Page 1

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

Page 2

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

Page 3

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

Page 4

Newfoundland and Labrador Hydro in 1989. At that time, I took a position as an economist working within the load forecasting group, and I have been working within the load forecasting area for the last 26 years. I primarily responsible for completing our operating load forecasts which are five year monthly of demand energy forecast for the island interconnected system, the Labrador interconnected system, and these are the forecasts that are in front of the Board at this hearing. I am also responsible for completing the island rural forecast and I'm also responsible for completing the long term planning forecast for the company. In my experience, I'm also tasked with completing or preparing oil price forecast. These oil price forecasts are provided to our system operations group for preparing our Holyrood #6 fuel price budgets, and I'm also responsible for preparing the isolated diesel fuel price forecasts that are used in our isolated fuel budgets.
MR. CASS:
Q. Mr. Moulton, please.

Page 5

MR. MOULTON:

A. My name is Bob Moulton. I'm the Manager of Generation and Rural Planning with Hydro. I've worked with Hydro for nearly 30 years. I actually started in 1985. I joined PDD, the Power Distribution District, which was the rural arm of Hydro at the time. I stayed there until 1989, and when PDD was folded into Hydro, I went to the System Planning and Generation and Rural Planning Department, and I've worked in that department ever since in various roles, and in 2013, I became the Manager of the section. I am responsible for planning the least cost reliable expansion of Hydro's generation and distribution systems. I'm a registered professional engineer, and education-wise, I received a Bachelor of Electrical Engineering in 1985, and a Masters of Business Administration in 1995.

MR. CASS:

Q. Mr. Humphries.

MR. HUMPHRIES:

A. Good morning. My name is Paul Humphries. I am the Vice President of System Operations and Planning. I'm an electrical engineer. I

Page 6

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

Page 7

MR. CASS:

Q. Mr. Goulding.

(9:15 a.m.)

MR. GOULDING:

A. Good morning, everybody. My name is Kevin Goulding. I have to apologize upfront, I'm not the loudest of speakers, so I'm hoping that I'm coming through there in the back. Unlike my colleagues, I guess, I haven't spent a whole lot of time with Hydro. This is my - I came back to Hydro in 2009. I'm currently the System Operations Engineering Manager. I graduated from the Electrical Engineering Program at MUN. That was 23 years ago now. At that time, I assumed a role with Hydro under their graduate training program. That was a two year rotational type program, so I would have spent the two years plus some time as a term employee. In 1995, I moved to assume a role at Deer Lake Power, which most of you know by now, I guess, is owned and operated by Corner Brook Pulp and Paper Limited. I started in 1995. I had various roles there, I guess. I was an engineer there from 1995 to 1997. I was plant engineer from

Page 8

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

Page 9

assets in our area as well.
MR. CASS:
Q. Mr. Humphries, can you summarize, please, the areas of evidence for which this panel is responsible?
MR. HUMPHRIES:
A. Yes, I will, and as there are four of us here, we intend to participate equally, I guess, in the discussions. From my perspective, I will be dealing with issues regarding divisional structure, questions in that area, Muskrat Falls integration, high level system planning type questions. Mr. Goulding will be dealing with Holyrood and other generation costs, Holyrood fuel conversion factor, and capacity assistance agreements. Questions regarding interfaces with industrial customers, they can be handled both by Mr. Goulding and Mr. Stratton. Mr. Stratton will handle any questions relating to load forecasting. Mr. Moulton will deal with rural system planning, generation planning, any questions regarding wind generation, and as well the rural subsidy, we will all participate in that if there are questions.

Page 10

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

Page 11

that means?
MR. HUMPHRIES:
A. Yeah, I guess, when we look at historically system planning and system operations have been separate, although they do interface regularly on a regular basis, but when we look where we are now and moving to the future, the way we plan the system and the way we operate the system is going to change significantly as we move from our current state to the future state, and so we brought the two groups together with the intent that we would be paying particular attention to that, I guess, and looking at the developments that were going on in the project, and how they would impact our operations and planning as we move forward, ensuring that we were getting the exposure to the people that are in system operations and system planning of the changes that are going to be coming, that we are taking advantage of all of the one time opportunities that are going to become available over the next couple of years with regards to participating in the design, the construction, and commissioning and training

Page 12

that's going to be going on as we move forward.
MR. O'BRIEN:
Q. In terms of it as a transition role, do you foresee where you will be in the future, in the near future, will it be a different role you'll play?
MR. HUMPHRIES:
A. Well, you know, I guess, it comes down from the role of whether it all - ultimately it will all, system operations and planning will all end up back in Hydro, I think, and whether that has its own Vice President or it has a reporting structure up through the operations, I don't know. That's part of what we're working through, I guess, with this transitional piece and working with Mr. Martin and the rest of the company on that to land on what the proper structure will be moving forward.
MR. O'BRIEN:
Q. So when you started your present position, that was in April of 2013, is that right?
MR. HUMPHRIES:
A. That's right.

Page 13

MR. O'BRIEN:

Q. And in terms of how that differs from what you were doing just immediately prior to that, can you give me just a bit of an overview as to how the role changed at that time?

MR. HUMPHRIES:

A. Well, I think even, you know, from a planning perspective, if we move back probably to 2010 when we first started to move the Muskrat Falls interconnection forward in earnest, I would say, from a planning perspective, I became heavily involved. Our group became heavily involved then looking at the technical aspects. We were carrying out those functions, I guess, as additional activities within the planning area, but it became obvious that as we move forward that the level of change that was going to have to take place was significant, and that we had to dedicate more of a dedicated effort, I guess, into the integration, so we - and we also realized that it just wasn't the system planning piece, it was the system operations as well that would be going through the changes. So, I guess, because of my background and association in

Page 14

the planning, a fairly strong - while I hadn't worked in system operations, I had an understanding of system operations and the relationships were very closely with Mr. Henderson over my full career, and I also had knowledge of the project itself, the issues related to the integration, it seemed natural to pull that together and looking forward for me to try to coordinate all that.

MR. O'BRIEN:

Q. And you've actually just brought up something I wanted to talk to you about, just in terms of prior to this particular role, systems planning and systems operations being sort of separate entities, I guess, or separate groups, is that right, is what you'd said before. I'm trying to get a sense of the operations piece and how you fit in in the operations piece, say, in contrast to where Mr. Henderson would fit in in terms of the operation piece?

MR. HUMPHRIES:

A. System planning and system operations were separate, but there's no question about it that they always worked together and supported

Page 15

each other. System planning supported system operations, and in certain aspects system operations supported system planning. From a reporting perspective, system operations obviously always reported up through the operations function and ended up with accountability, direct accountability to the person that was in Mr. Henderson's current role, would have been Mr. Haynes in the previous structure. From the system planning perspective, in the 30 years I've been with system planning, we've been in a lot of areas. We reported up through operations, we reported up through a corporate planning group, and prior to 2013 - from the time actually I took on the role as manager in 2005 to 2013, I reported to the Vice President of Engineering Services, and then it became Mr. MacIsaac's role, Vice President of - I can't remember his title now.

MR. O'BRIEN:

Q. Project Engineering -

MR. HUMPHRIES:

A. Project Execution and Technical Services, that's correct. So I reported through Mr.

Page 16

MacIsaac, but I always had that single line to Mr. Haynes and the operations group.

MR. O'BRIEN:

Q. Yeah.

MR. HUMPHRIES:

A. And always had accountability to operations. It was a given. You know, I had probably a number of different direct report supervisors and we reported to a number of different vice presidents. That linkage between system operations and system planning was always there and the accountabilities on the operation side were always there no matter who we reported to.

MR. O'BRIEN:

Q. So your role prior to where you are now in terms of a - was more of a planning role than an operations role, I take it?

MR. HUMPHRIES:

A. Yes, it was planning function, and as I say, we supported - with the change from an operations perspective, Mr. Henderson in his previous role was the Manager of System Operations and Integration Support, Mr. Butler has moved into that role, and the relationship

Page 17

between Mr. Butler and Mr. Henderson is no different than the relationship that existed between Mr. Henderson and Mr. Haynes in the previous structure.

MR. O'BRIEN:

Q. And so since the Nalcor group or parent entity has come into place now, systems planning, I guess, up until recently in 2013 would have gone up through the Nalcor -

MR. HUMPHRIES:

A. No.

MR. O'BRIEN:

Q. No, and that's what I was trying to get with Mr. MacIsaac's sort of role there.

MR. HUMPHRIES:

A. Even though I reported to Mr. MacIsaac, I was still a Hydro employee and reported up through the Hydro system.

MR. O'BRIEN:

Q. I understand that, I understand that, and just in terms of your direct report, say, in 2010, you reported into Mr. MacIsaac?

MR. HUMPHRIES:

A. I reported into Mr. MacIsaac, who was a Nalcor vice president, but I was a Hydro employee.

Page 18

MR. O'BRIEN:

Q. You were a Hydro employee, I understand that, okay, and you remain a Hydro employee in the new position now?

MR. HUMPHRIES:

A. That's correct.

MR. O'BRIEN:

Q. And maybe I can ask you just about that briefly. Mr. Martin, when he testified, indicated that there were sort of two lines of reporting for you in your present position, that you would for the operations piece report through to Mr. Henderson, whereas for your planning piece, report through Mr. Martin, am I getting that right?

MR. HUMPHRIES:

A. And I don't - I think it's really on the operations and planning, the planning that's directly related to Hydro, I still report through Mr. Henderson on that as well. What I would interface and report to Mr. Martin on is this integration piece and the forward looking piece.

MR. O'BRIEN:

Q. All right, so there's a sort of longer term approach where you'd report through to Mr. Martin the longer term planning and integration, whereas anything with the day to day operations of Hydro and any systems plannings for Hydro short term, you'd report through to Mr. Henderson, is that right?

Page 19

MR. HUMPHRIES:

A. That's correct, yes.

MR. O'BRIEN:

Q. Perhaps we can - I just want to have a look at your job description, if we could, Mr. Humphries. Can we bring up PUB-NLH-229, Attachment 1, page 8. That's your job description there, Mr. Humphries, is it?

MR. HUMPHRIES:

A. Yes, it is.

MR. O'BRIEN:

Q. And a couple of things I wanted to review with you and you've mentioned some of them, I think, in your direct. Under the key responsibility areas, the first bullet there provides ongoing functional leadership and direction in relation to the company system operations and system planning activities, and ensures that these groups seek and create all available synergies to ensure that they work together as effectively and as efficiently as possible as an integrated team. So that's more of a Hydro focused as opposed to - sort of a short term Hydro focus, is it?

Page 20

MR. HUMPHRIES:

A. It can be both.

MR. O'BRIEN:

Q. Can be both, yeah.

MR. HUMPHRIES:

A. It is, you know, definitely it is an immediate focus. In the future role, we're still working through an ultimate structure, but it's possible that a portion of the planning function could end up in an operations role moving forward. We are looking at options and alternatives there, so there would conceivably be synergies moving forward as well in the future role.

MR. O'BRIEN:

Q. In terms of - and I'll ask you about that in a second, the synergies, but in terms of the operations piece, what aspect of operations are you accountable for?

MR. HUMPHRIES:

Page 21

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

Page 22

MR. O'BRIEN:
Q. So the control centre, that's the centre responsible for dispatch?
MR. HUMPHRIES:
A. That's correct.
MR. O'BRIEN:
Q. And available resources, that sort of thing, okay, and Mr. Butler is not testifying, I understand, but perhaps you can give me an overview sort of generation and how that's dispatched on the island interconnected system, sort of what you go through in terms of that process?
MR. HUMPHRIES:
A. Actually, maybe Mr. Goulding would be better to go through the details of that.
MR. O'BRIEN:
Q. Sure.
MR. GOULDING:
A. I guess, it starts, like, we meet on a weekly basis. We have what we call water management meeting, and the aim of this meeting is in the end we provide a guideline to our ECC operators that essentially in the end our goal is to operate the system as efficiently and

Page 23

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

Page 24

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

Page 25

an outlook, I guess, on what our load forecasts are and what's required in terms of generation reserves, and we would also have an eye out, I guess, for what our water levels are. We try to minimize spill, we try to keep our reservoirs balanced to the extent that it's possible.

MR. O'BRIEN:

Q. So as part of this process, I guess, there's decisions made when to run gas turbines and that sort of thing as well?

MR. GOULDING:

A. That's correct.

MR. O'BRIEN:

Q. Okay, and like a weekly guideline, do you have monthly guidelines, do you have an annual guideline, how does that work?

MR. GOULDING:

A. I think the largest step would be weekly, but certainly we do maintain a generation outage schedule that's an annual schedule, and in that as well we optimize our unit outages to the same end, I guess, to make sure we maximize the efficiency of the system, plus operate in a reliable manner as well.

Page 26

MR. O'BRIEN:

Q. And the weekly guidelines, are these extensive booklets or is it something that you put -

MR. GOULDING:

A. It's probably - when it's printed, it's probably a two or three pager.

MR. O'BRIEN:

Q. I wonder if I could ask you to produce one for a month in 2015, so that we can have a look at it.

MR. GOULDING:

A. Sure.

MS. GLYNN:

Q. Noted as an undertaking.

MR. O'BRIEN:

Q. If I could go back, Mr. Humphries, to your job description.

MR. HUMPHRIES:

A. Sure.

MR. O'BRIEN:

Q. And that first bullet that we were looking at there, and it mentions the word "synergies", and I think you sort of touched on this earlier and I want to see if you would agree with me that I understood that when you're talking about creating available synergies, you're talking about opportunities for the teams to work together, is that right?

Page 27

MR. HUMPHRIES:

A. That's correct.

MR. O'BRIEN:

Q. Okay, so that's part of your role looking for opportunities for operations and systems planning to work together going forward?

MR. HUMPHRIES:

A. Exactly.

MR. O'BRIEN:

Q. In that transitional position?

MR. HUMPHRIES:

A. That's correct.

MR. O'BRIEN:

Q. In terms of the next bullet then, if we look at that, "To ensure strong positive interfaces and interaction between and among all Nalcor lines of business and divisions, in particular, Newfoundland Hydro, CF(L)Co, project execution and technical services and the Muskrat Falls and Labrador island link, Maritime link project team, Gull Island project team, investment evaluation in energy marketing", that seems to be kind of a broad role or aspect of your role. Can you give me sort of an overview as to what interfaces and integration means and what you do in that aspect of your role?

