 11 MR. O'BRIEN:  
 12 Q. And one of the things I noted in the  
 13 application or I guess in this plan, sorry,  
 14 not the application, was a reference to the  
 15 fact -- if we could look at page B5 I believe  
 16 it is, the first paragraph? It's the last  
 17 line of the first paragraph, "given the  
 18 synergies between the execution of the TL 267  
 19 project and the Lower Churchill Project, the  
 20 Lower Churchill Management Corporation will  
 21 provide all project management, engineering  
 22 and construction management services for this  
 23 project." I guess what I wanted to ask you  
 24 about is the first aspect of that is given the  
 25 synergies between those two, it struck me that

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1 the word "synergies" was also used in your job  
 2 description that we talked about.  
 3 MR. HUMPHRIES:  
 4 A. Yeah.  
 5 MR. O'BRIEN:  
 6 Q. And synergies being sort of opportunities. I  
 7 didn't get the impression that this was the  
 8 same sort of analysis as to whether or not  
 9 these were opportunities. Can you expand on  
 10 that, what the synergies between the execution  
 11 of the -  
 12 MR. HUMPHRIES:  
 13 A. Well, to my view, I think there are some  
 14 opportunities there, given that A. there were  
 15 individuals over there capable of -- that  
 16 understood the Hydro system, had the ability  
 17 to be able to lead the execution of that  
 18 project and as well, that team, when we look  
 19 at it, they're over there building thousands  
 20 of kilometres of like construction. There  
 21 should be obvious synergies there or benefits.  
 22 MR. O'BRIEN:  
 23 Q. And I guess I understand the idea that there's  
 24 an opportunity in that there are individuals  
 25 there who are doing that work. I guess I

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1 understood the idea of synergies from your job  
 2 description to mean there are opportunities  
 3 for two groups to get together and cooperate,  
 4 your systems planning -  
 5 MR. HUMPHRIES:  
 6 A. Yeah, yes, you know -  
 7 MR. O'BRIEN:  
 8 Q. - as opposed to -- there's always an  
 9 opportunity for a group of people to come in  
 10 and do work.  
 11 MR. HUMPHRIES:  
 12 A. Yes, and I don't -- you know, project  
 13 execution and technical services still has  
 14 individual interface in these activities with  
 15 the project.  
 16 MR. O'BRIEN:  
 17 Q. Was there a least cost analysis done at the  
 18 time of your application as to whether or not  
 19 this was the best course of action to take?  
 20 MR. HUMPHRIES:  
 21 A. Not that I'm aware of, no.  
 22 MR. O'BRIEN:  
 23 Q. It's not something you would have been  
 24 involved in, if it was?  
 25 MR. HUMPHRIES:

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1 A. No, it wasn't.  
 2 MR. O'BRIEN:  
 3 Q. Would that have been something done by a  
 4 project execution team?  
 5 MR. HUMPHRIES:  
 6 A. I really don't know.  
 7 MR. O'BRIEN:  
 8 Q. Okay. Do you have any idea who the  
 9 individuals say at the Lower Churchill  
 10 Management Corporation would be reporting to?  
 11 The individuals doing the work, would they  
 12 report directly to Hydro or would they report  
 13 up the food chain in their corporation? Do  
 14 you have any idea how that would work?  
 15 MR. HUMPHRIES:  
 16 A. I'm not sure of the detail of that  
 17 arrangement.  
 18 MR. O'BRIEN:  
 19 Q. Okay. I wonder if we could pull up  
 20 Information No. 9? I wanted to change course  
 21 a little bit there, if we could. This may be  
 22 for Mr. Humphries or for Mr. Moulton maybe or  
 23 whoever wants to jump in, I guess. I wanted  
 24 to ask about -- this is the -- this document  
 25 is a report to the Board of Commissioners of

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1 Public Utilities on generation adequacy. So  
 2 this is the September 2015 report.  
 3 MR. HUMPHRIES:  
 4 A. That's right.  
 5 MR. O'BRIEN:  
 6 Q. What's the genesis of this report? This comes  
 7 out of the recommendation from the Liberty  
 8 Consulting Group? Is that right?  
 9 MR. HUMPHRIES:  
 10 A. That's correct.  
 11 MR. O'BRIEN:  
 12 Q. Okay. And I understand Hydro is to provide or  
 13 plans to provide one of these in August of  
 14 each year. Is that right?  
 15 MR. HUMPHRIES:  
 16 A. That's correct, yeah.  
 17 MR. O'BRIEN:  
 18 Q. Okay. And the purpose of it, just briefly  
 19 outline the purpose of the report for me.  
 20 (10:30 a.m.)  
 21 MR. HUMPHRIES:  
 22 A. Well, the purpose is to A. give an outlook on  
 23 load forecasts between now and the in service  
 24 of Muskrat Falls, to give an overview of the  
 25 performance of our generation fleet over the

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1 past 12 months, and as well to look at where  
 2 the available capacity lines up with the  
 3 requirement moving forward, and we've landed  
 4 on a situation where we would try to maintain  
 5 a minimum of 240 megawatts of service on the  
 6 system, based on a P90 load forecast  
 7 expectation.  
 8 MR. O'BRIEN:  
 9 Q. I guess there's two points I wanted to ask you  
 10 there. The minimum of reserve, where does  
 11 that come out of? Is that a -  
 12 MR. HUMPHRIES:  
 13 A. Well, that was a -- I guess when Liberty  
 14 issued its initial report, they expressed a  
 15 concern with the level of reserve on the  
 16 system and that they requested that Hydro  
 17 recommend a process for monitoring that and  
 18 what would be an acceptable level of reserve  
 19 and we went through and we landed on the 240  
 20 megawatts, and that's basically -- it's 240  
 21 megawatts based on the P90, which can be  
 22 considered extreme winter forecast, and the  
 23 240 megawatt reserve reflects the ability to  
 24 be able to withstand the loss of our largest  
 25 generating unit at the time, which is 170

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1 megawatts, would be one of the Holyrood units,  
 2 and still have a 70 megawatt spinning reserve  
 3 on the system to manage changes in the system  
 4 and an additional buffer, I guess, to  
 5 withstand further loss of generation.  
 6 MR. O'BRIEN:  
 7 Q. So you'd still have -- you could lose your  
 8 largest generator and you can have -  
 9 MR. HUMPHRIES:  
 10 A. And still have some -  
 11 MR. O'BRIEN:  
 12 Q. Still have 70 megawatt reserve?  
 13 MR. HUMPHRIES:  
 14 A. 70 megawatts in reserve, yes.  
 15 MR. O'BRIEN:  
 16 Q. And that's a figure landed on by Hydro?  
 17 MR. HUMPHRIES:  
 18 A. It is, yes.  
 19 MR. O'BRIEN:  
 20 Q. Okay. And how did you land on that figure?  
 21 MR. HUMPHRIES:  
 22 A. Well, when we looked at the overall level of  
 23 potential -- well, the spinning reserve is a  
 24 number that we obviously would like to have  
 25 available to be able to manage the system and

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1 our largest contingency was 170 and when we  
 2 looked at other possible contingencies beyond  
 3 that, you know, if we look at the loss of, for  
 4 argument sake, two generators at Holyrood,  
 5 that's 340 megawatts.  
 6 MR. O'BRIEN:  
 7 Q. Sure.  
 8 MR. HUMPHRIES:  
 9 A. That's a bit onerous.  
 10 MR. O'BRIEN:  
 11 Q. Yeah.  
 12 MR. HUMPHRIES:  
 13 A. When we look at some of the other  
 14 combinations, the loss of the combustion  
 15 turbine and loss of Holyrood, even with the 70  
 16 megawatt spinning reserve, we know that we can  
 17 operate the system reasonably with as little  
 18 as 20 megawatts of reserve. We've done it.  
 19 So that, you know, even the 240 would give us  
 20 an additional buffer to handle some of these  
 21 smaller second contingencies that could exist.  
 22 MR. O'BRIEN:  
 23 Q. Okay.  
 24 MR. HUMPHRIES:  
 25 A. And to get much beyond those, obviously like I

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1 said to get to the loss of two generators, we  
 2 were into a significant -  
 3 MR. O'BRIEN:  
 4 Q. You're into a significant -  
 5 MR. HUMPHRIES:  
 6 A. - capacity.  
 7 MR. O'BRIEN:  
 8 Q. Yeah, okay. And the P90, just briefly explain  
 9 to me what the P90 is. I understood that's a  
 10 -- versus a P50, I guess, load and maybe Mr.  
 11 Stratton would -  
 12 MR. HUMPHRIES:  
 13 A. I'll ask my forecasting expert to do that.  
 14 MR. O'BRIEN:  
 15 Q. Yeah, sure.  
 16 MR. STRATTON:  
 17 A. The difference between the P50 and the P90 is  
 18 a P50 demand forecast essentially means that  
 19 you can be above that peak demand forecast 50  
 20 percent of the time or you can be below it 50  
 21 percent of the time in any -- for that  
 22 particular year. Your P90 forecast means that  
 23 you have a 90 percent chance -- sorry, that  
 24 only 10 percent probability that you would be  
 25 above that peak demand forecast.

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1 MR. O'BRIEN:  
 2 Q. Okay. That's what I thought it meant. And in  
 3 terms of what your == prior to say 2014 was it  
 4 a P50 forecast that Hydro would run or was it  
 5 a P90?  
 6 MR. HUMPHRIES:  
 7 A. We always used a P50 before.  
 8 MR. O'BRIEN:  
 9 Q. Always used a P50, all right. And the P90 is  
 10 now being used based on recommendations out of  
 11 the -- from Liberty? Is that right?  
 12 MR. HUMPHRIES:  
 13 A. Well, it was twofold, I guess. Liberty  
 14 recommended it and as well, we had our own  
 15 assessment done by our consultant, Ventyx.  
 16 MR. O'BRIEN:  
 17 Q. Okay.  
 18 MR. HUMPHRIES:  
 19 A. And they recommended that as an alternative we  
 20 could consider a P90, yes.  
 21 MR. O'BRIEN:  
 22 Q. Okay. Apart from this type of report, I guess  
 23 the annual now, generation adequacy report  
 24 that Hydro will be preparing in the future,  
 25 prior to those, to that report, what types of

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1 generation reports did Hydro produce on a  
 2 regular basis?  
 3 MR. HUMPHRIES:  
 4 A. Well, we would do an update of -- I believe it  
 5 was called -  
 6 MR. MOULTON:  
 7 A. Generation planning issues report.  
 8 MR. HUMPHRIES:  
 9 A. Yes.  
 10 MR. O'BRIEN:  
 11 Q. Okay.  
 12 MR. HUMPHRIES:  
 13 A. Generation planning issues.  
 14 MR. O'BRIEN:  
 15 Q. There's a couple of RFIs, I think, that have  
 16 the attachments, yeah.  
 17 MR. HUMPHRIES:  
 18 A. So that would have been our normal course for  
 19 generation planning. We would update that on  
 20 an annual basis. Obviously what we're doing  
 21 now with this review, it's transitional, a lot  
 22 of transition going on here and once we get to  
 23 the interconnected state, you'll see another  
 24 type -  
 25 MR. O'BRIEN:

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1 Q. A different type of report?  
 2 MR. HUMPHRIES:  
 3 A. A different type of report, probably more  
 4 consistent with what we have done in the past,  
 5 but it will have changes, you know, because  
 6 there are more inputs there as well as we move  
 7 forward. We do have the interconnections and  
 8 the benefits that they will bring, so that's  
 9 part of a review that we're involved in now  
 10 and hopefully by the end of 2016, we will land  
 11 on a methodology for reviewing generation  
 12 adequacy as we move forward in the new world.  
 13 MR. MOULTON:  
 14 A. Yeah, our generation -- you know, our next  
 15 generation source has already been defined  
 16 obviously. So that -  
 17 MR. O'BRIEN:  
 18 Q. That'll be a different type of approach, I  
 19 guess, in terms of going forward as to how  
 20 you're going to look at generation planning.  
 21 MR. HUMPHRIES:  
 22 A. Yes, and you know, I think our criteria will  
 23 change.  
 24 MR. O'BRIEN:  
 25 Q. Will it? Okay. And there's another report I

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1 know that's actually a more recent type of  
 2 thing, the rolling 12-month performance of  
 3 Hydro's generation units. That's another  
 4 report that's being produced.  
 5 MR. HUMPHRIES:  
 6 A. Yes.  
 7 MR. O'BRIEN:  
 8 Q. Since the Liberty review. Is that right?  
 9 MR. HUMPHRIES:  
 10 A. Yeah. So that provides an input actually to  
 11 this report.  
 12 MR. O'BRIEN:  
 13 Q. I noticed that, yes, the actual generation  
 14 planning has some of that information in  
 15 there.  
 16 MR. HUMPHRIES:  
 17 A. That's right.  
 18 MR. O'BRIEN:  
 19 Q. And actually, what I did notice is there was  
 20 another report, one of those 12-month rolling  
 21 reports was filed yesterday. I wonder if we  
 22 could just get an undertaking to put that one  
 23 on the record? I don't have any questions for  
 24 the panel, but there was a 12-month rolling  
 25 report filed yesterday. Just because it does

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1 have some of the input information that's in  
 2 this generation adequacy report.  
 3 MS. GLYNN:  
 4 Q. Notes on the record.  
 5 MR. O'BRIEN:  
 6 Q. Thank you. Perhaps Mr. Moulton, I can ask you  
 7 a few questions on this generations planning  
 8 report, but before we get to it, I wonder if  
 9 we could look at IC-NLH-016? And I think this  
 10 is one of the RFIs that has an attachment of a  
 11 report you mentioned, Mr. Moulton, the  
 12 generation planning issues report, if we could  
 13 bring that up.  
 14 So that one there is for November of  
 15 2012. So that's the latest generation -- and  
 16 if we can scroll down just to see the front  
 17 page, I guess. So generation planning issues,  
 18 November 2012, in response to that RFI that  
 19 was the latest one of those reports. Is that  
 20 right?  
 21 MR. MOULTON:  
 22 A. Yes, that's correct.  
 23 MR. O'BRIEN:  
 24 Q. Okay. And prior to November 2012, was that an  
 25 annual report that you did or was it -

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1 MR. MOULTON:  
 2 A. Typically, yes.  
 3 MR. O'BRIEN:  
 4 Q. - every two years? Typically. Do you know if  
 5 one -- so there wasn't one done in 2013 or  
 6 2014?  
 7 MR. MOULTON:  
 8 A. No, there wasn't. We were still looking at  
 9 the forecast at the time when we did -- I  
 10 think, and I can't remember the exact RFIs.  
 11 We did actually look at the forecast and it  
 12 was very similar to the one in there.  
 13 MR. O'BRIEN:  
 14 Q. That was in this one, okay.  
 15 MR. MOULTON:  
 16 A. And we didn't actually issue a formal report  
 17 at that time.  
 18 MR. O'BRIEN:  
 19 Q. Okay.  
 20 MR. HUMPHRIES:  
 21 A. Yeah, that would have been for 2013, yeah. So  
 22 then 2014, we got into the changes.  
 23 MR. O'BRIEN:  
 24 Q. Sure, and it was another issue, I guess, then  
 25 at that point in terms of whether or not you

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1 issued one of those reports. If we could  
 2 scroll down on this report, page one looks  
 3 like it has a -- we're still on this page one  
 4 there, sorry, Jenny. That's your stamp there,  
 5 is it, Mr. Moulton?  
 6 MR. MOULTON:  
 7 A. That's correct.  
 8 MR. O'BRIEN:  
 9 Q. Okay. So this would have been a report you  
 10 prepared?  
 11 MR. MOULTON:  
 12 A. Yes.  
 13 MR. O'BRIEN:  
 14 Q. This report itself, this would have been a  
 15 much more detailed type of a report, is it,  
 16 than what we see in the generation adequacy  
 17 report that we've got?  
 18 MR. MOULTON:  
 19 A. Yes, it would have.  
 20 MR. O'BRIEN:  
 21 Q. And in fact, I think when I look through this  
 22 generation issues report, it seemed to be just  
 23 prior to the decision for Muskrat Falls  
 24 approval and there was an analysis in that  
 25 report of two different scenarios, an Island

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1 Isolated scenario and one with  
 2 interconnection. Is that right?  
 3 MR. MOULTON:  
 4 A. That's correct.  
 5 MR. O'BRIEN:  
 6 Q. Okay. And can you just take me through how  
 7 you would prepare these types of reports, Mr.  
 8 Moulton? What's the background of it?  
 9 MR. MOULTON:  
 10 A. That's a -- these are usually done in  
 11 conjunction with preparing our provincial load  
 12 forecast. So what we'll usually do is start  
 13 off with Seed rates from our rates department  
 14 which will then go to Mr. Stratton. He'll  
 15 prepare a forecast from these inputs. Then  
 16 these inputs come back to -- he'll prepare the  
 17 forecast and we'll take the forecast in the  
 18 generation planning group and do an expansion  
 19 plan to come up -- well, a number of expansion  
 20 plans and a preferred expansion plan. That  
 21 information gets sent back to our investment  
 22 evaluation group. They prepare rates again  
 23 which goes back to Mr. Stratton and it's kind  
 24 of an iterative process until we get a  
 25 generation expansion plan stays the same, so

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1 our capital spending is going to be the same.  
 2 And from that, we have a forecast and from  
 3 that we develop the preferred expansion plan.  
 4 Of course, besides that, you know,  
 5 there's a considerable amount of information  
 6 that has to be gathered. Forecasts, fuel  
 7 costs, you know, capital costs of various  
 8 alternatives, economic parameters, escalation,  
 9 you know, a lot of information. And as you  
 10 see in the report, there's a lot of  
 11 information on the various alternatives we're  
 12 looking at.  
 13 MR. O'BRIEN:  
 14 Q. Yes, I noticed that. There's a lot of  
 15 different alternatives from a hydroelectric  
 16 perspective, I guess, that you look at for  
 17 planning down the road and what other options  
 18 you can look at.  
 19 MR. MOULTON:  
 20 A. Many hydroelectric, thermal, wind.  
 21 MR. O'BRIEN:  
 22 Q. Okay. This particular report, as we  
 23 indicated, it seemed to focus largely on the  
 24 analysis of two scenarios, the interconnected  
 25 -- or Island Isolated scenario where you

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1 didn't have an interconnection and what the  
 2 planning was going forward in that scenario,  
 3 as well as what the planning would be once you  
 4 get an interconnection, if it's approved. Is  
 5 that right?  
 6 MR. MOULTON:  
 7 A. That's correct.  
 8 MR. O'BRIEN:  
 9 Q. Okay. I wonder if we could turn to the  
 10 Executive Summary of that report? I think  
 11 it's at page -- it's Roman numeral one. Yeah,  
 12 okay. So executive summary there. We scroll  
 13 down a little bit there, please. Okay, yeah.  
 14 "Based on the examination of the systems  
 15 existing capability, the 2012 planning load  
 16 forecast and the generation planning criteria,  
 17 the Island system can expect capacity deficits  
 18 starting in 2015 under both scenarios" I guess  
 19 under both the interconnected island and  
 20 isolated island scenarios, "and energy  
 21 deficits in 2019." So at that point in time,  
 22 in 2012, you were expecting capacity deficits  
 23 in 2015?  
 24 MR. MOULTON:  
 25 A. That's correct.

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1 MR. O'BRIEN:  
 2 Q. And that -- I don't think that was a new  
 3 thing, was it?  
 4 MR. MOULTON:  
 5 A. No.  
 6 MR. O'BRIEN:  
 7 Q. Was it a couple years back you still had  
 8 expected that as well?  
 9 MR. MOULTON:  
 10 A. Yes.  
 11 MR. O'BRIEN:  
 12 Q. Okay. And in terms of energy deficits though,  
 13 were you expecting energy deficits that early  
 14 in 2019 a number of years back?  
 15 MR. MOULTON:  
 16 A. The energy deficit in 2019 -- well, we had --  
 17 you know, we knew there was going to be an  
 18 energy deficit coming after the capacity  
 19 deficit.  
 20 MR. O'BRIEN:  
 21 Q. Yeah.  
 22 MR. MOULTON:  
 23 A. I can't remember now exactly which year.  
 24 MR. O'BRIEN:  
 25 Q. Okay. And in terms of the capacity deficit

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1 then, one of the options, it's in this report  
 2 that was mentioned was to add a 50 megawatt  
 3 combustion turbine at that point in time.  
 4 MR. MOULTON:  
 5 A. That's correct.  
 6 (10:45 a.m.)  
 7 MR. O'BRIEN:  
 8 Q. And if we look at page two of that, Roman  
 9 numeral two there, if we scroll down just a  
 10 little bit here, "from a systems planning  
 11 point of view, the key issues for Hydro to  
 12 deal with the near term are" -- the first  
 13 bullet there, "maintaining two expansion  
 14 plans. Hydro must be prepared for events that  
 15 may delay the proposed Muskrat Falls Project  
 16 or if the project is not sanctioned." At that  
 17 point in time, what steps did you take to  
 18 prepare for a delay in Muskrat Falls?  
 19 MR. MOULTON:  
 20 A. Well, again, the next source, we were looking  
 21 at a deficit either with the Isolated or  
 22 Interconnected options, and the next chosen  
 23 generation addition was the 50 megawatt CT,  
 24 and that would have carried us, I think, you  
 25 know, two or three, three or four years past

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1 2015.  
 2 MR. O'BRIEN:  
 3 Q. And were steps taken to look into the 50  
 4 megawatt CT at that time?  
 5 MR. MOULTON:  
 6 A. From what point of view?  
 7 MR. O'BRIEN:  
 8 Q. To purchase one or to lease one?  
 9 MR. MOULTON:  
 10 A. Well, to get ready to start, yes.  
 11 MR. O'BRIEN:  
 12 Q. Okay. And why the 50 megawatt CT at that  
 13 point?  
 14 MR. MOULTON:  
 15 A. At that point, we had looked at a number of  
 16 different sizes, but over the years, from a --  
 17 you know, the typical growth in Hydro's  
 18 system, 50 megawatts CT was a good size, a  
 19 good increment of generation to have. Of  
 20 course, typically when you add generation, you  
 21 know, you're adding more than you need exactly  
 22 when you add it. It's going to be several  
 23 years before you, I'll say, use all the  
 24 capacity or before you're back to having to  
 25 add something else.

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1 MR. O'BRIEN:  
 2 Q. Okay.  
 3 MR. MOULTON:  
 4 A. That was a good step size.  
 5 MR. O'BRIEN:  
 6 Q. You thought that was -  
 7 MR. HUMPHRIES:  
 8 A. Yeah, and just if I could step in for a  
 9 minute.  
 10 MR. O'BRIEN:  
 11 Q. Sure.  
 12 MR. HUMPHRIES:  
 13 A. I think at that time, based on the criteria  
 14 and assumptions, the average or P5 load  
 15 forecast and the anticipated generation  
 16 availability, 50 megawatts was adequate to get  
 17 us through the period.  
 18 MR. O'BRIEN:  
 19 Q. Okay. And were steps taken to obtain a 50  
 20 megawatt generator at that point? We're in  
 21 November 2012 and you've noted that there's --  
 22 you're forecasting a capacity issue in 2015.  
 23 MR. HUMPHRIES:  
 24 A. Through 2013, there were moves afoot, yes, to  
 25 protect the schedule for acquisition of a new



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1 gas turbine for that timeframe.  
 2 MR. O'BRIEN:  
 3 Q. Okay. And who was making those moves?  
 4 MR. HUMPHRIES:  
 5 A. That was being done through our project  
 6 execution group.  
 7 MR. O'BRIEN:  
 8 Q. And if we could scroll down just a little bit  
 9 on these bullets here, there's one here, talks  
 10 about resource inventory. Yeah, okay.  
 11 "Resource inventory: Hydro must ensure that it  
 12 maintains a current inventory of resource  
 13 options with sufficient concept costs and  
 14 schedules." Can you take me through what you  
 15 mean by that?  
 16 MR. MOULTON:  
 17 A. As we see, the costs aren't in this report,  
 18 but if you go down farther in the report, we  
 19 do list -- you know, we had -- there's three  
 20 hydro plants on the island. We looked at a 50  
 21 megawatt CT for peaking. We looked at another  
 22 we keep on was 170 megawatt combined cycle CT  
 23 for, well, possibly peaking and base energy.  
 24 The option of wind, and of course, the option  
 25 of the Lower Churchill Project. So you know,

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1 and so we would -- you know, especially the  
 2 various thermal, hydro, wind, you know, as far  
 3 as the input into the generation expansion  
 4 process, you know, we had costing done for  
 5 these various projects.  
 6 MR. O'BRIEN:  
 7 Q. And in terms of -- I noticed, as you say, if  
 8 you go through the report, you mention  
 9 Portland Creek.  
 10 MR. MOULTON:  
 11 A. Yes.  
 12 MR. O'BRIEN:  
 13 Q. Round Pond, as options for -  
 14 MR. MOULTON:  
 15 A. And Island Pond.  
 16 MR. O'BRIEN:  
 17 Q. And Island Pond, as options.  
 18 MR. MOULTON:  
 19 A. Yeah.  
 20 MR. O'BRIEN:  
 21 Q. And were those options ever explored?  
 22 MR. MOULTON:  
 23 A. Oh, they were -- well, they were explored  
 24 quite extensively. You know, we had them  
 25 costed in, I think it was 2007-2008. We had,

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1 you know, close to final feasibility studies  
 2 redone. We had these updated. They were  
 3 explored. I think at the time, at the -- you  
 4 know, when this report or through that time,  
 5 again, we were looking at the two things and  
 6 by that time, there wouldn't have been time to  
 7 actually build the build, and the other thing  
 8 is, you know, with the Lower Churchill, again  
 9 hydro plants give you both capacity and  
 10 energy, where a CT, well, it can give you  
 11 energy, but typically they're built for  
 12 capacity. So at that time, we needed capacity  
 13 first. So, it was -- rather than build the  
 14 hydro plant, we went with the CT.  
 15 MR. O'BRIEN:  
 16 Q. How long would it take you to build a hydro  
 17 plant?  
 18 MR. MOULTON:  
 19 A. I think it's there in the report, the  
 20 different ones. I think it's three or four  
 21 years.  
 22 MR. O'BRIEN:  
 23 Q. Okay. I wonder if we could go back to IC-NLH  
 24 I believe it's 074, Revision 1, and if we  
 25 scroll down here, this is generation planning

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1 issues, July 2010 update. Now you mentioned  
 2 that some of those hydro plant issues were  
 3 studied back in 2007-2008. Is that right?  
 4 MR. MOULTON:  
 5 A. That's correct.  
 6 MR. O'BRIEN:  
 7 Q. And I noted going through this particular  
 8 report, they're mentioned as options as well,  
 9 as far back as 2010.  
 10 MR. MOULTON:  
 11 A. Um-hm.  
 12 MR. O'BRIEN:  
 13 Q. Did you consider proceeding with them at that  
 14 point or any of them, for capacity issues?  
 15 MR. MOULTON:  
 16 A. At that point, I'm trying to remember the  
 17 exact generation expansion there, but we were  
 18 considering them at that time, but in 2010, we  
 19 didn't need to actually start building them.  
 20 They were considered, yes.  
 21 MR. HUMPHRIES:  
 22 A. And I think it's -- you know, that these hydro  
 23 plants were only preferred options in the  
 24 Isolated scheme. When we looked at the  
 25 Interconnected scheme, they were not -

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1 MR. O'BRIEN:  
 2 Q. They weren't going to -  
 3 MR. HUMPHRIES:  
 4 A. They weren't part of the least cost.  
 5 MR. O'BRIEN:  
 6 Q. Okay. So even back in 2010, did you have  
 7 concerns about capacity issues in 2015?  
 8 MR. MOULTON:  
 9 A. We knew there was -- well, we knew there was -  
 10 - you know, we knew that Vale was coming on in  
 11 the future and we knew that, you know, when  
 12 they came on that would increase the load  
 13 forecast significantly and that was probably  
 14 going to drive the next generation addition,  
 15 along with other things.  
 16 MR. O'BRIEN:  
 17 Q. And did you identify a CT at that point in  
 18 time as a possibility?  
 19 MR. MOULTON:  
 20 A. If we scroll down through.  
 21 MR. O'BRIEN:  
 22 Q. Yeah, sure.  
 23 MR. MOULTON:  
 24 A. If we scroll down through the report, a few  
 25 pages in, it'll give what was identified at

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1 that time. It's not too far into the report.  
 2 MR. O'BRIEN:  
 3 Q. Combustion turbine units, page 17.  
 4 MR. MOULTON:  
 5 A. Okay, just keep going.  
 6 MR. O'BRIEN:  
 7 Q. And that's just the Holyrood -- the Hydro  
 8 Hardwoods.  
 9 MR. MOULTON:  
 10 A. Maybe it's just past that.  
 11 MR. O'BRIEN:  
 12 Q. So your preliminary generation expansion  
 13 analysis.  
 14 MR. HUMPHRIES:  
 15 A. Yeah.  
 16 MR. MOULTON:  
 17 A. There is one -- yeah, there is one in the  
 18 report. It wouldn't be in that section. I  
 19 think it would be slightly beyond that.  
 20 MR. HUMPHRIES:  
 21 A. Not very far in.  
 22 MR. MOULTON:  
 23 A. Not very far in.  
 24 MR. O'BRIEN:  
 25 Q. No.

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1 MR. MOULTON:  
 2 A. Just keep scrolling there.  
 3 MS. GLYNN:  
 4 Q. The paper copy is behind you as well, Mr.  
 5 Moulton.  
 6 MR. MOULTON:  
 7 A. Okay. So at that time, it shows we were  
 8 considering at that time a CT in 2014.  
 9 MR. O'BRIEN:  
 10 Q. That's what I thought, okay.  
 11 MR. MOULTON:  
 12 A. A possible wind farm in 2014 and Island Pond  
 13 in 2015.  
 14 MR. O'BRIEN:  
 15 Q. And the CT that you were considering in 2014,  
 16 were there any steps taken in 2010 to acquire  
 17 a CT for 2014?  
 18 MR. MOULTON:  
 19 A. I think again at that time, I think it's about  
 20 a three-year process. So it would have been -  
 21 - you know, it would have -- '10 and '11, it  
 22 would have really got started in 2012. So I  
 23 mean, we had a fair idea of what the -- you  
 24 know, what it would have cost and some idea of  
 25 locations where to put it, but I don't know

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1 how far we went with actually -- we hadn't  
 2 started -- we hadn't, I'll say, applied to the  
 3 Board to do this or you know, actually started  
 4 the process of acquiring it, no.  
 5 MR. O'BRIEN:  
 6 Q. Is there any reason why you didn't at that  
 7 time?  
 8 MR. MOULTON:  
 9 A. Again, I think it was that we had a year or  
 10 two before we actually, you know, needed to  
 11 build it. It wasn't required to be started  
 12 right at that point.  
 13 MR. HUMPHRIES:  
 14 A. And I think it was the Vale load requirement  
 15 that was driving it and we were going through  
 16 -- there were delays. As we went from 2010,  
 17 the actual in-service dates for Vale did  
 18 shift, so with that, the requirement shifted  
 19 as well, and that's how we got from 2014 to  
 20 the 2015 difference between the 2010 and the  
 21 2012 reports. So, while this requirement had  
 22 been identified, it's -- I don't know what the  
 23 timeframes are.  
 24 MR. MOULTON:  
 25 A. The timing kept changing.