Page 28

MR. HUMPHRIES:

A. I guess, that's sort of multifaceted. If we look at in our current state on a daily basis, I guess, project execution and technical services are out there executing capital work as we move forward. It has impacts on schedule and generation and outage schedules, it has impact from a planning perspective on if - when we look at removing particular pieces of equipment from service, for example, what the impact on the - the overall impact on the system is, so it's important that these groups all work together and ensure that we've identified all the puts and takes, I guess, in a day to day operation of carrying out operations, carrying out maintenance work, carrying out capital work, and to ensure that that's all integrated. These groups need to be continually interfacing and communicating. So that's a current piece.

Page 29

MR. O'BRIEN:
Q. Is that part of your accountability then to make sure that those groups are interfacing and integrating?
MR. HUMPHRIES:
A. Well, I make sure that the system planning and system operations groups are interfacing with these other outside groups, yes.
MR. O'BRIEN:
Q. All right. How much of your time is taken up with that sort of aspect of your role, would you figure?
MR. HUMPHRIES:
A. Well, it's hard to say to put it in a perspective of - there's hardly probably a day goes by that there's not some type of interface issue that either comes to my attention or I'll ask a question, have we covered this off on a certain point.
MR. O'BRIEN:
Q. And in terms of the operation part in terms of the EEC, how much of your role is taken up with that?
MR. HUMPHRIES:
A. Well, not - I don't think it's a whole lot.

Page 30

I'm providing a directional support to Mr. Butler, but from the day to day operations, Mr. Butler is running that show, so to speak, and he interfaces with Mr. Henderson very closely and that group on that. I get involved, but at the end of the day Mr. Butler will go to Mr. Henderson before or at the same time he comes to me.
MR. O'BRIEN:
Q. Does Mr. Butler report directly to you?
MR. HUMPHRIES:
A. Yes, he does.
MR. O'BRIEN:
Q. And he doesn't report directly to Mr. Henderson?
MR. HUMPHRIES:
A. No, he doesn't.
MR. O'BRIEN:
Q. So in terms of the EEC, he's responsible for running that show, so to speak, but it's subject to your oversight, which is subject to Mr. Henderson's oversight, is that how that goes?
MR. HUMPHRIES:
A. Exactly, and he has - I think Mr. Henderson

Page 31

indicated when he was on the stand, you know, he has a direct line of communications with Mr. Butler.
MR. O'BRIEN:
Q. Sure.
MR. HUMPHRIES:
A. And that's - historically, that's no different than it's always been, that that role had a direct link to the operations, the person responsible for the operations.
MR. O'BRIEN:
Q. Would it be more likely for Mr. Butler to go to Mr. Henderson than to go to you on issues with the control centre?
MR. HUMPHRIES:
A. He would go to Mr. Henderson first most times, yes. He would involve me, but he would go to Mr. Henderson first.
MR. O'BRIEN:
Q. In terms of if we could go back to your - actually, if we could go to the next bullet there. The next bullet talks about, "leading the design and structure of the provincial electrical system". That seems to be more of a future type role, I guess, in terms of an

Page 32

integration type role. Would you see that as your focus being integration with Muskrat Falls?
MR. HUMPHRIES:
A. Yes, that's correct.
MR. O'BRIEN:
Q. That's the larger part of your long term focus, I guess?
MR. HUMPHRIES:
A. Yes.
MR. O'BRIEN:
Q. And will you be spending more time on that, do you think, in the coming years?
MR. HUMPHRIES:
A. I would think so, and I would hope I am, yes.
MR. O'BRIEN:
Q. Given the role that you're in now as transitional, you would expect that?
MR. HUMPHRIES:
A. That's correct.
MR. O'BRIEN:
Q. Okay, and that would, I guess, take us into the next bullet which talks about commercial structures and agreements and that type of thing, that all sort of ties into integration?

Page 33

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

Page 34

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

Page 35

seasoned and new young bright individuals that are over there learning, and they have the background in the system to understand the implications of what the changes would mean, and report that back to the rest of us who are going to inherit this in 2018, to ensure that we have a broad knowledge of what's going on. So that team is - but it reports to me.
MR. O'BRIEN:
Q. So that's the ready for integration team, is that right?
MR. HUMPHRIES:
A. That's correct, yes.
MR. O'BRIEN:
Q. And how many members are on that team?
MR. HUMPHRIES:
A. We can actually - if we want to pull up the RFI response to that.
MR. O'BRIEN:
Q. Sure.
MR. HUMPHRIES:
A. Just one second now. I think it's PUB-409. Yes, PUB-409. If you could page down, there's an organizational chart there.
MR. O'BRIEN:

Page 36

Q. Okay.
MR. HUMPHRIES:
A. So there's my organization as it stands right now. I have - we'll start at the left and move across, I guess. We have a Manager of Generation and Rural Planning, Mr. Moulton and his team.
MR. O'BRIEN:
Q. Okay.
MR. HUMPHRIES:
A. Manager of System Operations and Integration Support, that's Mr. Butler.
MR. O'BRIEN:
Q. Okay.
MR. HUMPHRIES:
A. Manager of Ready for Integration, this is the group we're talking about, so there's a system operations engineer there, integration, there's a design coordinator, and that's a person that's an administrative type person that is actually coordinating interfaces and requests for information between the project teams and the various Hydro entities. There are actually two HVdc systems engineers and these are project employees, but they are

Page 37

learning, I guess, the HVdc systems as they come into operation and design, and these two individuals will be key people to come back into our operation.

MR. O'BRIEN:

Q. So they're in Nalcor right now as Nalcor employees?

MR. HUMPHRIES:

A. They're in Nalcor right now, and, you know, it's - I guess, some of the discussion - I'll just take you aside a little bit here now.

MR. O'BRIEN:

Q. Sure.

MR. HUMPHRIES:

A. Some of the discussion we've got into recently on secondments and those types of things there was a view, I guess, that we got some pretty knowledgeable and experienced people within system operations and it would be nice to take them out and put them over in the project, and it would help things along vastly over there, but that just couldn't work because of the fact that we had a requirement to continue to manage and operate the system. So then we ended up posting these positions, or the

Page 38

project ended up posting these positions. Some of our younger people actually applied for them, went over and went into the role, and very quickly realized, you know, they're bright, but bright only gets you so far, we needed the knowledge base as well. So we integrated those back - in 2010, we integrated those roles back into the planning function to begin with so that they came on board, worked with the planning people, got experience in the system, and then we moved it up, they become part of the integration team, so they're over there. They're still project employees. At some point, they will transition back into the operation, but the functions that they are providing are providing direct support to the project and getting things done, but it's critical that they have the knowledge of the system as well, so this is - we started probably back in 2010/2011, and it's worked really well, we're developing people.

MR. O'BRIEN:

Q. And when you say project, just to be clear for me, are these project specific employees or is

Page 39

it - what project are you talking about?

MR. HUMPHRIES:

A. The Lower Churchill.

MR. O'BRIEN:

Q. The Lower Churchill project.

MR. HUMPHRIES:

A. Lower Churchill project, yes.

MR. O'BRIEN:

Q. Okay, and so these are the ones that are identified as Nalcor employees, they're not actually employed by the Lower Churchill project, though, are they?

MR. HUMPHRIES:

A. They're Nalcor Lower Churchill, yes.

MR. O'BRIEN:

Q. Okay, and there's two of those HVdc systems engineers?

MR. HUMPHRIES:

A. Yes.

MR. O'BRIEN:

Q. And plan in the future is to bring those back into the Hydro fold, is it?

MR. HUMPHRIES:

A. Yeah, you know, and from a report - they work as an integrated part of that ready for

Page 40

integration team. They report up through that Manager of Ready for Integration, and from their perspective, they don't see any difference in them and the rest of the group.

MR. O'BRIEN:

Q. And in terms of that ready for integration piece, they're focused on Hydro's role in integration or are they focused on a broader piece?

MR. HUMPHRIES:

A. Well, it's predominantly Hydro's. I mean, you know, the fact that the system has to come in and work in the Hydro system, so it's predominately Hydro, yes.

MR. O'BRIEN:

Q. And they would report in through you, I guess, at this point?

MR. HUMPHRIES:

A. They report up through that manager who reports to me, yes.

MR. O'BRIEN:

Q. And in terms of - let me just take you back a little bit to one of your comments earlier about, I guess, where you found yourself in the last couple of years versus where you

Page 41

expected yourself to be in terms of the role, and frankly, I guess, what I'm talking about is what you would have focus on in 2014/2015 as a result of some reliability issues in the 2013/2014 outages. Can you take me through sort of where your focus was at that time as a result of all of this?

MR. HUMPHRIES:

A. Well, I guess, you know, coming into the January - or coming out of the January 2014 events, you know, there was some realizations and lessons learned there. We had to move forward quickly with the generation addition, so we had a focus from a planning perspective of getting that application completed and filed with the Public Utilities Board. Then we went through the inquiry process. I guess, there was a fair bit of analysis on the whole system planning function, a multitude of requests for information that took up a lot of my time in - not preparing the answers myself, reviewing them and preparing for and having discussions with Liberty and others as we were moving through the review process. That consumed a fair bit of my 2014, there's no

Page 42

doubt about that.

MR. O'BRIEN:

Q. And prior to that in terms of systems planning and reliabilities' issues, were you - did that take up a lot of your time from a planning perspective?

MR. HUMPHRIES:

A. Well, yeah, let's back back, I guess. This role only started in April, 2013.

MR. O'BRIEN:

Q. Right, so take me through sort of -

MR. HUMPHRIES:

A. So, yeah, prior to April 13, my full focus was planning.

MR. O'BRIEN:

Q. Full focus, okay.

MR. HUMPHRIES:

A. The planning function, yes.

MR. O'BRIEN:

Q. And when you came into the role in April of 2013, was there any change in terms of your focus on planning?

MR. HUMPHRIES:

A. No.

MR. O'BRIEN:

Page 43

Q. And you mentioned that there was some realizations and lessons learned as a result of the outage inquiry. Can you give me an idea as to what you mean by that, just from a basic perspective?

MR. HUMPHRIES:

A. Well, I think, you know, coming through and as a result of that, you know, we have modified our generation planning criteria in the interim between now and 2018 and the interconnection of Muskrat Falls. You know, that's based on insight we've gained from the events that took place in 2014, and we've worked through that with Liberty, and we've accepted and made changes to our criteria and we believe that they were appropriate.

MR. O'BRIEN:

Q. Okay, and was it your - as a result of all this, did you see that there were some reliability issues that had to be addressed from a planning perspective?

MR. HUMPHRIES:

A. Yeah, I guess, you know - and for the most part it was the whole generation adequacy piece, you know, and when we looked at then

Page 44

the issues of - when we looked at what happened in early 2014 with the generation shortfall, and then we got into the issue of the generation availabilities, I don't think anyone really thought that so many things could happen at the same time back prior to that, you know, given the fact that we'd been through the winter before with a fair bit of generation on the service and there were no issues. So then when the concerns or the discussion, I guess, on the load forecast and the question of using an extreme forecast in combination with the assumptions around the availability of our generation, you know, when we went through that analysis, it did show that, you know, we were close, on the margin, a lot closer than we thought we'd be.

MR. O'BRIEN:

Q. A lot closer than you thought you were at the time?

MR. HUMPHRIES:

A. Yeah.

MR. O'BRIEN:

Q. Okay, and like you say, you've taken steps going forward now to address those generation

Page 45

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

Page 46

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

Page 47

just if you could repeat for me your present role as Manager of Generation and Rural Planning, is that right?
MR. MOULTON:
A. That's correct.
MR. O'BRIEN:
Q. And how long have you been in that particular role?
MR. MOULTON:
A. Since April of 2013.
(10:00 a.m.)
MR. O'BRIEN:
Q. April of 2013, and what was the role you were in prior to that?
MR. MOULTON:
A. I was a senior planning engineer.
MR. O'BRIEN:
Q. Okay, and you're an Hydro employee?
MR. MOULTON:
A. That's correct.
MR. O'BRIEN:
Q. Okay, now the position that you're in right now, just give me an overview of the difference between that and what you had before in terms of senior planning engineer?

Page 48

Is it a different - completely different role or is it a step up with more responsibilities, how does that work?
MR. MOULTON:
A. Well, I would take it more as a step up.
MR. O'BRIEN:
Q. Okay.
MR. MOULTON:
A. Well, before, as I said, I didn't actually have official supervisory roles, but, of course, in the position as a senior planning engineer, you know, besides guiding the work of that section of the department, I'm also mentoring younger engineers.
MR. O'BRIEN:
Q. Sure.
MR. MOULTON:
A. And things like that, but I didn't have direct supervisory role, which now I actually do.
MR. O'BRIEN:
Q. And what are you key responsibility areas, I guess, right now?
MR. MOULTON:
A. My key responsibility areas, one is market analysis with the forecasting, which Mr.