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1 MR. HUMPHRIES:  
 2 A. The timing kept changing on Vale as well and  
 3 that gets fairly well documented in Liberty's  
 4 findings as well, you know, that there was a  
 5 bit of chasing the load going on there at that  
 6 time.  
 7 MR. O'BRIEN:  
 8 Q. Okay. In terms of your criteria, I guess,  
 9 your planning criteria, you had indicated that  
 10 your planning -- I think, Mr. Humphries, you  
 11 indicated that maybe in the future when  
 12 there's interconnection, criteria might  
 13 change. Is that right?  
 14 MR. HUMPHRIES:  
 15 A. I think so, yes.  
 16 MR. O'BRIEN:  
 17 Q. So you presently have got capacity and energy,  
 18 certain criteria for both, that appears to  
 19 have remained constant over the last few  
 20 years. I believe your capacity criteria was  
 21 to satisfy loss of load hours at 2.8. Is that  
 22 right?  
 23 MR. HUMPHRIES:  
 24 A. That's correct.  
 25 MR. O'BRIEN:

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1 Q. And do you think that might change in the  
 2 future?  
 3 MR. HUMPHRIES:  
 4 A. I think it will. I think we'll get back to  
 5 something more consistent with what's done in  
 6 the rest of North America and it's a pretty  
 7 convoluted discussion, but this 2.8 actually  
 8 reflects a loss of one day in five years, and  
 9 the North American standard is one day in ten  
 10 years, and I suspect that we will migrate back  
 11 to the one day in ten years once we're  
 12 interconnected. And what that ultimately is  
 13 in the LOLH, I really don't know, because you  
 14 have to do an analysis to determine that.  
 15 MR. O'BRIEN:  
 16 Q. Okay, to see what the actual figure comes out.  
 17 MR. HUMPHRIES:  
 18 A. Yeah.  
 19 MR. O'BRIEN:  
 20 Q. And how about energy for Island  
 21 Interconnected? Right now your planning  
 22 criteria is you should have enough energy  
 23 capable -- energy or generating capability to  
 24 satisfy firm energy requirements with firm  
 25 system requirements. Is that right?

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1 MR. MOULTON:  
 2 A. That's correct.  
 3 MR. O'BRIEN:  
 4 Q. Or is that changing already?  
 5 MR. MOULTON:  
 6 A. I definitely think that will change. Right  
 7 now, we are an isolated island and we have to  
 8 ensure that from our resources that we have  
 9 enough energy to supply -- you know, to supply  
 10 our load under the circumstances of -- we call  
 11 it a firm load of, say you know, of low  
 12 rainfall for two or three years, that you  
 13 know, with the water we have in our  
 14 reservoirs, with the lowest amount of water we  
 15 expect coming into them, plus generation from  
 16 our thermal assets, you know, that we'll have  
 17 enough energy that we won't run out of energy  
 18 on the island.  
 19 One of the things we can see with two  
 20 interconnections to the mainland, you know,  
 21 we're not isolated any more and if we foresaw  
 22 a low energy period coming or we had  
 23 indications that we were getting down, you  
 24 know, there are opportunities, if you had to,  
 25 to purchase energy from the mainland North

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1 America. Now, of course, that'll -- you know,  
 2 that's got to be looked at from a point of how  
 3 much energy sufficiency do we want within the  
 4 province itself, on the island and in  
 5 Labrador, compared to that, and again, what  
 6 the prices would be of, you know, developing  
 7 the island resources such as the hydro plants  
 8 we've mentioned, possibly wind, possibly other  
 9 things, compared with what we thought we could  
 10 buy it for off island, and of course, our  
 11 ability to actually get it to the island.  
 12 (11:00 p.m.)  
 13 MR. O'BRIEN:  
 14 Q. Okay. So that might change in the future. It  
 15 might affect how much energy you need to  
 16 produce on the island, the availability of it  
 17 off the island?  
 18 MR. MOULTON:  
 19 A. Well, the -- not so much that, but the  
 20 capacity we have to produce or in the case of  
 21 a low rainfall period, you know, we have  
 22 another option.  
 23 MR. O'BRIEN:  
 24 Q. Okay. Mr. Chair, I'm going to go into a  
 25 little bit of a different line of questioning

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1 here. Perhaps we could take our break now.  
 2 CHAIRMAN:  
 3 Q. Certainly.  
 4 (BREAK - 11:01 a.m.)  
 5 (RESUME - 11:34 a.m.)  
 6 CHAIRMAN:  
 7 Q. Okay, sir, we are back to you.  
 8 MR. O'BRIEN:  
 9 Q. Thank you, Mr. Chair. Gentlemen, I wonder if  
 10 I could talk about just a few future system  
 11 planning issues for now and as they arise, I  
 12 guess, some of them arose in these generation  
 13 planning issues reports. One of them with  
 14 respect to Holyrood retirement, there seemed  
 15 to be an indication of Holyrood being -- the  
 16 retirement being in the 2021 timeframe. Is  
 17 that still the plan?  
 18 MR. HUMPHRIES:  
 19 A. Yeah, generally we talked about keeping it a  
 20 couple of years at least beyond the  
 21 interconnection with Muskrat Falls, so 2020-  
 22 2021.  
 23 MR. O'BRIEN:  
 24 Q. Okay. Any particular factors that would  
 25 affect that plan? What could cause that plan

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1 to change?  
 2 MR. HUMPHRIES:  
 3 A. Well, obviously, I guess, if there are  
 4 performance issues with the HVDC links, there  
 5 may be requirements to keep it longer and if  
 6 the HVDC link performs adequately for a year  
 7 or so, we may reassess the decision at that  
 8 time. So yeah, there could be either way, I  
 9 guess.  
 10 MR. O'BRIEN:  
 11 Q. Okay. How about Hardwoods? I noted that when  
 12 we looked at there was two generation planning  
 13 reports there, the 2010 of July and the 2012  
 14 of November, there seemed to be a change in  
 15 the plan for retirement of Hardwoods from 2022  
 16 to now 2025. Can you give me a -  
 17 MR. MOULTON:  
 18 A. I think at that time, we were -- you know, we  
 19 were in the process of doing some  
 20 refurbishment of both units and with our  
 21 discussion, you know, with the operations  
 22 group, that was the dates they had picked. I  
 23 can't give you the total reasoning behind it.  
 24 MR. O'BRIEN:  
 25 Q. Okay. And it's presently now 2025 is the plan

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1 for retirement of Hardwoods?  
 2 MR. MOULTON:  
 3 A. As far as I know.  
 4 MR. O'BRIEN:  
 5 Q. Okay. And how about Stephenville? I notice  
 6 the dates had changed from 2024 to 2028. Any  
 7 reason behind that?  
 8 MR. MOULTON:  
 9 A. The same as for -- again, they were in the  
 10 process of doing refurbishment and I think it  
 11 was kind of based on the dates that the  
 12 refurbishments would be finished at the time.  
 13 MR. O'BRIEN:  
 14 Q. And so at this point in time, those  
 15 refurbishments have been completed? Is that  
 16 right, for Stephenville?  
 17 MR. MOULTON:  
 18 A. I'm not -  
 19 MR. O'BRIEN:  
 20 Q. Or is it you're planning on doing  
 21 refurbishments in 2024?  
 22 MR. MOULTON:  
 23 A. Well, I don't -- in 2024, I wouldn't -- and I  
 24 probably shouldn't say, but I doubt they would  
 25 be done in 2024, but I mean, that would be a

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1 decision that would be made when we got much  
 2 closer to that date.  
 3 MR. HUMPHRIES:  
 4 A. Yeah, I think it reflects some of the ongoing  
 5 work that's happening at Stephenville now is  
 6 effectively extending the life.  
 7 MR. O'BRIEN:  
 8 Q. Okay. Extending the life, okay.  
 9 MR. HUMPHRIES:  
 10 A. Yes.  
 11 MR. O'BRIEN:  
 12 Q. That's what I was going to ask, okay. In  
 13 terms of other planning, I guess, right now  
 14 you have proceeded with the purchase of the  
 15 123 megawatt CT purchase and that's, I guess,  
 16 it was part of your systems planning as we saw  
 17 in those two reports was to purchase a CT. I  
 18 wonder if you could, Mr. Humphries, just take  
 19 me through your involvement in that process of  
 20 the purchase and the decision around what to  
 21 purchase, that kind of thing? What role did  
 22 you play in that?  
 23 MR. HUMPHRIES:  
 24 A. Well, from the -- I guess when we take us back  
 25 to this 2012 generation issues planning report

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1 where we identified the requirement for a 50  
 2 megawatt combustion turbine for 2015.  
 3 Following the events of January 2014, we got  
 4 into an in-depth analysis I guess, a review of  
 5 what happened, what the drivers were, and we  
 6 looked at, from an adequacy perspective, we  
 7 started to introduce this theory of the P 90  
 8 load forecast and also a sensitivity around  
 9 the availability of our thermal units and what  
 10 impact that would have on additional  
 11 generation.  
 12 So, when we completed that analysis in  
 13 February-March of 2014, the indications were  
 14 that if we were going to apply this more  
 15 stringent criteria of the P90 forecast and a  
 16 sensitivity around the generational  
 17 availability, that the 100 -- something in the  
 18 range of 100 megawatts would be more  
 19 appropriate than 60 megawatts. So at that  
 20 stage, we prepared the application to the  
 21 Public Utilities Board for additional  
 22 generation and that was for a 100 megawatt gas  
 23 turbine and the project execution group then  
 24 went and canvassed the market, I guess, and we  
 25 identified this 123 megawatt option and I

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1 guess the rest is history.  
 2 MR. O'BRIEN:  
 3 Q. So in terms of your role, in terms of the  
 4 planning department, I guess that would have  
 5 been similar to the TL 267 in that you would  
 6 look at what you required from a planning  
 7 perspective and your folks and your team came  
 8 up with you needed 100 megawatt generator? Is  
 9 that right?  
 10 MR. HUMPHRIES:  
 11 A. Yes, that's correct.  
 12 MR. O'BRIEN:  
 13 Q. And in terms of your involvement beyond that  
 14 and searching for the actual asset or anything  
 15 like that or procuring the asset, that's  
 16 something for project execution team?  
 17 MR. HUMPHRIES:  
 18 A. That's correct. We would have minimal  
 19 involvement other than the fact to assessing  
 20 that the solution that was arrived at was  
 21 adequate to meet the requirements.  
 22 MR. O'BRIEN:  
 23 Q. Okay. And when you looked at what would be  
 24 adequate to meet the requirements, what was  
 25 your thinking as to how and for what purpose

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1 the unit would be used?  
 2 MR. HUMPHRIES:  
 3 A. Predominantly the intent was that it would be  
 4 a peaking facility and would be used to cover  
 5 -- as a standby generation in the event that  
 6 there would be additional -- some of our  
 7 normal plant, I guess, out of service and the  
 8 fact that it would be there to actually be run  
 9 over any peak to provide system support.  
 10 MR. O'BRIEN:  
 11 Q. I'm going to ask you to have a look at a  
 12 document and see if you can identify it for  
 13 me. It's one of the documents we asked be  
 14 provided on Friday. It's a project briefing  
 15 document, if I can find it.  
 16 MS. GLYNN:  
 17 Q. It's been entered as Information No. 14.  
 18 MR. O'BRIEN:  
 19 Q. Yes, that's the document. Got to find my  
 20 copy. No, no, I have it here. Okay. Mr.  
 21 Humphries, have you seen this document before?  
 22 MR. HUMPHRIES:  
 23 A. Yes, I have.  
 24 MR. O'BRIEN:  
 25 Q. Can you tell me who prepared it and what it

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1 was prepared for?  
 2 MR. HUMPHRIES:  
 3 A. I think it was prepared by our corporate  
 4 communications group with input from our --  
 5 probably both our engineering and operations  
 6 group, as a public information document on the  
 7 combustion turbine.  
 8 MR. O'BRIEN:  
 9 Q. And when it says project briefing, was it for  
 10 a particular purpose or was it just for  
 11 general circulation within Hydro?  
 12 MR. HUMPHRIES:  
 13 A. Again, I'm not familiar with exactly what the  
 14 end result, what it was used for.  
 15 MR. O'BRIEN:  
 16 Q. Okay. I wonder if we could turn to page five  
 17 of the document, and the numbers I believe are  
 18 on the bottom, not very visible. If you go  
 19 down -- yeah, and it's entitled "how often  
 20 will the CT be in service" I believe. Scroll  
 21 back up. Maybe it's the next page.  
 22 MS. GRAY:  
 23 Q. It's potentially not in the computer.  
 24 MR. O'BRIEN:  
 25 Q. Here it is.

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1 MS. GRAY:  
 2 Q. Oh, there it is, yes.  
 3 MR. O'BRIEN:  
 4 Q. So there's a few bullets here I just wanted to  
 5 ask you about. How often the CT -- how often  
 6 will the CT be in service. So this document  
 7 is from September 2014. The first bullet  
 8 there "expected to operate infrequently. Will  
 9 not exceed 500 hours per year." Was that your  
 10 expectation at the time it was purchased?  
 11 MR. HUMPHRIES:  
 12 A. At the time, yes, I think that was our  
 13 expectation.  
 14 MR. O'BRIEN:  
 15 Q. And used to meet high peak winter load?  
 16 MR. HUMPHRIES:  
 17 A. Yes, that's correct.  
 18 MR. O'BRIEN:  
 19 Q. And "the unit will be tested two hours per  
 20 month". Was that your expectation?  
 21 MR. HUMPHRIES:  
 22 A. I think so, that's correct, yes. Sounds  
 23 right.  
 24 MR. O'BRIEN:  
 25 Q. And also used as a black start at the Holyrood

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1 plant during emergency situations.  
 2 MR. HUMPHRIES:  
 3 A. That's correct.  
 4 MR. O'BRIEN:  
 5 Q. And you had mentioned earlier about being used  
 6 as standby generation when normal plant was  
 7 out of service. I didn't see that necessarily  
 8 in this briefing, but was that -  
 9 (11:45 a.m.)  
 10 MR. HUMPHRIES:  
 11 A. I would consider that in an emergency  
 12 situation where we had other generation out  
 13 that, you know, obviously we would run this  
 14 unit rather than have customers out of  
 15 service.  
 16 MR. O'BRIEN:  
 17 Q. And that would have been your intention all  
 18 along to use it in that fashion?  
 19 MR. HUMPHRIES:  
 20 A. Oh yes, yes, definitely, it would have been,  
 21 yes.  
 22 MR. O'BRIEN:  
 23 Q. I wonder if we could go to page seven of the  
 24 document? Seven. No, that's it. Okay. No,  
 25 that is page seven. That's fine. I wanted to

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1 ask you just in terms of the first bullet  
 2 there about not being -- will not exceed 500  
 3 hours per year. I wanted to ask you a couple  
 4 of questions just in terms of the energy  
 5 supply cost variance deferral account. Are  
 6 you familiar with that proposal on that?  
 7 MR. HUMPHRIES:  
 8 A. I am, but Mr. Goulding is more familiar with  
 9 the actual detail.  
 10 MR. O'BRIEN:  
 11 Q. Okay. And maybe we can pull up finance -- in  
 12 the evidence, Finance Schedule 7. Yeah,  
 13 that's it there. So that's the description of  
 14 a deferral account. So, Mr. Goulding, you  
 15 would be the one who could speak to that,  
 16 would you?  
 17 MR. GOULDING:  
 18 A. Yes, I work with rates, I guess, who develop  
 19 this schedule.  
 20 MR. O'BRIEN:  
 21 Q. Okay. And so it appears that with respect to  
 22 the deferral account, the cost of running the  
 23 Holyrood CT, that would come under variations  
 24 in the following supply sources, under gas  
 25 turbine generation? Is that right?

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1 MR. GOULDING:  
 2 A. That's correct.  
 3 MR. O'BRIEN:  
 4 Q. Okay. And that would include I guess the cost  
 5 of fuel, No. 2 fuel to run it?  
 6 MR. GOULDING:  
 7 A. That's correct.  
 8 MR. O'BRIEN:  
 9 Q. Okay. That's not run through the RSP, the No.  
 10 2 fuel?  
 11 MR. GOULDING:  
 12 A. No. 2 is not run through the RSP, no.  
 13 MR. O'BRIEN:  
 14 Q. Okay. And in terms of the cost of running the  
 15 CT, one of the RFIs indicated it was 31.9  
 16 cents a kilowatt hour. Does that sound about  
 17 right to you?  
 18 MR. GOULDING:  
 19 A. That sounds right.  
 20 MR. O'BRIEN:  
 21 Q. And that would be much more expensive than  
 22 hydro electric -- the cost of say running one  
 23 of the other gas turbines?  
 24 MR. GOULDING:  
 25 A. In terms of running -

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1 MR. O'BRIEN:  
 2 Q. What's the difference?  
 3 MR. GOULDING:  
 4 A. In terms of running the other gas turbines, it  
 5 should be around the same order of costs.  
 6 MR. O'BRIEN:  
 7 Q. Would it be? Okay.  
 8 MR. GOULDING:  
 9 A. Now in terms of running our hydro electric,  
 10 obviously the CT is way more expensive than  
 11 that.  
 12 MR. O'BRIEN:  
 13 Q. Okay. And I just wanted to get an idea in  
 14 terms of the -- the CT's only been in service  
 15 now since March of this year. Is that right?  
 16 MR. GOULDING:  
 17 A. That's correct.  
 18 MR. O'BRIEN:  
 19 Q. Okay. And if we turn to the regulated  
 20 activities section, Schedule 5, there's a gas  
 21 turbine forecast of 11.4 gigawatt hours for  
 22 2015 in the forecast. Are you familiar with  
 23 that?  
 24 MR. GOULDING:  
 25 A. Yes, I am.

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1 MR. O'BRIEN:  
 2 Q. Okay. And how was that figure reached? Do  
 3 you have any idea?  
 4 MR. GOULDING:  
 5 A. Yes, I just need some time to go through it  
 6 there.  
 7 MR. O'BRIEN:  
 8 Q. Sure. Let's see if we can pull it up there.  
 9 MR. GOULDING:  
 10 A. Okay. So, basically, this would be the energy  
 11 that's associated with all our gas turbine  
 12 plants. So it would be Hardwoods in  
 13 Stephenville. There would also be the  
 14 Holyrood CT and our diesel plants at Hawks Bay  
 15 and St. Anthony as well.  
 16 MR. O'BRIEN:  
 17 Q. Okay.  
 18 MR. GOULDING:  
 19 A. So when this schedule was developed, there  
 20 were a number of reasons envisioned for  
 21 running these standby units. There'd be some  
 22 weekly testing requirements that would be  
 23 basically run throughout the year. There'd be  
 24 times during the winter months that we would  
 25 run the units up for storm readiness and there

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1 would also be some operation in order to --  
 2 when this schedule was developed, to maintain  
 3 minimum spinning reserve requirements on the  
 4 power system as well. Now that one there, we  
 5 mainly envisioned using the new CT and  
 6 Hardwoods for spinning reserve requirements.  
 7 MR. O'BRIEN:  
 8 Q. And is that built into the 11.4 gigawatt hour  
 9 figure?  
 10 MR. GOULDING:  
 11 A. Yes, it is, yes.  
 12 MR. O'BRIEN:  
 13 Q. And when that forecast was done, what was the  
 14 understanding as to when the Holyrood CT would  
 15 come into service?  
 16 MR. GOULDING:  
 17 A. The Holyrood CT, if I can recall, I think we  
 18 would have probably turned it on first and  
 19 then Hardwoods in terms of the order of  
 20 starting up units, and we, as Mr. Humphries  
 21 spoke to earlier, we basically laid out an  
 22 hourly load profile for the island and any  
 23 time our spinning reserve dropped below the 70  
 24 megawatts, we would have envisioned turning on  
 25 the CT to increase the spinning reserve

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1 requirements.  
 2 MR. O'BRIEN:  
 3 Q. And I guess, and maybe we weren't on the same  
 4 wavelength, in terms of when this forecast was  
 5 produced, it would have been produced with the  
 6 November 2014 filing, so I guess there would  
 7 have been a forecast there for 2015 as to that  
 8 11.4 gigawatt hours would have been for 2015.  
 9 Were you anticipating that the Holyrood CT  
 10 would be online as of the end of December  
 11 2014?  
 12 MR. GOULDING:  
 13 A. Yes, at that time, we had envisioned the CT  
 14 prior to year end.  
 15 MR. O'BRIEN:  
 16 Q. Okay.  
 17 MR. GOULDING:  
 18 A. So, even in the 2014 forecast, there probably  
 19 was some operation of that unit we envisioned  
 20 as well.  
 21 MR. O'BRIEN:  
 22 Q. Okay. And so for the 2015 forecast then, with  
 23 all the gas turbines, inclusive of the  
 24 Holyrood CT, you're forecasting 11.4 gigawatt  
 25 hours. To date, how much -- how many gigawatt

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1 hours have been spent on the Holyrood CT  
 2 alone?  
 3 MR. GOULDING:  
 4 A. I don't recall that number. There was, I  
 5 think -  
 6 MR. O'BRIEN:  
 7 Q. Maybe I can help you.  
 8 MR. GOULDING:  
 9 A. Yes. You had filed some documents there for  
 10 it.  
 11 MR. O'BRIEN:  
 12 Q. Yeah, and maybe we can have a walk through  
 13 those. The summary of power generation and  
 14 distribution from September 2015. I don't  
 15 know if we could -  
 16 MS. GLYNN:  
 17 Q. And we'll enter that as Information No. 15.  
 18 MR. O'BRIEN:  
 19 Q. And there are some small numbers in this one,  
 20 I think, so make sure we can see them. Okay,  
 21 that's the August one. Maybe we'll just have  
 22 a quick look at the August one while we've got  
 23 that one up. Sorry, let's go down to the  
 24 September one because that's already entered.  
 25 Okay. So let's say as of September then for

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1 the Holyrood CT, Holyrood CT and diesel under  
 2 subtotal hydro generation, over to the 12  
 3 month to date. Is that 24 gigawatt hours?  
 4 MR. GOULDING:  
 5 A. That's correct.  
 6 MR. O'BRIEN:  
 7 Q. Okay.  
 8 MR. GOULDING:  
 9 A. Well, 24.5.  
 10 MR. O'BRIEN:  
 11 Q. .5, okay. And that's inclusive of -- in terms  
 12 of the breakout between Holyrood CT and  
 13 diesels, would the bulk of that be the  
 14 Holyrood CT?  
 15 MR. GOULDING:  
 16 A. The bulk of that would be the Holyrood CT,  
 17 yeah.  
 18 MR. O'BRIEN:  
 19 Q. Okay. So that's as of September and the  
 20 Holyrood CT is only in service as of March, or  
 21 is it the end of March, beginning of March?  
 22 MR. GOULDING:  
 23 A. That sounds right. I don't quite recall when  
 24 we first started the unit up.  
 25 MR. O'BRIEN:

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1 Q. Okay. And so your 11.4 gigawatt hours, in  
 2 terms of the forecast, that would also include  
 3 the Hardwoods GT and the Stephenville GT? Is  
 4 that right?  
 5 MR. GOULDING:  
 6 A. That's correct.  
 7 MR. O'BRIEN:  
 8 Q. So we're up over 30 gigawatt hours as of  
 9 September.  
 10 MR. GOULDING:  
 11 A. Yeah. Now these are our 12 to date numbers,  
 12 so some of it would have been incurred in  
 13 particular for Hardwoods and Stephenville.  
 14 Some of it would have incurred in 2014.  
 15 MR. O'BRIEN:  
 16 Q. Okay. Well, if we took those out, we're still  
 17 at 24.5 for the Holyrood CT from March  
 18 forward. Is that right?  
 19 MR. GOULDING:  
 20 A. That's correct.  
 21 MR. O'BRIEN:  
 22 Q. And that's a fair bit higher than the forecast  
 23 for the overall, the overall forecast for 11.4  
 24 gigawatt hours. Is that right?  
 25 MR. GOULDING:

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1 A. That's correct.  
 2 MR. O'BRIEN:  
 3 Q. Can you tell us why that is?  
 4 MR. GOULDING:  
 5 A. Well, some of the energy at Holyrood would  
 6 have been because, you know, prior to it being  
 7 released to us, I guess, as a system operator,  
 8 there would have been energy incurred during  
 9 start up and testing, prior to the March  
 10 period.  
 11 MR. O'BRIEN:  
 12 Q. And do you have any idea as to how much of  
 13 that would -  
 14 MR. GOULDING:  
 15 A. No.  
 16 MR. O'BRIEN:  
 17 Q. Would there be a small percentage?  
 18 MR. GOULDING:  
 19 A. I'd say a fair amount of it, but I don't know  
 20 that number exactly.  
 21 MR. O'BRIEN:  
 22 Q. Would you be able to find that number out for  
 23 us and undertake to provide that?  
 24 MR. GOULDING:  
 25 A. Sure.



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1 MS. GLYNN:  
 2 Q. Is the undertaking accepted?  
 3 MR. YOUNG:  
 4 Q. He's writing it down.  
 5 MR. O'BRIEN:  
 6 Q. I think your lawyer is looking to see if he's  
 7 going to have to give an undertaking.  
 8 MR. YOUNG:  
 9 Q. So just to be clear, this is the commissioning  
 10 energy essentially?  
 11 MR. GOULDING:  
 12 A. Yes, yeah.  
 13 MR. YOUNG:  
 14 Q. Okay, thank you.  
 15 MS. GLYNN:  
 16 Q. Noted on the record.  
 17 MR. GOULDING:  
 18 A. And I guess the other part of it was basically  
 19 how we're operating CTs now as opposed to how  
 20 we had envisioned our operating CTs in the --  
 21 when we developed our budgets in the fall of  
 22 2014.  
 23 MR. O'BRIEN:  
 24 Q. Okay. Well, take me through that.  
 25 MR. GOULDING:

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1 A. Okay.  
 2 MR. O'BRIEN:  
 3 Q. What's the difference in that?  
 4 MR. GOULDING:  
 5 A. I guess as part of the events during the first  
 6 week in March, I think it's March the 4th, we  
 7 had issues on our power system. It was mainly  
 8 an Avalon event. We had a Holyrood unit off  
 9 for maintenance. It was envisioned to be on -  
 10 - be back online again at a time anyway before  
 11 our morning peak of that morning, and we also  
 12 -- and then when we realized that the Holyrood  
 13 CT -- the Holyrood unit would not be  
 14 available, we also had issues, I guess,  
 15 getting the Holyrood CT online as well and  
 16 that was -- we did send reports into the Board  
 17 on those unit outages, I guess, and probably  
 18 an overview of the -- so with those units not  
 19 available, we had issues from a voltage  
 20 perspective here on the Avalon. So there were  
 21 -- from what I recall, we had to hold off some  
 22 customers here on the Avalon for a period  
 23 until we had enough generation to serve those  
 24 customers.  
 25 MR. O'BRIEN:

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1 Q. And what was the issue with the CT at that  
 2 time?  
 3 MR. GOULDING:  
 4 A. I recall an issue with a fuel valve that would  
 5 have resulted in that unit not being  
 6 available.  
 7 MR. O'BRIEN:  
 8 Q. Okay.  
 9 MR. GOULDING:  
 10 A. Now it did start up. We did get it on that  
 11 morning afterwards, but it wasn't there right  
 12 at the time in the morning peak.  
 13 MR. O'BRIEN:  
 14 Q. Okay. And to follow through, I guess, and  
 15 where I think you were going, there's been a  
 16 change now in how you're operating?  
 17 MR. GOULDING:  
 18 A. Yeah. Part of our learnings from that event  
 19 and you know, way to increase the reliability  
 20 of the system, like we recognized, I guess,  
 21 that there was an event out there waiting to  
 22 happen which was essentially the Holyrood unit  
 23 not being available when required and prior  
 24 to, I guess, this event, we would have held  
 25 off on starting the CT until it was required.

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1 But right now, I guess, part of our learnings  
 2 from this event is that when we know that  
 3 there's a worst case outage out there that's  
 4 going to result in a customer impact during  
 5 the time say and I say a customer impact, we  
 6 may have -- you know, there may be an outage  
 7 that results in a transmission line overload  
 8 that we have to hold off customers or there  
 9 may be an issue with delivery point voltages  
 10 as well. So we've developed, I guess, a set  
 11 of load triggers now that tell us that we will  
 12 be operating the CT in advance of these  
 13 outages. So instead of -  
 14 MR. O'BRIEN:  
 15 Q. So is that part of your guidelines?  
 16 MR. GOULDING:  
 17 A. Pardon me?  
 18 MR. O'BRIEN:  
 19 Q. Is that part of your guidelines then?  
 20 MR. GOULDING:  
 21 A. It's not part of our weekly guidelines.  
 22 They're more or less from an economic  
 23 standpoint. But we do have daily reliability  
 24 assessments of the power system and through  
 25 those assessments, we take our load forecast

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1 and we take our generation availability and  
 2 based on our load forecast -- it's primarily  
 3 an Avalon requirement. So based on our Avalon  
 4 load forecast, now we have load triggers that  
 5 we'll start up the CT.  
 6 (12:00 p.m.)  
 7 MR. O'BRIEN:  
 8 Q. Okay. So those load triggers, are they built  
 9 into like an application similar to your daily  
 10 sort of load forecast that your group  
 11 performs?  
 12 MR. GOULDING:  
 13 A. Yeah. Like these load triggers, they wouldn't  
 14 normally change. Like we did load flows with  
 15 no Holyrood units in operation, one unit, two  
 16 unit and three units. So at each one of those  
 17 -- at each one of these times, we know when  
 18 the CT is required to be started to be able to  
 19 withstand our worst case outage.  
 20 MR. O'BRIEN:  
 21 Q. And this is different than what the plan for  
 22 the use of the CT was in 2014, is it?  
 23 MR. GOULDING:  
 24 A. That's correct.  
 25 MR. O'BRIEN:

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1 Q. Okay. And if we -- perhaps we can have a look  
 2 at the August 2015 monthly report as well.  
 3 MS. GLYNN:  
 4 Q. We'll enter that as Information No. 16.  
 5 MR. O'BRIEN:  
 6 Q. Thank you. If we have a look at the month  
 7 this year, I guess for August 2015, for the  
 8 Holyrood CT, there's 7.2 gigawatt hours in  
 9 that particular month.  
 10 MR. GOULDING:  
 11 A. That's correct.  
 12 MR. O'BRIEN:  
 13 Q. Was there something different happening in  
 14 that month or is it one of these load triggers  
 15 that caused it to run for that much in August?  
 16 MR. GOULDING:  
 17 A. There is something different in that there  
 18 would have been a total planned outage at  
 19 Holyrood. So ordinarily, we would have been  
 20 operating a Holyrood unit right throughout the  
 21 summer period. So in the first -- and I stand  
 22 to be corrected, but I think in the first two  
 23 weeks or two weeks plus in August, there was a  
 24 total planned outage which meant that neither  
 25 Holyrood unit was available. So we ran the CT

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1 essentially in place of the Holyrood unit.  
 2 But what happens with the CT is we're able to  
 3 turn it on, I guess, during -- prior to the  
 4 peak and after the peak. So there wouldn't  
 5 have been as much energy incurred by running  
 6 the CT as opposed to the Holyrood unit.  
 7 MR. O'BRIEN:  
 8 Q. So in terms of what was going on in August  
 9 then, there wasn't -- would you term this an  
 10 emergency? It wasn't a peak issue at that  
 11 time, was it?  
 12 MR. GOULDING:  
 13 A. It was a peak in that we ran it during the  
 14 peak period of the day when we were exposed to  
 15 an outage to one of the major lines coming  
 16 into the Avalon. So we would have ran it  
 17 during the high load period and in the event  
 18 that there was a line outage, the CT would  
 19 have been on and we wouldn't have had a line  
 20 overload and we wouldn't have had to hold off  
 21 our customers for a period.  
 22 MR. O'BRIEN:  
 23 Q. Okay. And when you decide to run the CT in  
 24 terms of, I guess, dispatch and whoever makes  
 25 the decision to run it, you've indicated that

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1 there are load triggers that you have. Is  
 2 there any consideration for cost given to run  
 3 that when you make that decision? How does  
 4 that work?  
 5 MR. GOULDING:  
 6 A. There is in that like we -- our triggers,  
 7 they're built around the economic breakpoint  
 8 as well of running the CT versus an extra  
 9 Holyrood unit. So, and we use 12 hours of CT  
 10 operation as our breakpoint. So if there's a  
 11 period that we see that we would be operating  
 12 the CT for more than 12 hours, then we turn on  
 13 a Holyrood unit instead, if it was available  
 14 of course.  
 15 MR. O'BRIEN:  
 16 Q. And that's more cost effective approach, would  
 17 it be, the Holyrood unit?  
 18 MR. GOULDING:  
 19 A. It is, up to a certain period of CT operation,  
 20 or after a certain period of CT operation.  
 21 MR. O'BRIEN:  
 22 Q. After a certain period, okay. And in terms of  
 23 -- I guess in terms of this deferral account,  
 24 Hydro would be looking to recover the cost of  
 25 running that CT. There's a band that's