Page 49

Stratton is the supervisor of.
MR. O'BRIEN:
Q. Okay.
MR. MOULTON:
A. You know, responsible to make sure that the forecasting for the island rural systems, that's done.
MR. O'BRIEN:
Q. Right.
MR. MOULTON:
A. I'm also responsible for the interconnected generation for the island, for the province, you know, making sure that anything that's connected with load in that area is completed. Also similar functions with the rural and isolated areas, again responsible for least cost reliable additions for increases in load in the isolated generation areas, and responsible the same thing in the distribution planning for the isolated areas and Hydro's rural areas.
MR. O'BRIEN:
Q. So would you say that the large part of your role is with respect to generation planning?
MR. MOULTON:

Page 50

A. That's correct.
MR. O'BRIEN:
Q. Okay, and you report directly to Mr. Humphries, do you?
MR. MOULTON:
A. That's correct.
MR. O'BRIEN:
Q. And perhaps we could bring up PUB-409, and you're here on that chart, Manager Generation and Rural Planning?
MR. MOULTON:
A. Yes.
MR. O'BRIEN:
Q. And so those are all your direct reports?
MR. MOULTON:
A. Yes.
MR. O'BRIEN:
Q. Mostly engineers and a couple of analysts, is that right?
MR. O'BRIEN:
Q. That's correct.
MR. O'BRIEN:
Q. Mr. Stratton is down here, senior market analyst, is that right?
MR. MOULTON:

Page 51

A. That's correct.
MR. O'BRIEN:
Q. In terms of Nalcor and the Nalcor entity, do you provide any duties or responsibilities or do you put in any time for Nalcor, bill time to Nalcor, or any other of the units?
MR. MOULTON:
A. I very seldom bill any time to Nalcor. Kind of look at the role, well, from the Isolated and Rural, that's pretty well strictly Hydro.
MR. O'BRIEN:
Q. Strictly Hydro, okay.
MR. MOULTON:
A. And from the generation planning, usually look at the interface with Nalcor as we're, you know, representing I'll say Hydro's interests or Hydro's role with Nalcor. So I consider that a Hydro function.
MR. O'BRIEN:
Q. Okay. But I mean, in terms of your particular role isn't any sort of a Nalcor overlap at all with your role? No?
MR. MOULTON:
A. No.
MR. O'BRIEN:

Page 52

Q. And Mr. Stratton, so we've got a bit of information from you as well. You're a senior market analyst and you've been in that position since when?
MR.STRATTON:
A. I would have undertaken that role in the 2000s area.
MR. O'BRIEN:
Q. Okay. You've been in that role for a fair -
MR.STRATTON:
A. For some time.
MR. O'BRIEN:
Q. A fair time, okay. And you're responsible for load forecasts, is it?
MR.STRATTON:
A. My key responsibility would be for load forecasts.
MR. O'BRIEN:
Q. Okay.
MR.STRATTON:
A. Both operating forecasts, which are used for budgeting, and operational, day-to-day -- or not day-to-day, but monthly and short term operational. And secondly would be my -- for preparing a long-term forecast for planning.

Page 53

MR. O'BRIEN:
Q. For planning. And the operation portion of it, how would you perform that role? What's your duties in that regard?
MR.STRATTON:
A. Well, depending on the systems. For the Island Interconnected system, our operating forecast is a five-year monthly energy and demand forecast. And the Island Interconnected system, that would entail compiling customer forecasts that are received from your company, Newfoundland Power -
MR. O'BRIEN:
Q. From customers, yeah.
MR.STRATTON:
A. - and from our Industrial Customers. So, beyond that, we do a Hydro Rural operating forecast and that would be a forecast that's prepared in house for both our Rural Interconnected systems in Island and in Labrador and as well for our Isolated systems.
MR. O'BRIEN:
Q. And you perform that role in terms of putting that together?
MR.STRATTON:

Page 54

A. I perform -- well, I have a market analyst who works under me.
MR. O'BRIEN:
Q. Okay.
MR.STRATTON:
A. She would be preparing more of the Isolated and the Rural Interconnected system forecast.
MR. O'BRIEN:
Q. Okay.
MR.STRATTON:
A. And she would report up to me. But I'm the primary responsibility for preparing those forecasts.
MR. O'BRIEN:
Q. And those are for the purposes of budgetary -- I guess, what would you use those forecasts for?
MR.STRATTON:
A. Well, I would distribute my forecasts to rates and regulatory for preparing the -- for sales revenue, and I would send my forecasts to Kevin Goulding's group for doing their system operations plan.
MR. O'BRIEN:
Q. For the systems ops plan, okay.

Page 55

MR.STRATTON:
A. And like I say, my forecasting role is with medium term and longer term.
MR. O'BRIEN:
Q. Oh, is it, okay.
MR.STRATTON:
A. There's also the operating or day-to-day, seven-day, hourly forecast, but that forecasting role resides within the operations, Kevin Goulding's group.
MR. O'BRIEN:
Q. Within Mr. Goulding's -
MR.STRATTON:
A. Yes.
MR. O'BRIEN:
Q. Okay. So that -- and perhaps, Mr. Goulding, maybe you can tell me, so is that -- that's something that's part of your weekly guidelines?
MR. GOULDING:
A. Yes, it is. We have a load forecasting application that will forecast load a week out and it gives us an hourly analysis of what we expect the load to be from an Island perspective and from an Avalon perspective as

Page 56

well.
MR. O'BRIEN:
Q. All right. So in terms of, Mr. Goulding, on this particular chart here we have, 409, where is your position on that chart?
MR. GOULDING:
A. I'm the system operations engineering manager. That's the employee, I guess, 261-01.
MR. O'BRIEN:
Q. 261-01, that's what I thought, okay. So do you have a market analyst or anything under your role there?
MR. GOULDING:
A. No.
MR. O'BRIEN:
Q. So how would you perform the seven-day forecast say or an hourly forecast?
MR. GOULDING:
A. Well, like I say, we have a load forecasting application. It's a PPO software.
MR. O'BRIEN:
Q. Okay.
MR. GOULDING:
A. That actually takes the inputs, such as the ambient temperature, the wind speed, day of

Page 57

week and what the load, we'll say, the day previous or a week previous and it forecast load in that manner.

MR. O'BRIEN:

Q. And so it doesn't take into account the monthly forecasts or the annual forecasts that say Mr. Stratton's -

MR. GOULDING:

A. No.

MR. O'BRIEN:

Q. - Mr. Stratton would produce, no.

MR. GOULDING:

A. No.

MR. O'BRIEN:

Q. This is a day-to-day thing based on previous days, that kind of thing?

MR. GOULDING:

A. Yes.

MR. O'BRIEN:

Q. All right. Okay. And Mr. Goulding, you report directly to -- is that Mr. Butler you would report to?

MR. GOULDING:

A. Yes, that's correct.

MR. O'BRIEN:

Page 58

Q. Yeah, okay. And you have a number of direct reports into you as well?

MR. GOULDING:

A. Yes.

MR. O'BRIEN:

Q. Do you provide to either -- Mr. Stratton or Mr. Goulding, do either one of you provide any services to Nalcor directly where you would bill time to Nalcor?

MR.STRATTON:

A. I don't.

MR. GOULDING:

A. There wouldn't be -- well, similar to Bob, to Mr. Moulton, there's not a lot of overlap between myself and Nalcor. Like we -- I think, you know, like if some cases, like we also oversee billing metering function, so when there was a Twinco entity, I certainly would have gotten involved there from time to time.

MR. O'BRIEN:

Q. Okay. Mr. Goulding, in terms of -- I want to take you back to some of the comments you had earlier in terms of outage scheduling. Can you give me a bit more overview as to how that

Page 59

gets done? I understand there's an annual process, but there's also monthly, maybe weekly process. Can you just give me an overview as to how that gets done?

MR. GOULDING:

A. Sure. Well, every year before the annual maintenance season begins, we have an engineer in our area. He's actually the system operations engineer of planning, so he would reach out to all the stakeholders, so the stakeholders being, you know, the asset owners in the areas of generation and transmission equipment as well. So he would reach out and basically ask that they provide their outage plans for the year and we would basically take those plans and input them into a spreadsheet and basically schedule the outages accordingly. So, that's the longer term aspect of it.

Plus we also have a generation outage application as well. So once these outages are in the longer term plan, we'll reach out to the asset owners again when we're getting, you know, somewhat near the time and I say near the time, like it could be a week or a

Page 60

month, and then we input these outages into our generation outage scheduling application as well and then they would receive the final approval at that point.

MR. O'BRIEN:

Q. So when you say you reach out to stakeholders, so that's on an annual basis, one of -- it's the -- is that the senior systems operations engineer?

MR. GOULDING:

A. No.

MR. O'BRIEN:

Q. Who would that be?

MR. GOULDING:

A. That would actually be the system operations engineer that's on the bottom there.

MR. O'BRIEN:

Q. Oh, I see, okay, 275-12.

MR. GOULDING:

A. Yes, yeah.

MR. O'BRIEN:

Q. So that individual would reach out to all of the asset owners to find out what -- I guess what maintenance needed to be done, that sort of thing, for each of the assets?

Page 61

MR. GOULDING:
A. That's correct.
MR. O'BRIEN:
Q. Okay. And how would you prioritize that in terms of what work needs to be done and when it needs to be done? How does that work?
MR. GOULDING:
A. I guess it all fits in terms of the asset owners, they would essentially prioritize what work needs to be done and when, and then we would take their outage plans and size it up from an overall power system perspective to make sure it works, you know, from a reliability standpoint and to make sure that we're still optimizing all our assets as well.
MR. O'BRIEN:
Q. And do you update that plan regularly or how does that work?
MR. GOULDING:
A. The annual plan is updated on a monthly basis.
MR. O'BRIEN:
Q. On a monthly basis, okay. And that's -
MR. GOULDING:
A. And that's also -- we also send our annual plan out to external stakeholders as well, so

Page 62

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

Page 63

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

Page 64

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

Page 65

MR. O'BRIEN:
Q. All right. And in terms of Hydro meetings, I take it systems operations and planning issues would be discussed regularly at these types of meetings, would they?
MR. HUMPHRIES:
A. Yes, they would.
MR. O'BRIEN:
Q. Okay. And if we scroll up at the Nalcor level, your name is -- you're on that particular leadership team as well. Is that right?
MR. HUMPHRIES:
A. Yes, I am.
MR. O'BRIEN:
Q. And would systems operations and planning take up a lot of time in terms of discussion at Nalcor leadership level?
MR. HUMPHRIES:
A. Well, they -- Hydro takes up a portion of the Nalcor leadership team discussion and if there are system operation issues in that particular month, yeah, it would involve system operations, but it would be part of the rolled up report to -- the rolled up Hydro report to

Page 66

the Nalcor leadership.
MR. O'BRIEN:
Q. To the Nalcor, okay. It wouldn't necessarily make up a separate discussion piece unless it was -
MR. HUMPHRIES:
A. If there was a pertinent issue.
MR. O'BRIEN:
Q. If there was a pertinent issue, okay.
MR. HUMPHRIES:
A. That's correct.
MR. O'BRIEN:
Q. In terms of direction then at the Nalcor level, do you receive any direction in terms of Hydro's systems operation and planning from the Nalcor leadership team?
MR. HUMPHRIES:
A. From Hydro's -
MR. O'BRIEN:
Q. Yeah, from Hydro's perspective, would you -
MR. HUMPHRIES:
A. No, generally not.
MR. O'BRIEN:
Q. Okay. So in terms of, from Hydro's perspective then, in terms of systems

Page 67

operations and planning, would you have the final call on planning or would that be Mr. Henderson's?
MR. HUMPHRIES:
A. Well, generally from a planning perspective, I have always in my role, I guess, brought forward the recommendations, but you know, Mr. Henderson and I work very closely in this role and me, in my transitional role, I guess. From a Hydro perspective, there's not much that goes forward that Mr. Henderson and I do not have a thorough discussion on before.
MR. O'BRIEN:
Q. Oh, I can understand that, I guess, in terms of you both being VPs in the same entity. I'm wondering just in terms of accountability and single point of accountability, whether or not planning issues for Hydro would fall -
MR. HUMPHRIES:
A. Planning issues, I would consider I'm the single point accountable, yes.
MR. O'BRIEN:
Q. Would you?
MR. HUMPHRIES:
A. Yes.

Page 68

MR. O'BRIEN:
Q. Okay. And the reason I ask that is I got the understanding that planning issues really overlap with Nalcor in terms of the integration piece, so I would have expected you to have the final accountability for planning issues. Even though there are short term planning issues, I guess, with Hydro, but this particular transition role, I would expect that you would have had final say on planning issues.
MR. HUMPHRIES:
A. From a planning, strictly planning issue, yes, I think that's correct.
MR. O'BRIEN:
Q. But from the day-to-day operations of Hydro, Mr. Henderson would have the single point of accountability?
MR. HUMPHRIES:
A. That's right.
MR. O'BRIEN:
Q. Okay. And when we say that you have the accountability for planning, what exactly are we talking about here? We're talking about generation planning?

Page 69

MR. HUMPHRIES:
A. No, we're talking about generation, transmission and the rural or distribution planning.
MR. O'BRIEN:
Q. And is that, as of April 2013, you would have been in that role and had that accountability?
MR. HUMPHRIES:
A. Yes, and I really had it from a planning perspective before April 2013. You know, in the role prior to April 2013, I was the manager of system planning. If you notice, at the organizational chart there now, there is no manager of -
MR. O'BRIEN:
Q. Yes, there is none. I noticed that.
MR. HUMPHRIES:
A. There is no manager, and that was done purposely because we're not sure as we move forward from the planning function how the accountabilities and reporting structures will roll up and there may be a separation between generation and transmission possibly. So we didn't fill the manager of system planning role. We put a manager in the generation and

Page 70

rural side and a manager in the transmission side and they report up through me. So effectively, from the overall manager role of pulling all the system planning pieces together, I'm still performing that, yes.
MR. O'BRIEN:
Q. Okay. And in terms of your accountability yourself on planning, you would be accountable to Mr. Martin?
MR. HUMPHRIES:
A. I am accountable to Mr. Martin, yes.
MR. O'BRIEN:
Q. So on planning issues, generation, transmission, rural distribution, that sort of thing, you would -- your accountability would be directly to Mr. Martin?
MR. HUMPHRIES:
A. Yes, other than, you know, the direct Hydro pieces, I think, you know, they will always -- I'm accountable, but will always have an involvement with the operations side of thing, Mr. Henderson, no different than it would -
MR. O'BRIEN:
Q. And I got that impression.
MR. HUMPHRIES:

Page 71

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

Page 72

Hydro's 2016-2020 Capital Plan which was recently filed and it indicates in that document that the project management engineering and construction management services for that project would be provided by the Lower Churchill Management Corporation. Is that right?
MR. HUMPHRIES:
A. That's correct.
MR. O'BRIEN:
Q. Okay. And where does that project fit in, in your perspective, in terms of systems planning?
MR. HUMPHRIES:
A. Well, systems planning would have identified the requirement for that project. They would have completed the project application that went before the Public Utilities Board and probably from the perspective of the review process that went through the request for information, we probably would have -- system planning would probably have addressed the majority of those. Once that project received approval, then it was transferred to the project execution group to execute.