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1 proposed of \$500,000 in terms of around the  
 2 deferral account. How long would you have to  
 3 run the CT to get to that band?  
 4 MR. GOULDING:  
 5 A. Just to do the rough math, 33 cents per  
 6 kilowatt hour, it's likely not that long.  
 7 MR. O'BRIEN:  
 8 Q. And when you say likely not that long, how  
 9 long would that be? Best case scenario.  
 10 We're not talking more than a couple of days  
 11 or a couple of weeks?  
 12 MR. GOULDING:  
 13 A. 33 cents a kilowatt, so it's \$330 a megawatt.  
 14 I'm not able to do that math here now in my  
 15 head, sorry.  
 16 MR. O'BRIEN:  
 17 Q. And maybe I'll ask you to give an undertaking  
 18 just to provide that.  
 19 MR. GOULDING:  
 20 A. Yeah, sure.  
 21 MS. GLYNN:  
 22 Q. Noted on the record.  
 23 MR. O'BRIEN:  
 24 Q. And in terms of -- it appears you've described  
 25 like a change in philosophy as to how to

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1 operate the CT or what it's going -- how it's  
 2 going to fit into the generation plan. How  
 3 did that change in philosophy come about? I  
 4 mean, is that something you decided? Was it  
 5 something decided by Mr. Henderson? Was there  
 6 a group? How did that work?  
 7 MR. GOULDING:  
 8 A. Oh no, it was certainly decided on by a group.  
 9 Mr. Henderson and Mr. Humphries certainly  
 10 would have been aware of it and agreed with  
 11 the change. It's basically, I guess, in  
 12 recognition and in learnings of our March  
 13 event and the customer impact that resulted  
 14 from it.  
 15 MR. O'BRIEN:  
 16 Q. And we talked earlier about maintaining a  
 17 certain level of reserves in terms of  
 18 generation. Is the CT run from that  
 19 perspective?  
 20 MR. GOULDING:  
 21 A. It would be, but the way it turns out, like,  
 22 the Avalon is essentially the ruling system,  
 23 so once we have it on to be able to respond, I  
 24 guess, in the event of an outage to a piece of  
 25 equipment, or worse case outage, then this

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1 also satisfies our spinning reserve  
 2 requirements as well.  
 3 MR. O'BRIEN:  
 4 Q. I wonder whether or not you can answer this,  
 5 in terms of the deferral account, if the Board  
 6 were to grant Hydro's proposal, what would the  
 7 incentive be to Hydro to dispatch resources  
 8 more efficiently once you hit the \$500,000.00  
 9 band?  
 10 MR. GOULDING:  
 11 A. I guess, as has been stated, any times, like,  
 12 we still have a mandate to provide least cost  
 13 reliable power, so, like, in this particular  
 14 instance, like, we still have our daily  
 15 meetings and part of that meeting is to  
 16 determine how best to not only economically  
 17 operate the power system, but - I'm sorry, to  
 18 not only reliably operate the power system,  
 19 but to economically operate the power system  
 20 as well, and that plays into our decision  
 21 making of whether or not to run a Holyrood  
 22 unit or to run a standby unit.  
 23 MR. O'BRIEN:  
 24 Q. And in terms of the disposition of the balance  
 25 that would be in the deferral account, I

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1 understand Hydro is proposing that that would  
 2 be subject to Board approval on an annual  
 3 basis, is that how that would work?  
 4 MR. GOULDING:  
 5 A. That's right. I believe in that schedule, I  
 6 think it was the end of March, the end of the  
 7 first quarter each year.  
 8 MR. O'BRIEN:  
 9 Q. Okay, and from your perspective, what sort of  
 10 factors should the Board consider in whether  
 11 or not the balance should be - how the balance  
 12 should be dealt with?  
 13 MR. GOULDING:  
 14 A. I guess, as part of the report, the Board may  
 15 ask that we provide an indication, like, a  
 16 summary report of when gas turbines were ran  
 17 and maybe even what the circumstances were.  
 18 MR. O'BRIEN:  
 19 Q. Okay. I wonder if we could go back to - maybe  
 20 we don't have to do this, but just Information  
 21 9, actually. That's the 2015 generation  
 22 planning report. One of the notes we talked  
 23 about earlier from that combustion turbine  
 24 project briefing was about the use of the CT  
 25 as black start, in black start scenario. In

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1 this Information 9, if we go to the executive  
 2 summary page II there, the last paragraph -  
 3 just scroll up a bit.  
 4 MS. GRAY:  
 5 Q. Just scroll up?  
 6 MR. O'BRIEN:  
 7 Q. Yeah, just scroll up a little bit, please.  
 8 That's page 1, scroll down. I think it's in  
 9 the last paragraph on page II. I wanted to  
 10 ask you about actually the plan to or the  
 11 intention in terms of Hydro's intention to  
 12 purchase the eight 2 megawatt diesel  
 13 generators at this point in time. There's no  
 14 application, I understand, going forward, but  
 15 in this report there's a mention of an  
 16 intention to do that for generation purposes,  
 17 I think.  
 18 MR. GOULDING:  
 19 A. Yes.  
 20 MR. O'BRIEN:  
 21 Q. I wonder if you can speak to that, Mr.  
 22 Humphries?  
 23 (12:15 p.m.)  
 24 MR. HUMPHRIES:  
 25 A. Sure, I can. I guess, when this analysis was

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1 completed and filed, as indicated while we  
 2 were with the available system resources  
 3 neglecting the black start diesels, we were  
 4 predicting a reserve of 246 megawatts at the  
 5 time of interconnection, which while it meets  
 6 the criteria, it was pretty tight margin and  
 7 so from the perspective of these diesels that  
 8 in their current configuration they could  
 9 offer an additional 10 megawatts of support  
 10 with some additional capital, we could access  
 11 the full 16 megawatts for system capability,  
 12 we felt it was an opportunity that we should  
 13 look at.  
 14 MR. O'BRIEN:  
 15 Q. And were there other options considered in  
 16 that regard?  
 17 MR. HUMPHRIES:  
 18 A. Yes, we looked at other alternatives and (a)  
 19 whether we would execute those now as this is  
 20 an opportunity that's there and would need to  
 21 be taken advantage of now as opposed to  
 22 leaving it and running the risk of getting  
 23 into a deficit at a point in the future.  
 24 MR. O'BRIEN:  
 25 Q. Are those diesels still required for black

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1 start purposes?  
 2 MR. HUMPHRIES:  
 3 A. Right now they are still continuing - they  
 4 provide a source of black start for the plant,  
 5 yes.  
 6 MR. O'BRIEN:  
 7 Q. Will the 123 megawatt CT provide black start?  
 8 MR. HUMPHRIES:  
 9 A. The intent is that the 123 megawatt CT will  
 10 provide black start, but that has not been  
 11 tested and proven to this point.  
 12 MR. O'BRIEN:  
 13 Q. So for now in terms of the 8 megawatt or eight  
 14 2 megawatt diesels, they're still there for  
 15 black start purposes?  
 16 MR. HUMPHRIES:  
 17 A. They are still there and we were assessing the  
 18 - given that they were there and there's an  
 19 opportunity through the - they're on a lease  
 20 to purchase option, and appear to be an  
 21 attractive alternative for acquiring some  
 22 additional capacity.  
 23 MR. O'BRIEN:  
 24 Q. So in terms of any application that goes  
 25 forward in terms of purchasing, would that

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1 application come from your group?  
 2 MR. HUMPHRIES:  
 3 A. Yes, it would.  
 4 MR. O'BRIEN:  
 5 Q. And would there be a least cost analysis  
 6 provided with that?  
 7 MR. HUMPHRIES:  
 8 A. Yes. I will offer some additional information  
 9 here around that right now, I guess.  
 10 MR. O'BRIEN:  
 11 Q. Sure, yes.  
 12 MR. HUMPHRIES:  
 13 A. We're still assessing this opportunity. Since  
 14 this report was filed in September, as  
 15 recently as last week, we do have indications  
 16 that both Newfoundland Power's forecast will  
 17 be reducing. The forecast that was filed with  
 18 the GRA Application on Friday is in the range  
 19 of 20 megawatts lower in the period we're  
 20 talking about, and as well just last week we  
 21 had additional information from Vale that  
 22 would change their load requirements in the  
 23 period, which we're still assessing. So we're  
 24 looking at this application, looking at the  
 25 change in load forecast. We still feel that

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1 there could be value to acquiring some or all  
 2 of these diesels, we're working through that,  
 3 and that will be identified in the proposal.  
 4 I guess, this generation is on the system, 10  
 5 megawatts there, it has been providing support  
 6 for the past 18 months to two years. Given  
 7 where we've been from a generation perspective  
 8 in the past two years, intuitively I have  
 9 trouble with taking capacity off the system  
 10 right now, but we'd have to go through it  
 11 again and obviously make sure that this is a  
 12 right decision to keep them around, so that  
 13 will get identified in the application.  
 14 MR. O'BRIEN:  
 15 Q. And what sort of additional capital would be  
 16 required, additional steps, and in order to  
 17 make that generation capability available to  
 18 the system?  
 19 MR. HUMPHRIES:  
 20 A. Well, again we're looking at now with the  
 21 change in forecast, whether we need - if the  
 22 full 16 megawatts is the optimum solution or  
 23 it's some combination of lower, up to 10  
 24 megawatts, if we went with 10 megawatts, we  
 25 can get that today, there's no further

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1 addition, the units are there installed and  
 2 proven to be able to do it, so it's just a  
 3 matter of purchasing the units. To get the  
 4 additional 6 megawatts, yes, there's a capital  
 5 upgrade required, and like I say, with the new  
 6 load forecast information, we're still  
 7 assessing that and we're not sure what the  
 8 least cost alternative for keeping this  
 9 capacity would be.  
 10 MR. O'BRIEN:  
 11 Q. So you have to consider maybe whether there's  
 12 transformer upgrades, that kind of thing, to  
 13 get it to the -  
 14 MR. HUMPHRIES:  
 15 A. Yeah, to get the 16 megawatts, we would have  
 16 to do a modification at Holyrood that would  
 17 effectively add additional transformer  
 18 capacity.  
 19 MR. O'BRIEN:  
 20 Q. Okay. I wonder if I can ask if we can move  
 21 just to talk about the possible scenarios, I  
 22 guess, going forward as to if there's a delay  
 23 in first power from Muskrat Falls in 2018, and  
 24 there's a couple of scenarios where we could  
 25 look; one where there is an interconnection,

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1 the link is there, and one where the link is  
 2 not.  
 3 MR. HUMPHRIES:  
 4 A. That's right.  
 5 MR. O'BRIEN:  
 6 Q. And I wonder if you could comment just in  
 7 terms of contingencies on both. Like, if we  
 8 look first at supposing there's a delay in  
 9 power, but the link is there, what are the  
 10 contingencies that are in place now for Hydro  
 11 in terms of capacity?  
 12 MR. HUMPHRIES:  
 13 A. With the link in place, and there's a delay in  
 14 Muskrat Falls, we will have the capability to  
 15 be able to deliver approximately 200 megawatts  
 16 over the link from Labrador to Soldiers Pond  
 17 without the support of Muskrat Falls. Then  
 18 when we look at what's available in Labrador  
 19 at that time, between the surplus Churchill  
 20 Falls recall and gas turbine capacity in that  
 21 system, we could conceivably deliver 100  
 22 megawatts of firm capacity to the island  
 23 system from Labrador if required. We have the  
 24 capability, as I said, of bringing 200.  
 25 Obviously, the balance between the 100 and 200

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1 would have to be sourced in the market, and it  
 2 would not be required for load serving  
 3 capability, but then it comes down to an issue  
 4 of whether it would be economic to source  
 5 market energy to displace fuel at Holyrood.  
 6 Holyrood - I think it's important, because  
 7 Holyrood will be available at least through  
 8 2020, that capacity will be there and be able  
 9 to run in that interim. That's part of the  
 10 contingency plan.  
 11 MR. O'BRIEN:  
 12 Q. All right, and how about in terms of Maritime  
 13 link, would that be part of the contingency  
 14 plan?  
 15 MR. HUMPHRIES:  
 16 A. Again the Maritime link will have the  
 17 capability of delivering up to 300 megawatts  
 18 into the island system from the North East  
 19 American market, I would say, whether it came  
 20 from Nova Scotia or New Brunswick. We are  
 21 currently engaged in an analysis with the  
 22 Atlantic provinces doing a detailed study, (a)  
 23 the capabilities of that system, and the  
 24 resources that are available to supply  
 25 capacity and energy from that market into

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1 Newfoundland, and we anticipate by the spring  
 2 of 2016 we'll have some material results from  
 3 that study, and will be in a better position  
 4 to determine what could be available from our  
 5 markets as a market solution from Nova Scotia.  
 6 MR. O'BRIEN:  
 7 Q. What's the time line for the completion of  
 8 that link?  
 9 MR. HUMPHRIES:  
 10 A. Again right now the completion of the link is  
 11 December, 2017, the same as the Labrador  
 12 island link.  
 13 MR. O'BRIEN:  
 14 Q. So presuming that that link is complete,  
 15 that's one option available to you from a  
 16 contingency perspective?  
 17 MR. HUMPHRIES:  
 18 A. That's right, we have that option. Assuming  
 19 the link is complete, we have the option and  
 20 we know we have 100 megawatts of firm  
 21 capability available to us in Labrador.  
 22 MR. O'BRIEN:  
 23 Q. Okay, and that - what firm is available in  
 24 Labrador, this is the recapture power, is it?  
 25 MR. HUMPHRIES:

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1 A. It's recapture, plus the gas turbine that we  
 2 could run for capacity, yes.  
 3 MR. O'BRIEN:  
 4 Q. Okay.  
 5 MR. HUMPHRIES:  
 6 A. The Happy Valley gas turbine.  
 7 MR. O'BRIEN:  
 8 Q. That recapture energy, I noted there's been  
 9 some recent news coverage on that, and there's  
 10 mention of a plan to transmit power from the  
 11 Upper Churchill down the completed  
 12 transmission lines, so that's the recapture  
 13 energy we're talking about?  
 14 MR. HUMPHRIES:  
 15 A. Yes, in the event that the links were finished  
 16 and Muskrat Falls were not available, that  
 17 opportunity exists.  
 18 MR. O'BRIEN:  
 19 Q. Right, and in terms of how that would work,  
 20 would there be any significant cost concerns  
 21 with that course of action?  
 22 MR. HUMPHRIES:  
 23 A. I'm not sure on the detail behind that, how  
 24 that would work out, but the ability is there  
 25 to do it and the energy and capacity is

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1 available.  
 2 MR. O'BRIEN:  
 3 Q. And there's some recent regulations  
 4 surrounding that recapture of the 300 megawatt  
 5 recapture energy. Are you familiar with that?  
 6 MR. HUMPHRIES:  
 7 A. Yes, I'm somewhat familiar with that.  
 8 MR. O'BRIEN:  
 9 Q. Okay, and that's the same energy we're talking  
 10 about, is that right?  
 11 MR. HUMPHRIES:  
 12 A. It's the same energy. Well, actually, I think  
 13 the regulation deals with recall that surplus  
 14 to Hydro's requirements, and if we had a  
 15 requirement, it obviously wouldn't be surplus.  
 16 MR. O'BRIEN:  
 17 Q. That's why I wanted to ask you about it, I  
 18 guess, in terms of - that's your  
 19 understanding?  
 20 MR. HUMPHRIES:  
 21 A. That's my understanding.  
 22 MR. O'BRIEN:  
 23 Q. Is that if Hydro had that requirement, then  
 24 that surplus could be used by Hydro in its  
 25 totality?