Page 73

MR. O'BRIEN:
Q. Okay. And in terms of the application process itself then, if systems operations and planning would have put together that application to seek approval, would you have been the group to have looked at initially who was going to complete the project or would you have left that later on for project execution group to look at?
MR. HUMPHRIES:
A. That was the project execution piece.
MR. O'BRIEN:
Q. Would you have any discussion about whether or not Lower Churchill Management Corporation would have been the right -- the employees there would have been the right group to do that?
MR. HUMPHRIES:
A. Yeah, and I think to Mr. Henderson's point, I was involved in some of those discussions. I don't think I was involved in all of them, from the perspective that, you know, and from the ability of the people that were over there and the knowledge, there was no question from my perspective that the right people to be

Page 74

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

Page 75

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

Page 76

understood the idea of synergies from your job description to mean there are opportunities for two groups to get together and cooperate, your systems planning -
MR. HUMPHRIES:
A. Yeah, yes, you know -
MR. O'BRIEN:
Q. - as opposed to -- there's always an opportunity for a group of people to come in and do work.
MR. HUMPHRIES:
A. Yes, and I don't -- you know, project execution and technical services still has individual interface in these activities with the project.
MR. O'BRIEN:
Q. Was there a least cost analysis done at the time of your application as to whether or not this was the best course of action to take?
MR. HUMPHRIES:
A. Not that I'm aware of, no.
MR. O'BRIEN:
Q. It's not something you would have been involved in, if it was?
MR. HUMPHRIES:

Page 77

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

Page 78

Public Utilities on generation adequacy. So this is the September 2015 report.
MR. HUMPHRIES:
A. That's right.
MR. O'BRIEN:
Q. What's the genesis of this report? This comes out of the recommendation from the Liberty Consulting Group? Is that right?
MR. HUMPHRIES:
A. That's correct.
MR. O'BRIEN:
Q. Okay. And I understand Hydro is to provide or plans to provide one of these in August of each year. Is that right?
MR. HUMPHRIES:
A. That's correct, yeah.
MR. O'BRIEN:
Q. Okay. And the purpose of it, just briefly outline the purpose of the report for me.
(10:30 a.m.)
MR. HUMPHRIES:
A. Well, the purpose is to A. give an outlook on load forecasts between now and the in service of Muskrat Falls, to give an overview of the performance of our generation fleet over the

Page 79

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

Page 80

megawatts, would be one of the Holyrood units, and still have a 70 megawatt spinning reserve on the system to manage changes in the system and an additional buffer, I guess, to withstand further loss of generation.
MR. O'BRIEN:
Q. So you'd still have -- you could lose your largest generator and you can have -
MR. HUMPHRIES:
A. And still have some -
MR. O'BRIEN:
Q. Still have 70 megawatt reserve?
MR. HUMPHRIES:
A. 70 megawatts in reserve, yes.
MR. O'BRIEN:
Q. And that's a figure landed on by Hydro?
MR. HUMPHRIES:
A. It is, yes.
MR. O'BRIEN:
Q. Okay. And how did you land on that figure?
MR. HUMPHRIES:
A. Well, when we looked at the overall level of potential -- well, the spinning reserve is a number that we obviously would like to have available to be able to manage the system and

Page 81

our largest contingency was 170 and when we looked at other possible contingencies beyond that, you know, if we look at the loss of, for argument sake, two generators at Holyrood, that's 340 megawatts.

MR. O'BRIEN:

Q. Sure.

MR. HUMPHRIES:

A. That's a bit onerous.

MR. O'BRIEN:

Q. Yeah.

MR. HUMPHRIES:

A. When we look at some of the other combinations, the loss of the combustion turbine and loss of Holyrood, even with the 70 megawatt spinning reserve, we know that we can operate the system reasonably with as little as 20 megawatts of reserve. We've done it. So that, you know, even the 240 would give us an additional buffer to handle some of these smaller second contingencies that could exist.

MR. O'BRIEN:

Q. Okay.

MR. HUMPHRIES:

A. And to get much beyond those, obviously like I

Page 82

said to get to the loss of two generators, we were into a significant -

MR. O'BRIEN:

Q. You're into a significant -

MR. HUMPHRIES:

A. - capacity.

MR. O'BRIEN:

Q. Yeah, okay. And the P90, just briefly explain to me what the P90 is. I understood that's a -- versus a P50, I guess, load and maybe Mr. Stratton would -

MR. HUMPHRIES:

A. I'll ask my forecasting expert to do that.

MR. O'BRIEN:

Q. Yeah, sure.

MR.STRATTON:

A. The difference between the P50 and the P90 is a P50 demand forecast essentially means that you can be above that peak demand forecast 50 percent of the time or you can be below it 50 percent of the time in any -- for that particular year. Your P90 forecast means that you have a 90 percent chance -- sorry, that only 10 percent probability that you would be above that peak demand forecast.

Page 83

MR. O'BRIEN:

Q. Okay. That's what I thought it meant. And in terms of what your == prior to say 2014 was it a P50 forecast that Hydro would run or was it a P90?

MR. HUMPHRIES:

A. We always used a P50 before.

MR. O'BRIEN:

Q. Always used a P50, all right. And the P90 is now being used based on recommendations out of the -- from Liberty? Is that right?

MR. HUMPHRIES:

A. Well, it was twofold, I guess. Liberty recommended it and as well, we had our own assessment done by our consultant, Ventyx.

MR. O'BRIEN:

Q. Okay.

MR. HUMPHRIES:

A. And they recommended that as an alternative we could consider a P90, yes.

MR. O'BRIEN:

Q. Okay. Apart from this type of report, I guess the annual now, generation adequacy report that Hydro will be preparing in the future, prior to those, to that report, what types of

Page 84

generation reports did Hydro produce on a regular basis?

MR. HUMPHRIES:

A. Well, we would do an update of -- I believe it was called -

MR. MOULTON:

A. Generation planning issues report.

MR. HUMPHRIES:

A. Yes.

MR. O'BRIEN:

Q. Okay.

MR. HUMPHRIES:

A. Generation planning issues.

MR. O'BRIEN:

Q. There's a couple of RFIs, I think, that have the attachments, yeah.

MR. HUMPHRIES:

A. So that would have been our normal course for generation planning. We would update that on an annual basis. Obviously what we're doing now with this review, it's transitional, a lot of transition going on here and once we get to the interconnected state, you'll see another type -

MR. O'BRIEN:

Page 85

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

Page 86

know that's actually a more recent type of thing, the rolling 12-month performance of Hydro's generation units. That's another report that's being produced.
MR. HUMPHRIES:
A. Yes.
MR. O'BRIEN:
Q. Since the Liberty review. Is that right?
MR. HUMPHRIES:
A. Yeah. So that provides an input actually to this report.
MR. O'BRIEN:
Q. I noticed that, yes, the actual generation planning has some of that information in there.
MR. HUMPHRIES:
A. That's right.
MR. O'BRIEN:
Q. And actually, what I did notice is there was another report, one of those 12-month rolling reports was filed yesterday. I wonder if we could just get an undertaking to put that one on the record? I don't have any questions for the panel, but there was a 12-month rolling report filed yesterday. Just because it does

Page 87

have some of the input information that's in this generation adequacy report.
MS. GLYNN:
Q. Notes on the record.
MR. O'BRIEN:
Q. Thank you. Perhaps Mr. Moulton, I can ask you a few questions on this generations planning report, but before we get to it, I wonder if we could look at IC-NLH-016? And I think this is one of the RFIs that has an attachment of a report you mentioned, Mr. Moulton, the generation planning issues report, if we could bring that up.
So that one there is for November of 2012. So that's the latest generation -- and if we can scroll down just to see the front page, I guess. So generation planning issues, November 2012, in response to that RFI that was the latest one of those reports. Is that right?
MR. MOULTON:
A. Yes, that's correct.
MR. O'BRIEN:
Q. Okay. And prior to November 2012, was that an annual report that you did or was it -

Page 88

MR. MOULTON:
A. Typically, yes.
MR. O'BRIEN:
Q. - every two years? Typically. Do you know if one -- so there wasn't one done in 2013 or 2014?
MR. MOULTON:
A. No, there wasn't. We were still looking at the forecast at the time when we did -- I think, and I can't remember the exact RFIs. We did actually look at the forecast and it was very similar to the one in there.
MR. O'BRIEN:
Q. That was in this one, okay.
MR. MOULTON:
A. And we didn't actually issue a formal report at that time.
MR. O'BRIEN:
Q. Okay.
MR. HUMPHRIES:
A. Yeah, that would have been for 2013, yeah. So then 2014, we got into the changes.
MR. O'BRIEN:
Q. Sure, and it was another issue, I guess, then at that point in terms of whether or not you

Page 89

issued one of those reports. If we could scroll down on this report, page one looks like it has a -- we're still on this page one there, sorry, Jenny. That's your stamp there, is it, Mr. Moulton?

MR. MOULTON:

A. That's correct.

MR. O'BRIEN:

Q. Okay. So this would have been a report you prepared?

MR. MOULTON:

A. Yes.

MR. O'BRIEN:

Q. This report itself, this would have been a much more detailed type of a report, is it, than what we see in the generation adequacy report that we've got?

MR. MOULTON:

A. Yes, it would have.

MR. O'BRIEN:

Q. And in fact, I think when I look through this generation issues report, it seemed to be just prior to the decision for Muskrat Falls approval and there was an analysis in that report of two different scenarios, an Island

Page 90

Isolated scenario and one with interconnection. Is that right?

MR. MOULTON:

A. That's correct.

MR. O'BRIEN:

Q. Okay. And can you just take me through how you would prepare these types of reports, Mr. Moulton? What's the background of it?

MR. MOULTON:

A. That's a -- these are usually done in conjunction with preparing our provincial load forecast. So what we'll usually do is start off with Seed rates from our rates department which will then go to Mr. Stratton. He'll prepare a forecast from these inputs. Then these inputs come back to -- he'll prepare the forecast and we'll take the forecast in the generation planning group and do an expansion plan to come up -- well, a number of expansion plans and a preferred expansion plan. That information gets sent back to our investment evaluation group. They prepare rates again which goes back to Mr. Stratton and it's kind of an iterative process until we get a generation expansion plan stays the same, so

Page 91

our capital spending is going to be the same. And from that, we have a forecast and from that we develop the preferred expansion plan.

Of course, besides that, you know, there's a considerable amount of information that has to be gathered. Forecasts, fuel costs, you know, capital costs of various alternatives, economic parameters, escalation, you know, a lot of information. And as you see in the report, there's a lot of information on the various alternatives we're looking at.

MR. O'BRIEN:

Q. Yes, I noticed that. There's a lot of different alternatives from a hydroelectric perspective, I guess, that you look at for planning down the road and what other options you can look at.

MR. MOULTON:

A. Many hydroelectric, thermal, wind.

MR. O'BRIEN:

Q. Okay. This particular report, as we indicated, it seemed to focus largely on the analysis of two scenarios, the interconnected -- or Island Isolated scenario where you

Page 92

didn't have an interconnection and what the planning was going forward in that scenario, as well as what the planning would be once you get an interconnection, if it's approved. Is that right?

MR. MOULTON:

A. That's correct.

MR. O'BRIEN:

Q. Okay. I wonder if we could turn to the Executive Summary of that report? I think it's at page -- it's Roman numeral one. Yeah, okay. So executive summary there. We scroll down a little bit there, please. Okay, yeah. "Based on the examination of the systems existing capability, the 2012 planning load forecast and the generation planning criteria, the Island system can expect capacity deficits starting in 2015 under both scenarios" I guess under both the interconnected island and isolated island scenarios, "and energy deficits in 2019." So at that point in time, in 2012, you were expecting capacity deficits in 2015?

MR. MOULTON:

A. That's correct.

Page 93

MR. O'BRIEN:
Q. And that -- I don't think that was a new thing, was it?
MR. MOULTON:
A. No.
MR. O'BRIEN:
Q. Was it a couple years back you still had expected that as well?
MR. MOULTON:
A. Yes.
MR. O'BRIEN:
Q. Okay. And in terms of energy deficits though, were you expecting energy deficits that early in 2019 a number of years back?
MR. MOULTON:
A. The energy deficit in 2019 -- well, we had -- you know, we knew there was going to be an energy deficit coming after the capacity deficit.
MR. O'BRIEN:
Q. Yeah.
MR. MOULTON:
A. I can't remember now exactly which year.
MR. O'BRIEN:
Q. Okay. And in terms of the capacity deficit

Page 94

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

Page 95

2015.
MR. O'BRIEN:
Q. And were steps taken to look into the 50 megawatt CT at that time?
MR. MOULTON:
A. From what point of view?
MR. O'BRIEN:
Q. To purchase one or to lease one?
MR. MOULTON:
A. Well, to get ready to start, yes.
MR. O'BRIEN:
Q. Okay. And why the 50 megawatt CT at that point?
MR. MOULTON:
A. At that point, we had looked at a number of different sizes, but over the years, from a -- you know, the typical growth in Hydro's system, 50 megawatts CT was a good size, a good increment of generation to have. Of course, typically when you add generation, you know, you're adding more than you need exactly when you add it. It's going to be several years before you, I'll say, use all the capacity or before you're back to having to add something else.

Page 96

MR. O'BRIEN:
Q. Okay.
MR. MOULTON:
A. That was a good step size.
MR. O'BRIEN:
Q. You thought that was -
MR. HUMPHRIES:
A. Yeah, and just if I could step in for a minute.
MR. O'BRIEN:
Q. Sure.
MR. HUMPHRIES:
A. I think at that time, based on the criteria and assumptions, the average or P5 load forecast and the anticipated generation availability, 50 megawatts was adequate to get us through the period.
MR. O'BRIEN:
Q. Okay. And were steps taken to obtain a 50 megawatt generator at that point? We're in November 2012 and you've noted that there's -- you're forecasting a capacity issue in 2015.
MR. HUMPHRIES:
A. Through 2013, there were moves afoot, yes, to protect the schedule for acquisition of a new

Page 97

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

Page 98

and so we would -- you know, especially the various thermal, hydro, wind, you know, as far as the input into the generation expansion process, you know, we had costing done for these various projects.
MR. O'BRIEN:
Q. And in terms of -- I noticed, as you say, if you go through the report, you mention Portland Creek.
MR. MOULTON:
A. Yes.
MR. O'BRIEN:
Q. Round Pond, as options for -
MR. MOULTON:
A. And Island Pond.
MR. O'BRIEN:
Q. And Island Pond, as options.
MR. MOULTON:
A. Yeah.
MR. O'BRIEN:
Q. And were those options ever explored?
MR. MOULTON:
A. Oh, they were -- well, they were explored quite extensively. You know, we had them costed in, I think it was 2007-2008. We had,

Page 99

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

Page 100

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

Page 101

MR. O'BRIEN:
Q. They weren't going to -
MR. HUMPHRIES:
A. They weren't part of the least cost.
MR. O'BRIEN:
Q. Okay. So even back in 2010, did you have concerns about capacity issues in 2015?
MR. MOULTON:
A. We knew there was -- well, we knew there was -- you know, we knew that Vale was coming on in the future and we knew that, you know, when they came on that would increase the load forecast significantly and that was probably going to drive the next generation addition, along with other things.
MR. O'BRIEN:
Q. And did you identify a CT at that point in time as a possibility?
MR. MOULTON:
A. If we scroll down through.
MR. O'BRIEN:
Q. Yeah, sure.
MR. MOULTON:
A. If we scroll down through the report, a few pages in, it'll give what was identified at

Page 102

that time. It's not too far into the report.
MR. O'BRIEN:
Q. Combustion turbine units, page 17.
MR. MOULTON:
A. Okay, just keep going.
MR. O'BRIEN:
Q. And that's just the Holyrood -- the Hydro Hardwoods.
MR. MOULTON:
A. Maybe it's just past that.
MR. O'BRIEN:
Q. So your preliminary generation expansion analysis.
MR. HUMPHRIES:
A. Yeah.
MR. MOULTON:
A. There is one -- yeah, there is one in the report. It wouldn't be in that section. I think it would be slightly beyond that.
MR. HUMPHRIES:
A. Not very far in.
MR. MOULTON:
A. Not very far in.
MR. O'BRIEN:
Q. No.

Page 103

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

Page 104

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

Page 105

MR. HUMPHRIES:
A. The timing kept changing on Vale as well and that gets fairly well documented in Liberty's findings as well, you know, that there was a bit of chasing the load going on there at that time.
MR. O'BRIEN:
Q. Okay. In terms of your criteria, I guess, your planning criteria, you had indicated that your planning -- I think, Mr. Humphries, you indicated that maybe in the future when there's interconnection, criteria might change. Is that right?
MR. HUMPHRIES:
A. I think so, yes.
MR. O'BRIEN:
Q. So you presently have got capacity and energy, certain criteria for both, that appears to have remained constant over the last few years. I believe your capacity criteria was to satisfy loss of load hours at 2.8. Is that right?
MR. HUMPHRIES:
A. That's correct.
MR. O'BRIEN:

Page 106

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

Page 107

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

Page 108

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

Page 109

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

Page 110

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

Page 111

for retirement of Hardwoods?
MR. MOULTON:
A. As far as I know.
MR. O'BRIEN:
Q. Okay. And how about Stephenville? I notice the dates had changed from 2024 to 2028. Any reason behind that?
MR. MOULTON:
A. The same as for -- again, they were in the process of doing refurbishment and I think it was kind of based on the dates that the refurbishments would be finished at the time.
MR. O'BRIEN:
Q. And so at this point in time, those refurbishments have been completed? Is that right, for Stephenville?
MR. MOULTON:
A. I'm not -
MR. O'BRIEN:
Q. Or is it you're planning on doing refurbishments in 2024?
MR. MOULTON:
A. Well, I don't -- in 2024, I wouldn't -- and I probably shouldn't say, but I doubt they would be done in 2024, but I mean, that would be a

Page 112

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

Page 113

where we identified the requirement for a 50 megawatt combustion turbine for 2015. Following the events of January 2014, we got into an in-depth analysis I guess, a review of what happened, what the drivers were, and we looked at, from an adequacy perspective, we started to introduce this theory of the P 90 load forecast and also a sensitivity around the availability of our thermal units and what impact that would have on additional generation.

So, when we completed that analysis in February-March of 2014, the indications were that if we were going to apply this more stringent criteria of the P90 forecast and a sensitivity around the generational availability, that the 100 -- something in the range of 100 megawatts would be more appropriate than 60 megawatts. So at that stage, we prepared the application to the Public Utilities Board for additional generation and that was for a 100 megawatt gas turbine and the project execution group then went and canvassed the market, I guess, and we identified this 123 megawatt option and I

Page 114

guess the rest is history.

MR. O'BRIEN:

Q. So in terms of your role, in terms of the planning department, I guess that would have been similar to the TL 267 in that you would look at what you required from a planning perspective and your folks and your team came up with you needed 100 megawatt generator? Is that right?

MR. HUMPHRIES:

A. Yes, that's correct.

MR. O'BRIEN:

Q. And in terms of your involvement beyond that and searching for the actual asset or anything like that or procuring the asset, that's something for project execution team?

MR. HUMPHRIES:

A. That's correct. We would have minimal involvement other than the fact to assessing that the solution that was arrived at was adequate to meet the requirements.

MR. O'BRIEN:

Q. Okay. And when you looked at what would be adequate to meet the requirements, what was your thinking as to how and for what purpose

Page 115

the unit would be used?

MR. HUMPHRIES:

A. Predominantly the intent was that it would be a peaking facility and would be used to cover -- as a standby generation in the event that there would be additional -- some of our normal plant, I guess, out of service and the fact that it would be there to actually be run over any peak to provide system support.

MR. O'BRIEN:

Q. I'm going to ask you to have a look at a document and see if you can identify it for me. It's one of the documents we asked be provided on Friday. It's a project briefing document, if I can find it.

MS. GLYNN:

Q. It's been entered as Information No. 14.

MR. O'BRIEN:

Q. Yes, that's the document. Got to find my copy. No, no, I have it here. Okay. Mr. Humphries, have you seen this document before?

MR. HUMPHRIES:

A. Yes, I have.

MR. O'BRIEN:

Q. Can you tell me who prepared it and what it

Page 116

was prepared for?

MR. HUMPHRIES:

A. I think it was prepared by our corporate communications group with input from our -- probably both our engineering and operations group, as a public information document on the combustion turbine.

MR. O'BRIEN:

Q. And when it says project briefing, was it for a particular purpose or was it just for general circulation within Hydro?

MR. HUMPHRIES:

A. Again, I'm not familiar with exactly what the end result, what it was used for.

MR. O'BRIEN:

Q. Okay. I wonder if we could turn to page five of the document, and the numbers I believe are on the bottom, not very visible. If you go down -- yeah, and it's entitled "how often will the CT be in service" I believe. Scroll back up. Maybe it's the next page.

MS. GRAY:

Q. It's potentially not in the computer.

MR. O'BRIEN:

Q. Here it is.

Page 117

MS. GRAY:
Q. Oh, there it is, yes.
MR. O'BRIEN:
Q. So there's a few bullets here I just wanted to ask you about. How often the CT -- how often will the CT be in service. So this document is from September 2014. The first bullet there "expected to operate infrequently. Will not exceed 500 hours per year." Was that your expectation at the time it was purchased?
MR. HUMPHRIES:
A. At the time, yes, I think that was our expectation.
MR. O'BRIEN:
Q. And used to meet high peak winter load?
MR. HUMPHRIES:
A. Yes, that's correct.
MR. O'BRIEN:
Q. And "the unit will be tested two hours per month". Was that your expectation?
MR. HUMPHRIES:
A. I think so, that's correct, yes. Sounds right.
MR. O'BRIEN:
Q. And also used as a black start at the Holyrood

Page 118

plant during emergency situations.
MR. HUMPHRIES:
A. That's correct.
MR. O'BRIEN:
Q. And you had mentioned earlier about being used as standby generation when normal plant was out of service. I didn't see that necessarily in this briefing, but was that -
(11:45 a.m.)
MR. HUMPHRIES:
A. I would consider that in an emergency situation where we had other generation out that, you know, obviously we would run this unit rather than have customers out of service.
MR. O'BRIEN:
Q. And that would have been your intention all along to use it in that fashion?
MR. HUMPHRIES:
A. Oh yes, yes, definitely, it would have been, yes.
MR. O'BRIEN:
Q. I wonder if we could go to page seven of the document? Seven. No, that's it. Okay. No, that is page seven. That's fine. I wanted to

Page 119

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

Page 120

MR. GOULDING:
A. That's correct.
MR. O'BRIEN:
Q. Okay. And that would include I guess the cost of fuel, No. 2 fuel to run it?
MR. GOULDING:
A. That's correct.
MR. O'BRIEN:
Q. Okay. That's not run through the RSP, the No. 2 fuel?
MR. GOULDING:
A. No. 2 is not run through the RSP, no.
MR. O'BRIEN:
Q. Okay. And in terms of the cost of running the CT, one of the RFIs indicated it was 31.9 cents a kilowatt hour. Does that sound about right to you?
MR. GOULDING:
A. That sounds right.
MR. O'BRIEN:
Q. And that would be much more expensive than hydro electric -- the cost of say running one of the other gas turbines?
MR. GOULDING:
A. In terms of running -

Page 121

MR. O'BRIEN:
Q. What's the difference?
MR. GOULDING:
A. In terms of running the other gas turbines, it should be around the same order of costs.
MR. O'BRIEN:
Q. Would it be? Okay.
MR. GOULDING:
A. Now in terms of running our hydro electric, obviously the CT is way more expensive than that.
MR. O'BRIEN:
Q. Okay. And I just wanted to get an idea in terms of the -- the CT's only been in service now since March of this year. Is that right?
MR. GOULDING:
A. That's correct.
MR. O'BRIEN:
Q. Okay. And if we turn to the regulated activities section, Schedule 5, there's a gas turbine forecast of 11.4 gigawatt hours for 2015 in the forecast. Are you familiar with that?
MR. GOULDING:
A. Yes, I am.

Page 122

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

Page 123

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

Page 124

requirements.
MR. O'BRIEN:
Q. And I guess, and maybe we weren't on the same wavelength, in terms of when this forecast was produced, it would have been produced with the November 2014 filing, so I guess there would have been a forecast there for 2015 as to that 11.4 gigawatt hours would have been for 2015. Were you anticipating that the Holyrood CT would be online as of the end of December 2014?
MR. GOULDING:
A. Yes, at that time, we had envisioned the CT prior to year end.
MR. O'BRIEN:
Q. Okay.
MR. GOULDING:
A. So, even in the 2014 forecast, there probably was some operation of that unit we envisioned as well.
MR. O'BRIEN:
Q. Okay. And so for the 2015 forecast then, with all the gas turbines, inclusive of the Holyrood CT, you're forecasting 11.4 gigawatt hours. To date, how much -- how many gigawatt

Page 125

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

Page 126

the Holyrood CT, Holyrood CT and diesel under subtotal hydro generation, over to the 12 month to date. Is that 24 gigawatt hours?
MR. GOULDING:
A. That's correct.
MR. O'BRIEN:
Q. Okay.
MR. GOULDING:
A. Well, 24.5.
MR. O'BRIEN:
Q. .5, okay. And that's inclusive of -- in terms of the breakout between Holyrood CT and diesels, would the bulk of that be the Holyrood CT?
MR. GOULDING:
A. The bulk of that would be the Holyrood CT, yeah.
MR. O'BRIEN:
Q. Okay. So that's as of September and the Holyrood CT is only in service as of March, or is it the end of March, beginning of March?
MR. GOULDING:
A. That sounds right. I don't quite recall when we first started the unit up.
MR. O'BRIEN:

Page 127

Q. Okay. And so your 11.4 gigawatt hours, in terms of the forecast, that would also include the Hardwoods GT and the Stephenville GT? Is that right?
MR. GOULDING:
A. That's correct.
MR. O'BRIEN:
Q. So we're up over 30 gigawatt hours as of September.
MR. GOULDING:
A. Yeah. Now these are our 12 to date numbers, so some of it would have been incurred in particular for Hardwoods and Stephenville. Some of it would have incurred in 2014.
MR. O'BRIEN:
Q. Okay. Well, if we took those out, we're still at 24.5 for the Holyrood CT from March forward. Is that right?
MR. GOULDING:
A. That's correct.
MR. O'BRIEN:
Q. And that's a fair bit higher than the forecast for the overall, the overall forecast for 11.4 gigawatt hours. Is that right?
MR. GOULDING:

Page 128

A. That's correct.
MR. O'BRIEN:
Q. Can you tell us why that is?
MR. GOULDING:
A. Well, some of the energy at Holyrood would have been because, you know, prior to it being released to us, I guess, as a system operator, there would have been energy incurred during start up and testing, prior to the March period.
MR. O'BRIEN:
Q. And do you have any idea as to how much of that would -
MR. GOULDING:
A. No.
MR. O'BRIEN:
Q. Would there be a small percentage?
MR. GOULDING:
A. I'd say a fair amount of it, but I don't know that number exactly.
MR. O'BRIEN:
Q. Would you be able to find that number out for us and undertake to provide that?
MR. GOULDING:
A. Sure.