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1 MR. HUMPHRIES:  
 2 A. Yes.  
 3 MR. O'BRIEN:  
 4 Q. But you wouldn't be able to bring 300 -  
 5 MR. HUMPHRIES:  
 6 A. Well, we can -  
 7 MR. O'BRIEN:  
 8 Q. Your capability is what?  
 9 MR. HUMPHRIES:  
 10 A. We're limited in what we can bring to 200  
 11 megawatts because we require the support from  
 12 Muskrat Falls to bring the link up to its full  
 13 800 megawatts. We can bring 200, and our view  
 14 is that there would be 100 available in  
 15 Labrador in the 2017/2018 time period.  
 16 MR. O'BRIEN:  
 17 Q. Okay, and is there anything in terms of  
 18 integration, any steps that needs to be done  
 19 from your perspective and your group's  
 20 perspective to make sure that that can be  
 21 done?  
 22 MR. HUMPHRIES:  
 23 A. Well, we're already in the process and have  
 24 actually completed analysis to confirm that  
 25 that could be done.

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1 MR. O'BRIEN:  
 2 Q. You have, okay.  
 3 MR. HUMPHRIES:  
 4 A. Yeah.  
 5 MR. O'BRIEN:  
 6 Q. In the event there's a delay in first power  
 7 from Muskrat Falls, and there's also a delay  
 8 in the link, I guess, what are the  
 9 contingencies Hydro has in place in terms of  
 10 go forward generation?  
 11 MR. HUMPHRIES:  
 12 A. We're back to the scenario that we have in  
 13 this analysis, I guess, that was filed. This  
 14 analysis looked out to the winters of 2018 and  
 15 2019, which is beyond the current in-service  
 16 date for Muskrat or any of the links, and it  
 17 did not consider obviously any support from  
 18 those links, so it was showing that through  
 19 that period we would maintain our reserve of  
 20 246 megawatts. As I said earlier, we had a  
 21 concern that was pretty close to the criteria,  
 22 but with recent changes in forecast both  
 23 between Newfoundland Power and Vale, I would  
 24 anticipate there being an overall 40 to 45  
 25 megawatt reduction in the requirement on the

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1 island in that time frame. So the 246 margin  
 2 is up to over 300.  
 3 MR. O'BRIEN:  
 4 Q. Is it? Okay.  
 5 MR. HUMPHRIES:  
 6 A. And we realized - have to realize that that's  
 7 on a P90 type forecast, so it's a lower  
 8 probability, I guess, than our average we're  
 9 used to, and during most years our reserves  
 10 will be higher than that 300 level.  
 11 MR. O'BRIEN:  
 12 Q. So with that lower probability and higher  
 13 reserves, that's based on the lower forecast  
 14 that you're looking at?  
 15 MR. HUMPHRIES:  
 16 A. Yeah, like I said, we haven't done a - this is  
 17 new information to us and we haven't done a  
 18 full assessment.  
 19 MR. O'BRIEN:  
 20 Q. All right, in terms of what your contingencies  
 21 are for the operation of the CT going forward,  
 22 is that a continued part of your plan on the  
 23 new - I guess, the new approach to operating  
 24 the CT, will that be required?  
 25 MR. HUMPHRIES:

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1 A. I think so. That's been a reliability  
 2 decision to limit or impact or mitigate impact  
 3 to customers in the event of the next event,  
 4 so it is a significant change from where we've  
 5 been before where we would wait for the event  
 6 to happen, and then start up the generation,  
 7 but it seems that, you know, it definitely has  
 8 benefits to improving reliability to  
 9 customers, but it has a cost associated with  
 10 it as well.  
 11 MR. O'BRIEN:  
 12 Q. It has a cost associated with it, yeah.  
 13 MR. HUMPHRIES:  
 14 A. Yeah.  
 15 MR. O'BRIEN:  
 16 Q. I wonder if we could - I just wanted to ask  
 17 you in terms of, and this is only a couple of  
 18 questions in terms of post Holyrood shutdown,  
 19 I wonder whether or not there's a plan in  
 20 place or a requirement to have continued  
 21 generation or backup generation on the Avalon,  
 22 is that something that's been considered as a  
 23 necessity?  
 24 MR. HUMPHRIES:  
 25 A. Well, again we haven't considered it, no,

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1 given the fact that the transmission  
 2 configuration into the Avalon will change  
 3 significantly with the addition of the circuit  
 4 form Bay d'Espoir and the HVdc link in  
 5 addition, and, I mean, given the reliability  
 6 of transmission lines compared to generation,  
 7 lines are much more reliable, so that the  
 8 overall reliability to the Avalon should  
 9 improve above where it is today and has been  
 10 for the past number of years.  
 11 MR. O'BRIEN:  
 12 Q. And if something goes wrong with the DC line,  
 13 for example, is there a requirement - have you  
 14 considered whether or not there's a necessity  
 15 to have any further backup for generation on  
 16 the Avalon?  
 17 (12:30 p.m.)  
 18 MR. HUMPHRIES:  
 19 A. Well, again it depends on where the problem is  
 20 with the DC line. If the DC line goes out -  
 21 well, the problems with the DC line alone, no.  
 22 With the Maritime link and the ability to  
 23 import the 300 megawatts, we will have  
 24 adequate capacity out into the 2020s for sure  
 25 to supply full capability, and we'll continue

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1 to assess that and monitor it as we move  
 2 forward.  
 3 MR. O'BRIEN:  
 4 Q. Okay.  
 5 MR. HUMPHRIES:  
 6 A. If the Labrador island link is down and the  
 7 Maritime link is down, or a combination of AC  
 8 transmission on the island the Labrador island  
 9 link, yeah, there may be shortfalls, but again  
 10 the probability of these events is rather  
 11 remote, right.  
 12 MR. O'BRIEN:  
 13 Q. I wonder if we can pull up Undertaking 35.  
 14 That's the winter readiness report. I have a  
 15 few questions on that for you, Mr. Humphries.  
 16 If we could go to page 3, and if we scroll  
 17 down there a bit, you see there's a - if we  
 18 walk through this document, you see a number  
 19 of, I guess, tables talking about the work and  
 20 the winter readiness work that's going to be  
 21 completed in accordance with your plan, is  
 22 that right?  
 23 MR. HUMPHRIES:  
 24 A. Yes.  
 25 MR. O'BRIEN:

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1 Q. So the first one is here Holyrood Unit 1, "The  
 2 forecast completion status, the RYG", can you  
 3 just briefly tell me what the difference  
 4 between red, yellow, and green would be, how  
 5 do you define it?  
 6 MR. HUMPHRIES:  
 7 A. Basically, green would tell us that there is a  
 8 level of comfort that we will meet the winter  
 9 availability target. Yellow would be a  
 10 concern that there may be concern with meeting  
 11 the time line that probably could be  
 12 mitigated, and recovered, whereas red would be  
 13 that there is a definite concern meeting the  
 14 target.  
 15 MR. O'BRIEN:  
 16 Q. And I scrolled through it myself, but if we go  
 17 through all of the Holyrood units there, 1, 2,  
 18 and 3, and the balance of the plant there, and  
 19 if we scroll down a little bit more there's  
 20 some Hardwoods there, Stephenville, Bay  
 21 d'Espoir, Cat Arm, all of these are green. So  
 22 have you reviewed that report and you're  
 23 satisfied that all of these particular - the  
 24 status of all of these are green going forward  
 25 on a winter readiness basis?

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1 MR. HUMPHRIES:  
 2 A. Yes, I've reviewed, and again I think Mr.  
 3 Goulding's point, we discuss this on a weekly  
 4 and almost a daily basis in our reviews, and  
 5 if there are concerns that arise, we  
 6 immediately look at means of mitigating them  
 7 or what needs to be done to do it, so it's not  
 8 like - this is something that's on our radar  
 9 pretty well every day now.  
 10 MR. O'BRIEN:  
 11 Q. If we could scroll back there to page 3 again,  
 12 just start with the Holyrood Unit 1, I just  
 13 wanted to ask you about - you see the plan  
 14 progress line, and the notes across you've got  
 15 work in progress is 50 percent. That plan  
 16 progress line seems to be quite near the end.  
 17 Is that how that works, how does that line  
 18 work, how do I interpret that?  
 19 MR. HUMPHRIES:  
 20 A. Are you -  
 21 MR. GOULDING:  
 22 A. No.  
 23 MR. HUMPHRIES:  
 24 A. I'm really not sure. We could -  
 25 MR. O'BRIEN:

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1 Q. Could you find that out for me and just  
 2 undertake to - I'm really looking to find out,  
 3 it appears to me when I look at it, that the  
 4 progress is a fair bit away from the plan  
 5 line, but the line is close to the end, and  
 6 I'm wondering how that could be considered  
 7 green?  
 8 MR. HUMPHRIES:  
 9 A. We can follow up on that.  
 10 MR. O'BRIEN:  
 11 Q. Can you follow up on that for me?  
 12 MR. HUMPHRIES:  
 13 A. Yes.  
 14 MS. GLYNN:  
 15 Q. Noted on the record.  
 16 MR. O'BRIEN:  
 17 Q. And if we go down as well down to - scroll  
 18 down and stop there at, Holyrood, balance of  
 19 the plant. For example, you can see the  
 20 remaining amount there, and the amount  
 21 completed. The amount completed is pretty  
 22 close to the line, so it appears to be there's  
 23 a fair bit of time left to catch up and meet  
 24 that planned completion, but I didn't see that  
 25 with Holyrood 1. I had a concern about that



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1 and I wanted you to follow up.  
 2 MR. HUMPHRIES:  
 3 A. Sure, it may be issues that there are other  
 4 pieces of work that are affecting the -  
 5 MR. O'BRIEN:  
 6 Q. I don't know, and -  
 7 MR. HUMPHRIES:  
 8 A. We'll follow up on that.  
 9 MR. O'BRIEN:  
 10 Q. Can you follow up on that for me?  
 11 MR. GOULDING:  
 12 A. Just to add there, like, in our latest update  
 13 for Holyrood Unit 1, that we pulled in, I  
 14 guess, during our daily meetings, we are on  
 15 schedule to have the work done on October  
 16 27th, and then there would be a week or so of  
 17 start up activities there.  
 18 MR. O'BRIEN:  
 19 Q. So in terms of the - it says, "Including work  
 20 in progress", the overall program completion  
 21 status there is 50 percent. You're past that  
 22 now?  
 23 MR. GOULDING:  
 24 A. Yes.  
 25 MR. O'BRIEN:

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1 Q. The date of this report is September 30th, but  
 2 do you have any idea as to sort of how far  
 3 along you are on that?  
 4 MR. GOULDING:  
 5 A. The date of the report is September 30th, but  
 6 now the chart in the case is that it -  
 7 MR. O'BRIEN:  
 8 Q. As of the 19th of September.  
 9 MR. GOULDING:  
 10 A. Yes, so we've had a month elapse now basically  
 11 since then.  
 12 MR. O'BRIEN:  
 13 Q. And you're satisfied your -  
 14 MR. GOULDING:  
 15 A. Yes.  
 16 MR. O'BRIEN:  
 17 Q. Now as of the 19th of September, though, this  
 18 is marked green?  
 19 MR. GOULDING:  
 20 A. That's correct.  
 21 MR. O'BRIEN:  
 22 Q. It's not marked green as of today, it's marked  
 23 green as of September 19th. That's why I'm  
 24 looking for the -  
 25 MR. HUMPHRIES:

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1 A. The intent there was that we would still  
 2 continue to meet that schedule.  
 3 MR. O'BRIEN:  
 4 Q. Okay. Any factors that could delay you in  
 5 meeting that schedule, say, for Holyrood Unit  
 6 1, anything that comes to mind?  
 7 MR. GOULDING:  
 8 A. We aren't aware of anything extraordinary at  
 9 this point. I guess, any time you start up a  
 10 Holyrood unit, there's a number of aspects  
 11 that have to be come together before you  
 12 actually get that unit on line, but right now  
 13 we aren't aware of any issues.  
 14 MR. O'BRIEN:  
 15 Q. In terms of the - is this right now under a  
 16 planned maintenance - is this off line now?  
 17 MR. GOULDING:  
 18 A. Yes, it is.  
 19 MR. O'BRIEN:  
 20 Q. Until the plant -  
 21 MR. GOULDING:  
 22 A. This unit is actually off on its annual  
 23 maintenance schedule.  
 24 MR. O'BRIEN:  
 25 Q. Until October 27th, that's what's planned?

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1 MR. GOULDING:  
 2 A. Yes, and unit 2 is operating now. Unit 3 is  
 3 available, but not operating.  
 4 MR. O'BRIEN:  
 5 Q. But not operating yet, okay. How about if you  
 6 scroll down to Hardwoods, and Stephenville,  
 7 what's the status of Hardwoods there, is that  
 8 operating now?  
 9 MR. GOULDING:  
 10 A. I don't recall if Hardwoods is available right  
 11 now.  
 12 MR. O'BRIEN:  
 13 Q. Okay, can you find that out for us?  
 14 MR. GOULDING:  
 15 A. Yes.  
 16 MS. GLYNN:  
 17 Q. Noted on the record.  
 18 MR. O'BRIEN:  
 19 Q. And is Stephenville available now?  
 20 MR. GOULDING:  
 21 A. Stephenville is not available. That unit  
 22 remains off, I think, for some work.  
 23 MR. O'BRIEN:  
 24 Q. Until December 1st, is that where that -  
 25 MR. GOULDING:

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1 A. Yes, yeah. That there is certainly a  
 2 realistic target date. We expect that it's  
 3 going to -  
 4 MR. O'BRIEN:  
 5 Q. I guess you could see my point there with  
 6 Stephenville, it's not far off the line, and  
 7 there's a fair bit of time left.  
 8 MR. GOULDING:  
 9 A. Yes.  
 10 MR. O'BRIEN:  
 11 Q. The next topic I wanted to cover with you is  
 12 the Holyrood fuel conversation factor. That's  
 13 something, Mr. Goulding, that you're prepared  
 14 to talk about, is that right?  
 15 MR. GOULDING:  
 16 A. That's correct.  
 17 MR. O'BRIEN:  
 18 Q. Okay. I understand that in terms of the  
 19 evidence, we can pull up page 2.4, lines 1 to  
 20 4. The first bullet there, "There's been a  
 21 decline in fuel conversation rate at Holyrood  
 22 in recent years due to lower production  
 23 requirements attributable to a number of  
 24 factors, as well as lower fuel heating content  
 25 in the fuel since the switch to .7 percent

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1 sulphur in 2009". The first part of that, the  
 2 lower production requirements due to a number  
 3 of factors - attributable to number of  
 4 factors, can you provide me with a little bit  
 5 more information on that?  
 6 MR. GOULDING:  
 7 A. Sure.  
 8 MR. O'BRIEN:  
 9 Q. What you mean by that?  
 10 MR. GOULDING:  
 11 A. There's a - right now, I guess, since - I'm  
 12 going to say since 2009, we've essentially had  
 13 Holyrood at minimum generation levels.  
 14 Basically, only as required from a reliability  
 15 standpoint, and also to meet the peak demand  
 16 periods as well. So when a Holyrood unit is  
 17 on, it's maintained at a load of 70 megawatts.  
 18 So since 2009, there were a number of things  
 19 that changed. We had a fair amount of load  
 20 fall off the system. I believe there may have  
 21 been a shutdown of another paper machine at  
 22 Corner Brook Pulp and Paper, there was a - it  
 23 was around that time, I think, that Abitibi  
 24 shut down in in Grand Falls, and that was, I  
 25 guess, from a load generation standpoint, that

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1 there was a double whammy sort of thing  
 2 because not only did their load go off the  
 3 system, there was a fair amount of generation  
 4 that became available as well. Also in 2009,  
 5 I believe the wind farm at St. Lawrence came  
 6 on in 2008, and the wind farm in Fermeuse was  
 7 in 2009, so a combination of the extra sources  
 8 of energy, along with the load drop, has  
 9 resulted in us operating Holyrood at minimum  
 10 generation levels. I guess, from a thermal  
 11 unit perspective, with all things being equal,  
 12 a thermal unit is more efficient at higher  
 13 levels of generation, so because we've been  
 14 operating units in the lower end of their  
 15 operating range, that has meant that our fuel  
 16 conversion rate has declined as well.  
 17 MR. O'BRIEN:  
 18 Q. Okay, I wonder if we can pull up NP-NLH-379,  
 19 just to follow up on that in terms of load  
 20 production. If you can scroll down there - so  
 21 we've got a table there that shows in the  
 22 middle column, I guess, the Holyrood  
 23 production. This is the reduction in load you  
 24 talked about in 2008/2009, gone down under  
 25 1000 gigawatt hours, is that right?