Page 129

MS. GLYNN:
Q. Is the undertaking accepted?
MR. YOUNG:
Q. He's writing it down.
MR. O'BRIEN:
Q. I think your lawyer is looking to see if he's going to have to give an undertaking.
MR. YOUNG:
Q. So just to be clear, this is the commissioning energy essentially?
MR. GOULDING:
A. Yes, yeah.
MR. YOUNG:
Q. Okay, thank you.
MS. GLYNN:
Q. Noted on the record.
MR. GOULDING:
A. And I guess the other part of it was basically how we're operating CTs now as opposed to how we had envisioned our operating CTs in the -- when we developed our budgets in the fall of 2014.
MR. O'BRIEN:
Q. Okay. Well, take me through that.
MR. GOULDING:

Page 130

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

Page 131

Q. And what was the issue with the CT at that time?
MR. GOULDING:
A. I recall an issue with a fuel valve that would have resulted in that unit not being available.
MR. O'BRIEN:
Q. Okay.
MR. GOULDING:
A. Now it did start up. We did get it on that morning afterwards, but it wasn't there right at the time in the morning peak.
MR. O'BRIEN:
Q. Okay. And to follow through, I guess, and where I think you were going, there's been a change now in how you're operating?
MR. GOULDING:
A. Yeah. Part of our learnings from that event and you know, way to increase the reliability of the system, like we recognized, I guess, that there was an event out there waiting to happen which was essentially the Holyrood unit not being available when required and prior to, I guess, this event, we would have held off on starting the CT until it was required.

Page 132

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

Page 133

and we take our generation availability and based on our load forecast -- it's primarily an Avalon requirement. So based on our Avalon load forecast, now we have load triggers that we'll start up the CT.

(12:00 p.m.)

MR. O'BRIEN:

Q. Okay. So those load triggers, are they built into like an application similar to your daily sort of load forecast that your group performs?

MR. GOULDING:

A. Yeah. Like these load triggers, they wouldn't normally change. Like we did load flows with no Holyrood units in operation, one unit, two unit and three units. So at each one of those -- at each one of these times, we know when the CT is required to be started to be able to withstand our worst case outage.

MR. O'BRIEN:

Q. And this is different than what the plan for the use of the CT was in 2014, is it?

MR. GOULDING:

A. That's correct.

MR. O'BRIEN:

Page 134

Q. Okay. And if we -- perhaps we can have a look at the August 2015 monthly report as well.

MS. GLYNN:

Q. We'll enter that as Information No. 16.

MR. O'BRIEN:

Q. Thank you. If we have a look at the month this year, I guess for August 2015, for the Holyrood CT, there's 7.2 gigawatt hours in that particular month.

MR. GOULDING:

A. That's correct.

MR. O'BRIEN:

Q. Was there something different happening in that month or is it one of these load triggers that caused it to run for that much in August?

MR. GOULDING:

A. There is something different in that there would have been a total planned outage at Holyrood. So ordinarily, we would have been operating a Holyrood unit right throughout the summer period. So in the first -- and I stand to be corrected, but I think in the first two weeks or two weeks plus in August, there was a total planned outage which meant that neither Holyrood unit was available. So we ran the CT

Page 135

essentially in place of the Holyrood unit. But what happens with the CT is we're able to turn it on, I guess, during -- prior to the peak and after the peak. So there wouldn't have been as much energy incurred by running the CT as opposed to the Holyrood unit.

MR. O'BRIEN:

Q. So in terms of what was going on in August then, there wasn't -- would you term this an emergency? It wasn't a peak issue at that time, was it?

MR. GOULDING:

A. It was a peak in that we ran it during the peak period of the day when we were exposed to an outage to one of the major lines coming into the Avalon. So we would have ran it during the high load period and in the event that there was a line outage, the CT would have been on and we wouldn't have had a line overload and we wouldn't have had to hold off our customers for a period.

MR. O'BRIEN:

Q. Okay. And when you decide to run the CT in terms of, I guess, dispatch and whoever makes the decision to run it, you've indicated that

Page 136

there are load triggers that you have. Is there any consideration for cost given to run that when you make that decision? How does that work?

MR. GOULDING:

A. There is in that like we -- our triggers, they're built around the economic breakpoint as well of running the CT versus an extra Holyrood unit. So, and we use 12 hours of CT operation as our breakpoint. So if there's a period that we see that we would be operating the CT for more than 12 hours, then we turn on a Holyrood unit instead, if it was available of course.

MR. O'BRIEN:

Q. And that's more cost effective approach, would it be, the Holyrood unit?

MR. GOULDING:

A. It is, up to a certain period of CT operation, or after a certain period of CT operation.

MR. O'BRIEN:

Q. After a certain period, okay. And in terms of -- I guess in terms of this deferral account, Hydro would be looking to recover the cost of running that CT. There's a band that's

Page 137

proposed of $500,000 in terms of around the deferral account. How long would you have to run the CT to get to that band?

MR. GOULDING:

A. Just to do the rough math, 33 cents per kilowatt hour, it's likely not that long.

MR. O'BRIEN:

Q. And when you say likely not that long, how long would that be? Best case scenario. We're not talking more than a couple of days or a couple of weeks?

MR. GOULDING:

A. 33 cents a kilowatt, so it's $330 a megawatt. I'm not able to do that math here now in my head, sorry.

MR. O'BRIEN:

Q. And maybe I'll ask you to give an undertaking just to provide that.

MR. GOULDING:

A. Yeah, sure.

MS. GLYNN:

Q. Noted on the record.

MR. O'BRIEN:

Q. And in terms of -- it appears you've described like a change in philosophy as to how to

Page 138

operate the CT or what it's going -- how it's going to fit into the generation plan. How did that change in philosophy come about? I mean, is that something you decided? Was it something decided by Mr. Henderson? Was there a group? How did that work?

MR. GOULDING:

A. Oh no, it was certainly decided on by a group. Mr. Henderson and Mr. Humphries certainly would have been aware of it and agreed with the change. It's basically, I guess, in recognition and in learnings of our March event and the customer impact that resulted from it.

MR. O'BRIEN:

Q. And we talked earlier about maintaining a certain level of reserves in terms of generation. Is the CT run from that perspective?

MR. GOULDING:

A. It would be, but the way it turns out, like, the Avalon is essentially the ruling system, so once we have it on to be able to respond, I guess, in the event of an outage to a piece of equipment, or worse case outage, then this

Page 139

also satisfies our spinning reserve requirements as well.

MR. O'BRIEN:

Q. I wonder whether or not you can answer this, in terms of the deferral account, if the Board were to grant Hydro's proposal, what would the incentive be to Hydro to dispatch resources more efficiently once you hit the $500,000.00 band?

MR. GOULDING:

A. I guess, as has been stated, any times, like, we still have a mandate to provide least cost reliable power, so, like, in this particular instance, like, we still have our daily meetings and part of that meeting is to determine how best to not only economically operate the power system, but - I'm sorry, to not only reliably operate the power system, but to economically operate the power system as well, and that plays into our decision making of whether or not to run a Holyrood unit or to run a standby unit.

MR. O'BRIEN:

Q. And in terms of the disposition of the balance that would be in the deferral account, I

Page 140

understand Hydro is proposing that that would be subject to Board approval on an annual basis, is that how that would work?

MR. GOULDING:

A. That's right. I believe in that schedule, I think it was the end of March, the end of the first quarter each year.

MR. O'BRIEN:

Q. Okay, and from your perspective, what sort of factors should the Board consider in whether or not the balance should be - how the balance should be dealt with?

MR. GOULDING:

A. I guess, as part of the report, the Board may ask that we provide an indication, like, a summary report of when gas turbines were ran and maybe even what the circumstances were.

MR. O'BRIEN:

Q. Okay. I wonder if we could go back to - maybe we don't have to do this, but just Information 9, actually. That's the 2015 generation planning report. One of the notes we talked about earlier from that combustion turbine project briefing was about the use of the CT as black start, in black start scenario. In

Page 141

this Information 9, if we go to the executive summary page II there, the last paragraph - just scroll up a bit.

MS. GRAY:

Q. Just scroll up?

MR. O'BRIEN:

Q. Yeah, just scroll up a little bit, please. That's page 1, scroll down. I think it's in the last paragraph on page II. I wanted to ask you about actually the plan to or the intention in terms of Hydro's intention to purchase the eight 2 megawatt diesel generators at this point in time. There's no application, I understand, going forward, but in this report there's a mention of an intention to do that for generation purposes, I think.

MR. GOULDING:

A. Yes.

MR. O'BRIEN:

Q. I wonder if you can speak to that, Mr. Humphries?

(12:15 p.m.)

MR. HUMPHRIES:

A. Sure, I can. I guess, when this analysis was

Page 142

completed and filed, as indicated while we were with the available system resources neglecting the black start diesels, we were predicting a reserve of 246 megawatts at the time of interconnection, which while it meets the criteria, it was pretty tight margin and so from the perspective of these diesels that in their current configuration they could offer an additional 10 megawatts of support with some additional capital, we could access the full 16 megawatts for system capability, we felt it was an opportunity that we should look at.

MR. O'BRIEN:

Q. And were there other options considered in that regard?

MR. HUMPHRIES:

A. Yes, we looked at other alternatives and (a) whether we would execute those now as this is an opportunity that's there and would need to be taken advantage of now as opposed to leaving it and running the risk of getting into a deficit at a point in the future.

MR. O'BRIEN:

Q. Are those diesels still required for black

Page 143

start purposes?

MR. HUMPHRIES:

A. Right now they are still continuing - they provide a source of black start for the plant, yes.

MR. O'BRIEN:

Q. Will the 123 megawatt CT provide black start?

MR. HUMPHRIES:

A. The intent is that the 123 megawatt CT will provide black start, but that has not been tested and proven to this point.

MR. O'BRIEN:

Q. So for now in terms of the 8 megawatt or eight 2 megawatt diesels, they're still there for black start purposes?

MR. HUMPHRIES:

A. They are still there and we were assessing the - given that they were there and there's an opportunity through the - they're on a lease to purchase option, and appear to be an attractive alternative for acquiring some additional capacity.

MR. O'BRIEN:

Q. So in terms of any application that goes forward in terms of purchasing, would that

Page 144

application come from your group?

MR. HUMPHRIES:

A. Yes, it would.

MR. O'BRIEN:

Q. And would there be a least cost analysis provided with that?

MR. HUMPHRIES:

A. Yes. I will offer some additional information here around that right now, I guess.

MR. O'BRIEN:

Q. Sure, yes.

MR. HUMPHRIES:

A. We're still assessing this opportunity. Since this report was filed in September, as recently as last week, we do have indications that both Newfoundland Power's forecast will be reducing. The forecast that was filed with the GRA Application on Friday is in the range of 20 megawatts lower in the period we're talking about, and as well just last week we had additional information from Vale that would change their load requirements in the period, which we're still assessing. So we're looking at this application, looking at the change in load forecast. We still feel that

Page 145

there could be value to acquiring some or all of these diesels, we're working through that, and that will be identified in the proposal. I guess, this generation is on the system, 10 megawatts there, it has been providing support for the past 18 months to two years. Given where we've been from a generation perspective in the past two years, intuitively I have trouble with taking capacity off the system right now, but we'd have to go through it again and obviously make sure that this is a right decision to keep them around, so that will get identified in the application.

MR. O'BRIEN:

Q. And what sort of additional capital would be required, additional steps, and in order to make that generation capability available to the system?

MR. HUMPHRIES:

A. Well, again we're looking at now with the change in forecast, whether we need - if the full 16 megawatts is the optimum solution or it's some combination of lower, up to 10 megawatts, if we went with 10 megawatts, we can get that today, there's no further

Page 146

addition, the units are there installed and proven to be able to do it, so it's just a matter of purchasing the units. To get the additional 6 megawatts, yes, there's a capital upgrade required, and like I say, with the new load forecast information, we're still assessing that and we're not sure what the least cost alternative for keeping this capacity would be.

MR. O'BRIEN:

Q. So you have to consider maybe whether there's transformer upgrades, that kind of thing, to get it to the -

MR. HUMPHRIES:

A. Yeah, to get the 16 megawatts, we would have to do a modification at Holyrood that would effectively add additional transformer capacity.

MR. O'BRIEN:

Q. Okay. I wonder if I can ask if we can move just to talk about the possible scenarios, I guess, going forward as to if there's a delay in first power from Muskrat Falls in 2018, and there's a couple of scenarios where we could look; one where there is an interconnection,

Page 147

the link is there, and one where the link is not.

MR. HUMPHRIES:

A. That's right.

MR. O'BRIEN:

Q. And I wonder if you could comment just in terms of contingencies on both. Like, if we look first at supposing there's a delay in power, but the link is there, what are the contingencies that are in place now for Hydro in terms of capacity?

MR. HUMPHRIES:

A. With the link in place, and there's a delay in Muskrat Falls, we will have the capability to be able to deliver approximately 200 megawatts over the link from Labrador to Soldiers Pond without the support of Muskrat Falls. Then when we look at what's available in Labrador at that time, between the surplus Churchill Falls recall and gas turbine capacity in that system, we could conceivably deliver 100 megawatts of firm capacity to the island system from Labrador if required. We have the capability, as I said, of bringing 200. Obviously, the balance between the 100 and 200

Page 148

would have to be sourced in the market, and it would not be required for load serving capability, but then it comes down to an issue of whether it would be economic to source market energy to displace fuel at Holyrood. Holyrood - I think it's important, because Holyrood will be available at least through 2020, that capacity will be there and be able to run in that interim. That's part of the contingency plan.

MR. O'BRIEN:

Q. All right, and how about in terms of Maritime link, would that be part of the contingency plan?

MR. HUMPHRIES:

A. Again the Maritime link will have the capability of delivering up to 300 megawatts into the island system from the North East American market, I would say, whether it came from Nova Scotia or New Brunswick. We are currently engaged in an analysis with the Atlantic provinces doing a detailed study, (a) the capabilities of that system, and the resources that are available to supply capacity and energy from that market into

Page 149

Newfoundland, and we anticipate by the spring of 2016 we'll have some material results from that study, and will be in a better position to determine what could be available from our markets as a market solution from Nova Scotia.

MR. O'BRIEN:

Q. What's the time line for the completion of that link?

MR. HUMPHRIES:

A. Again right now the completion of the link is December, 2017, the same as the Labrador island link.

MR. O'BRIEN:

Q. So presuming that that link is complete, that's one option available to you from a contingency perspective?

MR. HUMPHRIES:

A. That's right, we have that option. Assuming the link is complete, we have the option and we know we have 100 megawatts of firm capability available to us in Labrador.