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1 MR. GOULDING:  
 2 A. That's correct.  
 3 MR. O'BRIEN:  
 4 Q. Okay, now that production is gone back up for  
 5 the test years, is that right?  
 6 MR. GOULDING:  
 7 A. That's correct.  
 8 MR. O'BRIEN:  
 9 Q. A fair bit?  
 10 MR. GOULDING:  
 11 A. That's correct.  
 12 MR. O'BRIEN:  
 13 Q. And how would you see that as impacting, or I  
 14 guess wouldn't you see that as impacting the  
 15 conversion factor, shouldn't that increase  
 16 conversion factor?  
 17 MR. GOULDING:  
 18 A. It would. Like, our - and we are showing an  
 19 improvement there from where we have bottomed  
 20 out, I guess, in 2013 and 2014, up to 607, and  
 21 that's based on an average load on the units  
 22 in the average of - in the order of 109/110  
 23 megawatts per unit.  
 24 MR. O'BRIEN:  
 25 Q. So is there a direct correlation then to

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1 production and fuel conversion factor?  
 2 MR. GOULDING:  
 3 A. Not in terms of the overall energy output.  
 4 The direct correlation is the average load on  
 5 the unit while it is operating.  
 6 MR. O'BRIEN:  
 7 Q. Okay, and how do you come up with that, that's  
 8 through a regression analysis, is that how you  
 9 came up with that?  
 10 (12:45 p.m.)  
 11 MR. GOULDING:  
 12 A. Yes, that's how this here was determined. We  
 13 took a five year, our last five year  
 14 performance at the plant and we did a  
 15 regression analysis based on the, there were  
 16 two inputs into it, one was the average unit  
 17 loading and the other one was the fuel heat  
 18 content.  
 19 MR. O'BRIEN:  
 20 Q. And how do you forecast that going forward,  
 21 what the average unit load would be?  
 22 MR. GOULDING:  
 23 A. Well I'll take you back a bit, I guess. In  
 24 order to develop the Holyrood forecast, we  
 25 developed what we call a Hydro Thermal Split

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1 and that's an annual schedule of our  
 2 generation sources for the year. So in this  
 3 generation split, there's our own Hydro  
 4 generation and there's our purchases. We  
 5 forecast our standby requirements and then the  
 6 energy from Holyrood basically falls out, so  
 7 what we also do is from a reliability  
 8 perspective we forecast the number of minimum  
 9 operating hours for each of the Holyrood  
 10 units, so once we have the annual energy  
 11 requirement from the Holyrood plant and the  
 12 minimum operating hours from the unit and the  
 13 average load falls out from there.  
 14 MR. O'BRIEN:  
 15 Q. And are there any assumptions built into that  
 16 forecast, do you assume so much operation from  
 17 each unit over the year?  
 18 MR. GOULDING:  
 19 A. We do, like we would certainly anticipate  
 20 having three units operating throughout the  
 21 winter period and then we transition from  
 22 three to two to one during the fall--I'm  
 23 sorry, during the spring, and then we go--  
 24 right now we would operate one unit throughout  
 25 the summer months with the exception of the

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1 total plan outage and then we go from one to  
 2 two to three then during the fall period into  
 3 December.  
 4 MR. O'BRIEN:  
 5 Q. How about if you got one unit off, would you  
 6 see a fuel conversion factor increase is  
 7 you're operating two instead of three?  
 8 MR. GOULDING:  
 9 A. We would probably see a fuel conversion factor  
 10 increase, but we would see a reliability  
 11 decrease because we've scheduled the units  
 12 according to what we feel are required from a  
 13 reliability standpoint.  
 14 MR. O'BRIEN:  
 15 Q. And when you schedule, say, maintenance on the  
 16 units, I take it you try to schedule only one  
 17 unit down, is that right?  
 18 MR. GOULDING:  
 19 A. We would try to schedule maintenance,  
 20 certainly when the units aren't required, so  
 21 during the winter we wouldn't schedule any  
 22 long-term maintenance on the units. Typically  
 23 we would take one unit off during the spring  
 24 which may happen around April, May time  
 25 period, and then during the summer there would

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1 be two off because we only need one from a  
 2 reliability standpoint and then the first unit  
 3 would become available again and then we  
 4 schedule a third unit.  
 5 MR. O'BRIEN:  
 6 Q. In 2013 was unit one off for a fair bit of  
 7 time?  
 8 MR. GOULDING:  
 9 A. Yes, unit one would have been, I guess,  
 10 following the events of January 11th, 2013.  
 11 MR. O'BRIEN:  
 12 Q. For how long?  
 13 MR. GOULDING:  
 14 A. The unit went down in January and I recall it  
 15 starting up again in October.  
 16 MR. O'BRIEN:  
 17 Q. And would that have affected the overall fuel  
 18 conversion factor for that year?  
 19 MR. GOULDING:  
 20 A. It certainly would have during the winter  
 21 period, from an average loading perspective  
 22 with one unit off at a time when we need  
 23 three, then it would have meant that we  
 24 probably would have driven those units higher  
 25 from a loading perspective to offload the

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1 lines to the Avalon, so that on its own merit  
 2 I guess would have improved fuel efficiency,  
 3 performance, but we weren't where we wanted to  
 4 be from a reliability perspective certainly.  
 5 MR. O'BRIEN:  
 6 Q. How is the CT operation at this point going to  
 7 affect, if anything, the fuel conversation  
 8 factor, how you're planning on operating it or  
 9 how you are operating it?  
 10 MR. GOULDING:  
 11 A. It will, like we expect that the CT will  
 12 enable us to more efficiently operate the  
 13 Holyrood units because the CT, it doesn't have  
 14 the two-day on and off time, so we were able  
 15 to run it through peak load periods, so if the  
 16 economics are right, then we'd be able to run  
 17 the CT in place of the Holyrood unit and, of  
 18 course, with the minimum hours on your  
 19 Holyrood unit reduced, then that would drive  
 20 up the average loading as well.  
 21 MR. O'BRIEN:  
 22 Q. And is that operation of the CT is that built  
 23 into your forecasts for the fuel conversion  
 24 factor here of 2014, 2015?  
 25 MR. GOULDING:

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1 A. It would have, except that in, you know, based  
 2 on what we've talked about earlier about  
 3 having the CT on in advance now, that there  
 4 wouldn't have been built in, so in this  
 5 forecast, we wouldn't have envisioned  
 6 operating the Holyrood unit throughout the  
 7 summer months.  
 8 MR. O'BRIEN:  
 9 Q. That's, I guess, my point because some of the  
 10 information you had given earlier, some of  
 11 your testimony earlier was the manner in which  
 12 you're running the CT, what you envisioned  
 13 running the CT probably when these forecasts  
 14 were done is different than what you're  
 15 actually running the CT at now, is that  
 16 correct?  
 17 MR. GOULDING:  
 18 A. That's correct.  
 19 MR. O'BRIEN:  
 20 Q. And would you expect now, based on how you're  
 21 running the CT, that fuel conversion factor to  
 22 be more efficient, to be higher?  
 23 MR. GOULDING:  
 24 A. It would be more efficient than if the CT  
 25 wasn't there, but not as efficient as we had

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1 envisioned going into this forecast here.  
 2 MR. O'BRIEN:  
 3 Q. So you think your forecast now based on the  
 4 use of the CT right now and how you're using  
 5 it is the fuel conversion factor would be  
 6 lower than 607?  
 7 MR. GOULDING:  
 8 A. Yes, yes, and the main driver of that is the  
 9 summertime operation period where we now  
 10 would--where, because our load, I guess during  
 11 the summer days is flat, it's more economic  
 12 for us to operate a Holyrood unit during the  
 13 summer period, rather than have the CT on  
 14 during the peak periods, during the peak day  
 15 periods because we'd incur hours on the CT  
 16 that would make it more uneconomic than the  
 17 Holyrood units.  
 18 MR. O'BRIEN:  
 19 Q. I understood that the use of the CT was, one  
 20 of the benefits was that it would increase the  
 21 fuel conversion factor but that's based on how  
 22 you initially intended to use it, is that  
 23 right?  
 24 MR. GOULDING:  
 25 A. Yes. But even under a new operating regime,

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1 the operation of the CT does still improve  
 2 fuel conversion performance because there's  
 3 still periods, I guess, that we would operate  
 4 the CT to defer the operation of the Holyrood  
 5 unit, but our base point has changed now.  
 6 MR. O'BRIEN:  
 7 Q. What do you mean, your base point has changed?  
 8 MR. GOULDING:  
 9 A. Well if we were, say, to develop a minimum  
 10 Holyrood schedule now, then we would envision  
 11 operating Holyrood units straight through the  
 12 summer and probably more hours during the  
 13 spring and fall because it's more economical  
 14 to operate that Holyrood unit than the CT;  
 15 whereas prior, say, to our March events, we  
 16 would have operated the Holyrood units and  
 17 planned on starting up the CT after an event  
 18 occurred.  
 19 MR. O'BRIEN:  
 20 Q. Now what other sort of activities and  
 21 initiatives would you have implemented to  
 22 improve efficiency at Holyrood generation?  
 23 MR. GOULDING:  
 24 A. I guess from a, I can't speak a whole lot  
 25 about what goes on, I guess, inside the

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1 Holyrood plant, but from a system operations’  
 2 perspective, we’ve always, regardless of if  
 3 the CT was in the mix or not, we always  
 4 scheduled Holyrood units to ensure that only  
 5 the right number of units are on at the right  
 6 time, so we balance--and basically scheduling  
 7 Holyrood units from reliability perspective  
 8 and by avoiding hours, you know, when a unit  
 9 is not required, it also avoids our operation  
 10 at these low inefficient load levels. So we  
 11 actually have a corporate target, I guess,  
 12 that we set out each year to measure our  
 13 performance in having Holyrood units on at  
 14 only the right time.  
 15 MR. O’BRIEN:  
 16 Q. And how does that work?  
 17 MR. GOULDING:  
 18 A. Basically what we do is when we lay out, each  
 19 month we’ll have a review of the month and the  
 20 loads, primarily again from an Avalon  
 21 perspective, so we’ll have a review of the  
 22 loads and I guess we’ll review the number of  
 23 Holyrood units on and in light of what would  
 24 have been an ideal schedule and an ideal  
 25 schedule is just having the right number of

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1 units on at the right time. So it’s basically  
 2 a review of our performance in scheduling the  
 3 units, plus the factors outside of our  
 4 scheduling, such as unit outages and this sort  
 5 of carry on that gets into the mix as well.  
 6 MR. O’BRIEN:  
 7 Q. Okay. Does Hydro consider the fuel conversion  
 8 rate to be something that’s uncontrollable or  
 9 do you take steps at trying to control it?  
 10 MR. GOULDING:  
 11 A. We consider it to be uncontrollable basically  
 12 for the reasons that we’ve outlined. There’s  
 13 been a number of changes in the last, I’ll say  
 14 six or seven years, that have resulted in us  
 15 and you know, like a primary driver is the  
 16 minimum load on the unit, so we’ve done the  
 17 right thing, we’ve reduced the unit loading to  
 18 only what’s required and that’s resulted in a  
 19 lot of fuel savings through the RSP, but on  
 20 the back end, it’s caused a decline in the  
 21 fuel conversion rate which is not recoverable  
 22 through the RSP and Hydro’s bottom line.  
 23 MR. O’BRIEN:  
 24 Q. So part of the deferral account that Hydro is  
 25 seeking, one of the deferral accounts,

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1 obviously is the Holyrood fuel conversion  
 2 factor deferral account, are you aware of any  
 3 other jurisdictions that would have a similar  
 4 type of deferral account for -  
 5 MR. GOULDING:  
 6 A. I’m not aware of any.  
 7 MR. O’BRIEN:  
 8 Q. I want to ask you, just before we leave this  
 9 topic, just in terms of the heating content  
 10 that’s mentioned and the shift to .7 percent  
 11 sulphur in fuel, I’m wondering have you done  
 12 any studies to see how the heating content  
 13 actually impacts the fuel conversion factor?  
 14 MR. GOULDING:  
 15 A. We haven’t, like, Mr. Henderson, I think he  
 16 outlined in his testimony that we did have a  
 17 fuel expert engaged and he did--they did  
 18 indicate that there is certainly some  
 19 opportunity there to increase the fuel heating  
 20 content. Now at the same time, markets have  
 21 changed to a point now where there’s not a lot  
 22 of people using this fuel, so I understand --  
 23 and that they go, they may go to different  
 24 refineries now and get a blend and that’s what  
 25 really impacts the fuel heat content.

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1 MR. O’BRIEN:  
 2 Q. I guess my question is more have you done any  
 3 studies or commissioned any studies to see if  
 4 the heating content actually has a direct  
 5 result or a direct effect on the fuel  
 6 conversion factor?  
 7 MR. GOULDING:  
 8 A. I’m sure--there’s a monitoring system in the  
 9 Holyrood plant itself that would, I’m sure,  
 10 have inputs and outputs to be able to  
 11 determine the fuel heating content verses the  
 12 actual kilowatt hours per barrel.  
 13 MR. O’BRIEN:  
 14 Q. But was there a study done or have you  
 15 commissioned a study to see if there is a  
 16 direct correlation or direct affect on it and  
 17 what you can do about it?  
 18 MR. GOULDING:  
 19 A. I’m not aware of an external study, anything  
 20 that would have been done there was probably  
 21 done internally.  
 22 MR. O’BRIEN:  
 23 Q. All right. I’m going to ask you, maybe Mr.  
 24 Humphries, you might be the one to ask about  
 25 this in terms of operating costs, move to

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1 another topic there. If we could reference  
 2 Table 2.11, it's on page 2.51 of the evidence.  
 3 At Table 2.11, it's a systems operations and  
 4 planning operating expenses, is that the  
 5 summary of the expenses that your department,  
 6 I guess, would submit in a budgetary sort of  
 7 process?  
 8 MR. HUMPHRIES:  
 9 A. Yes.  
 10 MR. O'BRIEN:  
 11 Q. Okay, and are you involved in that process in  
 12 pulling together the salaries and benefits and  
 13 expenses in terms of the annual budget?  
 14 MR. HUMPHRIES:  
 15 A. Yes.  
 16 MR. O'BRIEN:  
 17 Q. And so we've only got three categories of  
 18 costs that are listed. Are those the only  
 19 three that you would have any input in, in  
 20 terms of say the forecast for this rate  
 21 hearing?  
 22 MR. HUMPHRIES:  
 23 A. Yes.  
 24 MR. O'BRIEN:  
 25 Q. Okay. So in terms of the annual budgeting

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1 process, what role do you play? Do you give  
 2 budget guidelines each year and do you sort of  
 3 provide these types of costs to Mr. Henderson  
 4 or to Finance, how does that work?  
 5 MR. HUMPHRIES:  
 6 A. Yes, well we would have the budget guidelines  
 7 and this budget, there are four business units  
 8 that report up through me. Mr. Moulton, Mr.  
 9 Butler, Mr. Collett, who is the manager of  
 10 transmissions planning; and Mr. Thoms, who is  
 11 the manager of ready for integration, they  
 12 would generate their individual operating  
 13 budgets and requirements, then that would be  
 14 consolidated into the overall.  
 15 MR. O'BRIEN:  
 16 Q. Okay, so in terms of the requirements and that  
 17 sort of thing, it appears to be largely  
 18 salaries and benefits for each of those  
 19 groups, is that right?  
 20 MR. HUMPHRIES:  
 21 A. That's correct.  
 22 MR. O'BRIEN:  
 23 Q. And that's based on the FTE requirements for  
 24 each part or department, I guess, for -  
 25 MR. HUMPHRIES:

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1 A. Yes.  
 2 MR. O'BRIEN:  
 3 Q. Okay. Now if we go to page 252, 2.52, lines 6  
 4 to 9, the salaries and benefits there. The  
 5 salaries and benefits expense in the 2014 test  
 6 year of 3.3 million are .7 million higher than  
 7 the 2007 actual costs and 2.6 million  
 8 primarily due to salary increases. In the  
 9 2014 test year, there are 27 operating FTEs, a  
 10 decrease from 2 in the 2007 actual of 29.  
 11 What was the reason for the decrease there, do  
 12 you know?  
 13 MR. HUMPHRIES:  
 14 A. Well I guess with the overall integration of  
 15 the system operations and system planning  
 16 departments, I think effectively there was an  
 17 overall reduction.  
 18 MR. O'BRIEN:  
 19 Q. A reduction in a couple of FTEs and that's  
 20 what I had assumed. Now going forward, I  
 21 understand for 2015 you're forecasting an  
 22 increase to 36 FTEs? That's the next lines 11  
 23 to 12, so there's an increase from 27 to 36?  
 24 MR. HUMPHRIES:  
 25 A. Yes, that's correct.

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1 MR. O'BRIEN:  
 2 Q. Is that a figure that you would have prepared?  
 3 MR. HUMPHRIES:  
 4 A. Yes, that's correct.  
 5 MR. O'BRIEN:  
 6 Q. Okay, and can you tell us sort of the reason  
 7 for that increase?  
 8 MR. HUMPHRIES:  
 9 A. Well again, with the spin-out of and creation  
 10 of the ready for integration group, that  
 11 involved the creation of additional FTE  
 12 positions and as well there were an additional  
 13 couple of planning positions added in the  
 14 system planning area that had been identified.  
 15 MR. O'BRIEN:  
 16 Q. It might help you if we pulled up PUB-NLH-409,  
 17 I think there's a number shown there that  
 18 might help.  
 19 MR. HUMPHRIES:  
 20 A. So there would have been, in 2015 there were  
 21 an additional two FTEs added in the system  
 22 planning areas, so one would have been in the  
 23 generation of rural and one in the  
 24 transmission planning area. There were two  
 25 FTEs added with the addition of the ready for

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1 integration piece. Mr. Thoms moved into the  
 2 new role there and the senior system planning  
 3 engineer, that's really not the correct title  
 4 now, he's actually, I think he's integration  
 5 support lead, that was a new position that was  
 6 created, and down in system operations  
 7 engineering, there was an additional position  
 8 added down there as well. And some of these,  
 9 it was effectively when we made the changes in  
 10 system operations, Mr. Butler moved into, in  
 11 2013, moved into Mr. Henderson's old role. We  
 12 did not fill that position.

13 MR. O'BRIEN:  
 14 Q. Right.

15 MR. HUMPHRIES:  
 16 A. Mr. Butler's old position, we spread the  
 17 duties between Mr. Goulding and Mr. Butler and  
 18 added an additional engineering position on  
 19 the lower end instead.

20 MR. O'BRIEN:  
 21 Q. Okay, so there might have been a reduction of  
 22 an FTE there or part of an FTE.

23 MR. HUMPHRIES:  
 24 A. Well I think it was really FTE neutral when we  
 25 came -

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1 MR. O'BRIEN:  
 2 Q. Okay, so in terms of 2015 then, the  
 3 additional, is it nine FTEs and we've heard  
 4 some evidence from Mr. McDonald that there was  
 5 going to be, I think a vacancy of about 65 for  
 6 this particular year based on what they've  
 7 assessed, he's assessed up until now. Have  
 8 you filled those roles?

9 MR. HUMPHRIES:  
 10 A. Yes, everything has -

11 MR. O'BRIEN:  
 12 Q. Every one has been filled in your area?

13 MR. HUMPHRIES:  
 14 A. Yes, everything is filled, yes.

15 MR. O'BRIEN:  
 16 Q. So that figure, we can satisfy ourselves that  
 17 the 36 FTEs for 2015 is the proper figure for  
 18 your -

19 MR. HUMPHRIES:  
 20 A. Yes, effective about a month ago, I think the  
 21 last one was filled.

22 MR. O'BRIEN:  
 23 Q. Okay. And we go back to the evidence, page  
 24 2.52, lines 16 to 24, there's a few comments  
 25 there I wanted to ask you to comment--there's

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1 a paragraph there I wanted to ask you to  
 2 comment on, starting with line 16 there,  
 3 "Hydro will begin undertaking the work  
 4 necessary to ensure it is prepared for these  
 5 significant changes." Well maybe we should go  
 6 up higher there, line 14, "Hydro's electrical  
 7 system will be interconnected to the North  
 8 American grid for the first time in 2017,  
 9 2018, and the way the system is planned and  
 10 operated, as well as its cost structure, will  
 11 fundamentally change. Hydro will be  
 12 undertaking the work necessary to ensure it is  
 13 prepared for these significant changes in  
 14 order to successfully integrate a large new  
 15 source of generation and transmission  
 16 infrastructure into the current electrical  
 17 system. While Hydro has included some costs  
 18 related to this in its 2015 test year, the  
 19 Board may want to consider the deferral of  
 20 these costs for future recovery upon the in-  
 21 service of the Labrador island link. Salary  
 22 costs associated and new positions are a  
 23 million and one million associated with normal  
 24 salary increases." What I wanted to ask you,  
 25 there's a few points in there, the first of

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1 which was what was meant there by some of the  
 2 costs in 2015 being included in the test year  
 3 and presumably some not, do you know what  
 4 costs are not included in the test year?

5 MR. HUMPHRIES:  
 6 A. I'm not sure that that's--I think the costs  
 7 that were included and have been included to  
 8 date are the costs associated with the  
 9 creation of the ready for integration team and  
 10 the building production team, that's under Mr.  
 11 Henderson.

12 MR. O'BRIEN:  
 13 Q. Okay.

14 MR. HUMPHRIES:  
 15 A. I'm not sure what costs may not have been  
 16 included, but--and I think as Mr. Henderson  
 17 and probably Mr. McDonald might have  
 18 indicated, that area, particularly building  
 19 the production operation, moving forward,  
 20 that's going to require to grow from here  
 21 between now and in-service. I'm not, from the  
 22 ready for integration piece, I'm not  
 23 anticipating any major further requirements,  
 24 resource wise in that group, but definitely as  
 25 we build the operations' team, that there will

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1 be a requirement to expand that and get people  
 2 over there and get them involved in the  
 3 operation and maintenance aspects of the  
 4 project as it moves forward.  
 5 MR. O'BRIEN:  
 6 Q. Okay, I guess my point is more that there  
 7 appears to be an indication there that some  
 8 costs may--the Board may want to consider  
 9 deferring some costs and I'm not sure what  
 10 costs are being talked about here.  
 11 MR. HUMPHRIES:  
 12 A. Yeah, well I think there's, of these new  
 13 million dollars for new position, those are  
 14 related for the most part to integration  
 15 activities, so whether they would want to be  
 16 considered for deferral.  
 17 MR. O'BRIEN:  
 18 Q. And are they included in the test year costs?  
 19 It seems to be they are.  
 20 MR. HUMPHRIES:  
 21 A. It's my understanding, they are, yes.  
 22 MR. O'BRIEN:  
 23 Q. Yes, okay. And I guess my concern was why say  
 24 well Hydro has included some costs related to  
 25 the test year or may want to consider the

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1 deferral of these costs, so I just want to  
 2 make sure that those are the ones -  
 3 MR. HUMPHRIES:  
 4 A. I'm pretty sure that's what we're talking  
 5 about, a million dollars that's included  
 6 there.  
 7 MR. O'BRIEN:  
 8 Q. Okay. And the million dollars, that's in the  
 9 new positions in 2015, is it?  
 10 MR. HUMPHRIES:  
 11 A. Yes.  
 12 MR. O'BRIEN:  
 13 Q. Okay, and then there's also one million in  
 14 salary increases in 2015 as well?  
 15 MR. HUMPHRIES:  
 16 A. Yeah, I think that's across the board.  
 17 MR. O'BRIEN:  
 18 Q. Across the board of those, of the existing  
 19 FTEs?  
 20 MR. HUMPHRIES:  
 21 A. I think so, yes.  
 22 MR. O'BRIEN:  
 23 Q. And if we go down to other operating costs, so  
 24 other operating costs in 2014 test year of .3  
 25 million are on par with the 27 actual--the

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1 2015 test year, there's an increase of .8 from  
 2 the, .8 million from the 27 actual. This  
 3 increase is primarily related to consulting  
 4 costs associated with system planning studies  
 5 relating to the integration of additional  
 6 generation sources." Can you just give me  
 7 just a little bit more information as to what  
 8 costs they would have been, who you were  
 9 consulting with and -  
 10 (1:15 p.m.)  
 11 MR. HUMPHRIES:  
 12 A. We do have a block of money there allocated to  
 13 engage a consultant to advise us on the  
 14 additional generation or our generation  
 15 adequacy requirements post 2018, this analysis  
 16 of looking at what our criteria will be and  
 17 how we're going to implement that moving  
 18 through.  
 19 MR. O'BRIEN:  
 20 Q. So would that be incurred in the 2015 test  
 21 year?  
 22 MR. HUMPHRIES:  
 23 A. The intent was, yes, that that would be in the  
 24 2015 test year.  
 25 MR. O'BRIEN:

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1 Q. And have you engaged that consultant?  
 2 MR. HUMPHRIES:  
 3 A. As of yet, no we have not.  
 4 MR. O'BRIEN:  
 5 Q. And when do you intend to engage the  
 6 consultant?  
 7 MR. HUMPHRIES:  
 8 A. Well we're hopeful that we'll do that this  
 9 fall.  
 10 MR. O'BRIEN:  
 11 Q. And that .8 million, where does that come  
 12 from? Is that in relation to a tender, is it  
 13 in relation to a quote or where does that  
 14 figure come from then if it's to do with a  
 15 consultant?  
 16 MR. HUMPHRIES:  
 17 A. Again this is a .8 million increase from 2007.  
 18 MR. O'BRIEN:  
 19 Q. Yeah, okay, so that figure from--do you have  
 20 any idea as to what it would cost for the  
 21 consultant, have you built something in?  
 22 Maybe if we scroll down to the--or scroll up  
 23 to the actual other costs, maybe you can get a  
 24 better flavour for that.  
 25 MR. HUMPHRIES:



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1 A. And when we're looking at it in that context,  
 2 I guess, there was also in our professional  
 3 services, there was the piece looking at the  
 4 future general adequacy which was also a sum  
 5 of money in there this year for the marginal  
 6 cost study analysis, so that is moving  
 7 forward.  
 8 MR. O'BRIEN:  
 9 Q. Is that something that would come under your  
 10 budget?  
 11 MR. HUMPHRIES:  
 12 A. It has, yes, come under my budget, under  
 13 system--under Mr. Moulton's budget.  
 14 MR. O'BRIEN:  
 15 Q. Okay. I just have a couple of questions and  
 16 maybe even one here on transmission losses. I  
 17 wonder if we could reference NP-NLH-297?  
 18 MS. GRAY:  
 19 Q. Revision 1.  
 20 MR. O'BRIEN:  
 21 Q. Revision 1, yes, please. And this is a  
 22 detailed calculation of the 2013 forecast  
 23 transmission losses and it's been updated and  
 24 the answer here for the 2015 forecast. I'm  
 25 just wondering if you can tell me are those

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1 losses in that table, are they calculated on  
 2 the basis of the last five years, is it how  
 3 that's done?  
 4 MR. STRATTON:  
 5 A. I believe that was calculated on the basis of  
 6 an average ten year loss rate.  
 7 MR. O'BRIEN:  
 8 Q. Average ten year. I understood there was a  
 9 Board order in 2001 and I don't have it handy,  
 10 that said it was to be calculated every five  
 11 years, has there been something changed since  
 12 then?  
 13 MR. STRATTON:  
 14 A. Sorry?  
 15 MR. O'BRIEN:  
 16 Q. I understood there was a Board order in 2001  
 17 to suggest the calculation over five years,  
 18 has that changed?  
 19 MR. STRATTON:  
 20 A. Not that I'm aware of, no.  
 21 MR. O'BRIEN:  
 22 Q. Okay, did you do it over five years before and  
 23 change it to ten or has it always been done  
 24 over ten years?  
 25 MR. STRATTON:

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1 A. When I checked those calculations, they were  
 2 consistent with how we had done the 2007 GRA.  
 3 MR. O'BRIEN:  
 4 Q. Okay, and can you just confirm for me if it  
 5 was ever, I wonder if I could get an  
 6 undertaking to confirm if it was ever done  
 7 over five years or it's always done over ten?  
 8 MR. STRATTON:  
 9 A. Okay, sure.  
 10 MS. GLYNN:  
 11 Q. Noted on the record.  
 12 MR. O'BRIEN:  
 13 Q. I've only got another area to cover and it's  
 14 just briefly. It's with respect to, and Mr.  
 15 Humphries, I don't know if you can answer this  
 16 question for me or not, Newfoundland Power has  
 17 recently received some information from  
 18 Newfoundland Hydro concerning the, I guess the  
 19 forecast for current all-in electricity rates  
 20 for 2020 based on, I guess, the recent figures  
 21 of rates are expected to be for residential  
 22 customers in the 19.8 cents per kilowatt  
 23 range, is that a figure that you're familiar  
 24 with?  
 25 MR. HUMPHRIES:

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1 A. I'm aware of it and I've heard it, yes.  
 2 MR. O'BRIEN:  
 3 Q. Okay, and I wonder whether or not you can tell  
 4 us whether or not there's any assumptions for  
 5 export sales built into those figures?  
 6 MR. HUMPHRIES:  
 7 A. It's my understanding that there's not.  
 8 MR. O'BRIEN:  
 9 Q. That there's not, okay. I don't have any  
 10 further questions for this witness.  
 11 CHAIRMAN:  
 12 Q. Okay, it's 20 after, do we want to continue or  
 13 do you want to adjourn?  
 14 JOHNSON, Q.C.:  
 15 Q. I'd just as soon start tomorrow now.  
 16 CHAIRMAN:  
 17 Q. I don't think there's anybody going to argue  
 18 with you. We are adjourned.  
 19 Upon concluding at 1:20 p.m.

1 CERTIFICATE

2 I, Judy Moss, hereby certify that the foregoing is a true  
3 and correct transcript of a hearing in the matter of  
4 Newfoundland and Labrador Hydro's General Rate  
5 Application heard on the 20th of October, A.D., 2015  
6 before the Commissioners of the Public Utilities Board,  
7 St. John's, Newfoundland and Labrador and was transcribed  
8 by me to the best of my ability by means of a sound  
9 apparatus.  
10 Dated at St. John's, Newfoundland and Labrador  
11 this 20th day of October, A.D., 2015  
12 Judy Moss

<p><b>-#-</b></p> <p>#6 [1] 4:19</p> <p><b>-\$-</b></p> <p>\$330 [1] 137:13 \$500,000 [1] 137:1 \$500,000.00 [1] 139:8</p> <p><b>-?-</b></p> <p>'10 [1] 103:21 '11 [1] 103:21</p> <p><b>-.-</b></p> <p>.3 [1] 190:24 .5 [1] 126:11 .7 [3] 165:25 179:10 183:6 .8 [4] 191:1,2 192:11,17</p> <p><b>-0-</b></p> <p>074 [1] 99:24</p> <p><b>-1-</b></p> <p>1 [12] 19:13 99:24 141:8 158:1,17 159:12 160:25 161:13 163:6 165:19 193:19,21 10 [5] 82:24 142:9 145:4 145:23,24 100 [8] 113:17,18,22 114:8 147:21,25 149:20 152:14 1000 [1] 167:25 109/110 [1] 168:22 10:00 [1] 47:11 10:15 [1] 63:12 10:30 [1] 78:20 10:45 [1] 94:6 11 [2] 21:10 183:22 11.4 [6] 121:21 123:8 124:8,24 127:1,23 11:00 [1] 108:12 11:01 [1] 109:4 11:34 [1] 109:5 11:45 [1] 118:9 11th [1] 172:10 12 [6] 79:1 126:2 127:11 136:9,12 183:23 12-month [3] 86:2,20 86:24 123 [4] 112:15 113:25 143:7,9 12:00 [1] 133:6 12:15 [1] 141:23 12:30 [1] 156:17 12:45 [1] 169:10 13 [1] 42:13 14 [2] 115:17 187:6 15 [1] 125:17</p>	<p>16 [6] 134:4 142:11 145:22 146:15 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