MR. O'BRIEN:

Q. Okay, and that - what firm is available in Labrador, this is the recapture power, is it?

MR. HUMPHRIES:

Page 150

A. It's recapture, plus the gas turbine that we could run for capacity, yes.

MR. O'BRIEN:

Q. Okay.

MR. HUMPHRIES:

A. The Happy Valley gas turbine.

MR. O'BRIEN:

Q. That recapture energy, I noted there's been some recent news coverage on that, and there's mention of a plan to transmit power from the Upper Churchill down the completed transmission lines, so that's the recapture energy we're talking about?

MR. HUMPHRIES:

A. Yes, in the event that the links were finished and Muskrat Falls were not available, that opportunity exists.

MR. O'BRIEN:

Q. Right, and in terms of how that would work, would there be any significant cost concerns with that course of action?

MR. HUMPHRIES:

A. I'm not sure on the detail behind that, how that would work out, but the ability is there to do it and the energy and capacity is

Page 151

available.

MR. O'BRIEN:

Q. And there's some recent regulations surrounding that recapture of the 300 megawatt recapture energy. Are you familiar with that?

MR. HUMPHRIES:

A. Yes, I'm somewhat familiar with that.

MR. O'BRIEN:

Q. Okay, and that's the same energy we're talking about, is that right?

MR. HUMPHRIES:

A. It's the same energy. Well, actually, I think the regulation deals with recall that surplus to Hydro's requirements, and if we had a requirement, it obviously wouldn't be surplus.

MR. O'BRIEN:

Q. That's why I wanted to ask you about it, I guess, in terms of - that's your understanding?

MR. HUMPHRIES:

A. That's my understanding.

MR. O'BRIEN:

Q. Is that if Hydro had that requirement, then that surplus could be used by Hydro in its totality?

Page 152

MR. HUMPHRIES:

A. Yes.

MR. O'BRIEN:

Q. But you wouldn't be able to bring 300 -

MR. HUMPHRIES:

A. Well, we can -

MR. O'BRIEN:

Q. Your capability is what?

MR. HUMPHRIES:

A. We're limited in what we can bring to 200 megawatts because we require the support from Muskrat Falls to bring the link up to its full 800 megawatts. We can bring 200, and our view is that there would be 100 available in Labrador in the 2017/2018 time period.

MR. O'BRIEN:

Q. Okay, and is there anything in terms of integration, any steps that needs to be done from your perspective and your group's perspective to make sure that that can be done?

MR. HUMPHRIES:

A. Well, we're already in the process and have actually completed analysis to confirm that that could be done.

Page 153

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

Page 154

island in that time frame. So the 246 margin is up to over 300.
MR. O'BRIEN:
Q. Is it? Okay.
MR. HUMPHRIES:
A. And we realized - have to realize that that's on a P90 type forecast, so it's a lower probability, I guess, than our average we're used to, and during most years our reserves will be higher than that 300 level.
MR. O'BRIEN:
Q. So with that lower probability and higher reserves, that's based on the lower forecast that you're looking at?
MR. HUMPHRIES:
A. Yeah, like I said, we haven't done a - this is new information to us and we haven't done a full assessment.
MR. O'BRIEN:
Q. All right, in terms of what your contingencies are for the operation of the CT going forward, is that a continued part of your plan on the new - I guess, the new approach to operating the CT, will that be required?
MR. HUMPHRIES:

Page 155

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

Page 156

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

Page 157

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

Page 158

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

Page 159

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

Page 160

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

Page 161

and I wanted you to follow up.
MR. HUMPHRIES:
A. Sure, it may be issues that there are other pieces of work that are affecting the -
MR. O'BRIEN:
Q. I don't know, and -
MR. HUMPHRIES:
A. We'll follow up on that.
MR. O'BRIEN:
Q. Can you follow up on that for me?
MR. GOULDING:
A. Just to add there, like, in our latest update for Holyrood Unit 1, that we pulled in, I guess, during our daily meetings, we are on schedule to have the work done on October 27th, and then there would be a week or so of start up activities there.
MR. O'BRIEN:
Q. So in terms of the - it says, "Including work in progress", the overall program completion status there is 50 percent. You're past that now?
MR. GOULDING:
A. Yes.
MR. O'BRIEN:

Page 162

Q. The date of this report is September 30th, but do you have any idea as to sort of how far along you are on that?
MR. GOULDING:
A. The date of the report is September 30th, but now the chart in the case is that it -
MR. O'BRIEN:
Q. As of the 19th of September.
MR. GOULDING:
A. Yes, so we've had a month elapse now basically since then.
MR. O'BRIEN:
Q. And you're satisfied your -
MR. GOULDING:
A. Yes.
MR. O'BRIEN:
Q. Now as of the 19th of September, though, this is marked green?
MR. GOULDING:
A. That's correct.
MR. O'BRIEN:
Q. It's not marked green as of today, it's marked green as of September 19th. That's why I'm looking for the -
MR. HUMPHRIES:

Page 163

A. The intent there was that we would still continue to meet that schedule.
MR. O'BRIEN:
Q. Okay. Any factors that could delay you in meeting that schedule, say, for Holyrood Unit 1, anything that comes to mind?
MR. GOULDING:
A. We aren't aware of anything extraordinary at this point. I guess, any time you start up a Holyrood unit, there's a number of aspects that have to be come together before you actually get that unit on line, but right now we aren't aware of any issues.
MR. O'BRIEN:
Q. In terms of the - is this right now under a planned maintenance - is this off line now?
MR. GOULDING:
A. Yes, it is.
MR. O'BRIEN:
Q. Until the plant -
MR. GOULDING:
A. This unit is actually off on its annual maintenance schedule.
MR. O'BRIEN:
Q. Until October 27th, that's what's planned?

Page 164

MR. GOULDING:
A. Yes, and unit 2 is operating now. Unit 3 is available, but not operating.
MR. O'BRIEN:
Q. But not operating yet, okay. How about if you scroll down to Hardwoods, and Stephenville, what's the status of Hardwoods there, is that operating now?
MR. GOULDING:
A. I don't recall if Hardwoods is available right now.
MR. O'BRIEN:
Q. Okay, can you find that out for us?
MR. GOULDING:
A. Yes.
MS. GLYNN:
Q. Noted on the record.
MR. O'BRIEN:
Q. And is Stephenville available now?
MR. GOULDING:
A. Stephenville is not available. That unit remains off, I think, for some work.
MR. O'BRIEN:
Q. Until December 1st, is that where that -
MR. GOULDING:

Page 165

A. Yes, yeah. That there is certainly a realistic target date. We expect that it's going to -

MR. O'BRIEN:

Q. I guess you could see my point there with Stephenville, it's not far off the line, and there's a fair bit of time left.

MR. GOULDING:

A. Yes.

MR. O'BRIEN:

Q. The next topic I wanted to cover with you is the Holyrood fuel conversation factor. That's something, Mr. Goulding, that you're prepared to talk about, is that right?

MR. GOULDING:

A. That's correct.

MR. O'BRIEN:

Q. Okay. I understand that in terms of the evidence, we can pull up page 2.4, lines 1 to 4. The first bullet there, "There's been a decline in fuel conversation rate at Holyrood in recent years due to lower production requirements attributable to a number of factors, as well as lower fuel heating content in the fuel since the switch to .7 percent

Page 166

sulphur in 2009". The first part of that, the lower production requirements due to a number of factors - attributable to number of factors, can you provide me with a little bit more information on that?

MR. GOULDING:

A. Sure.

MR. O'BRIEN:

Q. What you mean by that?

MR. GOULDING:

A. There's a - right now, I guess, since - I'm going to say since 2009, we've essentially had Holyrood at minimum generation levels. Basically, only as required from a reliability standpoint, and also to meet the peak demand periods as well. So when a Holyrood unit is on, it's maintained at a load of 70 megawatts. So since 2009, there were a number of things that changed. We had a fair amount of load fall off the system. I believe there may have been a shutdown of another paper machine at Corner Brook Pulp and Paper, there was a - it was around that time, I think, that Abitibi shut down in in Grand Falls, and that was, I guess, from a load generation standpoint, that

Page 167

there was a double whammy sort of thing because not only did their load go off the system, there was a fair amount of generation that became available as well. Also in 2009, I believe the wind farm at St. Lawrence came on in 2008, and the wind farm in Fermeuse was in 2009, so a combination of the extra sources of energy, along with the load drop, has resulted in us operating Holyrood at minimum generation levels. I guess, from a thermal unit perspective, with all things being equal, a thermal unit is more efficient at higher levels of generation, so because we've been operating units in the lower end of their operating range, that has meant that our fuel conversion rate has declined as well.

MR. O'BRIEN:

Q. Okay, I wonder if we can pull up NP-NLH-379, just to follow up on that in terms of load production. If you can scroll down there - so we've got a table there that shows in the middle column, I guess, the Holyrood production. This is the reduction in load you talked about in 2008/2009, gone down under 1000 gigawatt hours, is that right?

Page 168

MR. GOULDING:

A. That's correct.

MR. O'BRIEN:

Q. Okay, now that production is gone back up for the test years, is that right?

MR. GOULDING:

A. That's correct.

MR. O'BRIEN:

Q. A fair bit?

MR. GOULDING:

A. That's correct.

MR. O'BRIEN:

Q. And how would you see that as impacting, or I guess wouldn't you see that as impacting the conversion factor, shouldn't that increase conversion factor?

MR. GOULDING:

A. It would. Like, our - and we are showing an improvement there from where we have bottomed out, I guess, in 2013 and 2014, up to 607, and that's based on an average load on the units in the average of - in the order of 109/110 megawatts per unit.

MR. O'BRIEN:

Q. So is there a direct correlation then to

Page 169

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

Page 170

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

Page 171

total plan outage and then we go from one to two to three then during the fall period into December.
MR. O'BRIEN:
Q. How about if you got one unit off, would you see a fuel conversion factor increase is you're operating two instead of three?
MR. GOULDING:
A. We would probably see a fuel conversion factor increase, but we would see a reliability decrease because we've scheduled the units according to what we feel are required from a reliability standpoint.
MR. O'BRIEN:
Q. And when you schedule, say, maintenance on the units, I take it you try to schedule only one unit down, is that right?
MR. GOULDING:
A. We would try to schedule maintenance, certainly when the units aren't required, so during the winter we wouldn't schedule any long-term maintenance on the units. Typically we would take one unit off during the spring which may happen around April, May time period, and then during the summer there would

Page 172

be two off because we only need one from a reliability standpoint and then the first unit would become available again and then we schedule a third unit.
MR. O'BRIEN:
Q. In 2013 was unit one off for a fair bit of time?
MR. GOULDING:
A. Yes, unit one would have been, I guess, following the events of January 11th, 2013.
MR. O'BRIEN:
Q. For how long?
MR. GOULDING:
A. The unit went down in January and I recall it starting up again in October.
MR. O'BRIEN:
Q. And would that have affected the overall fuel conversion factor for that year?
MR. GOULDING:
A. It certainly would have during the winter period, from an average loading perspective with one unit off at a time when we need three, then it would have meant that we probably would have driven those units higher from a loading perspective to offload the

Page 173

lines to the Avalon, so that on its own merit I guess would have improved fuel efficiency, performance, but we weren't where we wanted to be from a reliability perspective certainly.

MR. O'BRIEN:

Q. How is the CT operation at this point going to affect, if anything, the fuel conversation factor, how you're planning on operating it or how you are operating it?

MR. GOULDING:

A. It will, like we expect that the CT will enable us to more efficiently operate the Holyrood units because the CT, it doesn't have the two-day on and off time, so we were able to run it through peak load periods, so if the economics are right, then we'd be able to run the CT in place of the Holyrood unit and, of course, with the minimum hours on your Holyrood unit reduced, then that would drive up the average loading as well.

MR. O'BRIEN:

Q. And is that operation of the CT is that built into your forecasts for the fuel conversion factor here of 2014, 2015?

MR. GOULDING:

Page 174

A. It would have, except that in, you know, based on what we've talked about earlier about having the CT on in advance now, that there wouldn't have been built in, so in this forecast, we wouldn't have envisioned operating the Holyrood unit throughout the summer months.

MR. O'BRIEN:

Q. That's, I guess, my point because some of the information you had given earlier, some of your testimony earlier was the manner in which you're running the CT, what you envisioned running the CT probably when these forecasts were done is different than what you're actually running the CT at now, is that correct?

MR. GOULDING:

A. That's correct.

MR. O'BRIEN:

Q. And would you expect now, based on how you're running the CT, that fuel conversion factor to be more efficient, to be higher?

MR. GOULDING:

A. It would be more efficient than if the CT wasn't there, but not as efficient as we had

Page 175

envisioned going into this forecast here.

MR. O'BRIEN:

Q. So you think your forecast now based on the use of the CT right now and how you're using it is the fuel conversion factor would be lower than 607?

MR. GOULDING:

A. Yes, yes, and the main driver of that is the summertime operation period where we now would--where, because our load, I guess during the summer days is flat, it's more economic for us to operate a Holyrood unit during the summer period, rather than have the CT on during the peak periods, during the peak day periods because we'd incur hours on the CT that would make it more uneconomic than the Holyrood units.

MR. O'BRIEN:

Q. I understood that the use of the CT was, one of the benefits was that it would increase the fuel conversion factor but that's based on how you initially intended to use it, is that right?

MR. GOULDING:

A. Yes. But even under a new operating regime,

Page 176

the operation of the CT does still improve fuel conversion performance because there's still periods, I guess, that we would operate the CT to defer the operation of the Holyrood unit, but our base point has changed now.

MR. O'BRIEN:

Q. What do you mean, your base point has changed?

MR. GOULDING:

A. Well if we were, say, to develop a minimum Holyrood schedule now, then we would envision operating Holyrood units straight through the summer and probably more hours during the spring and fall because it's more economical to operate that Holyrood unit than the CT; whereas prior, say, to our March events, we would have operated the Holyrood units and planned on starting up the CT after an event occurred.

MR. O'BRIEN:

Q. Now what other sort of activities and initiatives would you have implemented to improve efficiency at Holyrood generation?

MR. GOULDING:

A. I guess from a, I can't speak a whole lot about what goes on, I guess, inside the

Page 177

Holyrood plant, but from a system operations' perspective, we've always, regardless of if the CT was in the mix or not, we always scheduled Holyrood units to ensure that only the right number of units are on at the right time, so we balance--and basically scheduling Holyrood units from reliability perspective and by avoiding hours, you know, when a unit is not required, it also avoids our operation at these low inefficient load levels. So we actually have a corporate target, I guess, that we set out each year to measure our performance in having Holyrood units on at only the right time.

MR. O'BRIEN:

Q. And how does that work?

MR. GOULDING:

A. Basically what we do is when we lay out, each month we'll have a review of the month and the loads, primarily again from an Avalon perspective, so we'll have a review of the loads and I guess we'll review the number of Holyrood units on and in light of what would have been an ideal schedule and an ideal schedule is just having the right number of

Page 178

units on at the right time. So it's basically a review of our performance in scheduling the units, plus the factors outside of our scheduling, such as unit outages and this sort of carry on that gets into the mix as well.

MR. O'BRIEN:

Q. Okay. Does Hydro consider the fuel conversion rate to be something that's uncontrollable or do you take steps at trying to control it?

MR. GOULDING:

A. We consider it to be uncontrollable basically for the reasons that we've outlined. There's been a number of changes in the last, I'll say six or seven years, that have resulted in us and you know, like a primary driver is the minimum load on the unit, so we've done the right thing, we've reduced the unit loading to only what's required and that's resulted in a lot of fuel savings through the RSP, but on the back end, it's caused a decline in the fuel conversion rate which is not recoverable through the RSP and Hydro's bottom line.

MR. O'BRIEN:

Q. So part of the deferral account that Hydro is seeking, one of the deferral accounts,

Page 179

obviously is the Holyrood fuel conversion factor deferral account, are you aware of any other jurisdictions that would have a similar type of deferral account for -

MR. GOULDING:

A. I'm not aware of any.

MR. O'BRIEN:

Q. I want to ask you, just before we leave this topic, just in terms of the heating content that's mentioned and the shift to .7 percent sulphur in fuel, I'm wondering have you done any studies to see how the heating content actually impacts the fuel conversion factor?

MR. GOULDING:

A. We haven't, like, Mr. Henderson, I think he outlined in his testimony that we did have a fuel expert engaged and he did--they did indicate that there is certainly some opportunity there to increase the fuel heating content. Now at the same time, markets have changed to a point now where there's not a lot of people using this fuel, so I understand -- and that they go, they may go to different refineries now and get a blend and that's what really impacts the fuel heat content.

Page 180

MR. O'BRIEN:

Q. I guess my question is more have you done any studies or commissioned any studies to see if the heating content actually has a direct result or a direct effect on the fuel conversion factor?

MR. GOULDING:

A. I'm sure--there's a monitoring system in the Holyrood plant itself that would, I'm sure, have inputs and outputs to be able to determine the fuel heating content verses the actual kilowatt hours per barrel.

MR. O'BRIEN:

Q. But was there a study done or have you commissioned a study to see if there is a direct correlation or direct affect on it and what you can do about it?

MR. GOULDING:

A. I'm not aware of an external study, anything that would have been done there was probably done internally.

MR. O'BRIEN:

Q. All right. I'm going to ask you, maybe Mr. Humphries, you might be the one to ask about this in terms of operating costs, move to

Page 181

another topic there. If we could reference Table 2.11, it's on page 2.51 of the evidence. At Table 2.11, it's a systems operations and planning operating expenses, is that the summary of the expenses that your department, I guess, would submit in a budgetary sort of process?

MR. HUMPHRIES:

A. Yes.

MR. O'BRIEN:

Q. Okay, and are you involved in that process in pulling together the salaries and benefits and expenses in terms of the annual budget?

MR. HUMPHRIES:

A. Yes.

MR. O'BRIEN:

Q. And so we've only got three categories of costs that are listed. Are those the only three that you would have any input in, in terms of say the forecast for this rate hearing?

MR. HUMPHRIES:

A. Yes.

MR. O'BRIEN:

Q. Okay. So in terms of the annual budgeting

Page 182

process, what role do you play? Do you give budget guidelines each year and do you sort of provide these types of costs to Mr. Henderson or to Finance, how does that work?

MR. HUMPHRIES:

A. Yes, well we would have the budget guidelines and this budget, there are four business units that report up through me. Mr. Moulton, Mr. Butler, Mr. Collett, who is the manager of transmissions planning; and Mr. Thoms, who is the manager of ready for integration, they would generate their individual operating budgets and requirements, then that would be consolidated into the overall.

MR. O'BRIEN:

Q. Okay, so in terms of the requirements and that sort of thing, it appears to be largely salaries and benefits for each of those groups, is that right?

MR. HUMPHRIES:

A. That's correct.

MR. O'BRIEN:

Q. And that's based on the FTE requirements for each part or department, I guess, for -

MR. HUMPHRIES:

Page 183

A. Yes.

MR. O'BRIEN:

Q. Okay. Now if we go to page 252, 2.52, lines 6 to 9, the salaries and benefits there. The salaries and benefits expense in the 2014 test year of 3.3 million are .7 million higher than the 2007 actual costs and 2.6 million primarily due to salary increases. In the 2014 test year, there are 27 operating FTEs, a decrease from 2 in the 2007 actual of 29. What was the reason for the decrease there, do you know?

MR. HUMPHRIES:

A. Well I guess with the overall integration of the system operations and system planning departments, I think effectively there was an overall reduction.

MR. O'BRIEN:

Q. A reduction in a couple of FTEs and that's what I had assumed. Now going forward, I understand for 2015 you're forecasting an increase to 36 FTEs? That's the next lines 11 to 12, so there's an increase from 27 to 36?

MR. HUMPHRIES:

A. Yes, that's correct.

Page 184

MR. O'BRIEN:

Q. Is that a figure that you would have prepared?

MR. HUMPHRIES:

A. Yes, that's correct.

MR. O'BRIEN:

Q. Okay, and can you tell us sort of the reason for that increase?

MR. HUMPHRIES:

A. Well again, with the spin-out of and creation of the ready for integration group, that involved the creation of additional FTE positions and as well there were an additional couple of planning positions added in the system planning area that had been identified.

MR. O'BRIEN:

Q. It might help you if we pulled up PUB-NLH-409, I think there's a number shown there that might help.

MR. HUMPHRIES:

A. So there would have been, in 2015 there were an additional two FTEs added in the system planning areas, so one would have been in the generation of rural and one in the transmission planning area. There were two FTEs added with the addition of the ready for

Page 185

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

MR. O'BRIEN:

Q. Right.

MR. HUMPHRIES:

A. Mr. Butler's old position, we spread the duties between Mr. Goulding and Mr. Butler and added an additional engineering position on the lower end instead.

MR. O'BRIEN:

Q. Okay, so there might have been a reduction of an FTE there or part of an FTE.

MR. HUMPHRIES:

A. Well I think it was really FTE neutral when we came -

Page 186

MR. O'BRIEN:

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

MR. HUMPHRIES:

A. Yes, everything has -

MR. O'BRIEN:

Q. Every one has been filled in your area?

MR. HUMPHRIES:

A. Yes, everything is filled, yes.

MR. O'BRIEN:

Q. So that figure, we can satisfy ourselves that the 36 FTEs for 2015 is the proper figure for your -

MR. HUMPHRIES:

A. Yes, effective about a month ago, I think the last one was filled.

MR. O'BRIEN:

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

Page 187

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

Page 188

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

MR. HUMPHRIES:

A. I'm not sure that that's--I think the costs that were included and have been included to date are the costs associated with the creation of the ready for integration team and the building production team, that's under Mr. Henderson.

MR. O'BRIEN:

Q. Okay.

MR. HUMPHRIES:

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

Page 189

be a requirement to expand that and get people over there and get them involved in the operation and maintenance aspects of the project as it moves forward.

MR. O'BRIEN:

Q. Okay, I guess my point is more that there appears to be an indication there that some costs may--the Board may want to consider deferring some costs and I'm not sure what costs are being talked about here.

MR. HUMPHRIES:

A. Yeah, well I think there's, of these new million dollars for new position, those are related for the most part to integration activities, so whether they would want to be considered for deferral.

MR. O'BRIEN:

Q. And are they included in the test year costs? It seems to be they are.

MR. HUMPHRIES:

A. It's my understanding, they are, yes.

MR. O'BRIEN:

Q. Yes, okay. And I guess my concern was why say well Hydro has included some costs related to the test year or may want to consider the

Page 190

deferral of these costs, so I just want to make sure that those are the ones -

MR. HUMPHRIES:

A. I'm pretty sure that's what we're talking about, a million dollars that's included there.

MR. O'BRIEN:

Q. Okay. And the million dollars, that's in the new positions in 2015, is it?

MR. HUMPHRIES:

A. Yes.

MR. O'BRIEN:

Q. Okay, and then there's also one million in salary increases in 2015 as well?

MR. HUMPHRIES:

A. Yeah, I think that's across the board.

MR. O'BRIEN:

Q. Across the board of those, of the existing FTEs?

MR. HUMPHRIES:

A. I think so, yes.

MR. O'BRIEN:

Q. And if we go down to other operating costs, so other operating costs in 2014 test year of .3 million are on par with the 27 actual--the

Page 191

2015 test year, there's an increase of .8 from the, .8 million from the 27 actual. This increase is primarily related to consulting costs associated with system planning studies relating to the integration of additional generation sources." Can you just give me just a little bit more information as to what costs they would have been, who you were consulting with and -

(1:15 p.m.)

MR. HUMPHRIES:

A. We do have a block of money there allocated to engage a consultant to advise us on the additional generation or our generation adequacy requirements post 2018, this analysis of looking at what our criteria will be and how we're going to implement that moving through.

MR. O'BRIEN:

Q. So would that be incurred in the 2015 test year?

MR. HUMPHRIES:

A. The intent was, yes, that that would be in the 2015 test year.

MR. O'BRIEN:

Page 192

Q. And have you engaged that consultant?

MR. HUMPHRIES:

A. As of yet, no we have not.

MR. O'BRIEN:

Q. And when do you intend to engage the consultant?

MR. HUMPHRIES:

A. Well we're hopeful that we'll do that this fall.

MR. O'BRIEN:

Q. And that .8 million, where does that come from? Is that in relation to a tender, is it in relation to a quote or where does that figure come from then if it's to do with a consultant?

MR. HUMPHRIES:

A. Again this is a .8 million increase from 2007.

MR. O'BRIEN:

Q. Yeah, okay, so that figure from--do you have any idea as to what it would cost for the consultant, have you built something in? Maybe if we scroll down to the--or scroll up to the actual other costs, maybe you can get a better flavour for that.

MR. HUMPHRIES:

Page 193

A. And when we're looking at it in that context, I guess, there was also in our professional services, there was the piece looking at the future general adequacy which was also a sum of money in there this year for the marginal cost study analysis, so that is moving forward.

MR. O'BRIEN:

Q. Is that something that would come under your budget?

MR. HUMPHRIES:

A. It has, yes, come under my budget, under system--under Mr. Moulton's budget.

MR. O'BRIEN:

Q. Okay. I just have a couple of questions and maybe even one here on transmission losses. I wonder if we could reference NP-NLH-297?

MS. GRAY:

Q. Revision 1.

MR. O'BRIEN:

Q. Revision 1, yes, please. And this is a detailed calculation of the 2013 forecast transmission losses and it's been updated and the answer here for the 2015 forecast. I'm just wondering if you can tell me are those

Page 194

losses in that table, are they calculated on the basis of the last five years, is it how that's done?

MR. STRATTON:

A. I believe that was calculated on the basis of an average ten year loss rate.

MR. O'BRIEN:

Q. Average ten year. I understood there was a Board order in 2001 and I don't have it handy, that said it was to be calculated every five years, has there been something changed since then?

MR. STRATTON:

A. Sorry?

MR. O'BRIEN:

Q. I understood there was a Board order in 2001 to suggest the calculation over five years, has that changed?

MR. STRATTON:

A. Not that I'm aware of, no.

MR. O'BRIEN:

Q. Okay, did you do it over five years before and change it to ten or has it always been done over ten years?

MR. STRATTON:

Page 195

A. When I checked those calculations, they were consistent with how we had done the 2007 GRA.

MR. O'BRIEN:

Q. Okay, and can you just confirm for me if it was ever, I wonder if I could get an undertaking to confirm if it was ever done over five years or it's always done over ten?

MR. STRATTON:

A. Okay, sure.

MS. GLYNN:

Q. Noted on the record.

MR. O'BRIEN:

Q. I've only got another area to cover and it's just briefly. It's with respect to, and Mr. Humphries, I don't know if you can answer this question for me or not, Newfoundland Power has recently received some information from Newfoundland Hydro concerning the, I guess the forecast for current all-in electricity rates for 2020 based on, I guess, the recent figures of rates are expected to be for residential customers in the 19.8 cents per kilowatt range, is that a figure that you're familiar with?

MR. HUMPHRIES:

Page 196

A. I'm aware of it and I've heard it, yes.

MR. O'BRIEN:

Q. Okay, and I wonder whether or not you can tell us whether or not there's any assumptions for export sales built into those figures?

MR. HUMPHRIES:

A. It's my understanding that there's not.

MR. O'BRIEN:

Q. That there's not, okay. I don't have any further questions for this witness.

CHAIRMAN:

Q. Okay, it's 20 after, do we want to continue or do you want to adjourn?

JOHNSON, Q.C.:

Q. I'd just as soon start tomorrow now.

CHAIRMAN:

Q. I don't think there's anybody going to argue with you. We are adjourned.

Upon concluding at 1:20 p.m.

CERTIFICATE

I, Judy Moss, hereby certify that the foregoing is a true and correct transcript of a hearing in the matter of Newfoundland and Labrador Hydro's General Rate Application heard on the 20th of October, A.D., 2015 before the Commissioners of the Public Utilities Board, St. John's, Newfoundland and Labrador and was transcribed by me to the best of my ability by means of a sound apparatus.

Dated at St. John's, Newfoundland and Labrador this 20th day of October, A.D., 2015

Judy Moss

-B-

-Q-

-R-

-S-

-T-